New York State Office of Parks, Recreation and Historic Preservation

Statewide Comprehensive Outdoor Recreation Plan ~ 2009-13

EXECUTIVE SUMMARY

People • Resources • Recreation

SEQR
NOTICE OF COMPLETION OF A FINAL EIS

Date of Notice: December 10, 2008

Lead Agency: New York State Office of Parks, Recreation and Historic Preservation (OPRHP)

Title of Action: **Adoption and Implementation of a Statewide Comprehensive Outdoor Recreation Plan**

SEQR Status: Type I

Location of Action: Statewide

This Notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review) of the Environmental Conservation Law.

A Final Statewide Comprehensive Outdoor Recreation Plan and a Final Generic Environmental Impact Statement (FGEIS) has been prepared and has been accepted by OPRHP.

Brief Project Description: The Statewide Comprehensive Outdoor Recreation Plan (SCORP) is prepared periodically by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) to provide statewide policy direction and to fulfill the agency's recreation and preservation mandate. The updated SCORP serves as a status report and as an overall guidance document for recreation resource preservation, planning, and development from 2009 through 2013. The document is also used to guide the allocation of state and federal funds for recreation and open space projects. The direction for recreation in the state is guided by statewide policies. These policies are grouped into four major initiative areas that respond to the current issues impacting the state's natural, cultural and recreational resources: revitalizing our parks and historic sites, natural resource stewardship and interpretation, creating connections beyond the parks, and sustainability. The Final SCORP/EIS contains a comments and responses chapter as well as provides updates and additions to the Draft SCORP/EIS as necessary.

Availability of FEIS: The Final SCORP/EIS may be downloaded at http://www.nysparks.state.ny.us/agency/scorp. Copies or CDS of the Final SCORP/EIS are available upon request from the Agency Contact, available for review at all OPRHP regional offices, and CDs are available at DEC regional offices. The Agency Contact can provide regional office locations.

Agency representatives and the public can provide comments during the consideration period for the FEIS. Comments on the Final Plan/FEIS will be accepted by the Agency until **December 22**. Comments should be forwarded to the contact person:

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Copies of this notice have been filed with involved and interested agencies and persons including the Commissioner of OPRHP, NYS Department of Environmental Conservation, NYS Department of State, and the Governor of NYS.

The New York State Statewide Comprehensive Outdoor Recreation Plan and Generic Environmental Impact Statement 2009 - 2013 Summary

Prepared by : New York State Office of Parks, Recreation and Historic Preservation

Completed: December 10, 2008

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NEW YORK STATE

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Governor

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Chapter 1 - Introduction

Parkland and open space are two of New York State's most valuable nonrenewable resources that enhance the quality of life. These important places have a long history dating back to Niagara Falls State Park, the "Oldest State Park" in the country and Central Park in New York City. Recognizing the value of the parks and open space, this system of protected areas continues to expand to over 6,000 public areas comprising over 4 million acres.

Federal, state and local governments as stewards of these resources are faced with a challenging situation of maintaining and revitalizing an aging system while looking to the future to protect critical open space areas and addressing the needs of the citizens and the environment. These resources can no longer be viewed as islands but as systems that need to be connected to benefit both people and wildlife. The benefits derived from these efforts are far reaching – enhanced quality of life, increased tourism, improved health, protected ecosystems, and sustainability of our environment. Parks and open spaces are truly "important places" and must be protected.

These protected areas are the result of a long history supported by various funding sources including bond acts, the Environmental Protection Fund (EPF) and the federal Land and Water Conservation Fund (LWCF). The parkland conversion process associated with parks funded through LWCF and the parkland alienation applicable to all municipal parklands afford long term protection of these special places. It is important that these mechanisms are maintained for the benefit of future generations.

The Statewide Comprehensive Outdoor Recreation Plan (SCORP) is prepared periodically by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) to provide statewide policy direction and to fulfill the agency's recreation and preservation mandate.

The SCORP process has evolved well beyond its original purpose of satisfying eligibility requirements for continued funding under the Land and Water Conservation Fund (LWCF). The 2009 SCORP will serve as a status report and as an overall guidance document for recreation resource preservation, planning and development through 2013. It is the State's premier assessment and policy statement to the executive and legislative branches of state government, other units of government, recreation and preservation interest groups, and the general public on the state of the State's Parks. Planners, researchers, administrators, legislators, educators, special interest groups, the general public and private sector entrepreneurs utilize the SCORP document as a basic information source particularly for recreational issues, policies, priorities and for supply and demand forecast data. However, it is the ongoing planning process and its related products, which gives the SCORP its greatest meaning.

This document is also used to guide the allocation of state and federal funds for recreation and open space projects. The policies, needs assessment, programs and initiatives listed throughout SCORP are translated into criteria for evaluating projects in an objective manner. This document provides guidance for the allocation of municipal and not-for-profit funds to local areas and facilities with the greatest needs.

Currently, OPRHP and DEC are responsible for the bulk of outdoor recreation and conservation in the State. OPRHP administers about 330,000 acres of land incorporating 178 state parks, 35 historic sites, 67 marine facilities and boat launch sites, 20 parkways, over 5,000 structures, 77 developed beaches, 53 swimming pools, 29 golf courses, over 800 cabins and rental houses, 8,355 campsites, and over 1,350 miles of trail, as well as several outdoor education centers, museums, and nature centers and the Empire State Games. DEC administers nearly 4 million acres of land (including 3 million acres of Forest Preserve, over 700,000 acres of State Forest, and over 190,000 acres of Wildlife Management Areas), about 662,000 acres of conservation easements, 52 campgrounds, several day-use areas, 12 fish hatcheries, 1,280 miles of easements for public fishing rights, over 400 boat launch and fishing access sites, two Submerged Heritage preserves, the Belleayre Mountain Ski Center, and about 2,800 miles of trail, as well as several environmental education centers and summer camps.

The SCORP expands the OPRHP's mission statement and guiding principles to a statewide focus (Figure 1). The ideals within the mission statement and guiding principles are applicable to all public and private recreation providers as well as the protectors and managers of our natural, cultural and recreation resources. We share in the mandate to be responsible stewards of these resources.

Office of Parks, Recreation and Historic Preservation

Mission Statement and Guiding Principles

Mission Statement

The mission of Parks, Recreation and Historic Preservation is to provide safe and enjoyable recreational and interpretive opportunities for all New York State residents and visitors and to be responsible stewards of our valuable natural, historic and cultural resources.

Guiding Principles

- A Commitment to Leadership. We recognize the preeminence of the New York State Park and Historic Site System. We are committed to excellence, innovation, professionalism and to forging partnerships. We are committed to seeking the means by which operational and maintenance needs are met as recreational and cultural opportunities are enhanced for our patrons. To meet that challenge, we are committed to pursuing compatible revenue initiatives as we continue our commitment to protect resources.
- A Commitment to People. We are committed to serving and protecting the public to the best of our ability, with courtesy and respect. We are committed to our employees and volunteers, encouraging teamwork, self-improvement and mutual support.
- A Commitment to Service. We are committed to equal access and outreach to all segments of our society, recognizing individual needs and interests. We are committed to safety, security, creativity and accountability in providing our programs and services.
- A Commitment to Preservation. State Parks and Historic Sites are unique and irreplaceable public assets. We are committed to wise acquisition, planning and where compatible, development of recreational facilities; timely and professional care and maintenance; and a responsibility to future generations in whose trust we manage resources. We are committed to providing encouragement to all agencies and individuals to identify, evaluate and protect recreational, natural, historic and cultural resources.

Revised
July 16, 1997

Figure 1 - OPRHP Mission Statement

Buttermilk Falls State Park , Tompkins County

The Department of Environmental Conservation's (DEC) mission is taken from Section 1-0101 of the New York State Environmental Conservation Law (Figure 2). DEC is charged with protecting the quality of New York State's land, water and air, the character of its scenery, the health and diversity of its fish and wildlife populations and habitats. Additionally, DEC conserves both living and nonliving resources for appropriate use. This includes managing the forest preserve in the Adirondacks and Catskills, protecting wetlands, rivers, lakes and salt water embayments, and serving as stewards of the State's plant and animal species. Saving and managing open space is a key part of this mission. In doing this, however, DEC bases its approach not just on the number of citizens who wish to participate in outdoor recreation activities, but also on the value of the resources themselves to present and future generations.

Blue Mountain Fire Tower, Hamilton County

Department of Environmental Conservation
Mission Statement and Responsibilities

Mission

The mission of the Department is to:

"…conserve, improve and protect its natural resources and environment, and control water, land and air pollution, in order to enhance the health, safety and welfare of the people of the state and their overall economic and social well being."

Responsibilities

The Department of Environmental Conservation is responsible for administration and enforcement of the Environmental Conservation Law. The Department's major responsibilities as assigned by the Environmental Conservation Law are:

- Regulate the disposal, transport and treatment of hazardous and toxic wastes in an environmentally sound manner;
- Manage the state program for oil and chemical spills;
- Provide for the abatement of water, land and air pollution, including pesticides;
- Monitor environmental conditions and test for contaminants;
- Encourage recycling, recovery and reuse of all solid waste to conserve resources and reduce waste;
- Administer fish and wildlife laws, carry out sound fish and wildlife management practices, and conduct fish and wildlife research;
- Manage New York's marine and coastal resources;
- Conduct sound forestry management practices on state lands, provide assistance to private forest landowners and manage fire prevention and control efforts;
- Manage the Adirondack and Catskill forest preserves and recreational facilities, including campsites and the Belleayre Mountain ski center;
- Protect tidal and freshwater wetlands and flood plains;
- Promote the wise use of water resources;
- Administer the wild, scenic and recreational rivers program;
- Regulate mining, including reclamation of mined lands, extraction of oil and gas, and underground storage of natural gas and liquefied petroleum gas;
- Inform the public about environmental conservation principles and encourage their participation in environmental affairs.

Figure 2 - DEC Mission Statement

Planning Process

Principles

The planning process for the SCORP is predicated upon three basic principles. An understanding, acceptance and faithful adherence to these principles is fundamental to the success of OPRHP's overall goal to provide a unified State Park and Recreation System which will serve the needs of all the State's citizenry. The plan and the process must also be responsive to modification in an expeditious and practical manner as warranted to meet changes in societal values and environmental conditions.

The three principles are:

- Planning is a Continuous Process
- Planning must be Comprehensive
- Planning must be a Participatory and Coordinated Process

Process

The proper development of recreation and open space plans requires adherence to a fundamental planning process — inventory, analysis and forecasting, plan formulation, and plan implementation— supported by program goals, actions and accomplishments. A projection to the year 2025 is provided in the identification of recreation needs. Programs and statewide initiatives have a 5-year horizon; the plan must be constantly reexamined in light of changing conditions and new information. Planning, therefore, is a continuous, open-ended process. The plan provides the overall concept and policy framework for program and facility development. The action program identifies the implementation devices and strategies necessary to effectuate the plan.

Public Participation

The goals, objectives, policies, actions, and program priorities ultimately expressed in SCORP begin to be shaped early in the planning process through the identification of the changing needs of New York's people. To insure the plan is an accurate reflection of both current and projected recreational needs, the State has sought input from citizens, state and local governmental officials, and interest groups.

In order to assure maximum opportunity for public participation, OPRHP has:

- Implemented a General Citizen Survey
- Implemented a Park Professional Survey
- Implemented a Trail Maintainers Survey
- Formulated an interagency Working Group
- Coordinated with user groups

Additional input was obtained through the public review process for the Draft Plan. Comments have been considered and, where appropriate, included in the final Plan. The Plan will be available for review on OPRHP's web site.

The participation of the public by no means ends the fulfillment of the above activities. Citizens will continue to be asked, periodically, what their recreation preferences are and their opinions on recreational issues and delivery of services. It is a major purpose of the SCORP to accurately anticipate the public's needs; and, in doing so, to lay the groundwork necessary to maximize the public benefit of the dollars spent for recreation and open space. It is further a purpose of SCORP to assure that the natural resources that comprise the State Park System are properly conserved and managed.

Chapter 2 -Vision and Policies

Vision for Recreation in New York State

The vision for recreation in New York State is: "to provide a system of safe and enjoyable recreational and interpretive opportunities for all New York State residents and visitors and to protect and improve the quality of the valuable natural, historic and cultural resources." In meeting this vision, the quality of life will be improved with incentives for a healthier life style and economic vitality. This vision establishes a direction and leadership role for the State in providing a "greener" environment.

Policies and Strategies

The direction for recreation in New York State is guided by ten statewide policies of which seven have been in place since the last SCORP and are still considered relevant. These policies provide direction and support for the protection and management of natural, cultural and recreational resources. The last two are considered supportive. The policies can be grouped into the four major initiative areas that respond to the current issues impacting the State's natural, cultural and recreational resources and that are consistent with OPRHP priorities. The policies will provide a strong, statewide structure to support specific actions and administrative and legislative decisions. Action strategies that support the policies are identified in the SCORP Technical Report.

Cherry Plains State Park, Rensselaer County

Revitalizing our Parks and Historic Sites

- Improve recreation and historic site operation, maintenance and resource management practices.
- Improve and expand water-oriented recreation opportunities.
- Apply research techniques and management practices to improve and expand parks, trails and other open spaces.

Natural Resource Stewardship and Interpretation

- Preserve and protect natural and cultural resources.
- Support compatible recreation and interpretive programs.

Creating Connections beyond the Parks

- Develop comprehensive, interconnected recreationway, greenway, blueway and heritage trail systems.
- Protect natural connections between parks and open space areas.
- Improve access to opportunities for regular physical activity that is in close proximity to where people live, work and/or go to school.
- Improve cooperation and coordination between all levels of government and the private sector in providing recreational opportunities and in enhancing natural and cultural resource stewardship.

Sustainability

- Employ ecosystem-based management to ensure healthy, productive and resilient ecosystems which deliver the resources people want and need.
- Improve and expand the statewide commitment toward environmental sustainability in all parks, recreation and historic sites and support facilities.

Chapter 3 - Trends, Issues and Needs

The 21st century has brought many challenges in meeting the recreation needs and desires of the citizens of New York State and its visitors. The State is part of a dynamic system that is constantly changing. As the population composition, land use and environmental conditions change, so do the types and demands for recreation activities and available resources. To project future demand for recreation, all the factors need to be considered. This includes an assessment of existing recreation supply, participation rates, demand, demographics, and issues and trends.

Population Trends

New York State is the third most populous state in the United States with a population of 18.9 million in 2000 and a projected population of 19.2 million in 2005. The population level will remain fairly level through the year 2025.

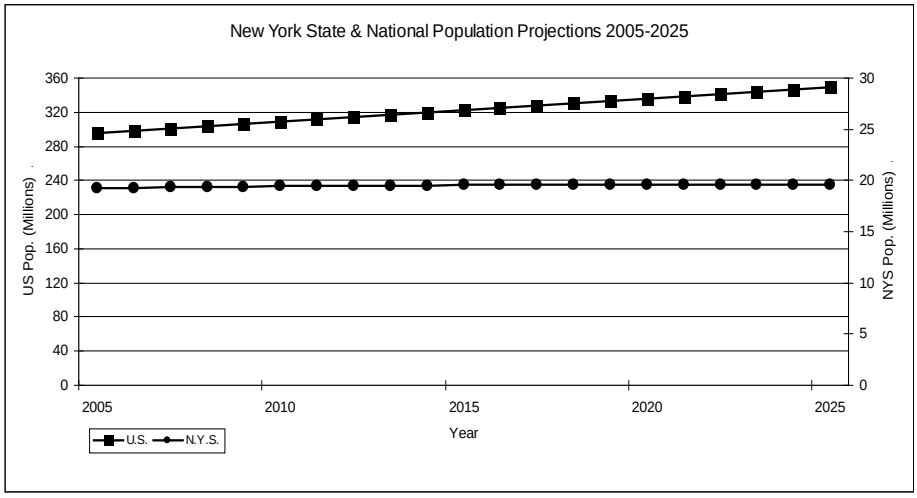
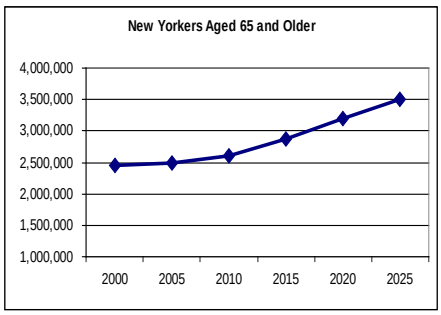


Figure 3 - NY vs. US Population Growth

Aging

The baby boom generation (those born from 1946 to 1964) will transition from being the most elderly part of the workforce to retirement. By 2025, the youngest baby boomer will be 61 years old. For recreation providers, this means a trend away from activities typically associated with youth: team sports, court games and other high physical activities and a growth of other activities such as golf, relaxing in the park, walking, and other passive activities. Although New York's population is increasing slightly over the projected period, the number of senior citizens is increasing dramatically.



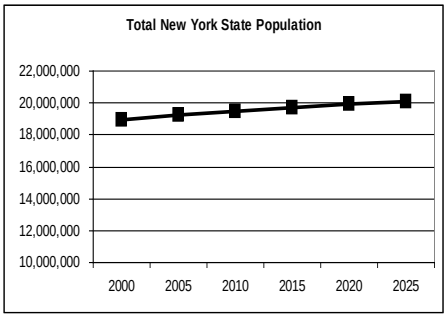


Figure 4 - New York State's Aging Population

Youth

While there has been a focus on research devoted to meeting the recreation needs of senior citizens because of the aging of the population, there is also a need to improve the quality and quantity of recreational experiences of younger New Yorkers as well.

Today's youth are spending less time participating in outdoor recreational activities. This is a factor in the rise of obesity and associated health concerns. There is a need to increase the public's awareness and value of connecting children and nature toward a goal of improving the knowledge of our state's natural resources and health and welfare of the present and future generation of our youth.

Finally, the rewards of participation in recreation by youths can last a lifetime, providing not only physical, but emotional and psychological benefits as well.

Urban Areas

There are 61 cities in New York State. Not including New York City, 2 million people live in these cities. However, most of the cities, particularly those in the "rust belt" (that portion of America most affected by the decline of manufacturing) are losing population. However, with the aging of population and change in living styles by the younger working class, there is renewed interest in residing in urban areas that provide services and cultural opportunities. Revitalization of these areas should be guided by smart growth principles. Past development and transportation practices will need to be revisited to make communities more walkable and pedestrian friendly.

Universal Accessibility

Approximately 20.6% of the New York State population above the age of 5 is considered to have a disability. Providing recreational opportunities to this segment of the population will require existing and future recreation facilities to be universally accessible.

Composition of the Population:

The population of New York State will increase very slightly over the next twenty years, but the composition of this population will be quite different from what it is today. Higher birth-rates among minority populations as well as immigration will continue to increase ethnic diversity. The recreation preferences of minority groups can be different from those of the previously more dominant ethnic groups. Facility design, signage and public awareness will need to consider the populations being served.

Research has shown that on the federal level, minority groups are under-represented among the visitors to national parks. A number of reasons for this have been proposed. One is that both majority and minority groups have an equal affinity to experience the outdoors but, with other things being equal, minority groups having less income, have less money available to spend on recreation. Another theory holds that there are historic and cultural reasons why minority groups may not wish to participate in traditional recreational activities to the extent that the majority does.

Leisure Time:

Recent research has shown a decrease in the number of hours devoted to work over the past generation. However, it has been noted that passive, indoor activities such as watching television have increased at an even greater rate, thus decreasing the availability of the increased leisure time for outdoor activities. It has also been noted that the time devoted to outdoor recreation has increasingly been occurring during peak hours causing increasing pressure on limited resources.

Social Conditions:

There continues to be a decrease in the average household size and an increase in single parent households. This has an impact on the amount of leisure time. The economic gap between the affluent and the poor continues to increase. As a result activities with high entry costs, such as golf and downhill skiing, will decrease in total participation.

Energy:

The future of travel, tourism and recreational activities dependant on gasoline will become more uncertain due to cost and availability. This can impact such recreational activities as snowmobiling, ATV usage, boating and camping. As a result, there will be an increase in non-fuel related activities.

Climate Change:

Climate change will undoubtedly impact the landscape, environmental resources and recreational activities. The composition of the fauna and flora may change. The warming of the climate can impact both winter and summer activities. The potential rise in sea level will impact water related facilities and ecosystems. The impacts will need to be considered in the future location and design of recreational facilities.

Where the public stands on recreation and conservation issues:

As part of the 2004 General Public Recreation Survey, the public was asked its opinion on issues related to recreation and conservation. Given nine statements, the respondents indicated the degree to which they agreed or disagreed. A similar set of questions was asked, in 2005, of the municipal officials throughout the state. Both groups showed support, in varying degrees for all these issues as indicated by the ranking of the issues from 1 highest to 9 lowest.

Table 1 - Issues Regarding Recreation in New York State

Issue	General Public	Municipal Officials
More money should be spent on public park maintenance and repair.	1	1
More land should be purchased by government to preserve open space.	2	8
Government should increase/create additional public access to water resources such as lakes, streams, beaches and oceanfronts.	3	4
Federal financial assistance to support state and local recreation development and land acquisition should be increased.	4	3
Government should increase spending for development of recreation facilities, e.g. pools, marinas, trails, campgrounds, etc.	5	3
Public/private partnerships should be considered to expand and develop recreational facilities.	6	2
More land should be purchased by government for recreation.	7	7
Government should preserve more open space by means other than acquisition, e.g. easements, zoning, etc..	8	6
Patrons should help support programs and services that have been provided through government subsidies in the past.	9	n.a.

Recreation Supply

There are over 14,000 public and private recreation sites within New York State. OPRHP's facilities inventory maintains information on the location of each of these sites and the number and types of recreation facilities each provides.

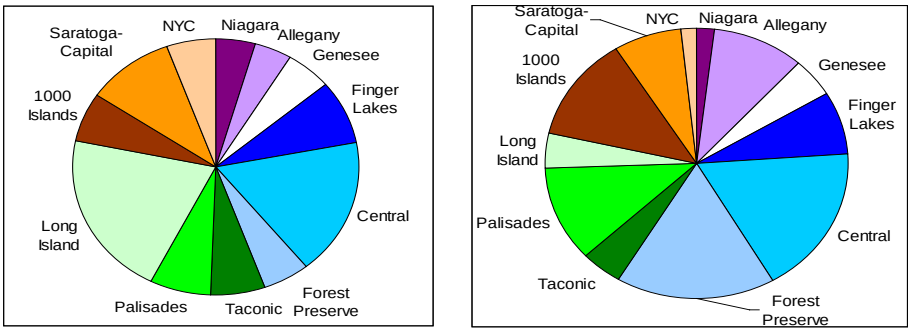
There are fewer facilities operated by State agencies as compared to other operators but the sites are larger in acreage. Commercially operated sites account for about one-quarter of the total sites but are generally smaller in acreage than government run facilities. An important difference between these two groups is that one function of the government is to provide recreation opportunities of various types and locations which are not profitable for the private sector. This would include large areas that are set aside for conservation and passive recreation.

There is a considerable difference in the distribution in the number of recreation sites and recreational acreage through the state. The table and charts show this information by OPRHP regions:

Table 2 - Recreation Facilities in New York State by OPRHP Region

The table to the right includes only sites presently on the Outdoor Recreation Inventory. Note that not all sites reported acreage. The state acreage figure in the chart below does not include 2.7 million acres in the Forest Preserve within the Adirondack and Catskill Parks.

Region	Number of Sites	Acreage
Niagara	397	43,106
Allegany	370	220,553
Genesee	480	106,866
Finger Lakes	738	166,243
Central	1,536	399,333
Forest Preserve	495	383,487
Taconic	535	100,657
Palisades	644	251,360
Long Island	1,867	98,210
1000 Islands	547	276,942
SaraCap	902	163,139
NYC	509	39,421



Number of sites by Region

Acreage of Sites by Region

Figure 5 - Number and Acreage of Sites by Region

Figure 6 - OPRHP State Park Regions

Recreation Demand

The demand for recreation facilities is derived from the general public survey that addressed levels of participation and attitudes toward recreation/open space issues. This was supplemented through a survey of the local governmental park professionals which focused on facility needs, issues and trail concerns.

Relaxing in the park continues to be the recreation activity enjoyed by most New York residents. This is followed by walking/jogging, visiting museums/historic sites, swimming and biking. However, the walking/jogging experiences the highest total of activity days followed by relaxing in the park, swimming, visiting museums/historic sites, and biking.

Table 3 - Participation Rate Changes

Activity	2005 Number of Participants	2025 Number of Participants	2005 Activity Days	2025 Activity Days	% change Participants	% change Activity Days
Relaxing in the Park	12,495,807	12,994,075	104,170,358	109,449,437	3.99%	5.07%
Swimming	7,193,165	7,201,111	60,966,850	60,309,198	0.11%	-1.08%
Biking	5,148,247	5,304,582	51,482,470	53,047,831	3.04%	3.04%
Golfing	2,031,215	2,044,693	22,215,328	22,521,577	0.66%	1.38%
Walking/ Jogging	10,259,380	10,704,563	347,294,417	366,896,973	4.34%	5.64%
Tennis	1,734,461	1,751,914	8,140,674	8,245,728	1.01%	1.29%
Court Games	3,947,521	3,943,761	36,507,669	36,759,810	-0.10%	0.69%
Field Games	3,015,000	2,969,291	33,723,802	33,582,420	-1.52%	-0.42%
Visiting Museums/ Historic Sites	9,279,275	9,766,268	54,959,437	58,611,800	5.25%	6.65%
Camping	4,314,756	4,261,150	24,156,268	23,667,935	-1.24%	-2.02%
Hunting	1,003,858	1,027,296	7,702,896	7,790,958	2.33%	1.14%
Hiking/ Backpacking	3,084,106	3,080,203	20,821,392	21,068,539	-0.13%	1.19%
Boating	4,296,624	4,327,552	24,665,177	24,618,653	0.72%	-0.19%
Fishing	2,917,010	2,883,353	16,763,916	16,470,258	-1.15%	-1.75%
Local Winter	4,956,576	4,954,269	19,386,352	19,164,445	-0.05%	-1.14%
X Country Skiing	1,084,119	1,105,715	4,456,481	4,531,456	1.99%	1.68%
Downhill Skiing	1,252,905	1,223,477	6,400,664	6,366,777	-2.35%	-0.53%
Snowmobiling	762,384	722,935	2,109,036	2,003,940	-5.17%	-4.98%

In 2005, the New York State Office of Parks, Recreation and Historic Preservation collected data from approximately 2,300 individuals on participation in outdoor activities and attitudes toward environmental and recreational issues. As part of the General Public Recreation Survey, New Yorkers were asked what recreation facilities they felt were needed within 30 minutes of their home. Similarly, also in 2005, park professionals and local government officials were asked about the need for recreation facilities in their community. The results, while similar, did show some differences:

Table 4 - Recreational Facilities Needed

Expressed Need	General Public	Park Professionals
In the columns to the right, the top five facility needs expressed by each group are listed in order of need.	Swimming Pools/Beaches	Trails
	Trails	Facilities for picnicking
	Facilities for picnicking	Nature study facilities
	Playgrounds	Fields for sports
	Open Space	Fishing access points

Recreation Need

Recreation need considers the supply of recreation facilities and the level of participation (demand) in estimating how this level of participation will change, both geographically and quantitatively in the future. The "Relative Index of Needs" translates this need by county into a numerical scale, +10 the highest level of need and +1 the least. Five is considered the statewide average in the current year (2005). In all cases, there is a future need for all activities but the relative level will be different among activities and counties.

One of the factors used in calculating the Relative Index of Needs is the current and projected population of New York State by age and county. These figures are available from estimates developed by Cornell University together with the U.S. Census Bureau. The Relative Index of Needs also takes into account the fact people travel for recreation by using available information on the location of parks and other recreation facilities. Comparing the number of future recreationists at the destination counties with the availability of present facilities helps to project the future needs for both new and rehabilitated facilities.

As mentioned above, the relative index of needs depends on a number of input variables for which reliable data must exist. If the input variables for the calculations cannot be determined with a reasonable degree of accuracy, the outputs of the equations will not be accurate. For some activities, not enough participants responded to the 2004 General Public Recreation Survey. For other activities, the data on the supply side, that is location and quantity of recreation facilities, were inadequate. Another possible data shortfall could be a lack of information on willingness to travel to participate in an activity. For these reasons, relative index of need figures were unfortunately not computed for certain activities, e.g. surfing, ATV riding, and birding, although these were included in the 2004 General Public Recreation Survey.

Due to the low level response for some activities, an alternate means is utilized to provide a RIN at the county level for grant rating purposes. In these cases, an estimated RIN can be calculated on an *ad hoc* basis using information from the available RIN table. For instance, if a RIN figure were needed for ATV activity, its value might be estimated by averaging the values in the snowmobiling column with those in the hiking column. While ATV use is distinct from both of these activities, there are certain commonalities. ATV use appeals to participants that enjoy using vehicles to explore the outdoors and, at the same time, often requires the availability of trails such as those that are enjoyed when hiking. This approach, while not optimal, would provide an approximation of real-world needs. If this methodology is applied, the inputs will be determined by OPRHP and maintained for future use so that figures are applied consistently through time.

While this figure is valuable in looking at the big picture, often, the number presented for the county represents an average for the county as a whole and the actual need is not homogeneous within a county. As a simple example, a county may have a river or other natural resource that would attract great numbers of recreationists with limited facilities while at the same time having largely undeveloped areas elsewhere in the county that satisfy the recreational needs in those locations. The county-wide figure would consider both areas. It would over-estimate the needs in certain areas of the county and under-estimate it in others. Nonetheless, the Index of Need is relevant in comparing one county to another.

The "relative index of needs" is a valuable tool to determine need for facilities at geographic areas over the next twenty years, but other factors can and should be taken into account for any final decisions.

Abbreviations used in the Relative Index of Need Table

Park – Relaxing in the park, picnicking, playground use, other generic day use.
Swim - Outdoor swimming, either pool, lake, ocean or other
Bike - Non-motorized use of bicycles on trails, paths, off-road or highways for recreational purposes.
Golf – Golfing on either regulation 18 or 9 hole courses, par 3 and pitch and put courses.
Walk – Walking/Jogging on paths and trails. Walking for pleasure, generally requiring less equipment than hiking.
Tenn – Outdoor tennis on any type of surface.
Cort – Court Games, includes basketball, handball and similar sports.
Fild – Field Games, includes baseball, football, soccer and other similar sports.
Equine - Horseback riding
Hist – Visiting historic sites, museums, etc.
Camp – Camping including tent, RV camping and backpacking.
Hike - Hiking, usually along established trails for greater distances than what is considered in the walking for pleasure category.
Boat – Boating including canoeing, sailing, motorboating, rowboating.
Fish – Fishing, Salt and Fresh Water fishing from either shore or a boat.
LocW – Miscellaneous local winter activities: Ice Skating, Sledding, Hockey
Xski – Cross country skiing and snowshoeing
Dski – Downhill skiing
SnoM – Snowmobiling

Table 5 - Relative Index of Need (10-high; 5-statewide average; 1-low)

Index of Needs	Park	Swim	Bike	Golf	Walk	Tenn	Cort	Fild	Equine
Albany	3	5	6	5	6	4	3	4	6
Allegany	4	4	3	4	2	3	4	6	4
Bronx	8	7	10	6	10	6	7	9	10
Broome	3	5	5	5	8	4	3	4	5
Cattaraugus	3	4	3	4	2	3	4	4	4
Cayuga	3	4	4	4	3	4	3	3	5
Chautauqua	3	4	3	4	3	4	3	4	4
Chemung	3	5	4	4	4	3	3	4	5
Chenango	3	4	3	4	2	3	3	4	4
Clinton	2	3	4	4	3	4	4	3	4
Columbia	3	4	4	4	2	3	4	4	5
Cortland	3	4	4	4	3	3	4	5	5
Delaware	3	4	4	4	2	3	3	4	4
Dutchess	4	5	6	5	5	4	5	5	6
Erie	3	7	7	6	7	4	3	3	8
Essex	3	3	3	4	2	3	4	4	3
Franklin	4	4	3	4	2	3	4	5	3
Fulton	3	4	4	4	4	3	3	3	4
Genesee	3	4	4	4	3	3	3	3	5
Greene	3	4	4	4	3	2	3	4	5
Hamilton	1	3	3	3	1	1	2	2	3
Herkimer	3	4	3	4	3	3	3	4	4
Jefferson	3	4	3	4	3	3	3	4	5
Kings	10	7	10	7	10	6	7	10	10
Lewis	3	3	3	4	1	4	4	4	3
Livingston	5	5	4	4	3	4	4	7	6
Madison	3	4	4	4	3	3	3	4	4
Monroe	9	8	7	5	7	6	5	8	10
Montgomery	3	4	4	4	3	3	3	4	4
Nassau	7	6	9	6	7	5	7	6	10
New York	10	7	10	6	10	6	7	10	10
Niagara	3	6	5	5	6	4	4	4	7
Oneida	3	5	4	4	4	4	3	4	5
Onondaga	4	6	5	5	6	4	3	4	7
Ontario	4	5	4	4	4	4	4	5	6
Orange	5	7	7	5	6	4	4	6	7
Orleans	4	4	4	4	3	4	3	5	6
Oswego	3	4	4	4	3	4	3	4	5
Otsego	3	4	3	4	2	4	4	4	5
Putnam	5	5	6	5	5	5	4	6	6
Queens	10	8	10	6	10	6	7	10	10
Rennselaer	3	5	5	5	4	4	3	4	5
Richmond	10	7	10	6	10	6	5	10	10
Rockland	5	6	8	5	7	6	4	4	9
St. Lawrence	3	4	3	4	2	3	4	5	3
Saratoga	3	5	5	5	5	4	4	4	5
Schenectady	4	5	5	5	6	4	3	5	5
Schoharie	3	4	3	4	2	4	4	4	4
Schuyler	2	4	3	4	2	3	4	3	4
Seneca	2	4	3	4	3	4	3	3	5
Steuben	3	4	3	4	2	3	4	5	5
Suffolk	6	5	8	6	6	7	5	5	10
Sullivan	3	4	4	4	3	3	4	5	5
Tioga	3	4	3	4	2	4	3	4	4
Tompkins	3	5	4	4	3	4	4	4	5
Ulster	4	5	5	5	4	4	4	5	5
Warren	3	3	4	4	3	3	4	4	4
Washington	5	4	3	4	2	4	4	6	4
Wayne	4	6	4	4	3	4	4	5	6
Westchester	7	7	9	6	8	10	5	5	10
Wyoming	2	4	3	4	2	3	4	3	5
Yates	3	4	3	4	2	4	4	4	5

Table 5 - Relative Index of Need (10-high; 5-statewide average; 1-low)

Index of Needs	Hist	Camp	Hike	Boat	Fish	LocW	Xski	Dski	SnoM
Albany	4	6	6	7	6	4	6	5	5
Allegany	3	4	4	6	5	5	4	4	5
Bronx	8	10	10	6	6	10	10	10	10
Broome	4	5	6	7	5	3	6	5	5
Cattaraugus	3	4	4	5	4	6	4	4	5
Cayuga	3	5	6	4	5	3	6	5	4
Chautauqua	4	4	5	4	4	4	5	4	4
Chemung	3	5	5	6	5	4	5	5	4
Chenango	3	5	4	5	5	5	4	4	5
Clinton	3	4	4	4	4	5	4	4	5
Columbia	3	5	5	5	5	5	5	5	5
Cortland	3	5	5	5	5	4	5	4	5
Delaware	3	5	4	5	4	3	4	5	5
Dutchess	5	6	7	6	6	4	7	6	6
Erie	3	6	10	6	7	4	10	6	6
Essex	3	4	3	3	4	3	3	4	5
Franklin	3	4	3	4	4	4	3	4	5
Fulton	3	5	4	4	4	3	4	5	4
Genesee	3	5	6	5	5	3	6	4	4
Greene	3	5	5	5	5	4	5	5	5
Hamilton	2	4	3	3	4	2	3	4	4
Herkimer	3	5	4	5	5	6	4	4	5
Jefferson	3	4	5	3	4	4	5	4	5
Kings	10	10	10	6	6	9	10	10	10
Lewis	3	4	3	3	4	4	3	4	4
Livingston	3	5	5	6	5	7	6	4	5
Madison	3	5	5	4	5	3	5	4	4
Monroe	9	6	9	7	7	5	10	5	5
Montgomery	3	5	5	5	5	3	5	5	5
Nassau	6	10	10	5	6	5	10	9	10
New York	9	10	10	6	6	10	10	10	10
Niagara	3	5	9	5	5	5	9	5	5
Oneida	4	5	5	5	5	4	5	5	5
Onondaga	4	6	8	6	6	4	8	5	5
Ontario	4	5	6	5	5	4	6	4	5
Orange	5	7	7	7	6	4	7	6	6
Orleans	3	5	6	4	5	4	6	4	4
Oswego	4	5	5	4	5	4	5	5	4
Otsego	3	5	4	5	5	5	4	5	5
Putnam	5	6	7	5	5	7	7	6	5
Queens	10	10	10	6	6	8	10	10	10
Rennselaer	4	5	6	6	5	4	5	5	5
Richmond	9	10	10	7	7	8	10	10	10
Rockland	5	7	9	5	6	6	9	8	6
St. Lawrence	3	4	3	4	4	6	3	4	6
Saratoga	4	5	5	5	5	5	5	5	5
Schenectady	4	5	6	6	5	3	6	5	5
Schoharie	3	5	4	5	4	4	4	4	5
Schuyler	3	5	4	4	4	4	4	4	5
Seneca	3	5	5	4	5	3	5	4	4
Steuben	3	5	4	6	5	7	4	4	5
Suffolk	5	8	9	5	5	7	10	8	8
Sullivan	4	5	5	4	4	4	5	5	6
Tioga	3	5	5	5	4	5	5	5	4
Tompkins	3	5	5	5	5	4	5	5	5
Ulster	4	6	5	5	5	3	6	5	5
Warren	3	5	4	4	4	5	4	4	5
Washington	4	5	4	4	5	6	4	4	5
Wayne	4	5	6	5	5	4	6	5	4
Westchester	8	8	10	6	7	6	10	8	7
Wyoming	3	5	5	5	5	5	5	4	5
Yates	3	5	5	4	4	5	5	4	5

The data presented in the previous table can also be presented using a map, shading areas of greater need for recreational facilities darker and averaging the data spatially between the counties. As an example, the map shown below has done this using a weighted average of the relative index of needs for relaxing in the park, swimming and bicycling:

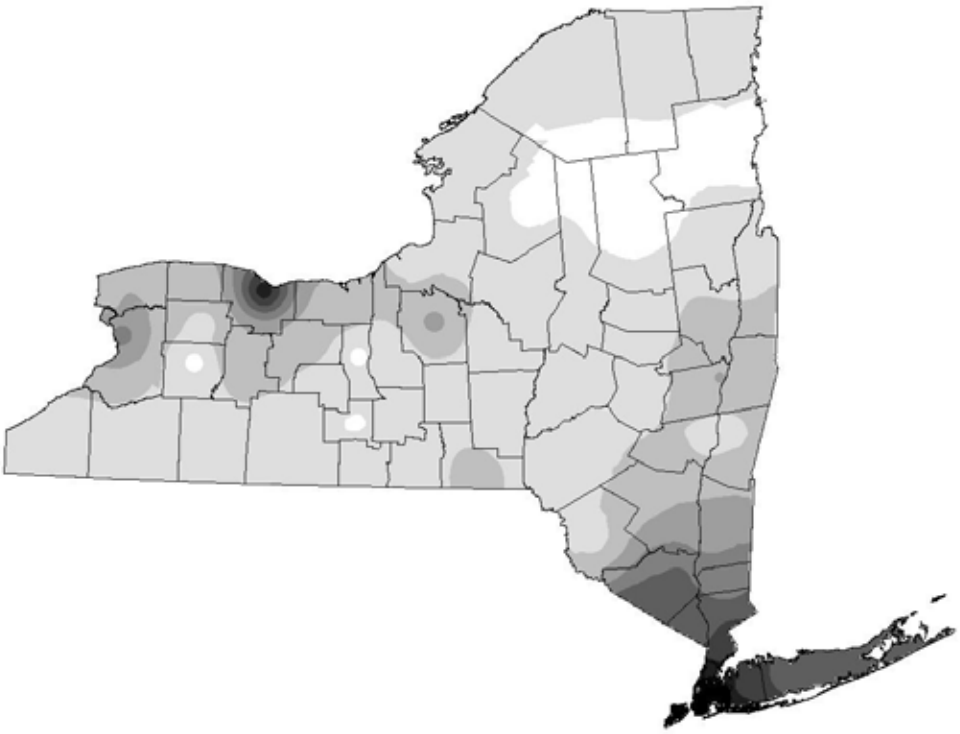


Figure 7 - Relative Index of Need Map

Chapter 4 - Land Conservation and Stewardship

Land Conservation

Recreation and open space provides numerous benefits to society, direct and indirect, short-term and long-term. There are both tangible and intrinsic values that together make it difficult to fully quantify the true benefits. Our quality of life depends on the surrounding environment and the use and conservation of the natural, cultural and recreational resources. This impacts the water, air, view sheds, forests, agricultural lands, seashores, heritage, solitude or in other words our well-being. There is also an economic value associated with open space and recreation that is associated with where we live, work and recreate. State Parks and Historic Sites alone generate an estimated $739 million in sales to local area businesses from visitor from out-of-state and $29.5 million is generated in tax revenues.

Open Space Conservation

The quality and character of the recreation opportunities within New York depend upon the quality and character of the land. Our mountains, lakes, rivers, forests and coastline, our natural landscapes, urban park and historic resources shape the way we spend our leisure time, affect the long term strength of our economy, determine whether we have clean air and water, support the web of living things of which we are a part, and affect how we think about ourselves and relate to other New Yorkers.

New York's fields, forests, waters and wetlands, however, are vulnerable to human intervention. We have the power to change the landscape, to conserve what is valuable to us as a people, or to destroy places which may be important to our future. How we manage change, how we protect and conserve open land and historic sites while providing space for the homes, commercial centers and industrial plants we need, will have a profound impact on future generations.

There are over 4 million acres of state open space areas with thousands of miles of boundaries throughout the state. Their primary focus is on the protection of important recreational, natural or cultural resources. However, assuring this protection goes beyond the borders. Habitats, watersheds, viewsheds and quality of experiences are not limited by man made boundaries. Therefore, sound land use of adjacent areas is important to ensure the quality of the resource. Although state agencies, local governments and non-for-profit organizations can protect some areas through acquisitions and easements, the solution is broader in scope. This includes an awareness and understanding of the need for protection and connections by the general public.

New York State's first Open Space Conservation Plan (OSP) was authorized by a 1990 Act of the State Legislature. It was prepared through a joint effort by the Department of Environmental Conservation (DEC) and the Office of Parks, Recreation and Historic Preservation (OPRHP), working with nine Regional Advisory Committees (RACs) appointed jointly by the State and local governments.

The 2006 OSP builds on the 2002 OSP. Similar to past versions, the OSP proposes what open space and historic sites should be protected for New York State's future and describes how we can conserve and manage these resources in a sensible and affordable way. The OSP does not confine itself to public land acquisition, but recognizes that encouraging private land stewardship is also important. The OSP recognizes that

For purposes of the Open Space Conservation Plan, open space is defined as land which is not intensively developed for residential, commercial, industrial or institutional use.

Open space can be publicly or privately owned, including agricultural and forest land, undeveloped shorelines and scenic lands, public parks and preserves and may contain water bodies such as lakes and bays.

What land is defined as open space depends in part on its surroundings. A vacant lot or a small marsh can be open space in a big city. A narrow corridor or pathway for walking or bicycling is open space even though it is surrounded by developed areas.

And while not strictly open space, the OSP also discusses cultural and historic resources which, along with open space, are part of the heritage of New York State.

Figure 8 - Definition of Open Space

open space conservation efforts must be fiscally prudent and they must be pursued in all fiscal climates; because, once developed, forests and fields, lakeshores and seashores will seldom, if ever, be open land again. Similarly, once destroyed, historic and archaeological sites cannot be replaced.

In order to suggest the policies and actions which define the kind of New York we leave for those who follow us, the OSP brings together: 1) an objective analysis of the State's resources; 2) the knowledge and insight of professionals inside state agencies; and most importantly, 3) the informed and valuable ideas of the public, local government and the private sector.

Goals of the Open Space Plan

The Open Space Conservation Plan identifies nine goals. The primary strategy for achieving these goals is for the State government to work cooperatively and in partnership with local governments, the federal government, not-for-profit organizations, the private sector and individual property owners to conserve a cohesive framework of open space around which all New Yorkers can build better, more rewarding lives.

While the acquisition of public land and easements by the State is part of this strategy, it is central to the recommendations of this OSP that land acquisition by the State is only one of several tools for conservation of open space. Most of New York State's open land is not, nor should it be, publicly owned. Rather it should include working landscapes managed by farmers, woodland and shoreline owners and nonworking open space maintained by private organizations and citizens. In this context, it should be clear that when the OSP discusses conservation of land or creation of a framework of open space it does not always imply acquisition by the State.

The State, working in cooperation with others, should continue to focus its attention on conservation of the high priority open space projects described in the OSP. Conservation of these areas, before they are lost forever to subdivision or development, has been determined to be critical to achieving the goals of the OSP. The approach to land conservation recommended by the OSP is complex and involves not just land protection but also ongoing care, management and stewardship.

Accomplishments

The State Open Space Conservation Plan has guided an unprecedented level of investment, and subsequent achievement, in a variety of open space protection projects by the State, often in partnership with local governments, non-profit conservation organizations and private landowners. The OSP has helped guide the expenditure of more than $700 million to protect more than 1 million acres since its inception, nearly a twenty percent increase in State land holdings since 1995.

The State's Environmental Protection Fund has grown to $250 million annually for a variety of important State and local environmental programs, including funding for State-level land acquisitions and stewardship, farmland protection programs and local park projects.

Highlights include the largest land conservation agreement in the State's history: a monumental working forest conservation easement with the International Paper Corporation covering nearly 260,000 acres of land within the Adirondack Park, in 21 separate tracts covering 34 towns in 9 counties. The deal will simultaneously protect the forest resource on these lands forever (and all the benefits that are derived from forests including superior water quality and wildlife habitat), require sustainable forestry, restrict non-forestry related development on the property, provide new public access and recreational opportunities and enhance the local tax base.

Many other important open space acquisitions have been made during this time period, from the Pine Barrens of Long Island, to remote wilderness areas in the Adirondacks and Catskills, to waterfront properties along the Great Lakes, Lake Champlain and Lake George. Exciting new urban parks in New York City, including the Hudson River Park, and new State Parks in Western New York and on Long Island have been acquired and developed for public use and enjoyment.

Since 2002, the EPF has also provided $2 million to land trusts throughout New York to work with private landowners and local communities to help save important open space resources.

Through the State's Clean Water State Revolving Loan fund, the Environmental Facilities Corporation has administered low interest loan funding for the acquisition of fee and easement on about 76,000 acres of land within the New York City watershed in the Catskills and Westchester County, and on lands protecting the aquifer that supplies clean water for Long Island residents.

Through the Department of State's (DOS) Coastal Management Program (CMP) and the Local Waterfront Revitalization Program funded by the EPF, dozens of coastal and inland waterfront communities have prepared comprehensive plans and implemented programs to conserve valuable natural resources and enhance public access while redeveloping their waterfronts and coast lines. $83 million in Stewardship funding from the Environmental Protection Fund also has helped augment available funding to ensure that existing and newly acquired lands are properly cared for and opened to public use and enjoyment.

The State has secured more than $10 million in federal Forest Legacy funding for a variety of forest land conservation projects identified in the Open Space Plan, including Sterling Forest, East Branch Fish Creek, and the Adirondack Lakes project. These funds, administered by the United State Forest Service, are focused on conserving forest resources for environmental and economic benefit and are used to augment funding available from the State's Environmental Protection Fund.

Sterling Forest State Park, Orange and Rockland Counties

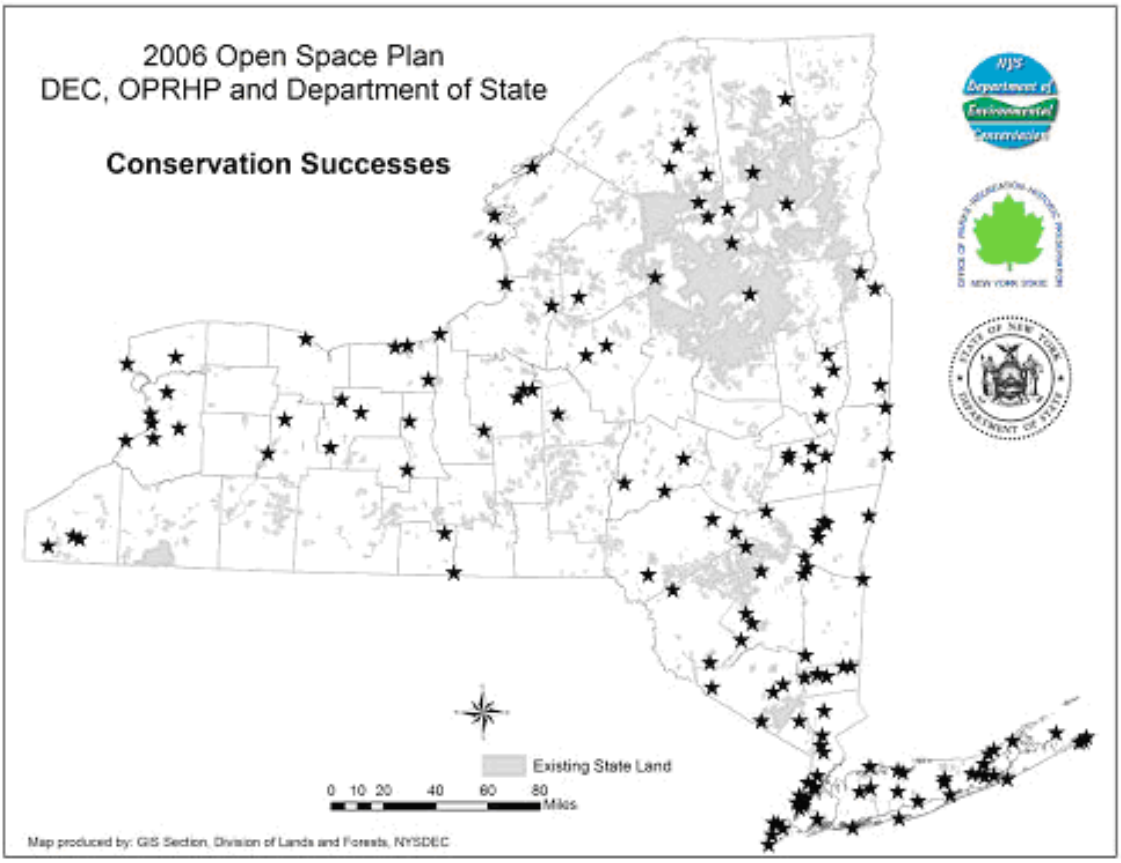


Figure 9 - 2006 Conservation Successes

Priority Projects

The open space planning process identifies projects, which deserve immediate conservation attention from DEC, OPRHP and their partners in land conservation. These projects have been identified as a result of:

- An analysis by agency staffs of New York State's resources including hydrology, rare and endangered species, population and density, water supplies, existing State land ownership patterns, recreational and cultural resources preservation needs;
- The recommendations of the Regional Advisory Committees;
- Recommendations of those testifying at public hearings or providing written comments on the draft OSP;
- Geographic distribution across the State.

Taken together, the list of projects represents the best current thinking regarding those places, which should be conserved to achieve the goals of the OSP and to protect the open space heritage of the people of New York State. The priority projects, however, only represent a small number of those projects identified through the public input process. The selectivity in identifying priority projects is required by fiscal prudence and by the basic approach of the OSP, which suggests the need to establish clear priorities for open space conservation.

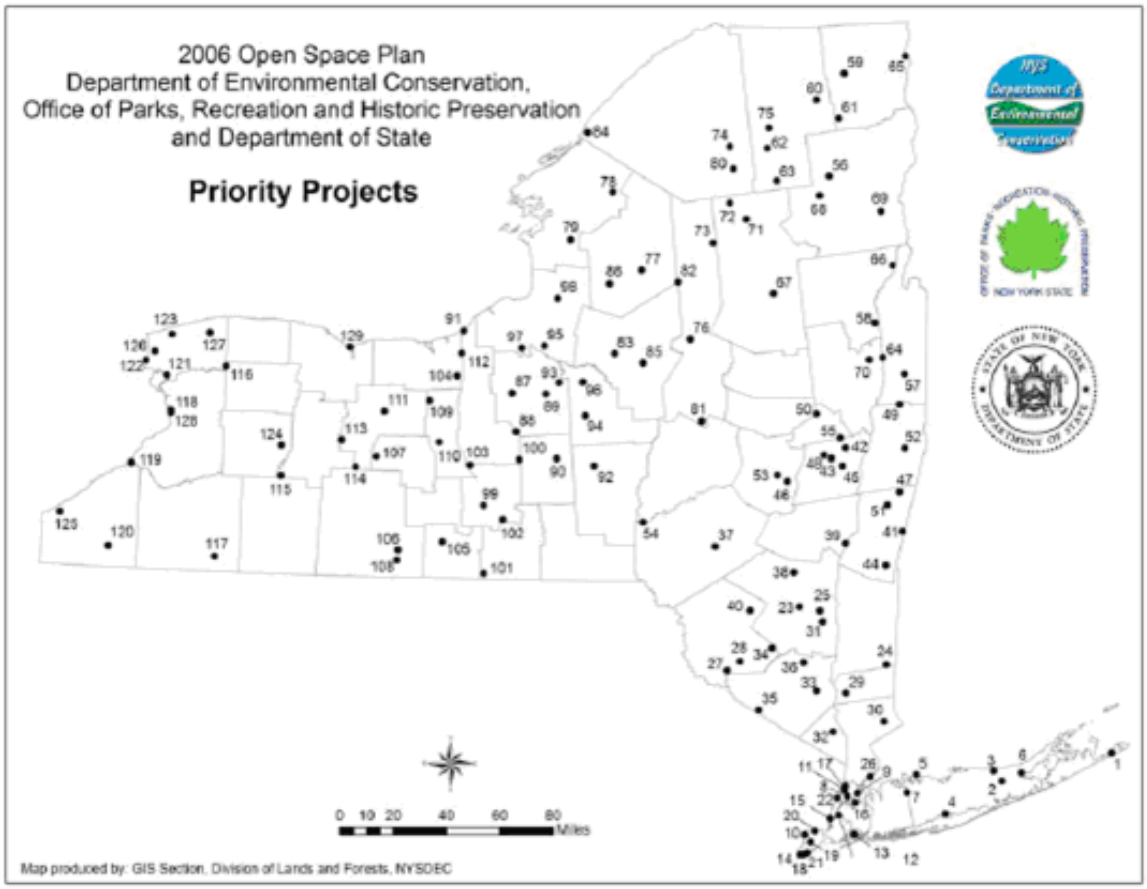


Figure 10 - 2006 Priority Projects

Coastal and Estuarine Land Conservation Program

The Coastal and Estuarine Land Conservation Program (CELCP) is a federal initiative established in 2002 to protect coastal and estuarine areas with significant conservation, recreation, ecological, historical, or aesthetic values. Priority is given to lands with significant ecological value, those that can be effectively managed, and which are threatened by imminent conversion.

In order to qualify for funds under this program, coastal states must develop a CELCP plan that provides as assessment of priority conservation needs and clear guidance for nominating land conservation projects. State CELCP plans are developed and submitted by the state's coastal management program in conjunction with other state or federal agencies involved in coastal land acquisition, conservation, or management; any National Estuarine Research Reserves in the state; and other interested parties.

The Department of State, working closely with its state partners in open space protection - the Department of Environmental Conservation and the Office of Parks, Preservation and Historic Preservation - developed a CELCP plan that was included in the 2006 New York State Open Space Conservation Plan. With completion of the expanded Open Space Conservation Plan that includes the State's CELCP plan, New York is eligible to compete for National Oceanic and Atmospheric Administration funds for the acquisition of coastal and estuarine lands.

New York's CELCP priorities are protecting tidal and freshwater wetlands, coastal floodplains, coastal erosion hazard areas, significant coastal fish and wildlife habitats, wild and scenic rivers, and lands suitable for providing coastal-based recreation and water-related access. The CELCP plan also establishes New York's priority coastal and estuarine waters as the Long Island marine district (Peconic Estuary, Long Island Sound, and the Long Island South Shore/Atlantic Ocean), the Hudson - Raritan Estuary, the Hudson River Estuary, the Great Lakes (Lake Erie and Lake Ontario), and the St. Lawrence River.

Farmland Protection

The State has two major programs in place to prevent the conversion of agricultural land to nonfarm uses. The Agricultural Districts Program and the Agricultural and Farmland Protection Program are complementary approaches to maintaining land in active agricultural production. The former relies on voluntary landowner initiative and municipal and state government cooperation to protect active farm operations from the threats of conversion; the latter actually seeks to preserve the land base where the benefits and protections available through agricultural districting may not be sufficient to overcome local development pressure.

The Agricultural Districts and Agricultural and Farmland Protection Programs are critical components of the State's overall land protection and open space programs. Farmland protects valuable open space and associated intrinsic benefits and supports the many farm businesses across the state. It contributes to scenic vistas and provides recreational opportunities including hunting, fishing and trail activities. Farms help to preserve the State and local heritage while providing educational and interpretive opportunities. The farming industry also contributes to the economy by supporting agro- and eco-tourism. They will continue to play an important role as the State continues to expand its goals for protection the rural character and associated open space across its many regions.

Agricultural Districts Program

New York's Agricultural Districts Law (Article 25-AA of the Agriculture and Markets Law) was enacted in 1971 to protect and conserve the State's agricultural resource base. The Agricultural Districts Program has its foundation in Article XIV of the State Constitution which concludes that it is the policy of the State "...to conserve and protect its natural resources and scenic beauty and encourage the development and improvement of its agricultural lands for the production of food and other agricultural products." The Constitution recognizes that agricultural lands are a necessary and irreplaceable resource that must be protected to assure economic stability and growth within the agricultural industry.

The Agricultural Districts Law prescribes a locally-initiated program involving both land owners and local governments. The Program is based on the principle that land will remain in agricultural production only insofar as an economic and land use climate exists which encourages farmers to remain in farming.

Agricultural and Farmland Protection Program

The Department of Agriculture and Markets is successfully implementing New York's Farmland Protection program, working closely with local governments and farmers to preserve over 50,000 acres of productive farmland, using $116 million in State funds

that has leveraged significant private donations. It also has worked proactively to develop alternative methods to preserve farmland in areas that have not yet experienced strong development pressures.

Stewardship

Natural Resource Stewardship and Interpretation

State lands provide habitat for an incredible diversity of plants, animals, and ecosystems, many of which are rare or endangered. Proper stewardship of these natural resources is achieved through:

- Understanding Biodiversity
- Inventory and identification of ecological communities and habitats.
- Designation of important communities and habitats.
- Management of communities and habitats.
- Regulations for the protection of communities and habitats.
- Interpretation and education of ecological systems and their importance.

Understanding Biodiversity

Biodiversity is a shortened form of the term "biological diversity." As defined by the premier ecologist, Edward O. Wilson, it is simply the variety of all life on earth. There are several components to this variety including species diversity, genetic diversity and ecosystem diversity. An ecosystem is comprised of a geographical location, its physical features and the organisms that survive and interact there.

Loss of habitat, loss of species, or pollution can result in a reduction in the number and complexity of interrelationships between organisms and their environments. Scholars believe that we are currently experiencing extinction rates rivaling or exceeding the rates of the prehistoric mass extinctions. Mass destruction attributable to our own species is apparently unique in the earth's history. Biodiversity loss does not just mean that certain species are going extinct. As population sizes and the numbers of populations decrease, genetic diversity is lost as well. The net result may be that major ecosystems may become imbalanced and crash.

Inventory and Identification

In order to protect natural resources and biodiversity, it is critical to know what exists and requires protection.

The NY Natural Heritage Program (NYNHP) is a partnership between NYS DEC and The Nature Conservancy (TNC). Its mission is to enable and enhance conservation of rare animals, rare plants, and significant natural communities (which are basically different types of forests, wetlands, grasslands, etc.). The NYNHP accomplishes this mission thorough field inventories, scientific analyses, and New York's most comprehensive database on the status and location of rare species and natural communities.

Currently, the NYNHP monitors natural community types, rare plants and animals, and animal concentration areas across New York, and keeps information on locations where these species and communities are found. The information is used by public agencies, the environmental conservation community, developers, and others to aid in land-use decisions. The information is used for prioritizing those species and communities in need of protection and for guiding land-use and land-management decisions where these species and communities exist.

Ecological Communities of New York State, published by the NYNHP in 1990, classified and described ecological communities (such as forests, wetlands, and other habitat types) representing biological diversity in the state. The report quickly became the primary source for community classification in the state. A draft revised and expanded edition (Edinger et.al. 2002) is available at http://www.dec.ny.gov/animals/29392.html.

The NYNHP has published online comprehensive fact sheets ("Conservation Guides") about individual rare species and natural community types designed to help land managers, decision-makers, planners, scientists, consultants, students, and the interested public better understand the biodiversity that characterizes New York.

DEC has also provided a new Environmental Resource Mapper online at http://www.dec.ny.gov/animals/38801.html. This interactive mapping application shows the general areas where rare animals, rare plants, and rare and significant natural communities have been documented by the NYNHP. The Environmental Resource Mapper also displays locations of New York regulated freshwater wetlands and of protected streams, rivers, and lakes. These maps are intended as one source of information for landowners, land managers, citizens, local officials, and project sponsors engaged in land use decision making, conservation, or environmental assessment.

Designation

One tool to enhance protection of biodiversity resources is designation of special areas or species to increase the public's awareness for the need for management and protection. Two relatively new designation programs are highlighted in this section.

The New York State Bird Conservation Area (BCA) program and the Natural Heritage Areas program are designed to increase the public's awareness for the need for management and protection. The BCA program is the first of its kind in the United States and is modeled after the National Audubon Society's Important Bird Areas Program, which recognizes special bird habitats on both private and public lands across the country. The BCA program seeks to "safeguard and enhance" bird populations and their habitats on state-owned lands and waters.

The Natural Heritage Areas program heightens awareness of state-owned land that supports important natural heritage resources and to better ensure stewardship of those areas compatible with the long-term conservation of these resources. OPRHP designated the first Natural Heritage Area (NHA) at Moreau Lake State Park in 2006 as part of its master planning process. In 2007, DEC designated its first NHA at Tivoli Bays Wildlife Management Area in the Hudson Valley. It is expected that additional designations will be forthcoming in the ensuing years.

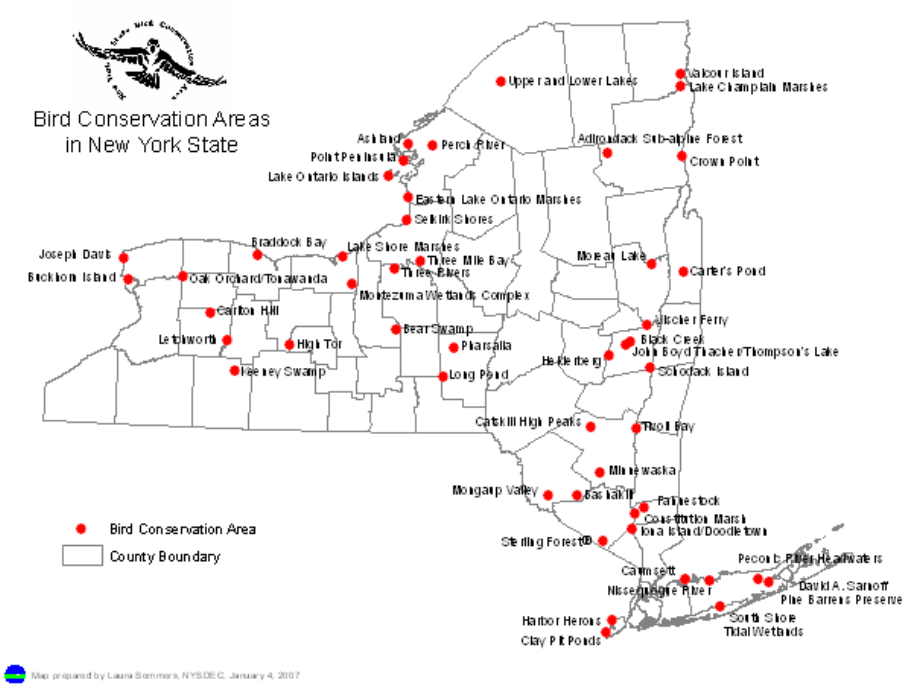


Figure 11 - New York State Bird Conservation Areas

American Woodcock

Management

Management actions required to protect and perpetuate ecological systems occur on a statewide level down to a site specific area. Ecosystem-based management (EBM) is an integrated, adaptive approach to managing human activities to ensure the coexistence of healthy, fully functioning ecosystems and human communities. The goal of EBM is to maintain an ecosystem in a healthy, productive and resilient condition so that it can provide the services humans want and need.

The Ocean and Great Lakes Ecosystem Conservation Act calls for the integration and coordination of EBM with existing laws and programs. EBM is a tool that can cut across programmatic and geographic jurisdictions to allow for improved communication between citizens, scientists, the private sector and government officials.

Invasive species are a form of biological pollution. As a threat to our biodiversity, they have been judged second only to habitat loss. Invasive species come from all around the world; the rate of invasion is increasing along with globalization. An invasive species is a species: 1) that is nonnative to the ecosystem under consideration, and; 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health. In the latter case, the harm must significantly outweigh any benefits. Invasive species have caused many problems in the past, are causing problems now, and pose threats to our future ecosystems, food supply, built environments, recreation and health.

Since a State Invasive Species Task Force (ISTF) first convened in 2004, at least eleven new organisms have invaded New York. The ISTF produced a report in 2005 with recommendations to address invasive species. A new Invasive Species Council (ISC), a permanent body within state government,

was established in law in 2007. EPF resources have been used to deliver invasive species programs primarily through partners. In 2006-07, $3.25 million and in 2007-08, $5 million, have been provided for agency action, contracts and grants to implement the recommendations. Funding has been or will soon be provided to advance planning, database, research, eradication projects, and Partnerships for Regional Invasive Species Management (PRISMs) to ensure prevention and rapid response to new invasives.

Interpretation/ Education Programs

Educating the public is vital for the protection of natural resources, and provides a better understanding of the complexity of ecosystems and their interrelationships with people and their actions. A renewed and expanded cooperative effort will be essential to enhancing our natural resource interpretation and education programming. The goal of such enhanced programming is to help create an environmental ethic and appreciation for the natural world among visitors to our parks and other open spaces, particularly among children and urban residents.

Environmental educators prepare and carry out educational and interpretive programs related to natural resource and environmental quality management. OPRHP and DEC maintain nature centers and interpretation and education facilities and environmental camps throughout the state. These centers are dedicated to developing an awareness of the value and beauty of natural areas and knowledge of the habitats and species.

Cultural Resource Stewardship and Interpretation

Existing Resources/ Inventories

New York State possesses extensive archeological and historic resources. It is important that these cultural resources are identified, protected and interpreted for current and future generations. The benefits of preserving the past can enhance today's quality of life and function as economic generators.

New York's State Historic Preservation Office (SHPO) helps communities identify, evaluate, preserve, and revitalize their historic, archeological, and cultural resources. The SHPO administers programs authorized by both the National Historic Preservation Act of 1966 and the New York State Historic Preservation Act of 1980. These and other related programs, including the Statewide Historic Resources Survey, the New York State and National Registers of Historic Places, the federal historic rehabilitation tax credit, the Certified Local Government program, the state historic preservation grants program, the state rehabilitation tax credit, state and federal environmental review, and a wide range of technical assistance, are provided through a network of teams assigned to territories across the state. The SHPO works with governments, the public, and educational and not-for-profit organizations to raise historic preservation awareness, to instill in New Yorkers a sense of pride in the state's unique history and to encourage heritage tourism and community revitalization.

Management and Resource Protection

The Historic Preservation Office (SHPO) administers state and federal preservation programs authorized by the New York State Historic Preservation Act (1980) and the National Historic Preservation Act (1966 as amended). This includes the identification, evaluation, registration, and protection of its significant buildings, structures, objects, places, and landscapes. This is supported by the following goals:

- To promote the use, reuse, and conservation of significant properties for the pleasure, education, inspiration, welfare, recreation, prosperity, and enrichment of the public.
- To protect, enhance, and preserve those resources which are significant to New York's diverse history and culture.
- To foster pride in our collective heritage by education and advocacy, in active partnership with public and private organizations, schools, and institutions.
- To coordinate state and federal preservation programs through consultation with individuals, organizations, and governmental agencies.

Currently over 85,000 structures are listed on the State and Natural Register of Historic Places.

Interpretation

For both the public and private sectors it is important to interpret the history of New York State for present and future generations. OPRHP administers 35 properties that are preserved and managed in the public trust and designated as New York State Historic Sites because of their associations with persons, places or events, of state and national importance. Each site provides educational opportunities to foster public awareness, understanding, and appreciation of New York State's heritage. Similar preservation and interpretative

initiatives exists at the local level and by the private sector.

The oversight and technical services for the 35 State Historic Sites are provided by OPRHP's Bureau of Historic Sites. It provides specialized technical services (i.e. services impractical to decentralize or not readily available for other sources) which are necessary for the professional management of a statewide historic site system. These services include archeology survey and resource management, historic and landscape architecture, engineering, exhibit design, and fabrication, historic research and interpretation, collection management, curation and conservation, and protective services.

Senate House State Historic Site, Ulster County

Chapter 5 - Creating Connections Beyond Parks and Open Spaces

New York's landscape is comprised of a large patchwork of protected parks, greenways, trails and open spaces. Landscapes and buffer lands that surround these important open spaces need to be protected from encroaching development and incompatible uses. Development of "connections" among these areas is critical to allow people and wildlife to move across these landscapes. Local communities must consider parks, trails and historic preservation as essential elements of community infrastructure. They must also advance recreation and open space projects in and around urban centers in order to meet the needs of underserved populations and "Smart Growth" principles.

Protection of Existing Protected Lands

There are over 4 million acres of state open space areas with thousands of miles of boundaries throughout the state. Their primary focus is on the protection of important recreational, natural or cultural resources. However, assuring this protection goes beyond the borders. Habitats, watersheds, viewsheds and quality of experiences are not limited by man-made boundaries. Therefore, sound land use of adjacent areas is important to ensure the quality of the resource. Although state agencies, local governments and non-for-profit organizations can protect some areas through acquisitions and easements, the solution is broader in scope. This includes an awareness and understanding of the need for protection and connections by the general public.

Protecting Connections to Protect Our Natural Resources

A key factor in biodiversity protection and enhancement is maintaining connectivity between natural areas. Both small and large scales of connectors are important for the protection of biodiversity and ecosystem processes. Protecting large swaths of natural areas are critical in providing a variety of natural habitat types which are needed to support healthy and viable populations of plant and animal species. In addition, connectivity is protected and maintained throughout these large, contiguous blocks of natural habitat. Preserving connectivity at this larger scale is particularly important because it facilitates the resurgence of biodiversity following natural disturbances such as floods, droughts, fires and blowndowns.

Protecting small-scale connections is equally important as these connections are often needed to allow for the movement of species between habitats. Small patches of natural land act as stepping stones and can provide refuge and/or linkages when connections between larger natural areas are not feasible. By protecting connections between natural areas at both scales, there is a greater opportunity to maintain genetic variability and prevent local extirpations, thus allowing species' persistence and viability over time.

A number of factors threaten connectivity; habitat loss and habitat fragmentation are the two largest contributors to connectivity loss. Loss of natural habitat through land use change is the single, most significant threat to wildlife in the United States. This is followed closely by habitat fragmentation as a threat to species viability. With fragmentation, habitat is broken into smaller and often times isolated patches thereby restricting or altering the movement of species and populations. Habitat fragmentation also affects the natural processes critical to completing plant and animal life cycles, and facilitates the introduction of non-native species, which in turn can further reduce biodiversity.

Ultimately, the severity of impact on species viability and ecosystem functionally depends on the type and intensity of human activity. Sometimes these impacts can be mitigated by land protection strategies. These strategies may lead to active or passive conservation management of the potentially affected natural resources.

Two tools commonly used to protect and enhance connectivity are the creation of corridors and protection of buffer zones. Corridors are defined as man-made or natural linear strips of land connecting two habitat types, while buffer zones are areas adjacent to protected lands with resource protection provisions that augment conservation goals or cushion detrimental effects

caused by adjacent, incompatible land practices. These areas are often created or established directly through public or private land purchases, through land donations, or indirectly by the creation of conservation easements or the implementation of environmentally sensitive guidelines for land use. The protection through these mechanisms is critical to maintain biodiversity and ecosystem functions in both the short and long-term to allow movement across the landscape.

Parks and other natural areas are clearly important to the conservation of biodiversity. Without such designated areas plants, animals, habitats and entire ecosystems would eventually be eliminated by habitat destruction and fragmentation. But the potential for biodiversity protection through parkland designations and management is severely limited as natural connections within the landscape diminish.

Clearly more connections are required. Because resources for acquisition and other protection mechanisms are limited, areas that will serve as corridors or buffers should be selected using a sound, scientific basis. It is likely that these areas will contain the greatest biodiversity value and will have the highest potential for biodiversity conservation improvements. Although it may not be possible to completely protect a corridor or buffer area all at once, the identification and protection of high biodiversity nodes or "hot spots" can serve as a starting point for eventual corridor designation.

Fostering open space connections for people via the greenways, trail corridors and right-of-ways may or may not provide a viable connection for the protection of species, habitats, and ecosystems. Biodiversity protection and recreation use can be compatible but they need to be carefully melded together. Striking a balance between natural resource protection and recreational use can be achieved through environmental education and environmental planning.

Trails

New York's natural and cultural resources provide for a broad range of land and water based trails that offer multiple recreational experiences. They range from hiking the gorge at Niagara Falls, cross-country skiing at Allegany State Park, biking along the Finger Lakes, and snowmobiling in the Tug Hill, climbing the high peaks in the Adirondacks, horseback riding in the Hudson Valley, bicycling along the Erie Canal on the Canalway Trail or walking the beaches on Long Island. Each region of the State offers a unique setting and different opportunities.

There are estimated to be over 16,000 miles of trails in New York State with new trails constantly being developed. They range from short nature trails to the 4,600 mile North Country National Scenic Trail. A comprehensive inventory effort is underway to identify all the major trails within the State and all the trails within State Parks. The inventory will include such information as owner, maintainer, location, physical attributes, allowable use and accessibility. Exclusive of the 11,000 miles of the state funded snowmobile trail system, nearly 10,000 miles of trails have been identified

The vision for trails in New York State is to have a statewide network of interconnecting shared and single use trails that connect parks, open spaces, historic sites, communities, business districts, and residential areas to allow people and wildlife to move across New York's landscapes. This would be accomplished through a system of federal, state and local trails and partnerships with not-for-profit groups and private landowners. Support facilities would be provided for trail users and to enhance the local economy. The trail system would promote the health and well being of the users, enhance the economy, provide alternative means of transportation, reduce the dependency on fossil fuels and benefit the quality of life in general.

The trail system is comprised of a network of primary, secondary and stand-alone trails. The primary system is comprised of trails of national, statewide or regional significance. A secondary trail system connects or is planned to a primary trail system. Secondary trails are generally shorter in length than primary trails and transverse fewer political boundaries. They provide linkages to support services, attractions, and communities from the primary trail system. Stand-alone trails are trails of local significance that do not connect to a primary trail system. They are generally loop trails, trails that connect to points of interest or provide short connections between parks, open spaces, historic sites, and/or communities or elements of a community (residence, school, business).

The development of the trails plan is guided by the Statewide Trails Plan. An effort is currently underway to update the Plan. This is being supported by surveys conducted as a part of the SCORP update process, additional trail specific survey efforts, the development of a comprehensive trails inventory and outreach to the various trail organizations and interest groups. The updated plan will provide statewide policy direction; roles and responsibilities; identification of issues and strategies; and a framework for the statewide system of trails and greenways.

With the assistance of the Statewide Trails Council, trail guidelines were developed to provide guidance in design, construction and maintenance. These should be used as a starting point and modified, as necessary, to address the natural characteristics of the resource and specific needs.

New trails and existing trails that require maintenance/repair should be designed or modified to maximize the opportunity to improve accessibility for persons with disabilities. Proposed accessibility guidelines that include trails have been developed by the Regulatory Negotiation Committee on Accessibility Guidelines for Outdoor Developed Areas

Trail systems are acquired, developed, maintained and promoted through a variety of relationships among units of government, organizations and individuals. There is no single set of roles and responsibilities for all trails. In many cases, a single trail may consist of various trail segments that have been acquired and developed by different units of government utilizing different methods. The trail may be maintained by the land owner or through an agreement with another unit of government or trail organization.

The following identifies the goals to meet the vision for trails:

- Encourage federal and state funding and program initiatives that enhance trail and other recreation opportunities for the public.
- Strengthen the State Trails Planning and Development Program.
- Strengthen stewardship of the State's trails systems.
- Encourage coordination of trail planning and development across lines of political jurisdictions, agencies and levels of the government.
- Strengthen communication and cooperation among all types of trail users and providers.
- Advance the development of a statewide system of interconnected trails and greenways and provide access to them.
- Conduct research and education to improve the quality of user experiences and enhance resource protection.
- Increase public awareness of New York State's trails and greenway corridors and their economic, social, health, educational and environmental benefits.
- Provide and improve trail systems for persons with disabilities.

Genesee Valley Greenway

Greenways

Greenways represent a broad spectrum of connectors for people and wildlife ranging from Genesee Valley Greenway to the Hudson River Valley Greenway. Each greenway has a unique set of parameters, objectives and administrative structure. Therefore, each greenway is self defining with an overall objective of connecting people and places for a better quality of life.

The Genesee Valley Greenway is a linear corridor that follows the path of the former Genesee Canal (1840-1878) and Pennsylvania Railroad, Rochester Branch (1882-1963), passing through five counties (Monroe, Livingston, Wyoming, Allegany, and Cattaraugus), seventeen townships, and several villages. Presently, there are 60 of its 90 miles that are officially open to the public. The development of the Genesee Valley Greenway is being accomplished by local citizens, user groups, governments, and businesses working in partnership to create a resource that will:

- preserve a corridor of significant natural and historic features
- link local and state parks, cultural attractions, historic sites, quaint villages, and major educational institutions and state trail systems

- provide year-round educational, recreational, environmental, and economic benefits for the region
- complement regional efforts to improve water quality, increase tourism, and ensure natural, historic and cultural resource protection

The Hudson River Valley Greenway is an innovative, voluntary state program created to facilitate the development of a regional strategy for preserving scenic, natural, historic, cultural and recreational resources while encouraging compatible economic development and maintaining the tradition of home rule for land use decision-making. Through voluntary participation in the Greenway, communities in the Hudson River Valley can receive technical assistance and funding for local land use planning and implementation projects, trail development, and heritage promotion that support the goals of the Greenway program.

The Hudson River Valley Greenway Act of 1991 creates a process for voluntary regional cooperation among 320 communities within the Greenway area, which includes the counties of Saratoga, Washington, Rensselaer, Albany, Greene (outside the Catskill Preserve), Columbia, Ulster, Dutchess, Orange, Putnam, Rockland, Westchester and the waterfronts of The Bronx and Manhattan. The Act specifies five Greenway Criteria through which this goal can be achieved. The five criteria include: natural and cultural resource protection; regional planning; economic development; public access; and, heritage and environmental education. The Greenway works with local and county governments to enhance local land use planning pertaining to the five Greenway criteria, create a voluntary regional planning compact, promote the Hudson River Valley as a single tourism destination area, assist in the preservation of agriculture and, work with communities to strengthen state agency cooperation with local governments.

The Greenway is also charged with developing the Hudson River Greenway Trail System from the Adirondack Park in northern Saratoga County and Lake Champlain in Washington County to Manhattan. The trail system includes a water trail, a bicycling trail and a walking trail, The Greenway supports community trail initiatives in the development of a regional trail system. The Greenway offers an annual competitive small grant program to fund trail projects including trail planning and design, trail construction and rehabilitation and trail interpretation and education. The goal of this grant program is to help local trail groups and municipalities implement community trail systems and develop new segments of the Greenway Trail. There are currently 709.3 miles of various types of trail that comprise the Greenway Trail System.

The Niagara River Greenway is a world-class corridor of places, parks and landscapes that celebrates and interprets our unique natural, cultural, recreational, and scenic and heritage resources and provides access to and connections between these important resources while giving rise to economic opportunities for the region. This Vision Statement has guided the development of the Niagara River Greenway, a regional planning initiative established by state legislation in September 2004. The legislation defines the Greenway as a linear system of state and local parks and conservation areas linked by a network of multi use trails within the established greenway area in Erie and Niagara counties. The stated purpose of the Greenway is to enhance waterfront access and complement economic revitalization of the communities along the river.

Five high-priority system-wide concepts that will help promote implementation of the Niagara River Greenway are identified as:

- Gateway Identification
- Accessing, Experiencing and Connecting to the River
- Protecting, Preserving , and Restoring Important Ecological Features
- Linking Special Places and Destinations
- Heritage Tourism and Economic Revitalization

The East Coast Greenway is the nation's first long-distance urban trail system; a city-to-city transportation corridor for cyclists, hikers, and other non-motorized users. By connecting existing and planned trails, a continuous, safe, green route 3,000 miles long is being formed linking Calais, Maine at the Canadian border with Key West, Florida. It incorporates waterfront esplanades, park paths, abandoned railroad corridors, canal towpaths, and highway corridors, and in many areas it temporarily follows streets and roads to link these completed trail sections together. (ECGA, 2008)

When completed, the East Coast Greenway in New York will follow two separate routes, (Eastern & Western) which both end in downtown Manhattan. The route uses New York's Waterway ferry service to connect to the New Jersey section of the Greenway. The two routes are in various stages of completion using completed trail sections of the New York City Greenway System, Parkway trails, Westchester County Trail System and on-road sections.

Chapter 6 - Sustainability

Human consumption of natural resources is depleting and degrading many resources faster than Earth's systems can replenish them. Sustainability is an approach that protects the natural systems of the planet while achieving economic prosperity, protecting public health and social well-being. By preserving and protecting ecosystems and natural systems, sustainability is the capability of equitably meeting vital needs of the present without compromising the ability of future generations to meet their needs. Sustainability requires the equitable distribution of resources and the empowerment of individuals to participate in decisions that affect their lives.

Climate Change

As Earth's surface warms, it emits thermal radiation, much of which travels directly out to space allowing Earth to cool. Heat-trapping gases or greenhouses gases (GHGs) such as carbon dioxide (CO2), nitrous oxide, water vapor and methane, occur naturally in the atmosphere. Some of the outgoing thermal radiation is re-absorbed by these GHGs and is re-radiated back toward Earth's surface. This is known as the Greenhouse effect. If there were no GHGs in the atmosphere, Earth's average surface temperature would be a very chilly 0ºF instead of the comfortable 59ºF that it averages today. The burning of fossil fuels such as coal, oil and gas, has resulted in increased concentrations of GHGs in the atmosphere. In the last 100 years humans have increased CO2 levels from pre-industrial concentrations by more than 35 percent.

Climate change is considered the most pressing environmental problem of this century. Many scientists have concluded that the Earth's atmosphere is warming due to increased concentrations of GHGs. The Intergovernmental Panel on Climate Change (IPCC) states that climate change, associated with the increased levels of GHG's in the atmosphere, is "unequivocal" and may bring abrupt and irreversible impacts to the earth's natural systems which support life on earth.

Most scientists conclude that emissions must be reduced by 75-80 percent below current levels by 2050 to reduce the substantial adverse impacts of global climate change on natural systems. To put the Northeast region on track to achieving this goal, a concerted, sustained effort to reduce emissions by just over 3 percent per year on average by 2030 is necessary.

John Boyd Thacher State Park, Albany County

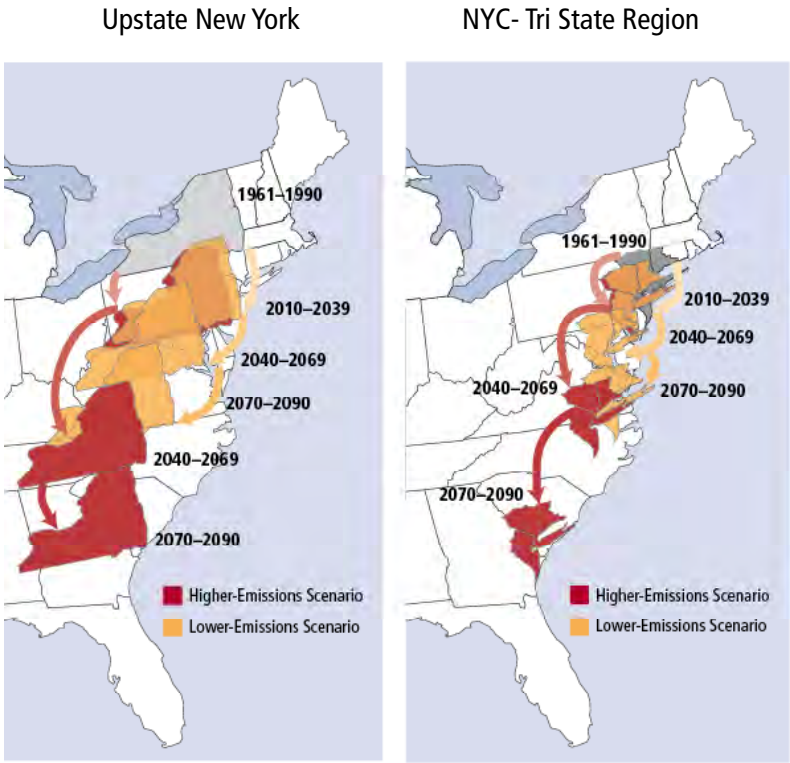
Impacts to the Northeast

Changes consistent with climate change, such as rising temperatures, decreasing snow cover and earlier arrival of spring are already being experienced in the Northeast. Since 1970 average temperatures in the Northeast have increased 1.5 degrees Fahrenheit (°F) with winter temperatures warming 4°F from 1970-2000.

Winter precipitation in the Northeast is projected to increase 20 to 30 percent, but this precipitation may just be rain – not snow. Depending on whether emissions targets can be met, the Adirondack region may be able to retain roughly three-quarters of its snow season, or its snow season could be cut in half. Due the impacts of rising summer temperatures the frequency of short-term droughts is projected to increase. Historically the Catskills and Adirondack regions have such droughts every two to three years, but dependent on emissions, by the end of this century these droughts may occur annually.

As the current rate of warming accelerates Albany, NY is predicted to have the climate of Washington, D.C., by 2050 and the climate of Richmond, VA or Atlanta, GA by the end of the century.

Westcott Beach State Park, Jefferson County



Source: "Confronting Climate Change in the US Northeast: Science, Impacts and Solution" Northeast Climate Impacts Assessment Synthesis team: July 2007.

Figure 12- Migrating States Climate

It is not unlikely for New Yorkers to see an increasing number of extremely hot days. For example depending on emissions, by the end of the century New York City could have approximately 7 to 25 days over 100 0F, compared to 2 from 1961-1990. An increase in extremely hot days is expected to worsen air quality, resulting in increases in associated respiratory diseases and conditions.

Melting ice caps have caused and will continue to cause sea level rise regardless of whether recommended emission reduction targets are met. The severity and frequency of damaging and heavy rainfall events is expected to increase, resulting in significant negative impacts to infrastructure and natural systems. Under the higher emissions scenario, floods in New York City that are currently anticipated to occur every 100 years will be anticipated to occur every 10 years. In addition to coastal homes and businesses being threatened, sea level rise can adversely affect the delicate life of the ecologically rich Long Island salt marshes and Hudson River estuaries.

Climate change will impact ecosystems which are critical for sustaining life on earth and provide many services such as erosion control, water purification, recreation, habitat and marketable products such as seafood and forest products. With the warming that accompanies climate change, the distribution of terrestrial ecosystems and agricultural products will change as plants and animals follow the shifting climate and face dwindling numbers and extinction. Shorter, milder winters will fail to kill insects, increasing the risk of infestations and possibly leading to a need for additional chemical pesticide use. Seasonal events such as egg laying and flowering of plants have been occurring 2-3 days earlier in each decade in the Northeast. In NY many of the deciduous

tree species, such as maples, will shift northwards; this will have an effect on the maple syrup and other timber industries in the state. Climate change will also trigger the expansion of invasive species into wider ranges.

The anticipated sea level rise, increased coastal flooding, loss of wetlands, erosion and shoreline change will require adaptations by waterfront park managers and users. A rise in sea level will impact beach related activities and support facilities. New facilities being considered will need to take into account these changing situations within their design and location. Climatic changes will impact how people recreate and their frequency of participation. Recreational activities associated with natural resources such as fishing, bird watching and the study of nature will be affected as the habitat that support these activities changes. Summer recreational activities will have a longer season as the climate warms. Warmer winters with less snow will impact winter activities such as skiing, snowmobiling, sledding and ice fishing. These changes will impact operations of park and recreational facilities. Managers of historic sites will also need to evaluate the impacts that climate change and associated impacts may have on the environmental setting, especially historic landscapes. Planning by facilities will need to take place to prepare for changes that may occur to participation in recreational activities.

Strategies for Enhancing Sustainability

The growing concern about climate change has resulted in a movement towards the adoption of policies, practices and procedures that reduce the use of fossil fuels and GHG emissions. This effort must comprehensively promote the use of renewable and energy efficient technologies, environmental and energy efficient building design, waste reduction and recycling, fuel efficient vehicles, water conservation and chemical use reduction. It must also address the procurement of environmentally preferable products as well as undertaking carbon sequestration strategies, like tree planting and forest conservation to off-set remaining carbon emissions. The extent of change and thus the choices made today will determine the climate our children and grandchildren inherit, and shape the consequences for their economy, environment, and quality of life (Riebeek, 2007: UCS, 2007).

The sustainability movement has become somewhat synonymous with the desire to be "green." The growing awareness of society's consumption of fossil fuels and the continued escalation of energy prices is creating a "green" market. The "green" movement will ensure environmental sustainability or the long term maintenance of valued environmental resources that support life systems. This transition to sustainable practices is urgent because the deterioration of global life support systems is already occurring.

Executive Order 111 (EO. 111), issued in 2001 "Green and Clean" State Buildings and Vehicles is the most aggressive and comprehensive directive issued in NYS to address energy use and associated environmental issues through state government procurement standards and design practices. EO.111 mandated that all state agencies reduce energy usage, follow green building standards during new construction or substantial renovation projects, procure energy-efficient products, purchase power from renewable sources, and procure clean-fuel vehicles. Other State policies and Executive Orders promote energy conservation, the use of renewable energy, recycling and the use of green cleaning products. The overarching goals of the Agency's sustainability initiative are to reduce greenhouse gas emissions by reducing the use of fossil fuels, reducing our energy demand, increase the use of clean renewable energy sources, while reducing waste, water use and the use of toxic chemicals.

Green Technology

"Green technology" is the application of science to conserve natural resources and the environment, including mitigation of the amount of GHGs and the effects of global climate change. Through policy, research, education, incentives, and innovative relationships with industry, government can play a central role in building a green future.

The United States currently relies heavily on fossil fuels, which are nonrenewable, environmentally damaging and draw on dwindling resources. This heavy reliance on nonrenewable energy is not sustainable because fossil fuel use affects the ability of future generations to use those resources. In contrast, renewable energy resources are constantly replenished. The use of renewable forms of energy helps to reduce concentrations of GHGs in the atmosphere and contributes to more stable local economies by reducing dependence on energy sources with an uncertain future. Renewable energy sources include solar (photovoltaic), wind (using turbines), biomass (from organic matter that makes up plants), hydrogen, geothermal (energy stored within the Earth), ocean: (thermal energy from the sun's heat and mechanical energy from the tides and waves), and hydropower (from flowing water).

Buildings consume more energy than any other sector of our economy – including transportation and industry. More efficient use of energy, environmental, and human resources in design and construction of buildings make sense. Building "green", in either new construction or when renovating, can be cost effective. The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is the nationally accepted benchmark for the design,

construction, and operation of green buildings, giving building owners and operators the tools needed to improve a buildings' performance in key areas of human and environmental health. This comprehensive approach means that LEED certified buildings have reduced operating costs, provided for healthier and more productive occupants, and conserved natural resources (USGBC, 2007).

"Green landscaping" minimizes the impacts to the natural landscape by eliminating or reducing the use of fossil fuels and chemical inputs and maximizing the use of natural features. Water conservation measures should keep water on site through use of green roofs, rain gardens, and use of rainwater for on-site irrigation. Planting should reflect and preserve native species. It is also important to conserve existing forest resources. When forests are disturbed through harvest or conversion to other land uses, they are a source of carbon emissions.

Green purchasing involves the search for and procurement of products whose manufacturing, contents and disposal have the smallest possible impact on the environment. Such products can be made from recycled instead of virgin resources, eliminate or reduce the use of toxic materials, conserve resources and prevent waste.

Reducing the production, amount, and toxicity of waste is the first and most important step toward efficient materials use. Reuse of products prolongs the useful life of materials, delaying final disposal or recycling. Recycling minimizes waste generation by recovering and reprocessing usable products that might otherwise be disposed of. Creating products from recycled materials saves energy and resources, and can often generate revenue.

Chemicals and synthetic substances that do not easily break down produce increased toxicity in ecosystems, water supplies, soil, food, the built environment, and human health. Pesticides, herbicides, insecticides and synthetic fertilizers accumulate in natural systems and in humans. The use of toxic chemicals and synthetic compounds should be reduced or eliminated in construction and building materials, operations, products, and services.

Sustainability at OPRHP

As climate change continues to emerge as the central environmental issue of our time the OPRHP must be a leader in demonstrating "green technologies." Parks are ideally poised to showcase how sustainability can be taught, planned for, implemented, and demonstrated. Parks are places of natural beauty and environmental integrity that have been afforded protection for generations to come. By planning for sustainability, parks can fulfill that vision as well as provide a medium for educating the public about ways that everyone can participate in sustainable practices. When everyone does their part to protect our home planet from continuing degradation, then parks truly will be places of beauty and integrity for many generations.

Chapter 7 – Statewide Programs

New York State provides a variety of recreation experiences, ranging from the playgrounds of New York City to the wilderness areas of the Adirondacks. This is a dynamic system comprised of "people", "resources", and "recreation". Each element has an influence on the other two. For instance, the composition of the population will impact the need for recreation, the quality of the resource will determine the availability of recreation opportunities and the type and extent of recreation can affect resource quality and the quality of life for people. As such, the improved water quality of a lake or river, will provide recreational opportunities, that will influence where people, live, work and play. Therefore, recreation and open space opportunities and resources are both influenced by, and a factor to be considered, within various agency programs and initiatives.

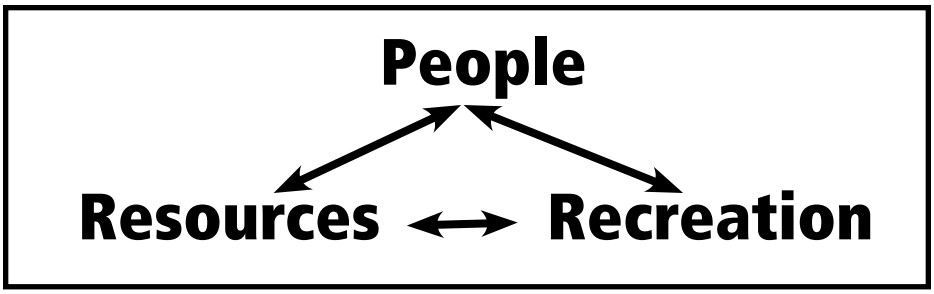


Figure 13 - Recreational Relationship

New York State's vast number of lakes, oceanfront, rivers and streams provide recreation resources that continue to be major destination locations. Participation in water related activities is often constrained by limited public access and unsuitable water quality. The State has initiated many programs to help improve water quality and increase access to the major water bodies such as the Great Lakes, Hudson River, Long Island Sound, the Peconic and Hudson River Estuaries, and Lake Champlain. The quality of life in these areas has improved and recreational opportunities increased resulting in an overall economic benefit to the communities.

Associated with land and water resources are the wildlife and fisheries resources that enhance and provide recreational opportunities. Wildlife focuses on both game and nongame species and is less location-specific when compared to other recreation resources; as a result, stewardship of wildlife crosses geographic and political boundaries. Fisheries management is similar to wildlife except it is more location-specific and closely associated with water quality and access.

In addition to the land and water resources, cultural resources help define the character of the State and our past. New York has a rich and diverse array of cultural resources and it is becoming more important to relate several historic sites together, whether through a trail or corridor. These heritage corridors are able to tell a more complete and valuable story of past events and honor the history of the State.

Recreation and open space play a vital role in maintaining the mental and physical health of our citizens as well as supporting the economy of the

Hamlin Beach State Park, Monroe County

State. This is apparent by the level of participation in recreation activities and sporting events. There is also an increasing awareness of the needs of all the populations. Facilities that are accessible to the disabled person are no longer the exception but are integrated within the design of new and rehabilitated facilities.

This chapter will explore the various agency programs and initiatives that have an impact on or are impacted by the quality of the recreational and open space resources or experiences they provide. This will include programs traditionally associated with recreation and others that may not be readily apparent.

The following chart identifies federal and state agencies and their involvement with six broad program areas. In various cases, there is overlap among agency programs that are guided by an interagency task force within a resource area. As such, the program is identified by the primary administrating agency or may be applicable statewide.

Table 6 - State Agency Involvement in Recreation

Agency	Planning	Land/ Natural Resource Management	Cultural Resources	Recreational Resources	Programs	Grants
OPRHP	x	x	x	x	x	x
DEC	x	x	x	x	x	x
DOS	x					x
DOT		x		x		x
Canals	x	x	x	x	x	
Museum			x		x	x
ORDA				x	x	
DOH					x	x
OFA					x	
Army Corps	x	x			x	x
EPA	x				x	x
NPS	x	x	x	x	x	x
NOAA	x				x	x

Planning – The Agency develops and/or coordinates recreation plans for its own facilities or provides technical assistance in planning to other agencies, local governments, organizations or individuals.

Land/Natural Resource Management – The agency owns and actively manages land and natural resources for a recreation or open space purpose.

Cultural Resources – The agency is responsible for procuring, preserving and interpreting cultural resources.

Recreational Resources – The agency is responsible for operating or maintaining recreational facilities.

Programs – The agency coordinates and oversees programs that influence or impact recreation opportunities, activities or facilities.

Grants – The agency administers grant programs that support, enhance or directly relate to recreation, natural, and cultural resources.

Snowmobile Program (OPRHP)

The New York State Snowmobile Program was legislated in response to the public's demand for places to ride snowmobiles. The planning, development, maintenance and administration of the program are funded from the snowmobile registration fees collected annually. The fees are deposited into a Special Revenue Account, exclusively used to support snowmobiling in New York State. Financial support is provided to local government entities for Snowmobile Trail Grants, Law Enforcement training, Safety Education, Special Event Permits, Accident Reporting, Publications, Grooming Education, Trail Liability Insurance and Signage Guidelines. Revenues from the trail program have increased from approximately $179,000 (late 1980s) to more than $6 million (2005). Revenue projections for 2008 are $4.2 million. The majority of this revenue is returned to local areas as grants-in-aid for snowmobile trail development/maintenance, trail insurance, and law enforcement. OPRHP coordinates closely with the New York Statewide Snowmobile Association (NYSSA) in providing snowmobiling opportunities and maintaining the 11,000 miles of State funded trails.

Heritage Areas and Corridors (OPRHP)

There are nineteen state designated Heritage Areas. The system is the oldest, and one of the largest, statewide heritage systems in the country. Interest continues for inclusion of other areas within the Heritage Area System. The system has grown from the initial thirteen Urban Cultural Parks, encompassing twenty-seven communities, to nineteen Heritage Areas in 2007, encompassing over four hundred municipalities (Figure 13).

A Heritage Area includes the historic, natural and cultural resources and activities that tell the story of a region's past and provide an identity for the present and future. The resources of a heritage area - main streets, neighborhoods, public building, parks, factories, landscapes – tell the story of how an area developed and why it is unique. The activities of a heritage area – festivals, special events, and regular community life – reflect what was and is important in citizens' everyday lives. Together these resources and activities create a "sense of place" and make a heritage area a special place to live and visit. The term heritage corridor is used to describe a heritage area that is organized around and focused on one linear resource such as a river, canal, or coastline.

The cornerstone of the Heritage Areas Program is a state, local and private sector partnership focused around four program goals: preservation of natural and historic resources; recreational use of these resources; education about local and regional heritage; and, economic revitalization through public and private investment.

In these partnerships, the State provides technical assistance, financial incentives through matching grants, and a heightened level of coordination among state agencies through the New York State Heritage Areas Advisory Council. Each Heritage Area retains complete management and operation of its program, projects, and facilities using various management mechanisms established at the local level.

Many of the heritage areas have visitor centers that provide a community meeting place and point of pride for residents, and provide orientation and motivation for visitors to go out and experience other points of interest in the community. Some of these visitor facilities are modest shared facilities, a few are quite elaborate. All feature interpretative themes that each heritage area has chosen for itself are based on its own unique history. These themes provide a consistent image and identity and are the basis for interpretive programs and events.

Figure 14 - New York State Heritage Areas System

These interpretive themes also provide a "brand" to market and promote the Heritage Areas. Heritage (cultural) tourism plays an important role in the Heritage Areas Program as well as a component of today's tourism economy. These themes generate interest from visitors, encourage them to stay longer, help them remember a destination, return at a future date, and spend tourist dollars.

National Heritage Areas and Corridors (NPS)

National heritage areas and corridors represent a relatively new, but growing, approach to conserving America's rich culture and history. The first national heritage corridor was designated by Congress in 1984. Today there are thirty-seven heritage areas or corridors around the country. Three of the most recently designated areas are located within New York State — the Hudson River Valley National Heritage Area (designated in 1996), the Erie Canalway National Heritage Corridor (designated in 2000) and the Champlain Valley National Heritage Partnership (designated in 2006).

All national heritage areas and corridors must complete a management plan that sets forth its goals, objectives, programs and management entity. This plan is approved by the Secretary of the Interior, and requires local input, review and approvals prior to completion. The role of the National Park Service, depending on the enabling legislation, may include providing technical, planning, and staff assistance, funding, and review and approval of the management plan.

Hudson and Champlain Quadricentennial and Fulton Bicentennial

2009 will be a watershed year, marking the 400th anniversary of Hudson and Champlain's voyages along the river and lake that bear their names and the 200th anniversary of Fulton's successful steamboat voyage and establishment of steam commerce on the Hudson River. Hudson's and Champlain's voyages laid the groundwork for Dutch settlement of the Hudson Valley and French settlement of the Champlain Valley and Canada. Nearly 200 years later, Fulton's journey would strengthen the region's ties to the world, while heralding a new era of innovation which distinguishes the Northeast to this day.

A Hudson-Fulton-Champlain Quadricentennial Commission (HFCQC) was formed to engage the public as well as civic, education, environmental, cultural and heritage organizations to develop and support related plans and activities in commemorating the events. The success of the Quadricentennial commemoration relies on a coordinated effort among the members of the Commission, federal partners, state agencies, and local governments, private corporations, non-profit corporations, similar commissions such as the Lake Champlain Quadricentennial Commission and the Quebec 400th, international partners and the citizens of New York State.

Boating Safety Programs (OPRHP)

With the number of boaters increasing, there is a need to continue boater safety, education and enforcement programs to ensure the enjoyment of all boaters on New York State waters. OPRHP is the designated agency responsible for ensuring the coordination of the State's boating safety and enforcement programs.

The Marine Services Bureau is chiefly responsible for the Agency's many boating safety initiatives as it also serves as the Office of the State Boating Law Administrator. As such, Marine Services offers an educational program for young boaters and recently implemented the new mandatory education program for personal watercraft operators. Each year nearly 20,000 individuals take the program which, in many cases, is offered free of charge. The course consists of an 8-hour nationally recognized program of instruction, which includes a proctored examination.

Marine Services also fulfills a number of other diverse safety initiatives including public vessel safety and operator licensing; specialized training for the marine law enforcement community; the issuance of marine regatta and floating object permits on the State's interior waters; and the State's Hull Identification Program.

Marine Services has a number of public information brochures, informational stickers and other such promotions, like the loaner personal flotation device program, which is directed at making recreational boating safer within the Empire State.

Empire State Games (OPRHP)

The Empire State Games began in 1978. The games are a form of competitive sports and are based on the Olympic model with preliminary qualifiers available at three levels. The scholastic division is designed for young people who are still in high school. The open division is for athletes generally of college age. Masters competition is available for age groups ranging from 24 to 85. Approximately 40,000 athletes compete yearly in preliminary competitions which are held in six regions statewide. Finalists enter a week long contest held at a chosen city in the state. Syracuse, Buffalo, Ithaca, Albany, Rochester, Long Island, Binghamton, both Mohawk and the Hudson Valley, and Westchester County have been chosen as sites in past years. While OPRHP provides professional management, organization and direction, much of the conduct of the Empire State Games is in the hands of thousands of volunteers, including coaches, officials and a medical team. Six thousand finalists compete in 28 sports ranging from archery to wrestling each summer; and 1,400 athletes participate in 11 winter events, including Nordic skiing, ski jumping and bobsledding. Twenty-two Empire State Winter Games athletes represented the United States at the 2006 Winter Olympics in Torino. Two dozen more Games athletes were part of the US team at the Summer Olympics in Athens. The main goal of this program is to provide opportunities for New Yorkers whose recreational focus is competitive sports.

2007 Summer Games, Medal Presentation Ceremony

Empire State Senior Games

The Empire State Senior Games is a program of fitness and sports competition for New Yorkers 50 years of age and older. The games are one of the largest of its kind in the country and serve as New York State's qualifying event for the U.S. National Senior Sports Classic. This six-day long program offers more than 40 competitive, recreational and drop-in activities, for which awards are given. Instructional clinics, exhibits of relevant information and social activities are also included. Competition is mixed with fun and friendship, providing something for people of all interests and abilities. The goal of this program is to encourage fitness and recreation participation for older New Yorkers.

Empire State Games for the Physically Challenged

The Empire State Games for the Physically Challenged is a program of fitness and sports competition for physically challenged youngsters. The games serve to promote confidence and encourage participation in adapted sports by individuals 5-21 years of age, who have cerebral palsy or spinal cord injuries, who are blind, deaf or amputees, or "les autres." The goal of this program is to provide opportunities for athletic competition and to encourage participation in fitness workshops for young people with physical disabilities throughout the State of New York.

Accessibility (Statewide)

The Americans with Disabilities Act Accessibility Guidelines (ADAAG)

The Americans with Disabilities Act (ADA) requires public agencies to employ specific guidelines which ensure that buildings, facilities, programs and vehicles as addressed by the ADA are accessible in terms of architecture and design, transportation and communication to individuals with disabilities. A federal agency known as the Access Board has issued the ADAAG for this purpose. The Department of Justice Rule provides authority to these guidelines.

The Access Board has proposed guidelines to expand ADAAG to cover outdoor developed facilities managed by the federal government including: trails, campgrounds, picnic areas and beaches. The proposed ADAAG are available through the access board website at www.access-board.gov.

Universal Access Program

Since 2001, the DEC has coordinated efforts to provide access to programs through the efforts of Access Coordinators in each regional office and a Statewide Coordinator for Access Issues located in the Department's central office. Their role is to assess the level of accessibility to programs and services, identify barriers, develop solutions to improve access, provide technical assistance and in-service training and provide outreach and education to promote our accessible areas.

The goal of the UAP is to develop a comprehensive approach to maximize accessibility to programs and services while ensuring consistency with the other legal mandates of conservation and protection of the resources we manage.

Looking beyond the legal minimum requirements for providing access for persons with disabilities, the UAP has promoted the employment of Universal Design principles for new construction. Universal Design enables use by everyone rather than a portion of the population. This inclusive approach makes sense from a planning perspective as it includes not only people with disabilities, but families, seniors, people with temporary or invisible disabilities and the people that they recreate with.

Access Pass

An Access Pass program provides free use of parks, historic sites, and recreational facilities operated by the New York State Office of Parks, Recreation and Historic Preservation and the New York State Department of Environmental Conservation. Qualified persons with permanent disabilities can obtain a pass for free use of facilities operated by these offices, for which there is normally a charge such as for parking, camping, green fees and swimming. The pass, however, is not valid at any facility within a park operated by a private concern under contract to the State, or for a waiver of fees such as those for seasonal marina dockage, for a group camp, for reservations of a picnic shelter, for performing arts programs, for campsite/cabin amenities, for consumables, or for fees related to campsite/cabin reservations and registrations.

Golden Park Program

A Golden Park Program provides free vehicle access to state parks and arboretums, fee reduction to state historic sites and fee reduction for state-operated swimming, golf, tennis and boat rental for resident 62 years of age or older on any weekday (except holidays).

Empire Passport

The Empire Passport provides unlimited day use vehicle entry to most of New York's State parks and recreational facilities for a one time purchase price. The Passport can be used from April 1 to March 31 of the following year and provides access to most of the 178 state parks, 55 Department of Environmental Conservation (DEC) forest preserve areas, as well as to boat launch sites, arboretums and park preserves. A second passport for the same household

Figure 15 - OPRHP Camping Facilities

can be purchased at a reduced rate, which may be used on a second vehicle, boat or motorcycle.

Wetlands (DEC)

It is estimated that New York has 2.4 million acres of freshwater wetlands and about 25,000 acres of vegetated tidal wetlands. They encompass about eight percent of the land of New York. Wetland types include marshes; hardwood, coniferous and shrub swamps, wet meadows; bogs and fens; coastal marshes; and wetland open water. While it is estimated that the State has lost over half of its wetlands since colonization to such activities as draining, dredging, filling, and polluting, it is estimated that the State had a net gain of an estimated 15,500 acres of freshwater wetlands between the mid-1980s and the mid-1990s. In addition, there are 25,000 acres of vegetated tidal wetlands in the marine district. The acreage is classified as follows:

- Coastal fresh marsh — the upper tidal limits of riverine systems. This category accounts for 4.8 percent of the vegetated tidal wetlands in the State.
- Intertidal marsh — the area between average high and low tidal elevations. It includes 60.8 percent of the vegetated wetlands.
- High marsh — the uppermost tidal wetland zone. It includes 31.6 percent of the vegetated wetlands.
- Formerly connected — areas where tidal flow has been restricted by either human or natural causes. It includes 4.8 percent of vegetated wetlands.

New York recognizes that wetlands provide a multitude of functions and benefits for the people of the State and has developed a multifaceted program to protect and manage that resource.

New York considers wetlands a priority resource, and articulates that concern in statute. The State has comprehensive wetland conservation programs and works with federal and local governmental agencies and with other nongovernmental partners to better protect wetlands.

Through a suite of programs from acquisition and regulation to restoration and education, the State has successfully protected its wetlands resources and will continue to be a leader in preserving, protecting, and conserving the wealth of its wetlands resources.

Wild and Scenic Rivers Program

National Wild and Scenic Rivers Program (NPS)

In 1968 the Wild and Scenic Rivers Act was passed by Congress in an effort to create a national system of protected rivers. The program has been successful at preserving a large number of the nation's premier rivers. New York State only has one river designated as part of the National system, that river is the Delaware (Upper) River. The Delaware (Upper) was designated in 1978 as a Wild and Scenic River for the portion between Hancock, NY and Sparrow Bush, NY; the designation is listed as both scenic (23.1 miles) and as recreational (50.3 miles).

The protection of the Delaware River through the Wild and Scenic River program has allowed the river to remain a productive source of drinking water for 17 million people as well as maintaining a natural recreational resource for visitors.

State Wild, Scenic and Recreational Rivers Program (DEC)

New York State has a number of rivers with significant natural, scenic, historic, ecological and recreational values. The NYS Wild, Scenic and Recreational Rivers System was enacted in 1972 to preserve, protect, and enhance these unique rivers and their immediate environs in a free flowing condition and in a natural state. There were 14 initial rivers (segments) designated as part of the NYS Wild, Scenic and Recreational Rivers system; these were located within the Adirondack Park boundaries. After the legislation was first passed, additional river segments were designated.

The legislation designates three classes of rivers: wild, scenic, and recreational. Currently, 66 rivers, encompassing over 1200 miles, have been designated as wild, scenic or recreational rivers in New York State

Great Lakes

New York State borders two Great Lakes. Lake Erie and Lake Ontario have more than 1,500 miles of shoreline with nearly half of that along New York State's border (Great Lakes Regional Waterways Management Forum, undated). Approximately 40% of New York's lands are within the Great Lakes watershed and more than 20% of its population resides within the basin. Recreation and tourism continue to be a major contributor to the economy of the Great Lakes region. As responses from the urban areas of Buffalo and Rochester demonstrate, increasing demand for swimming, boating and fishing opportunities are placing more pressure on management agencies to "clean up", maintain water levels, protect wildlife habitat areas, restore fish and wildlife populations, and provide more public access for improved public uses of the Lakes and their resources.

Recreational use of the Great Lakes waters is often listed as an impaired use. With the anticipated expansion of recreational interests, greater demands will be placed upon existing facilities and resources in the Great Lakes region, many of which are not in sufficient supply or condition to satisfy these increasing needs.

The following organizations and programs recognize the importance of the Great Lakes to the economic vitality of New York State and the role of recreational use and water access as part of the regional economy. OPRHP and DEC work with and participate in these programs to ensure public recreation and access issues to the Great Lakes are addressed.

The Great Lakes Commission (DEC)

The Great Lakes Commission (Commission) is a binational agency that promotes the orderly, integrated and comprehensive development, use and conservation of the water and related natural resources of the Great Lakes Basin and the St. Lawrence River. The Commission has been applying the principles of sustainability to the development, use and conservation of the natural resources of the Great Lakes Basin and St. Lawrence River. The Commission addresses a range of issues involving environmental protection, resource management, transportation and economic development. The Commission's vision for the basin is to have a strong and growing economy, a healthy environment, and a high quality of life for all citizens. To accomplish their vision, the Commission adheres to three supporting principles: 1) information sharing among the membership and the entire Great Lakes-St. Lawrence Community; 2) policy research, development and coordination on issues of regional interest; and, 3) advocacy of those positions on which members agree.

New York State's Great Lakes Basin Advisory Council (DEC)

The Great Lakes Basin Advisory Council (Council) assists the State in its effort to protect the environmental, social and economic health of the Great Lakes Region. The Council functions as a link between state and local governments, private sector businesses, academic community and the public.

The Council consists of 19 members who advise the Governor, State Legislature and the DEC Commissioner on matters relating to the State's role in regional, federal and international activities and programs aimed at protecting the quality and quantity of water in the Great Lakes. Domestic, municipal, industrial and agricultural water supplies; navigation; hydroelectric power and energy production; recreation; fish and wildlife habitat; and a balanced ecosystem are all vital to the future environmental, social and economic health of the Great Lakes Region.

Lakewide Management Plans (LaMPs) (DEC)

The development of Lakewide Management Plans (LaMPs) stem from the Great Lakes Water Quality Agreement originally signed by the United States and Canada in 1972 and amended in 1978 and 1987. In the 1987 amendment, the two governments agreed to develop Lakewide Management Plans that will "restore and maintain the chemical, biological and physical integrity of the waters of the Great Lakes Basin" (Great Lakes Information Network, 2001) The LaMPs are intended to (1) identify critical pollutants that affect beneficial uses of the waters of the Great Lakes and (2) promote ecosystem-based management approaches to restoring the basin's integrity.

Remedial Action Plans (DEC)

As part of the binational Great Lakes Program, six areas of concern were identified within New York as required by the 1987 amendment to the Great Lakes Water Quality Agreement (International Joint Commission, 1994). "Areas of Concern" are areas where beneficial uses of the lands, shores, and water are impaired due to water quality issues and do not meet the objectives of the Water Quality Agreement. The six areas identified in New York are the Buffalo River, the Niagara River, the Rochester Embayment, the Oswego River, Eighteenmile Mile Creek in Niagara County and the St. Lawrence River at Massena, NY (U.S. EPA, 2007).

The ultimate goal of the Remedial Action Plans is to have all areas "de-listed". In New York State, only the Oswego River AOC has achieved the goal, being the first of the U.S. AOC to be delisted in July 2006. The remaining five areas are in various stages of the process. After completing environmental review under the NY State Environmental Quality Review Act (SEQR), DEC included all six RAPs as part of the State's Water Quality Management Plan (DEC, 1998).

New York State 25-Year Plan for the Great Lakes (DEC)

An important objective specified in the 25-Year Plan for the Great Lakes (25-Year Plan), prepared in 1992, is to increase opportunities for the public to gain access to the Great Lakes Coastal areas (DEC, 1992).

DEC is in the process of evaluating the State's progress in implementing the 25-Year Plan and developing an action plan for the next five years of the plan's implementation. This action plan will identify short-term activities recommended within the 25-Year Plan

that have not yet been accomplished and identify new priorities that have been identified since the creation of the 25-Year Plan.

The Hudson River Estuary Program (DEC)

The Hudson River Estuary Program is a regional partnership designed to protect, conserve, restore and enhance the estuary, associated shorelands as well as related upland resources. DEC serves as manager of the program in collaboration with OPRHP, DOS, OGS, DOT, the Metro-North Railroad, the Hudson River Greenway, the Hudson River Foundation, Cornell University, New England Interstate Water Pollution Control Commission (NEIWPP), Soil and Water Conservation Districts and a citizen advisory committee along with municipal governments (DEC, 2007).

The long-range goals for the Estuary Program are outlined in the *Hudson River Estuary Action Agenda 2005-2009.* For each goal, interim targets have been set in quantitative terms, wherever possible, with specific dates for achievement. The *Action Agenda* undergoes revision every four years. The current edition of the Estuary *Action Agenda* is available from DEC's website at http://www.dec.ny.gov

Encouraging people to get to the river and enhancing recreational opportunities have been a major goal of the Estuary Program. In 1999, the Estuary Program initiated a grants program to provide opportunities for implementing *Action Agenda* goals at the local level. Grants are available to municipalities and not-for-profits in five categories, including access to the Hudson River estuary for recreation. To date, more than 300 grants, totaling nearly $10 million have been awarded to these local efforts. (DEC, 2007).

Marine Recreational Fishing/ Artificial Reef Program (DEC)

DEC's Bureau of Marine Resources is responsible for the management of living marine resources and their habitats within the Marine and Coastal District of New York State. The Finfish and Crustaceans Unit monitors and develops management recommendations for the principal finfish and crustacean species of the State including; striped bass, shad, sturgeon, weakfish, winter flounder, scup and many others. The management efforts strive to provide a healthy and stable marine fish population and maintain the habitat for these species for marine recreational and commercial fishing interests (DEC, 2007).

Recreational marine fishing access is developed on State properties or in cooperation with local municipalities. Program activities include property acquisition, construction of new access facilities such as fishing piers and boat ramps on existing properties, and rehabilitation or improvement of existing facilities (DEC, 2007).

The Artificial Reef Program strives to optimize the marine recreational fishing opportunities in the State. Artificial reefs may be designed and advocated to serve a dual purpose of habitat improvements and shoreline protection along the Long Island Shoreline. This program is important to the State's recreational future because of the popularity of fishing as a recreational activity.

Wildlife Resources (DEC)

Recreation resources generally focus on land or water areas and discrete facilities or sites. Wildlife as a recreational resource is less location-specific. Their habitat and movement are independent of property boundaries. Wildlife is viewed more in terms of species and populations than in acreage or sites. In the United States, jurisdiction over wildlife does not correspond to ownership of real property, but is vested in the people of each state. DEC acts as the steward of the people's wildlife in New York State. For migratory species, the ultimate authority is the federal government, with DEC and analogous agencies in other states as major participants and cooperators.

The mission of DEC's Wildlife program is to provide the people of New York with the opportunity to enjoy all the benefits of the wildlife of the State, now and in the future. This mission is embodied in five broad goals: (1) to assure that populations of all wildlife are of appropriate size to meet all the demands placed on them; (2) to assure the public desire for information is met and to obtain public input into management decisions; (3) to provide sustainable uses of wildlife for an informed public; (4) to minimize the damage caused by wildlife and wildlife users; and, (5) to foster and maintain an organization that efficiently achieves these goals.

Recreation is one of the major aspects of DEC's wildlife program. Achievement of appropriate population sizes, meeting desires for uses and exchanging information with the public are the goals most closely related to recreation. It is inevitable that program

objectives will reflect compromises among several goals.

Many people want to know that wildlife exists in its potential abundance and diversity. There are both direct and indirect recreational benefits derived from wildlife. Aside from hunting and observation opportunities, many people achieve satisfaction from the mere existence of various species, such as loons and bears in the Adirondacks, even though they may not have direct contact with them.

While engaging in such activities as camping, hiking, walking, skiing, etc., people often encounter wildlife and have the opportunity to observe many species. These incidental encounters often enhance the primary recreation experience. Recreationists often become accustomed to such encounters and eventually expect them. Observation of wildlife also has recreational value when it is a concomitant to every day living, working and traveling.

People observe and study wildlife for enjoyment. This activity includes both actively seeking opportunities and observing wildlife incidental to other activities. Therefore, an abundant and diverse wildlife population, including endangered, threatened and rare species, needs to be perpetuated and restored in order to serve wildlife recreation.

Hunters, trappers and other recreationists, current and future, should have the opportunity and resources to pursue wildlife interests. In some parts of the State, access to land is declining and/or is severely limited. In addition, political and legal challenges must be addressed.

To maximize social acceptability and public use of wildlife resources on private lands, wildlife recreationists need to develop and practice high standards of ethics, courtesy and safety. Training and educational programs to promote understanding and skill development are a high priority.

Income levels, education levels, physical health, residence in urban/suburban/rural areas, background in wildlife activities are all factors influencing people's involvement with wildlife. Programs that provide opportunities to develop skills, participate in wildlife recreational activities, and involve potential users are needed to enhance public wildlife understanding and support for wildlife resource programs.

Fisheries (DEC)

The State's freshwater resources provide recreational fishing benefits to nearly one million licensed anglers that enjoy over 20 million fishing trips each year. Additionally, hundreds of thousands of young people, under age 16 are introduced to the State's outdoor-recreational opportunities through fishing activities without any licensing requirements. The State's 4 million acres of lakes and ponds and 70,000 miles of rivers and streams support abundant and diverse fish populations that offer a great range of recreational options. Trophy-size salmon, muskellunge and striped bass are available in Lake Ontario, the St. Lawrence River and the Hudson River respectively. Many waters across the State provide trout, walleye, bass and northern pike fishing of a quality that is notable nationwide, while excellent panfish stocks provide both sport and table fare to all levels of angling expertise. The State also offers quality experiences for all types of angling techniques and preferences. These include boat trolling for salmon, isolated pond fishing for native brook trout, wading for trout in 15,000 miles of stream and float or shore fishing for smallmouth bass in over 50,000 miles of warm-water streams and rivers. In addition, the State has thousands of lakes and ponds that offer many species of game and panfish via ice fishing, shore fishing, rowboat, bass-boat and cabin cruiser access.

DEC's overall fisheries program mission is to maintain the quantity and quality of the State's fisheries resources and recreational benefits for future generations

Invasive Species (DEC)

A law enacted in 2007 created the New York State Invasive Species Council (ISC). The ISC will coordinate statewide efforts to control invasive species. The Council is co-chaired by DEC and the Department of Agriculture and Markets, and has seven other member agencies: DOT, OPRHP, Education, DOS, the Thruway Authority, the Canal Corporation and the Adirondack Park Agency. The law also established a multi-stakeholder Invasive Species Advisory Committee to represent a breadth of conservation, business, academia, and landowner interests.

A new Office of Invasive Species, housed in DEC, will bring together biologists and foresters to develop ways to combat the problem, and work with universities, other state agencies and non-profit organizations to support research and raise public awareness. This office will help the ISC create a plan by 2010 to control invasive plants, animals and insects that come into New York, and will provide support for the ISC. Among the other tasks for the new invasive species program are to:

- Establish a comprehensive education and outreach effort.
- Integrate databases and information clearinghouses.
- Establish an independent Center for Invasive Species Research.
- Fund efforts to clearly demonstrate the possibilities for successful invasive species management.

Funding will include supporting core functions of Partnerships for Invasive Species Management (PRISMs) formed or forming in the state to help combat invasive species. A diverse stakeholder base, including state agencies, resource managers, nongovernmental organizations, industry, resource users and others will comprise a PRISM.

Environmental Justice (DEC)

Promoting outdoor recreational opportunities is essential to the quality of life, health and enjoyment of New York's diverse communities. Unfortunately, many communities, especially minority and low-income communities and subsistence fishing communities, have inadequate access to these opportunities.

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Environmental justice principles recognize that some communities, especially minority and low-income communities are disproportionately exposed to negative environmental impacts, have been historically absent from environmental decision-making affecting their community, and may not receive equitable benefits of environmental programs. Environmental justice efforts focus on improving the environment in these communities.

The Adirondack Park Agency (APA)

The Adirondack Park Agency (APA) is an independent, bipartisan state agency responsible for developing long-range park policy in a forum that balances statewide concerns and the interests of local governments in the Adirondack Park. It was created by New York State law in 1971. The legislation defined the makeup and functions of the APA and authorized the Agency to develop two plans for lands within the Adirondack Park. The Adirondack Park Land Use and Development Plan regulates land use and development activities on the approximately 3.2 million acres of privately owned lands in the Park. The Adirondack Park State Land Master Plan (APSLMP) sets forth guidelines and criteria for the DEC's management of the remaining 2.8 million acres of public lands.

APA also administers the State's Wild, Scenic and Recreational Rivers System Act for private lands adjacent to designated rivers in the Park, and the State's Freshwater Wetlands Act within the Park.

APA operates two Visitor Interpretive Centers (VICs) at Paul Smiths, Franklin County and at Newcomb, Essex County. These Centers are the Agency's environmental education and traveler orientation centers.

Coastal Resources

New York's coast, the third longest in the nation, draws people to its shores. Over 15 million people, 85% of the State's population, live and work along our coastal waters--an area that accounts for 12% of the state's land mass. By 2010, an additional 700,000 people will join them.

The natural areas along New York's coast provide great diversity of fish and wildlife habitats, estuaries and deep water trenches, bluffs, barrier islands, and other natural protective features. Enormous economic benefits are derived from the coast each year. New York's commercial fishing industry, ports and marinas, and coastal farming areas contribute billions annually to the state's economy. The competing demands on our coastal area resources continue to threaten the natural and economic viability of the coast. New York's coastal zone management program was established to conserve and properly use coastal resources by managing competing demands along the coast.

The Division of Coastal Resources in the Department of State (DOS) works in partnership with local governments, community-based organizations, and state and federal agencies to better manage coastal resources and advance revitalization of waterfront communities. Division programs address waterfront redevelopment; expansion of visual and physical public access to the water; coastal resource protection, including habitats, water quality, and historic and scenic resources; and provision for water dependent uses, including recreational boating, fishing, and swimming. State and federal agency permitting, funding, and direct actions must be consistent with these purposes.

Local Waterfront Revitalization Program (DOS)

Cities, towns, and villages along major coastal and inland waterways are encouraged to prepare a Local Waterfront Revitalization Program

(LWRP) in cooperation with DOS. A LWRP is a locally prepared, comprehensive land and water use plan for a community's natural, public, working waterfront, and developed waterfront resources. It provides a comprehensive framework within which critical waterfront issues can be addressed. In partnership with the Division of Coastal Resources, a municipality develops community consensus regarding the future of its waterfront and refines state coastal policies to reflect local conditions and circumstances. As part of the preparation of a LWRP, a community identifies long term uses for its waterfront and an implementation strategy, including enacting or amending appropriate local development controls. The LWRP serves to coordinate state and federal actions needed to achieve the community's goals for its waterfront.

Harbor Management Plans (HMPs) are prepared as components of LWRPs to improve management of their harbors. HMPs take a hard look at the resources, conflicts, congestion and competition for space in New York's harbors and balance the interests of all uses of harbor resources. These plans consider local and regional needs and address issues related to commercial shipping and fishing, dredging, recreational boating and fishing, natural resource protection, and other matters affecting harbors.

Environmental Protection Fund Local Waterfront Revitalization Grants (DOS)

DOS provides grants to waterfront municipalities for a variety of planning, design and construction projects to protect and revitalize waterfront resources. The grants serve as a source of funding for communities to implement projects identified in a LWRP, as well as a means of enlisting new communities, to develop LWRPs.

Blueway Trail Plans (DOS)

Blueway trails are small boat and paddling routes that combine recreation, tourism and environmental awareness and allow users to travel to and between designated stops along the way for rest, overnight stays and linkages to land-based attractions, including community centers, heritage trails and sites, greenways, historic resources, and scenic by-ways. The process for developing blueway trails relies on intermunicipal cooperation with a high degree of participation from the private sector. Blueway trails are marketed as a regional attraction.

Municipalities may apply for grant funding from the Environmental Protection Fund Local Waterfront Revitalization Program to undertake the planning and physical development of blueway trails.

Regional Initiatives (DOS)

The Department of State has initiated a number of regional initiatives to better manage coastal resources for enhanced access, recreation and tourism-based economic development, waterfront revitalization and habitat protection. These initiatives include:

Long Island South Shore Estuary Reserve

The Long Island South Shore Estuary Reserve Act established the reserve, called for its protection and prudent management, and created a council charged with preparation of a comprehensive management plan for the reserve. The reserve includes five of Long Island's south shore estuarine bays and the adjacent upland areas draining to them, and stretches from the western boundary of the Town of Hempstead to the middle of the Town of Southampton. The reserve is home to about 1.5 million people and is the anchor of the region's tourism, seafood, and recreation industries.

The reserve's comprehensive management plan calls for a series of implementation actions to address key issues identified in the plan, including: reducing non-point and point sources of pollution; increasing harvest levels of hard clams; protecting and restoring coastal habitats; preserving open space; improving understanding of the ecosystem; increasing public use and tourism; sustaining water-dependent businesses and maritime centers; and heightening public awareness of the estuary.

Long Island Sound Coastal Management Program

The Long Island Sound Coastal Management Program (CMP) encompasses 304 miles of shoreline in Westchester County, the Bronx, Queens, and Nassau and Suffolk counties, and nearly 1.5 million people. Regionally specific coastal policies were developed which reflect the unique environmental, economic, and social characteristics of the Sound shoreline.

The policies focus on protecting and expanding public access and visual access opportunities along the Sound shore, which are currently limited; encouraging revitalization of developed centers; protecting and restoring natural resources and open spaces, particularly those areas of regional importance; and encouraging water-dependent uses in centers of maritime activity.

Scenic Resources (DOS)

New York State has long recognized the importance of scenic resources. The interaction of man with the landscape has made New York's coast a visually exciting and valued place. Designation of Scenic Areas of Statewide

Significance by DOS provides additional protection for coastal landscapes that are recognized for their importance in the natural, cultural and historic significance to the State.

Six Scenic Areas of Statewide Significance have been designated along the Hudson River, covering more than 50% of its shoreline. Each scenic area encompasses unique, highly scenic landscapes which are accessible to the public and recognized for their scenic quality. The scenic areas include a fiord in the Hudson Highlands, an impressive collection of great estates along the Hudson River's midsection, the landscape where Hudson River School painters Thomas Cole and Frederic Church made their homes, and the pastoral landscape south of the Capital region.

Designation provides special protection to the landscapes. Narratives for each scenic area describe which landscape elements should be protected and the types of actions that could impair them. Federal and state agencies must avoid permitting, funding, or undertaking actions that would impair the landscape's scenic quality. In addition, municipalities can use their local land use authority to protect scenic resources, such as through a LWRP.

Coastal Habitats (DOS)

Many habitats that are vital to the survival of New York's coastal fish and wildlife resources exist along New York's 3,200 mile shoreline. To protect these important natural areas, DOS, in cooperation with DEC, has designated 245 Significant Coastal Fish and Wildlife Habitats (SCFWHs) across the State. The designations are designed to protect and offer guidance on management activities within the habitats with important natural resource values, including recreational fishing and other passive natural resource-related activities.

DOS works with other state and federal agencies, local governments, and concerned citizens to restore and maintain significant coastal fish and wildlife habitats, primarily through projects funded through EPF LWRP grants.

Brownfield Opportunity Areas (DOS/DEC)

The Brownfield Opportunity Areas (BOA) Program provides communities with significant land use and redevelopment planning tools to revitalize areas affected by brownfields, abandoned or vacant properties. A "brownfield" or "brownfield site" is defined as any real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant. The end product is a community driven revitalization plan and implementation strategy to return unproductive land back to use while simultaneously improving environmental quality and revitalizing the affected area. An objective is to enable communities to plan for the reuse and redevelopment of brownfields on an area-wide basis, as opposed to dealing with brownfields and other unproductive parcels on a site by site basis.

Oceans and Great Lakes (DOS)

The New York Ocean and Great Lakes Ecosystem Conservation Act (Article 14 of the NYS ECL) was enacted in 2006 to establish policy and principles to guide management of the State's ocean and coastal ecosystems. The Act creates a New York Ocean and Great Lakes Ecosystem Conservation Council made up of the nine agencies responsible for managing human activities. The Council is responsible for developing recommendations on how to integrate ecosystem-based management with the programs, institutions and activities which affect our ocean and coastal ecosystems. Ecosystem-based management is an adaptive approach to managing human activities to ensure the coexistence of healthy, fully functioning ecosystems and human communities.

Coastal and Inland Consistency (DOS)

The Coastal Zone Management Act (CZMA) requires that each Federal agency activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved State management programs. Consistency review is the decision-making process through which proposed actions and activities are determined to be consistent or inconsistent with the coastal policies of the New York State Coastal Management Program or approved LWRPs. This process includes and affects federal agencies, the Department of State and its Division of Coastal Resources as the State's designated coastal management agency, other State agencies, and municipalities with approved LWRPs.

Watershed Management Plans (DOS)

A watershed management plan is a comprehensive plan to protect and restore specific waterbodies and their watersheds by identifying and prioritizing land uses and capital projects to reduce point and non-point source pollution, and protect or restore water quality, tributary corridors and aquatic habitats. Because watersheds generally include land within more than one municipal jurisdiction, watershed protection requires the preparation of cooperative, intermunicipal plans.

Watershed management is a key strategy in protecting and restoring New York's coastal waters and in revitalizing the communities within each watershed. Watershed management offers opportunities to improve stewardship of water related resources, such

as by concentrating development where intensity is most appropriate, avoiding more sensitive areas, and instituting practices which reduce the impacts of existing pollution.

Division of Coastal Resources – Regional Initiative (DOS)

The Division of Coastal Resources is working in the Great Lakes region to revitalize communities with post-industrial legacies – by strengthening existing community centers, reclaiming brownfields, and expanding public access. The Division is working with 31 communities within the region through the LWRP process; 27 of those communities have an approved LWRP. Communities in the region continue to revitalize their waterfronts by implementing public access improvements - as described in their LWRPs - providing new public access points, trails, and visitor-interpretation centers.

The Department of State works with Lake Champlain communities to improve public access to the waterfront in order to enhance water-based recreation and tourism. An important component of waterfront revitalization efforts involves linking enhanced waterfront facilities to downtowns and Main Streets in order to strengthen the local economy. These initiatives have also promoted regional cooperation among the waterfront communities.

DOS is working with 38 communities in the Hudson River Estuary to prepare and implement LWRPs and other planning initiatives that guide the beneficial use, revitalization, and protection of their waterfront resources. As part of this effort, DOS has assisted 10 communities to advance redevelopment plans in urban areas with vacant and abandoned waterfronts.

DOS works with waterfront communities in the non-tidal portion of the Hudson River through the Inland Waterways program. DOS projects in the Upper Hudson River focus on enhancing waterfront access for recreation and creating sustainable, tourism-based economic and community development opportunities for the region.

The Division of Coastal Resources works with communities in the Adirondack and Catskill Parks through the Inland Waterways Program and grants from the Environmental Protection Fund Local Waterfront Revitalization Program to promote community revitalization and resource protection. The Division helps communities prepare community-based plans and projects that enhance public access opportunities, promote water-based recreation, create a sustainable tourism-based economy, protecting and improving water quality, and guide growth to traditional community centers.

The DOS's Division of Coastal Resources has enjoyed an excellent partnership with local governments along the New York State Canal System for nearly twenty years through the Local Waterfront Revitalization Program and the Canal Recreationway Committee. Along the 524-mile canal system, currently over 90 municipalities have completed, or are preparing, LWRPs with many being multi-jurisdictional efforts.

In 2001, the New York State Department of State's Division of Coastal Resources created the Lake George Watershed Conference to prepare a long term plan to protect the lake water quality. The Conference includes all nine municipalities and three counties around the lake, five state agencies, and nine nonprofit organizations involved in protecting the lake. The Conference is a positive organization for assuring that local governments, non-governmental organizations, and state agencies work in partnership to address complex lake issues in a coordinated manner.

New York State has approximately 2,000 miles of marine coastline and one million plus acres of marine surface waters. The marine district, which includes New York City, Nassau, Suffolk and Westchester Counties, is home to 11 million people or 62% of our State's population. Development pressures have been progressing at such a rapid rate that significant remaining access to the waterfront is being lost. Programs such as the Open Space Plan and the DOS's Coastal Management Program, provide methods and funding sources to provide access and protect and preserve diminishing, recreational coastal resources.

Within the Long Island Marine District, New York State and its federal, regional and local partners continue to move forward to improve public access and recreation in Long Island's marine district through coordinated implementation of regional plans and programs. This has included the Long Island South Shore Bayway, Peconic Estuary Program and the Long Island Sound Stewardship Initiative.

The Waterfront Revitalization Program (WRP) is New York City's principal coastal zone management tool. The intensity of development in New York City, and the limited land area available made it critical to identify appropriate areas for water-dependent activities as well as natural areas needing protection. Towards this end, the WRP identifies both Significant Maritime and

Industrial Areas (SMIA) and Sensitive Natural Waterfront Areas (SNWA).

Bike and Pedestrian Program (DOT)

The New York State Bicycle and Pedestrian program was established in 1991, with the passage by Congress of the Intermodal Surface Transportation Efficiency Act (ISTEA), which recognized the increasingly important role of bicycling and walking in creating a balanced, intermodal transportation system. Subsequent federal transportation bills including the 2001 Transportation Equity Act for the 21st Century (TEA-21), and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFTEA-LU) have all reaffirmed the importance of promoting and facilitating the increased use of non-motorized transportation modes to the nation's and New York's overall health, economy and transportation choices.

It is the goal of the NYS DOT to continue to encourage bicycling and walking as safe, healthy, efficient and cost effective modes of transportation. Towards this goal, the Department will continue to promote a seamless intermodal transportation network that will include expanded bicycle and pedestrian facilities which target both the transportation and recreational needs of the residents of New York State. This will be achieved through the routine inclusion of sidewalks, crossings, bicycle lanes and wide shoulder in most highway construction projects, and through such popular Federal programs as the Transportation Enhancements, Scenic Byways and the new Safe Routes to School which encourage residents of all ages and abilities to walk and bicycle and to be active and healthy. Between 2003 and 2007, the Bicycle and Pedestrian Program has successfully implemented several major program initiatives. These accomplishments included:

- Signing of five new on-road bicycle routes across the State
- Mapping Initiative for State Bicycle Routes 11, 14, 19, 20 & 25
- Safe Routes to School
- Pedestrian Facility Design Training
- Complete Streets Movements

Some on-going initiatives which the NYS DOT Bicycle and Pedestrian program has continued to promote are:

- The Walk Our Children to School (WOCS) event.
- Traffic Calming

Hudson - Mohawk Bike-Hike Trail, Niskayuna, Schenectady County

Transportation Enhancement Program (DOT)

The Transportation Enhancement Program (TEP) was created in the Intermodal Surface Transportation Act of 1991 (ISTEA), and continued in the Transportation Equity Act for the 21st Century (TEA-21) and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

Through the Transportation Enhancement Program, Congress provided innovative opportunities to improve the transportation system through the implementation of a specific list of activities intended to benefit the traveling public, increase transportation choices and access, enhance the built and natural environment, and provide a sense of place. Transportation enhancement activities offer communities funding opportunities to help expand transportation choices such as bicycle and pedestrian facilities, scenic routes, beautification and other investments that increase recreation, accessibility, and safety for everyone beyond traditional highway programs.

Parkways and Bikeways (DOT and OPRHP)

DOT maintains the 20 parkways administered by OPRHP. This includes the parkways on Long Island and paralleling

the Niagara River and Lake Ontario. Some of the parkway segments were never completed and now significant linear open spaces exist within urban and suburban areas. The parkways provide the opportunity to develop hiking, biking and equestrian trails such as along the Niagara, Wantagh and Bethpage Parkways. Bikeways are being planned for the Palisades, Bethpage, Ocean and Lake Ontario Parkways

Scenic Byways Program (DOT)

Since 1992, the New York State Scenic Byways Program, managed by the Department's Environmental Analysis Bureau has revitalized individual and community interest in the State's scenic, natural, recreational, cultural and historic resources. Since its inception, the Scenic Byways Program has facilitated partnerships among State agencies and local and county organizations, private citizens, business owners, and not-for-profit organizations. The Program fosters extensive public involvement and encourages local communities to manage these resources and to enhance tourism and recreation.

Canal Corporation (Canals)

The NYS Canal Corporation, a subsidiary corporation of the New York State Thruway Authority, is responsible for the operation, maintenance and promotion of four historic operating canals that span 524 miles across NYS.

The four canals that make up the NYS Canal System are:

- the Erie Canal
- the Oswego Canal
- the Champlain Canal and
- the Cayuga-Seneca Canal

The Canal System links the Hudson River, Lake Champlain, Lake Ontario, the Finger Lakes, and the Niagara River with communities rich in history and culture. The Canal Corporation is also responsible for implementing the Canal Recreationway Plan and leads the statewide effort to develop the Canalway Trail.

Biodiversity Research Institute (NYS Museum)

By funding promising research projects, sponsoring conferences and seminar series, and undertaking and directing other initiatives, the New York State Biodiversity Research Institute (BRI) advances information and research for the conservation of New York State's biodiversity. Through improving the understanding of our state's natural resources and the challenges to their existence, BRI seeks to collaborate with all residents of New York State in preserving this rich biodiversity for future generations.

BRI is a partnership among conservation and environmental groups and leaders from throughout the state. Its partners include the State Education Department; New York State Department of Environmental Conservation; New York State Office of Parks, Recreation, and Historic Preservation; State University of New York; American Museum of Natural History; Audubon New York; New York Natural Heritage Program; and The Nature Conservancy. BRI has served as a comprehensive source of information about the ecosystems, habitats, and all living organisms in New York State.

The Olympic Training Center and Ski Areas (ORDA)

Lake Placid was the home of the 1932 and 1980 Winter Olympics that left behind valuable winter sports facilities including ski jumps, skating ovals, alpine trails, bobsled and luge runs. Olympic Regional Development Authority (ORDA) utilized these facilities along with other support facilities to develop an Olympic Training Center. From the training center, athletes have access to the Olympic Speed Skating Oval, the Olympic Jumping Complex, the Freestyle Aerial Complex, Whiteface Mountain's Olympic Downhill Ski trails, the Olympic Sports Complex at Mt. Van Hoevenberg, and the Olympic Ice Complex.

Since ORDA assumed authority of these facilities, Lake Placid has hosted more than 225 national and international competitions including 8 World Championships and 41 World Cups. It has also been the annual host to the Empire State Winter Games for nearly three decades. ORDA also maintains and makes periodic improvements to these facilities to keep America's only world class set of Winter Olympic facilities fully operational.

Health (DOH)

Recreation resources provide an important opportunity for people to be physically active, which can lead to significant improvements in health.

Being physically active on a regular basis can contribute to a decrease in the risk of numerous debilitating diseases and conditions, including heart disease, diabetes, hypertension, some forms of cancer, osteoporosis, obesity, depression, arthritis, and possibly Alzheimer's disease. In fact, being physically inactive (combined with poor eating habits) is the second underlying cause of death in this country (next to tobacco use), accounting for 14% of all deaths annually.

New York's efforts to increase and improve access to parks, trails and recreational facilities will significantly help address the obesity epidemic. Of particular importance are facilities that are in close proximity to where people live and work so that they can be used several times a week, for transportation (to/from school, work, errands) as well as for leisure. Additionally, priority should be given to developing neighborhood parks, trails, and other recreation facilities that serve low-income and rural populations.

New York State has over 3,000 bathing facilities including: bathing beaches on lakes, ponds, rivers and the ocean; swimming pools; and spray grounds. DOH is responsible for assuring that all public swimming facilities in the state are operated in a safe manner and that these facilities meet State and Federal standards for safe recreational use. All public bathing facilities in the state must be supervised by qualified lifeguards and meet state water quality and safety standards.

Office for the Aging (OFA)

The New York State Office for the Aging (OFA), through its network of 59 Area Agencies on Aging, has initiated and continues to manage a number of health promotion, disease prevention, and recreation programs and services for active, healthy living for older adults across New York State that fit in with the SCORP.

Senior Health Check is a new initiative that is designed to encourage older New Yorkers, covered by Medicare, to make greater use of preventive screening benefits under the insurance coverage. In addition, the OFA is encouraging Area Agencies on Aging to develop and implement evidenced-based prevention and chronic disease self-management programs to improve health status and quality of life.

Area Agencies on Aging use congregate meal sites, home delivered meals programs, multipurpose senior centers, and other appropriate sites to delivery health promotion and disease prevention services, thereby allowing them to integrate such services with the nutrition program. Priority is given to areas which are medically underserved and where there are a large number of older individuals in greatest economic and social need. All Area Agencies on Aging provide medications management screening and education.

The term "Senior Center" refers to a community facility through which a broad range of programs and services are provided to older adults. Included among these programs and services are recreation and education activities, and health promotion activities.

Activities also are organized and scheduled through the Area Agency on Aging or its sub contractors which involve older persons in courses, workshops and other learning activities and satisfying use of free time.

Services and activities that foster good health, increase awareness and understanding of healthy lifestyles and promote physical and mental health. These include but are not limited to: exercise classes; walking groups; stress education workshops; administration of influenza and other vaccines; promotion of early detection of various health problems through education and/or testing, and; activities to promote successful management of medications, such as group workshops or one-on-one consultations with a health professional.

Harbors of Refuge (COE)

A number of harbors of refuge along the shores of Lake Erie and Lake Ontario were identified by the U. S. Army Corps of Engineers (COE). These lakes are often subject to sudden squalls and high winds creating waves and wakes in excess of 10 feet. Harbor of refuge is a term that refers to a harbor that provides services specifically to accommodate transit craft rather than as a home port for local craft (OPRHP, 1980). Initially, the COE recommended that harbors of refuge occur every 30 miles. It was determined, however, for smaller craft navigating the Great Lakes that shorter intervals were more appropriate. Harbors of refuge have been established at Barcelona, Dunkirk, Cattaraugus Creek, Sturgeon Point and Buffalo Harbors on Lake Erie and Wilson-Tuscarora State Park, Olcott Harbor, Golden Hill State Park, Oak Orchard Marine Park, Braddock Bay, Irondequoit Bay State Park, Port Bay, Little Sodus Bay, Mexico Point State Park, Port Ontario, Henderson Harbor and Sackets Harbor on Lake Ontario.

Hydroelectric Power Projects (FERC)

Throughout the State, many rivers are being used by various power generating companies to produce hydroelectric power. These facilities are regulated and must obtain an operating license issued by the Federal Energy Regulatory Commission (FERC). Many of the facilities within the State are undergoing a re-licensing process to ensure power generating companies continue operating. One aspect of this process is to provide recreation facilities and access, to and in the vicinity of the power facility. Public access to the waters and portage around the structures is an important element of the project. Other recreational facilities that may be considered are picnic areas, campgrounds, and scenic overlooks. Some facilities may even provide an interpretive visitor center explaining their generating plant to the general public.

It is important to insure that these power facilities include recreation facilities within their boundaries. Power companies may create new facilities on their property or enter into agreements with the state or local governments to create new or improve existing facilities.

Lake Champlain Basin Program (EPA)

The Lake Champlain Basin stretches from the peaks of the Adirondacks in New York to the Green Mountains of Vermont and north into Quebec, Canada. The Basin is a unique and historically significant natural resource that attracts thousands of residents and visitors each year to participate in diverse recreational opportunities. Increased use, competing and conflicting uses, and development continues to pressure the Lake's natural and recreational resource. The Lake Champlain Basin Program (LCBP), established in 1990, was charged with developing a long-term, cooperative management plan and program to protect and enhance the lake and its drainage basin for future generations to enjoy. The program is a partnership with the states of New York and Vermont, the Province of Quebec, the US Environmental Protection Agency (EPA), other federal and local government agencies and many local groups both public and private. (LCBP, 2003)

The management plan, "Opportunities for Action" was first produced in 1996 and was revised in 2003. Although Lake Champlain is a vital lake with many assets, there are several serious environmental problems that demand action.

American Heritage River Initiative (EPA)

Created in 1997, the American Heritage Rivers Initiative (AHRI) has three major objectives: natural resource and environmental protection, economic revitalization, and historic and cultural preservation. The program is designed to make federal funding and technical expertise available to the State and local governments to reclaim the health, heritage and economic viability of river communities (U.S. EPA, 2007).

The Hudson River was nominated in 1998, as an American Heritage River. The 315 miles of river, from its source in Lake Tear of the Clouds to the Verrazano Narrows, and the 19 counties surrounding its shores are included in the Heritage River Area.

Beaches Environmental Assessment and Coastal Health Act (EPA)

The Beaches Environmental Assessment and Coastal Health Act (BEACH Act) was enacted in 2000 to improve water quality testing at beaches and help beach managers better inform the public when there are water quality

Cumberland Bay State Park, Clinton County

problems. DOH has received grants from EPA to administer this program, and the BEACH grant money is provided to County Health Departments and OPRHP to implement monitoring and public notification programs for beaches along the Atlantic Coast, Long Island Sound and Lakes Erie and Ontario.

National Estuarine Research Reserve (NOAA)

The National Estuarine Research Reserve System is a network of protected areas established for long-term research, education and stewardship. This partnership program between NOAA and the coastal states protects more than one million acres of estuarine land and water, which provides essential habitat for wildlife; offers educational opportunities for students, teachers and the public; and serves as living laboratories for scientists.

In New York State, the Hudson River Reserve is a network of four coastal wetlands located along 100 miles of the Hudson River Estuary. These units are Stockport Flats, Tivoli Bay, Iona Island and Piermont Marsh. The reserve's headquarters is at Norrie Point Environmental Center within Mills-Norrie State Park in Staatsburg, Dutchess County, and is located directly on the Hudson River.

Sea Grant (NOAA)

Sea Grant is a nationwide network (administered through NOAA), of university-based programs that work with coastal communities. New York Sea Grant Extension is a state- and federally-funded program providing science-based information to people making and influencing decisions for the wise development, management and use of our coastal resources. Extension specialists work with a variety of audiences throughout Long Island, Manhattan, and New York's Hudson Valley, and along the shores of Lake Ontario, Lake Erie, Lake Champlain, the St. Lawrence River and the Niagara River on a variety of coastal issues, including maintaining recreational and marine fisheries, preparing for and responding to coastal hazards and water level changes, responding to the spread and impacts of aquatic nuisance species, providing educational resources, and protecting, enhancing and restoring coastal habitats.

Hudson River Islands State Park, Columbia County

Chapter 8 - The State Outdoor Recreation System

The State of the State Outdoor Recreation System

The "heart and soul" of the State's outdoor recreation system is not the facilities or activities but its natural and cultural resources. Care and stewardship of these resources must be maintained and fostered. If these resources are lost so is the quality of the recreational experience which is the system's primary attribute. The public will not come to swim at our lakes and ocean, or hike the trails if the environmental quality of the resources is impaired.

The Office of Parks, Recreation and Historic Preservation and the Department of Environmental Conservation are the two primary state agencies that manage land resources and provide recreational opportunities. The Canal Corporation, Department of Transportation and Office of General Services are also land managers.

State Park System

OPRHP administers over 330,000 acres of land that incorporates 178 state parks, 35 historic sites, 67 marine facilities and boat launch sites, 20 parkways, over 5,000 structures, 77 developed beaches, 53 swimming pools, 29 golf courses, over 800 cabins, cottages and rental houses, 8,566 campsites, and over 1,350 miles of trail, as well as several outdoor education centers, museums, and nature centers and the Empire State Games. Nearly 80% of the park system is in natural areas with a wide range of geological features, ecological habitats and species of plants and animals. This includes the waterfall at Niagara Falls, the Genesee River gorge called the "Grand Canyon of the East" at Letchworth, extensive forested areas of Allegany and Sterling Forest State Parks, the gorges of the Finger Lakes parks, islands in the St. Lawrence and Hudson Rivers, cliffs at Minnewaska, and the beaches of Long Island.

The Department of Environmental Conservation (DEC) manages 53 day use and campsite facilities within the Adirondack and Catskill Forest Preserves. Unlike a state park, these facilities are within a larger unit management area. DEC manages over 4 million acres. This includes 3 million acres in the Adirondack and Catskill Forest Preserve, 776,000 acres of reforestation and multiple use areas, 190,000 acres in wildlife management areas and 662,000 acres in conservation easements.

The Adirondack Park, established by statute in 1892, is unique among parks within the nation in that it encompasses both state and private lands. Originally established at 2,800,000 acres, the park is now less than 6 million acres. Approximately 2.7 million acres are in state ownership most all of which is classified as Forest Preserve. Unique to the Adirondack Park is the Adirondack Park Agency that controls land use on state and private lands.

Figure 16 - New York State Parks and Historic Sties

The Catskill Park was similarly established, by statute in 1904 with 576,126 acres. Like the Adirondack Park, it includes both public and private lands. The size of this park has been enlarged to 705,500 acres. Approximately 300,000 acres are in state ownership and classified as Forest Preserve.

Like the Forest Preserve the State Nature and Historical Preserve also has constitutional protection that is authorized by Section 4 of Article 14 of the State constitution. It provides for the designation of state lands, outside the Forest Preserve counties, that have exceptional beauty, wilderness character, or geological, ecological or historical significance to the State Nature and Historical Preserve. Currently there are 11 properties dedicated to the State Nature and Historical Preserve.

DEC manages more than 85 Wildlife Management Areas (WMAs) containing more than 190,000 acres - including 124,000 acres of upland and 53,000 acres of wetland for the production and use of wildlife. The WMA program is part of a long term effort to establish permanent access to lands in New York State for the protection and promotion of its fish and wildlife resources. WMAs provide unique areas for the public to interact with a wide variety of wildlife species that provide good opportunities for hunting, fishing, trapping, hiking, cross-country skiing, bird watching, and enjoying nature.

State Forests

State Forest is a generic term used to describe the nearly 776,000 acres of DEC administered land located outside the Forest Preserve. There are approximately 480 State Forest areas, ranging in size from less than 100 acres to over 9,000 acres. The demand for recreational use of State Forests has greatly increased in recent years. Recreational activities are now a major component of State Forest Unit Management Plans and include diverse pursuits such as snowmobiling, horseback riding, hunting, fishing, hang gliding, picnicking, cross-country skiing, bird watching and hiking. The archer, the dog sledder, the rock climber and the orienteering enthusiast also claim the need for a place to enjoy their sport.

NYS Department of Transportation (DOT)

The road, rail and water transportation systems within the State play an important role in protecting open space and providing recreational opportunities. By their very nature a transportation route is a linear system that connects various points of interests. Their layout has significant impacts on land use and development patterns, on the conservation of open space, and on access to the outdoors for recreational activities as well as being a recreational facility within itself.

DOT administers the road and rail systems and, the Canal Corporation, the canal system. In addition, DOT is responsible for the State's Bicycle/ Pedestrian Program, Scenic Byways and the TEA-21 grant program.

Canal Corporation

Canal Recreationway and Canalway Trail System

Significant progress has been made over the last decade to develop the New York State Canal Recreationway, which spans the 524-mile New York State Canal System, consisting of the legendary Erie, Champlain, Oswego and Cayuga-Seneca Canals. The New York State Canal Corporation, a subsidiary of the New York State Thruway Authority, operates, maintains and promotes the system and has spear-headed the canal revitalization effort throughout New York State.

Canal Harbors were developed at seven canal gateways and other strategic locations. In addition, nearly 100 Canal Ports have been constructed or are currently under improvement at Canal Locks and waterfronts along the system. Improved visitor services and amenities are now available at 60 locations with plans underway locally to complete the remaining 36 sites.

In 2006, the Erie Canal Greenway Grant Program awarded over $8.9 million in grant funding to local projects designed to enhance tourism and economic development along the Canal System and further capitalize on this historic national resource for the benefit of local communities.

Completion of the end-to-end Canalway Trail is another major element of the Canal Revitalization effort. The Canalway Trail, which parallels the entire New York State Canal System, will be the longest multiple use trail in the United States. More than 170 miles of trail have been completed since the Canal Corporation began the program in 1995. A total of 280 miles of trail now exist, primarily along the Erie Canal corridor. The Canalway trail parallels the Erie, Champlain, Oswego, and Cayuga-Seneca canals, creating the spine of a statewide network of trails.

The Canal Corporation has also begun research and planning for the development of the New York State Canalway Water Trail, a coordinated water-based "trail" with boat launches and landing sites, along with campsites located on the shores of the Canal System. The Canal Corporation has developed an informational brochure and

has begun an inventory of existing and potential sites for future improvement and enhancement.

Office of General Services (OGS)

OGS administers state-owned land, including uplands and all ungranted lands under or formerly under the waters of New York State. The Agency issues licenses, permits, leases, easements and occasionally grants to underwater lands; disposes of uplands determined to be surplus to the needs of the State; and, provides transfers of jurisdiction for state agencies and local agencies for certain specific purposes (including recreational uses) subject to special acts of the State legislature.

Olympic Regional Development Authority (ORDA)

The facilities and venues that ORDA manages and maintains are not just for elite winter athletes. They're also a winter vacationer's paradise. ORDA manages and operates ski centers at Whiteface and Gore Mountains, the bobsled track, luge track and a number of skating facilities that are open to the public.

Others

There are various other state agencies that manage open space and/ or provide recreation programs. The Health Department encourages recreation activities to improve the health of the citizens of New York. The New York State Museum provides interpretive facilities, programs and kiosks. The Office for the Aging and Office of Children and Family Services also provide programs.

Enhancing and Revitalizing the State Outdoor Recreation System

New York has one of the nation's oldest and largest outdoor recreation systems but also one that has been expanding. Within the last fifteen years more than one million acres has been acquired. This has resulted in increase in stewardship responsibilities to manage these new natural, recreational and cultural resources. The basic infrastructure for many of the facilities has exceeded its life expectancy and needs to be rehabilitated, upgraded or in some cases adaptively reused. Of equal or greater concern is the stewardship of the natural resources and their role in protecting habitats, reducing the impacts of global warming and improving the quality of life.

State Parks

The State Parks System is comprised of 178 Parks and 35 Historic Sites, marine facilities, trails and parkways. The system serves more than 55 million visitors annually. Niagara Falls State Park's annual attendance of 7.8 million visitors is greater than that of the Grand Canyon and Yosemite National Parks combined. More than six million people visit Jones Beach State Park which is twice the number that visits Yellowstone. The system is also the oldest state system in the nation with Niagara Falls established in 1885 and Washington's Headquarters in 1850. The system continues to grow. Over the past 15 years, the size of the Park System expanded from184 sites in 1992 to 213, and added 29 new facilities. The land resource under the stewardship of the agency has grown from 257,000 acres in 1992 to 326,000 acres, an increase of 27%.

The guidance provided in the mission of OPRHP to provide safe and enjoyable recreational and interpretive opportunities and be responsible stewards of the natural, historic and cultural resources, provides the basis for the assessment of the condition of the Park System. As such, the assessment is defined within four categories:

Health and Safety

There are a number of health and safety issues facing the State Park System. Drinking water systems need to be upgraded or replaced, aging sewage treatment systems have exceeded their useful life, various dams on the state's high hazard list do not meet modern dam safety standards, and bridges have been flagged as potential hazards. In addition, outdated electrical systems and underground petroleum storage tanks need to be removed and landfills that, although inactive for many years, were never closed to DEC standards need to be addressed.

Rehabilitation of Existing Facilities

This category is by far of greatest concern, comprised of approximately 65% of OPRHP's total identified capital needs; it encompasses the capital rehabilitation of existing infrastructure in the Parks and Historic Sites including: replacing facilities that have long exceeded their practical and operational effectiveness and are in various stages of disrepair. This includes roofs, heating and plumbing systems, contact stations, campgrounds, boat launches, picnic

shelters, recreation fields, pools, swimming areas, visitor centers, bathrooms, roads, parking areas, hiking trails, and maintenance centers. There is also a significant backlog of repair and maintenance needs for historic buildings and structures at the Historic Sites, as well as energy efficiency investments in aging buildings.

New Facility Development

As identified above, the park system has increased by 29 facilities over the past 15 years. Many of these new parks consist of a sign, a car pull-off and a minimum level of recreational opportunities. Investments are needed to create entrance areas, parking areas, restrooms, trail systems and picnic areas and other compatible recreation facilities to make these new acquisitions available to the public. However, the need to expand recreation opportunities is not just restricted to new parks but also includes existing facilities. Many of the existing parks either have outdated or no master plans. Through the planning process, new recreation and interpretive opportunities may be proposed that require support facilities.

Natural Resource Stewardship

The State Park's natural resources – plant, wildlife, and ecosystems – face varied threats, such as pollution of lakes and rivers, impaired wetlands, invasive species, soil erosion, global warming, and sea level rise. There is a need to restore habitats and ecosystems to assure that natural resources in the State Park system remain "unimpaired for future generations."

Capital Needs

To address the health and safety, rehabilitation, new development and natural resource stewardship needs a significant capital investment is required. The capital expenditures for State Parks in 1992 were $60 million. The capital expenditures in 2007 from all sources were $40 million. Adjusted for inflation, the existing capital budget is in essence 50% less than in 1992.

The backlog of urgent capital needs in New York's State Parks and Historic Sites is estimated to be $650 million. The $40 million available only scratches the surface. A comprehensive plan to revitalize New York's State Parks and Historic Sites is needed. This comprehensive plan includes the following components:

- A multi-year plan should be developed to address the large backlog of capital projects which has grown over several decades. It will require a sustained effort to provide a multi-year, dependable commitment of funds.
- The federal government must be a partner in this effort. Federal funding for State Park projects has all but disappeared. The current allocation from the State's primary source of parks funding, the Land and Water Conservation Fund, is only $1.4 million. Federal support for LWCF and other federal programs needs to increase.
- Although New York State will be the primary source of capital funds, increased efforts are needed to raise private contributions from private individuals, foundations, Friends Groups, and corporate sector.
- Approval of the $100 million for the rehabilitation and revitalization of the State Park System recommended in Governor's budget.

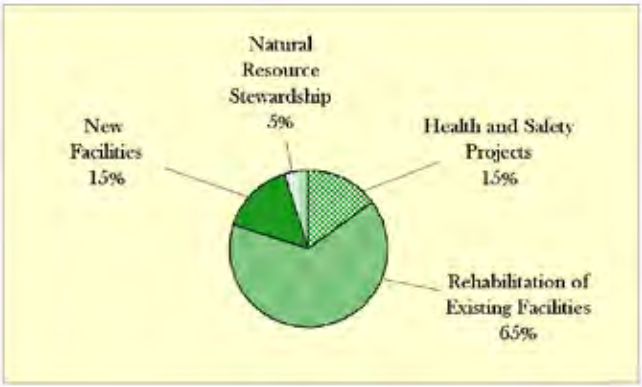
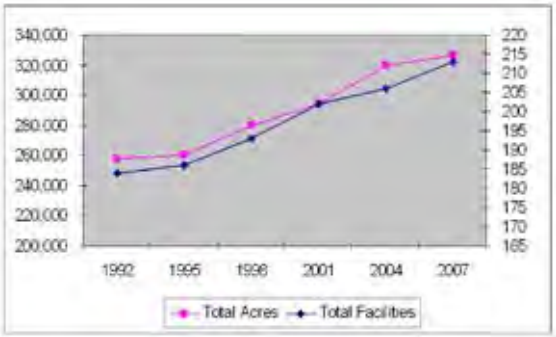


Figure 17 - Breakdown of $650 million – State Parks and Historic Sites Capital Needs



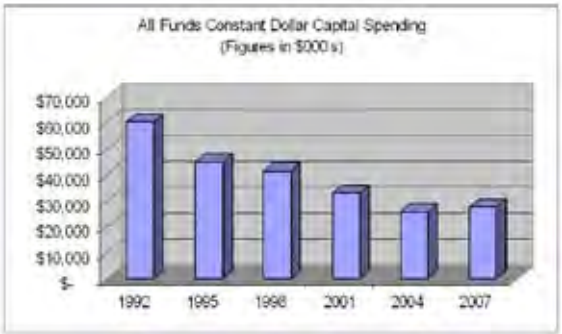


Figure 18 - OPRHP System Expansion vs. Capital Budget

DEC Lands and Forests

DEC manages nearly 4 million acres of Forest Preserve, State Forests, Wildlife Management Areas and other lands throughout the state. Within these lands, DEC maintains roads, campgrounds, day use areas, environmental education centers, fish hatcheries, ski resorts and other support facilities.

Public Forest Access Roads

There are over 600 miles of all-weather roads maintained on State Forests. These roads, along with other seasonal-use-only roads, provide the primary access system to the lands for recreationists. The roads are constructed to standards that will provide reasonably safe travel and to keep maintenance costs to a minimum. Turnoff, parking areas and cul-de-sacs provide space for the recreationists to leave their vehicles while enjoying the forests. Parking areas for horse riding enthusiasts include a stabling area, track area and even primitive camping sites for their use. These areas are reached from the public forest access road system.

The smaller seasonal-use-only roads are often developed as a result of a timber sale. While the sale is in progress, these "haul" roads provide the timber harvester with the means to enter and extract forest products from the sale area. Once the sale is completed, the roads are usually removed from motorized use and become available for hiking, mountain biking, skiing and snowmobiling.

Trailways

A survey conducted in 1991 identified 2,081 miles of single and multi-purpose trails. These trails range in use from hiking, cross-country skiing and horseback riding to mountain biking, running, snowshoeing, snowmobiling and nature walks.

Hiking is permitted on most of the trailways. These may range from a

Equestrian Facilities at Otter Creek State Forest, Lewis County

hiking experience of a mile or less on a nature/interpretive trail to the extended Finger Lakes Trail and the Long Path systems.

Equestrian trails are located in many of DEC's regions. The large system at Brookfield, Madison County has its counterpart at the Otter Creek system in Lewis County. These two and others are also used for snowmobiling during the winter months and receive intensive use for both pursuits. While 370 miles of trail are specifically signed for snowmobiling, this activity is not currently restricted on State Forests to trails and consequently uses more State land than is commonly recognized. Snowshoeing and cross-county skiing are other winter sports that make use of State Forest trail systems. Over four hundred miles of trail are designated for these uses and have become very popular with enthusiasts of these sports.

Currently, ATV use is not permitted. Future development of dedicated off-road ATV trails on State Forests is expected to be unlikely due to environmental and public safety concerns, limited enforcement capabilities, and lack of legislative funding.

Belleayre Ski Center

DEC administers the Belleayre Mountain Ski Center located in Highmount, New York in the Catskill Forest Preserve. Since 1949 this modern ski area has offered full service downhill and cross-country skiing. The center serves an average of 103,000 skiers per year. The facilities, which include 33 downhill slopes and trails, 4 cross-country trails and 8 passenger lifts and tows, generate about $2 million in revenue annually.

Belleayre Mountain Day-Use Area, located in the vicinity of the Belleayre Mountain Ski Center, was opened to the public in July of 1993.

Campgrounds and Day Use Areas

Many programs and services are offered to the public at DEC administered recreation facilities. These facilities are located in the Forest Preserve, either in the Adirondack or Catskill Parks.

Campgrounds and day use areas afford the public opportunities for day and resident camping and for other activities within the Forest Preserve setting. There are a total of 52 campgrounds within the Adirondack and Catskill Parks and 8 campgrounds offer structured interpretive/activity programs.

Interpretive and Activity programs have been offered within the Forest Preserve, on and off, since 1935. In 1996, the current program was revamped and a set of goals were established for the program. They are:

- To provide educational and recreational opportunities, for the enjoyment of campers, that are compatible with the Forest Preserve.
- To heighten awareness, appreciation and understanding of the environment.
- To foster proper recreational use of the Forest Preserve and its facilities.
- To promote understanding of the Department and its programs (DEC 2007).

Beginning in 1997, the new program was launched at seven DEC campgrounds. The Junior Naturalist Program and Adventure Discovery packs were incorporated into the regular interpreter Activity Program. In addition the Interpreter Activity Program staff began visiting other area campgrounds to conduct activities. The Junior Naturalist Program, in particular, is very successful and other state agencies, such as OPRHP, have adapted the program to suit their facilities.

Since the initiation of the new program, the program has served 23,156 participants in 1997, 32,228 in 1998, and 26,519 in 1999. High visitor satisfaction and demand prompted the expansion of the program to an eighth campground in the year 2000.

Figure 19 - DEC Campgrounds

Participation for 2000 was 31,130 attendees.

Over the past four years, improvements and changes have been made regularly. The program will continue to expand through its outreach efforts and upgrade its presentations to use the most current technology. The balance of recreation and interpretation in DEC's camper programs gives the public an increased sense of the natural world while fostering an appreciation for the resources of the Forest Preserve (DEC, 2007).

Capital Needs

For the period 2007-2012 DEC's capital plan proposes a total of $86 million to be invested in recreation facilities administered by DEC within the Forest Preserve and other State lands. Resource projects planned for the next five years include: $18 million in rehabilitation and replacement of fish hatcheries and hatchery equipment; $14 million in infrastructure renovation, modernization of computerized fishing licensing systems, and fisheries research vessels; and $4.4 million habitat restoration. Recreation related capital projects planned for other State lands during 2007-2012 include: $11 million in expansion of Belleayre Ski Center Base Lodge; $2.5 million in development of Phase 2 Schroon Manor Campground; $5 million in construction of fishing pier and access at Wildwood State Park; and $9.4 million in rehabilitation and modernization of boat launches, fishing piers, and access points across the state.

Table 7 - Detail of DEC's 5-Year Recreation Capital Investment Plan

Expenditure Description	Total Expenditures FY 2007 - 2012
Fish, Wildlife and Marine Resources	
Hatcheries – Rehabilitation of Infrastructure and Replacement of Hatchery Equipment	$18,000,000
Fishing Access - Develop New Boat Launches, Fishing Piers and Angler Parking	$8,700,000 [$5,000,000 for Fishing Pier at Wildwood State Park]
Fishing Access - Rehabilitate and Modernize Boat Launches, Fishing Piers and Fishing Access Points	$9,400,000
Habitat Restoration	$4,400,000
Infrastructure Renovation or Replacement of Facilities, Computerized Licensing Systems and Fisheries Research Vessels	$14,000,000
Federal Clean Vessel Act - Boat Sanitary Waste Pump-out Grants	$2,500,000
Rehab & Infrastructure in State Forest and Forest Preserve	
Major Department Facilities Reconstruction	$7,500,000
Total	$64,500,000
Recreation and Ski Center	
Recreation	
Schroon Manor Campground Development – Phase 2	$2,500,000
Campground Road Rehabilitation	$1,500,000
Modernization of Existing Facilities	$1,000,000
Shower Buildings	$2,000,000
Water/Sewer	$1,000,000
Belleayre Ski Center	
New Maintenance Center	$2,500,000
Base Lodge Expansion	$11,000,000
Total Recreation and Ski Center	$21,500,000

Canal Corporation

5-Year Capital Plan

The NYS Canal Corporation is playing a leading role in the development of the end-to-end Canalway Trail along the four branches of the New York State Canal System. Over 170 miles of trail have been constructed since the Canal Corporation began the program in 1995, resulting in 280 miles of completed trail. The Canalway Trail parallels the Erie, Champlain, Oswego and Cayuga-Seneca canals, creating the spine of a statewide network of trails.

Erie Canalway Trail

The recent emphasis of the Canalway Trail Program has been to complete the 371-mile Erie Canalway Trail from Buffalo to Albany. Nearly three-quarters of the Erie Canalway Trail is complete. Federal TEP funds have been allocated to two Erie Canalway trail projects but matching funds are needed to progress the projects. New York State Transportation Bond Act funding is in place to develop 16 miles of new and rehabilitated trail over the next five years. (See Table 8)

Bid documents are being developed for the following Erie Canalway Trail projects, but funding for actual construction has not been identified: (See Table 8a)

Table 8 - Capital Plan for the Erie Canalway Trail

Segment	Letting year	Length	Cost	Source
Little Falls to Ilion	TBD	8 miles	$6.3 M	TEP
Canastota to Rome	TBD	20 miles	$2.2 M	TEP/CC
Pittsford to Fairport	2010	10 miles	$3.0 M	Bond Act
City of Rome	2010	6 miles	$2.5 M	Bond Act

Table 8a - Capital Needs for the Erie Canalway Trail

Segment	Length	Estimated Cost
Newark to Clyde	15 miles	$3.5 M
Utica to Schuyler	6 miles	$4.5 M
Schenectady	2 miles	$1.5 M
Lockport to Amherst	6 miles	$4.4 M

Champlain Canalway Trail

Currently, 7 miles of trail are complete along the proposed Champlain Canalway Trail. Upon completion from Albany to Whitehall, it is expected that this trail will total 58 miles. Funding is in place to complete a portion of the remaining trail, as follows: (See Table 9)

Table 9 - Capital Plan for the Champlain Canalway Trail

	Letting Year	Length	Estimated Cost	Source
Fort Edward to Fort Ann	2011	12 miles	$5.0 M	2005 Rebuild and Renew Transportation Bond Act

Several locally generated projects will add approximately three additional miles of Champlain Canalway Trail over the next two years.

Cayuga-Seneca Canalway Trail

The Cayuga-Seneca Canalway Trail is proposed from Geneva to Montezuma and is expected to total approximately 18 miles. Seneca County and the Cayuga-Seneca Regional Canalway Trail group are working to complete an 8-mile segment between Geneva and Seneca Falls. Negotiation are taking place with New York State Electric and Gas for use of an abandoned rail line adjacent to the Canal that will accommodate the trail. An EPF grant is being used for survey and preliminary design and additional grants are being sought.

A plan exists to complete the remaining 10 miles of the Cayuga-Seneca Canalway Trail from Seneca Falls to Montezuma but no funding has been identified for design and construction.

Oswego Canalway Trail

The Oswego Canalway Trail is proposed to extend from Syracuse to Oswego for 38 miles along the Oswego Canal. Approximately two miles of trail have been completed in the City of Oswego.

Resource Planning for the State Outdoor Recreation System

In response to the stewardship needs for state lands and the condition of the existing facilities, there is a need to provide sound planning. Plans establish an overarching vision for each park, site and management area, clarify appropriate public use and recreation activities, define capital facility development and investment needs, and identify natural and historic resource stewardship and interpretation opportunities.

Planning Process

Over the years, the planning processes that are utilized by OPRHP and DEC have evolved to protect and manage the natural, cultural and recreational resources and recreational demands. Statewide plans such as SCORP, the Open Space Conservation Plan, Statewide Trails Plan, and Statewide Snowmobile Plan provide the broad framework. Regional and site specific plans guide the development and management of the natural, cultural and recreational resources. This is accomplished through master plans, resource management plans, trail plans and interim management guides by OPRHP and land master plans and unit management plans by DEC.

Land Classification System

The land classification system has been a component of OPRHP's planning process and SCORP since its development in 1974 and is constantly being updated as new information is developed. The current system utilizes natural and cultural resources characteristics, land uses, levels of improvements, physical capacity and other management related data to identify appropriate activities and classifications for lands administered by OPRHP and DEC.

The system provides six major classification categories. These are: Park and Land Resources, Water Access, Historic Resources, Linear Systems, Underwater Sites, and Environmental Education Facilities. Within these categories, there are 23 subcategories by which the parks and sites are classified.

OPRHP Master Planning

The master planning process establishes specific long-term direction and implementation strategies for individual parks and historic sites and groups of parks. Many of the existing plans were prepared several decades ago prior to the current requirements for public participation, environmental review and stewardship awareness. The need for master plans has been identified in past SCORPs, and the Open Space Conservation Plan. Increasing the pace of planning efforts has also been a long-recognized need.

OPRHP Interim Management Guides

The need and importance to have a master plan for each park and historic site is recognized. In order to accomplish this, considerable staff, financial resources and time are required. Due to funding limitations, many parks and historic sites continue to function with an outdated plan or without a master plan. Therefore, in many instances, management guides, which are less costly and time-consuming, are utilized. These guides provide policy and stewardship direction, a preliminary assessment of the natural, cultural and recreational resources and an identification of issues and concerns.

OPRHP Trail and Resource Management Plans

In addition to the comprehensive Statewide Trails Plan, individual trail plans are developed for a specific park or site, geographic area or system of trails. Such plans focus on trail locations, development, operations, maintenance, roles and responsibilities and partnerships with trail organizations and other interested parties.

Resource Management Plans are developed in response to specific natural resource issues. These may range from the control of invasive species and nuisance wildlife to the protection and management of threatened or endangered species.

DEC Unit Management Plans

The key element to future recreational activity and for all management policies and procedures on DEC land units is the Unit Management Plan

(UMP). The 472 State Forests have been grouped, where feasible, into 165 State Land units based on proximity to one another, similarity in treatment or management needs, and shared characteristics. Similarly, the Forest Preserve Lands in the Adirondack and Catskill Parks have been organized into 51 Adirondack planning units and 21 Catskill planning units. Where possible and practical, land units also encompass other land-use classifications, such as Wildlife Management Areas and Conservation Easements. Using these criteria, the planning units have been classified and more than 40 UMPs have been completed. Approximately 35 unit management plans are in various stages of development.

DEC State Forest/ Wildlife Management Area Unit Management Planning

DEC revised its long-range management procedures through the development of the State Forest Master Plan in 1988 and the State Forest Unit Management Handbook in 1989. These documents set guidelines and policies for the management of DEC lands outside the Forest Preserve. The Division of Lands and Forests has identified 165 separate management units, totaling 892,297 acres. This list includes State Forests, Wildlife Management Areas, Unique Areas, Multiple Use Areas, some detached parcels of Forest Preserve and other land classifications. Plans are to be developed for ten-year time periods with a five-year interval for review and possible update. Public involvement in the development and review of these plans is an integral part of the process.

DEC Resource Management Planning

Since 1995, the State has acquired over 500,000 acres in conservation easements that will be managed by DEC. As recreational rights were purchased on many of these easements, DEC is required to write plans that will address development and management of facilities to support the recreational opportunities. Similar to Unit Management Plans (UMPs) for State Forest lands, Recreation Management Plans (RMPs) for conservation easements will need to be developed through a public process, in addition to being reviewed and approved by the private landowner.

Planning Strategy

Given that planning is a critical prerequisite to sound public use, infrastructure development, and natural resource stewardship decision-making, OPRHP has made planning a priority for the next five years. OPRHP is committed to meeting a goal of completing 25 master plans and 25 other plans within 5 years.

DEC is receiving increased pressure to provide more recreational opportunities in more varieties than ever before. Recreation technology has responded to the increased level of leisure time that many New Yorkers enjoy by creating new and improved ways to spend that time. Adding this demand to the already large demand, in the more traditional activities such as hiking, camping and snowmobiling, creates tremendous pressure on State Forest lands. The impact of more intensive use of trails and recreational facilities is manifested in their present condition. DEC is committed to preserving these areas for the public's use and enjoyment, to restore the trails on State Forest lands, where appropriate, to usable and safe conditions, to responsibly expand the recreational opportunity that the State Forest resource represents and to begin development of recreational facilities on certain International Paper/Lyme Timber Conservation Easements that offer significant public recreational opportunities.

Chapter 9 - Implementation

State and Federal Funding

The provision of recreation facilities and the protection of open space requires looking at the big picture of the State facilities and balancing the past, present and future of development throughout the Parks System. Looking at the past shows the many facilities and open spaces which were acquired years ago that are now worn out, not designed to meet today's needs or have met and exceeded their life expectancy. In the present there is work to be done to manage the maintenance of existing facilities and resources. To prepare for the future, it is important to predict the need to: develop new facilities; protect and maintain natural, cultural and open space resources; and, meet present and future generations' needs for natural, cultural and open space resources. To achieve this balance of management a partnership of all segments of the population is required — individuals, interest groups, private industry, and all levels of government.

The federal and state governments are the primary sources for funding of open space and recreation projects. In most cases, the State functions as the administering agent for federal funds. As might be expected, the need for funding generally exceeds the funds available. As the demand for open space and recreation resources increases, the resource base available to provide new opportunities is decreasing which is why it is imperative to search out funding opportunities for specific projects that traditionally may not have been considered.

The following table shows available funding programs for projects that help to implement the goals of SCORP.

Public Information Meeting at Saratoga Spa State Park, Saratoga County

Table 10 - Funding Sources

	Funding Programs	Agency	Eligibility					Action					Project Elements					
			State	Municipalities/ Local	Tribal	Non-Profit	Individual	Acquisition	Planning/Design	Construction	Maintenance	Historic Preservation	Trail	Marine	Wildlife/ Open Space Protection	Recreational Facilities	Historic Sites/ Cultural	Interpretive/ Education/Research
Federal	Land and Water Conservation Fund	NPS	x	x	x			x	x	x			x	x	x	x		
	SAFETEA-LU	FHWA																
	Recreation Trails Program	FHWA	x	x	x	x		x	x	x	x		x					
	Transportation Enhancements	FHWA	x	x					x	x			x					x
	Sport Fish Restoration	FWS	x						x	x	x			x				
	Boating Infrastructure Grant Program	FHWA	x						x	x	x			x				x
	Congestion Mitigation and Air Quality	FHWA	x	x					x	x	x		x					x
	Safe Routes to School	FHWA	x						x	x			x					x
	Highway Safety	NHTSA	x	x		x			x				x					x
	Alternative Transportation in Parks and Public Lands	FHWA	x						x	x			x					
	Farm Bill 2002	NRCS	x	x	x	x	x	x							x			
	Forest Legacy Program	NRCS	x					x							x			
	Wetland and Conservation Reserve Programs	NRCS					x	x	x						x			
	Conservation of Private Grazing Lands Programs	NRCS					x								x			x
	Environmental Quality Incentives Program	NRCS					x								x			
	Farmland Protection Program	NRCS	x	x	x			x							x			
	Pittman-Robertson	FWS	x												x			x
	Recreational Boating Safety	USCG	x					x		x	x			x				
	Steps to a Healthier US Grants	CDC	x	x	x				x									x
	Special Recreation Program	DOE	x	x		x			x	x	x		x			x	x	x
	North American Wetlands Conservation Act Grants	FWS		x		x	x	x							x			
	State Wildlife Grant Program	DEC	x												x			
	Coastal and Estuarine Land Conservation Program	NOAA	x					x	x	x				x	x			
	Certified Local Government Grants Program	OPRHP		x					x		x	x					x	x
	Save America's Treasures Program	NPS	x	x	x	x						x					x	
	Forest Stewardship Program	USDA	x				x				x				x			

	Funding Programs	Agency	Eligibility					Action					Project Elements					
			State	Municipalities/ Local	Tribal	Non-Profit	Individual	Acquisition	Planning/Design	Construction	Maintenance	Historic Preservation	Trail	Marine	Wildlife/ Open Space Protection	Recreational Facilities	Historic Sites/ Cultural	Interpretive/ Education/Research
State	Environmental Protection Fund	Various	x	x				x	x	x	x	x	x	x	x	x	x	x
	Parks Program	OPRHP	x	x	x	x		x	x	x		x	x	x	x	x	x	x
	Historic Preservation Program	OPRHP	x	x	x	x		x	x	x		x			x	x	x	x
	Heritage Areas Program	OPRHP	x	x	x	x		x	x	x		x	x		x	x	x	x
	Acquisition	OPRHP	x	x	x	x		x	x	x		x	x	x	x	x	x	x
	Zoos, Botanical Gardens, Aquariums	OPRHP	x	x		x									x			x
	Snowmobile Trail Grant Program	OPRHP		x					x	x	x							
	Local Waterfront Revitalization Program	DOS		x					x	x			x	x	x			
	Hudson River Estuary Grant Program	DEC		x		x			x				x	x	x			x
	Invasive Species Eradication Grant Program	DEC	x	x		x			x	x				x	x			
	Brownfield Opportunity Area	DOS/ DEC		x	x	x			x									
	Biodiversity Research and Stewardship	BRI	x			x	x											x
	NYS Great Lakes Protection Fund	DEC		x			x		x	x				x	x			
	Habitat/Access Funding Grants	DEC		x		x	x		x	x	x				x			
Other	Hudson River Valley Greenway	HRVG		x		x			x	x			x			x		x
	Architecture, Planning and Design	NYSCA		x		x			x			x					x	
	Capital Projects	NYSCA		x		x					x	x					x	
	Preserve New York Grant Program	PLNY		x		x			x								x	
	Lake Champlain Basin Program	LCBP	x	x		x			x	x				x	x		x	x
	National Trails Fund	AHS				x					x		x					
	Capacity Building Grants Program	PTNY				x			x									

USCG= United States Coast Guard
FHWA= Federal Highway Administration
DOE= Department of Education
AHS= American Hiking Society
HRVG= Hudson River Valley Greenway
NPS= National Park Service
FWS= US Fish and Wildlife Services
DOS= Department of State
PTNY= Parks and Trails New York

NRCS=Natural Resources Conservation Services
OPRHP= Office of Parks, Recreation and Historic Preservation
NYSCA= New York State Council on the Arts
PLNY= Preservation League of New York
NOAA= National Oceanic and Atmospheric Administration
LCBP= Lake Champlain Basin Program
USDA= US Department of Agriculture
DEC= Department of Environmental Conservation
BRI= Biodiversity Research Institute

Grant Allocation

SCORP provides the foundation for the allocation of state and federal funds for recreation and open space projects. The policies, needs assessment, programs and initiatives are translated into criteria for evaluating projects in an objective manner. The SCORP is utilized to develop the rating systems for the Open Project Selection Process (OPSP) for LWCF projects and the EPF grants for municipal and not-for-profit projects, RTP grants and various acquisition categories consistent with the Conserving Open Space Plan.

SCORP helps guide the allocation of municipal and not-for-profit organization funds to local areas in greatest need and for facility types which are most deficient. The State's park and recreation priority rating system helps rank projects on a statewide basis, translating measurements of need and statements of policy to the maximum fulfillment of recreation wants and protection of natural assets. The SCORP's forecasts of need for recreation facilities combined with natural resource and recreation service objectives are reflected in the criteria comprising these systems. Factors include physical, recreational, social, economic, and environmental. The numeric ratings of the priority systems provide the method for comparative analysis of the many diverse projects evaluated. OPRHP administers grant programs that provide matching funds to municipalities and state agencies for the creation, operation, expansion, and rehabilitation of parks, facilities and programs. The importance of these initiatives requires that the most objective measures possible be used in the distribution of these funds. Many steps are taken in the SCORP assessment and policy process to assure meaningful public participation and technical evaluation.

Considerable public input is utilized in the development and revision of the State's rating systems. The LWCF, OPSP and the SCORP program provide sound bases for the priority rating systems. A strong public participation process was utilized in developing a system for the EPF and RTP grants.

Outreach and implementation occurs principally at the regional level. For the OPRHP grants, field representatives work with municipalities and not-for-profit organizations in developing applications and providing initial review. All applications receive statewide and compliance reviews. Joint meetings with regional field representatives and technical staff provide final review, ranking and approval, assuring full continuity from assessment and policy formulation to resource protection and program implementation.

Partnerships

Partnerships among governmental agencies and with the private sector, not-for-profit organizations and volunteers are an important tool in the acquisition, development, operations and maintenance of recreation facilities. Significant strides have been made to foster new partnerships and to provide guidance to agencies considering partnerships. The primary intent of partnerships is to assist public agencies in meeting their missions of providing quality and safe recreation while protecting the natural and cultural resources as well as improving the delivery of services.

First and foremost, it is important to maintain the resource stewardship mandate for resource agencies. Partnerships must be compatible with this mandate to maintain the integrity of the recreational and cultural system. The administrating agency should not relinquish ownership, control or responsibility for the protection of the land and facilities under its stewardship. Partnerships should be designed to supplement not supplant resources provided to an agency through their normal budgetary process.

Types of Partnerships

There are various types and forms of partnerships. These need to be tailored to the needs for a park, historic site or other recreation/open space area. The following is a listing of some of the types of partnerships:

Acquisitions - A not-for-profit organization, in some cases, has the ability to advance acquisitions with a landowner quicker than a governmental entity. The not-for-profit organization then holds the property until the governmental body can secure the funding and facilitate the acquisition process. In addition, a not-for-profit can function as a third party in the negotiations with a landowner.

Cooperative/Management Agreements – A public agency can enter into an agreement with not-for-profit groups where the group operates a property on the agency's behalf. The not-for-profit is then largely or solely responsible for all day-to-day operations and expenses for that facility. Agreements within OPRHP have terms of 5 to 20 years. Some agreements within OPRHP have been in place for more than 30 years.

Friends Groups - An agency can enter into an agreement with a not-for-profit organization to form Friends Groups to support a specific site.

Concession Agreements - These partnerships generally involve for-profit entities. An agency determines

that there is a need for a service and solicits proposals from the private sector. An objective is to encourage competition for private sector investment and operation of public service facilities.

Gifts - These are gifts in terms of land or facilities from the private sector to a governmental body.

Sponsor - It is common to have events conducted at public facilities sponsored by various organizations. Some events advance the goals of the organization while providing additional activities for the public.

Volunteers - In addition to the more formal arrangement with the not-for-profits, there are numerous informal arrangements with volunteers on public lands. These may range from local service organizations to Camper Assistance Programs.

Adopt a Resource Program - These are programs directed at a specific resource such as a beach or trail. The supporting groups would be responsible for the stewardship of that resource.

Research - These are partnerships with individuals, not-for-profit organizations, and institutions to conduct inventories and research on public lands to improve their stewardship, protection and management. The information is also valuable in the development of environmental education and interpretive programs.

Guidelines

Guidelines for partnerships are important to ensure that the partnership is compatible with the mission of the agency and with the framework that governs the agency. OPRHP with the assistance of a working group comprised of representatives from various recreational, environmental and cultural organizations developed a set of public/private partnership guidelines. Although these are specific to OPRHP, they could apply to other public agencies. The guidelines flow from the Agency's mission statement to the goals and objectives identified in SCORP. The guidelines are:

- Partnership activities shall provide a public benefit consistent with the Agency's mission, goals and objectives.
- Partnership activities shall be compatible with the involved park and shall take into account the protection of the park's recreational, natural, historic and cultural resources.
- Partnership activities being considered for a specific park/historic site shall be evaluated within the context of ongoing management and planning for that property.
- Generally, partnership activities should be self-sufficient. Any increased maintenance and operational responsibility to the Agency shall be evaluated within the context of the Agency's budget and the enhanced delivery of services.
- Partnership activities shall be within the determined carrying capacity of parks/historic sites, their facilities and landscapes.
- Partnership activities shall provide reasonable public access, use and enjoyment.
- Partnership recognition shall be commensurate with the enhancement to the park and compatible with the park's resources.
- Partnership activities that increase scientific understanding of the ecological resources in State Parks for both stewardship and educational programs will be encouraged.

Chapter 10 - Environmental Impacts

Environmental Review

New York's **State Environmental Quality Review Act** (SEQR) requires all state and local government agencies to consider environmental factors in agency decision-making processes along with social and economic factors. SEQR requires the agencies to balance the environmental impacts with social and economic factors when deciding to approve or undertake an **"action"**. The action in this case is the development and update of SCORP.

When an action is determined to have potentially significant adverse environmental impacts, an Environmental Impact Statement (EIS) is required. The SEQR process uses an EIS to examine ways to avoid or reduce adverse environmental impacts related to a proposed action. The SEQR **decision-making process** encourages communication among government agencies, project sponsors and the general public.

The updated SCORP will guide future recreational planning, activities, and development. Its adoption and implementation has the potential for significant effects, thus it was determined that an EIS should be prepared. Since SCORP is a broad plan, a Generic EIS (GEIS), which is an assessment of the potential impacts of broad based or related groups of actions, is being prepared.

Chapter 10, together with the remaining chapters of SCORP, constitutes a draft GEIS. It discusses impacts and mitigation of impacts associated with adoption and implementation of the 2008 SCORP by OPRHP. Other chapters provide detailed information on recreation resources and needs; natural, cultural, and historic resource settings; policies, actions, and implementation; and numerous ways in which the impacts of SCORP are mitigated. These other chapters are discussed briefly within the context of the policies and strategies. Many of the issues identified in this GEIS have been previously addressed in one or more earlier GEIS's for SCORP. This GEIS also references the 2006 Open Space Conservation Plan and GEIS prepared for it.

The environmental analysis of SCORP focuses on the adequacy, clarity, and appropriateness of the stated policies and action strategies that implement the vision of SCORP (Chapter 2). The GEIS is not intended to provide a comprehensive analysis of impacts of each program or project which may be undertaken pursuant to SCORP. It serves as a reference and sets forth the process for evaluation of future actions and related impacts, providing a sound environmental planning base. Existing evaluation and review processes are discussed in terms of assuring that resource protection is given appropriate consideration during planning and implementation of programs and activities under the SCORP "umbrella".

Specific recreational projects undertaken, funded or approved by state or local agencies pursuant to SCORP are subject to SEQR if the projects meet certain thresholds as defined by SEQR regulations. Some of these specific proposals will not have significant adverse effects on the environment. Other proposals that may have a significant adverse effect on the environment will require the preparation of EISs. The EIS process assures that an action to be undertaken will avoid or minimize adverse environmental impacts to the maximum extent practicable. Through SEQR and other existing review mechanisms such as permit processes, consideration of environmental factors is a part of all plans or specific actions undertaken to implement SCORP.

The Draft SCORP/GEIS is being made available for public review and will be the subject of a public hearing in accordance with the public review process of SEQR. Comments on the Draft SCORP/GEIS are welcome and will be incorporated and addressed in the Final SCORP/GEIS as part of the SEQR record, prior to adoption of SCORP.

Environmental Setting

The environmental setting for SCORP consists of the people and the natural, recreational, scenic, historic and cultural resources of New York State, as well as social and economic characteristics. The resources potentially affected by SCORP include recreational areas, water resources, significant habitats, fish and wildlife, rare species, forests, agricultural areas, parklands, historic sites, archeological areas, scenic areas, and communities. The setting also includes the general public, park and recreation service providers and users.

Alternatives

Non-preparation of a plan is not a viable option since the state is required to prepare SCORP, both pursuant to State law and to maintain eligibility of federal funds under the LWCF. Failure by the State to implement SCORP would mean

a lack of statewide guidance for the provision of recreation, and may result in the loss of needed opportunities for public access and outdoor recreation. Significant adverse impacts to the environment could occur without the guidance provided in the policies and strategies. A more limited scope would not capture the breadth of the outdoor recreational programs and opportunities within the state. SCORP as proposed provides a balance, providing the best information available on state and regional programs, facilities and actions related to outdoor recreation and open space resources.

Environmental Impacts and Mitigation

Each program and/or policy is briefly described and the implications as to the environmental impacts discussed along with general approaches to mitigation of potential adverse impacts.

Planning Process

The planning principles assure that recreation planning in the State considers natural as well as human resources. The planning process incorporates consideration of land and water resources and user impacts, and emphasizes the best use of available resources. Adequate information and analysis, coordination and citizen participation are keys to wise implementation of actions that protect resources.

Policies and Strategies

The policy framework in Chapter 2 provides balance in project evaluation to for adequate resource protection. To maximize the social and economic benefits associated with providing recreation while minimizing adverse impacts to the resource, planning for recreation programming and development of recreational facilities must consider the entire set of SCORP policy statements.

The SCORP policies and action strategies are comprehensive and reflect the guiding principle that OPRHP conserve, protect and enhance natural, ecological, historic, cultural and recreation resources and provide public access in a manner that will protect them for future generations. Assurance that the entire set of SCORP policies and action strategies is applied to development of recreational programs and facilities is provided through use of grant allocation criteria, planning processes and public participation, and environmental review procedures. Resource protection policies are continually balanced with other policies to achieve optimal levels of recreational facilities and programs in view of the capability of resources to support use. Each time that SCORP is updated, suggestions for policy and strategy additions or revisions are sought from agencies and the public. This process assures that the policies and strategies continue to be responsive to recreational needs and resource protection.

Review processes by which more detailed plans and projects are developed and evaluated should serve to minimize, if not eliminate, adverse effects possibly associated with development of recreational facilities. Site specific reviews will assure consistency with SCORP and projects which enhance or are compatible with natural and cultural resources.

Consistency of SCORP policies with New York's Coastal and Estuarine Land Conservation Program and its coastal policies is discussed in Chapter 10 within the Policy Framework. Overall, the policies and strategies of SCORP are consistent with and may advance coastal policies, including those related to development, public access and recreation.

Stewardship of the state's natural, cultural and recreational resources is essential to protect them. Through stewardship programs described in SCORP, potential adverse impacts of recreational development and use are minimized and consistency with coastal policies is assured.

Resource Planning for the State Park System

SCORP provides the basis for recreation planning in the State. Successive levels of planning, to specific facility plans, analyze natural, cultural and recreation resources and evaluate alternative management strategies. Environmental review is an important component of the planning process. Individual project planning also incorporates environmental review requirements.

Through the framework of SEQR, guidance is provided regarding

mitigation measures in undertaking projects, such as providing erosion and sediment controls, protecting rare plants or animals, or for restoration of disturbed areas.

Implementation

Policies, needs assessment and program initiatives are translated into criteria for evaluating projects in an objective manner. SCORP guides allocation of funds to areas in greatest need, along with the extent to which they further SCORP policy directions. The priority rating system is revised on an annual basis to reflect changing priorities and initiatives within the context of the most recent SCORP policies and actions. The priority system assures that consideration is given to an appropriate balance of SCORP policies when evaluating and ranking applications for federal and state assistance to acquire or develop recreation or open space resources. Protection of ecological, historical and open space resources are important factors.

Cumulative Impacts

The primary effect of the 2008 SCORP is to promote the policies identified in Chapter 2. These relate to such aspects as increasing coordination; preserving resources, expanding water recreation, recreationways and interpretive programs; and improving maintenance, operation, research and management.

Addressing recreational needs will have cost and environmental implications. Some of the types of needed recreation facilities will have greater impacts on the environment than others. Public health and safety considerations must be incorporated into planning for recreational opportunities.

The cumulative effects of applying the policies and strategies of SCORP systematically will be substantially beneficial. Existing recreational services to the public will be maintained while at the same time protection of natural and cultural resources will be ensured. The implementation of recreational and resource protection programs through the SCORP policies substantially enhances the physical and psychological well being - the quality of life - of the residents of the State.

Furthering the quality and quantity of recreational services and programs has substantial beneficial effects on economic activity, as well as preservation and recreation opportunities, within affected communities. Identification of the need for recreational services and facilities is based primarily on existing population and on growth projections. Most projected recreational development will occur in response to growth, rather than such development inducing growth.

Implementation of the programs which are guided by SCORP will result in irreversible and irretrievable commitments of time, funds, and energy and planning resources. Overall the benefits of preservation, stewardship and providing recreation outweigh these commitments. The policies stated in SCORP will not result in any significant increase in energy consumption associated with recreation activities. Several of the policies and action strategies will promote reduction in energy consumption by recreation providers and users.

Since SCORP is a general plan, identification of program-specific or site-specific adverse impacts, including those which are unavoidable, will be accomplished during future planning and environmental review of programs and projects. Although specific adverse impacts associated with the application of SCORP policies cannot be identified, adverse impacts may arise when one or a group of SCORP policies are given more emphasis over other policies. Also, while implementation of SCORP policies and objectives will generally promote coastal policies, overemphasis of particular SCORP policies can in turn create potential conflicts with coastal policies. Minimizing the chance that policies conflict with one another is accomplished through planning, environmental review, public participation and priority rating systems.

New policies and initiatives within this SCORP, including additional planning efforts, ecosystem-based management and sustainability, will facilitate proper balancing of the SCORP policies and advance environmentally sensitive recreational development and use.

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New York State Office of Parks, Recreation and Historic Preservation

Statewide Comprehensive Outdoor Recreation Plan 2009-2013

People • Resources • Recreation

SEQR
NOTICE OF COMPLETION OF A FINAL EIS

Date of Notice: December 10, 2008

Lead Agency: New York State Office of Parks, Recreation and Historic Preservation (OPRHP)

Title of Action: **Adoption and Implementation of a Statewide Comprehensive Outdoor Recreation Plan**

SEQR Status: Type I

Location of Action: Statewide

This Notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review) of the Environmental Conservation Law.

A Final Statewide Comprehensive Outdoor Recreation Plan and a Final Generic Environmental Impact Statement (FGEIS) has been prepared and has been accepted by OPRHP.

Brief Project Description: The Statewide Comprehensive Outdoor Recreation Plan (SCORP) is prepared periodically by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) to provide statewide policy direction and to fulfill the agency's recreation and preservation mandate. The updated SCORP serves as a status report and as an overall guidance document for recreation resource preservation, planning, and development from 2009 through 2013. The document is also used to guide the allocation of state and federal funds for recreation and open space projects. The direction for recreation in the state is guided by statewide policies. These policies are grouped into four major initiative areas that respond to the current issues impacting the state's natural, cultural and recreational resources: revitalizing our parks and historic sites, natural resource stewardship and interpretation, creating connections beyond the parks, and sustainability. The Final SCORP/EIS contains a comments and responses chapter as well as provides updates and additions to the Draft SCORP/EIS as necessary.

Availability of FEIS: The Final SCORP/EIS may be downloaded at http://www.nysparks.state.ny.us/agency/scorp. Copies or CDS of the Final SCORP/EIS are available upon request from the Agency Contact, available for review at all OPRHP regional offices, and CDs are available at DEC regional offices. The Agency Contact can provide regional office locations.

Agency representatives and the public can provide comments during the consideration period for the FEIS. Comments on the Final Plan/FEIS will be accepted by the Agency until **December 22**. Comments should be forwarded to the contact person:

Agency Contact:

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Copies of this notice have been filed with involved and interested agencies and persons including the Commissioner of OPRHP, NYS Department of Environmental Conservation, NYS Department of State, and the Governor of NYS.

The New York State Statewide Comprehensive Outdoor Recreation Plan and Generic Environmental Impact Statement 2009 - 2013

Prepared by : New York State Office of Parks, Recreation and Historic Preservation

Completed: December 10, 2008

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OFFICE OF PARKS · RECREATION · HISTORIC PRESERVATION
NEW YORK STATE

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Chapter 1 - Introduction

Parkland and open space are two of New York State's most valuable nonrenewable resources that enhance the quality of life. These important places have a long history dating back to Niagara Falls State Park, the "Oldest State Park" in the country and Central Park in New York City. Recognizing the value of the parks and open space, this system of protected areas continues to expand to over 6,000 public areas comprising over 4 million acres.

Federal, state and local governments as stewards of these resources are faced with a challenging situation of maintaining and revitalizing an aging system while looking to the future to protect critical open space areas and addressing the needs of the citizens and the environment. These resources can no longer be viewed as islands but as systems that need to be connected to benefit both people and wildlife. The benefits derived from these efforts are far reaching – enhanced quality of life, increased tourism, improved health, protected ecosystems, and sustainability of our environment. Parks and open spaces are truly "important places" and must be protected.

These protected areas are the result of a long history supported by various funding sources including bond acts, the Environmental Protection Fund (EPF) and the federal Land and Water Conservation Fund (LWCF). The parkland conversion process associated with parks funded through LWCF and the parkland alienation applicable to all municipal park lands afford long term protection of these special places. It is important that these mechanisms are maintained for the benefit of future generations.

The Statewide Comprehensive Outdoor Recreation Plan (SCORP) is prepared periodically by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) to provide statewide policy direction and to fulfill the agency's recreation and preservation mandate.

The SCORP process has evolved well beyond its original purpose of satisfying eligibility requirements for continued funding under the Land and Water Conservation Fund (LWCF). The 2009 SCORP will serve as a status report and as an overall guidance document for recreation resource preservation, planning and development through 2013. It is the State's premier assessment and policy statement to the executive and legislative branches of state government, other units of government, recreation and preservation interest groups, and the general public on the state of the State's Parks. Planners, researchers, administrators, legislators, educators, special interest groups, the general public and private sector entrepreneurs utilize the SCORP document as a basic information source particularly for recreational issues, policies, priorities and for supply and demand forecast data. However, it is the ongoing planning process and its related products, which gives the SCORP its greatest meaning.

This document is also used throughout the year to guide the allocation of state and federal funds for recreation and open space projects. The policies, needs assessment, programs and initiatives listed throughout SCORP are translated into criteria for evaluating projects in an objective manner. This document provides guidance for the allocation of municipal and not-for-profit funds to local areas and facilities with the greatest needs.

Currently, OPRHP and DEC are responsible for the bulk of outdoor recreation and conservation in the State. OPRHP administers about 330,000 acres of land incorporating 178 state parks, 35 historic sites, 67 marine facilities and boat launch sites, 20 parkways, over 5,000 structures, 77 developed beaches, 53 swimming pools, 29 golf courses, over 800 cabins and rental houses, 8,355 campsites, and over 1,350 miles of trail, as well as several outdoor education centers, museums, and nature centers and the Empire State Games. DEC administers nearly 4 million acres of land (including 3 million acres of Forest Preserve, over 700,000 acres of State Forest, and over 190,000 acres of Wildlife Management Areas), over 662,000 acres of Conservation Easements, 52 campgrounds, several day-use areas, 12 fish hatcheries, 1,280 miles of easements for public fishing rights, over 400 boat launch and fishing access sites, two Submerged Heritage preserves, the Belleayre Mountain Ski Center, and about 2,800 miles of trail, as well as several environmental education centers and summer camps.

The SCORP expands OPRHP's mission statement and guiding principles to a statewide focus (Figure 1.1). The ideals within the mission statement and guiding principles are applicable to all public and private recreation providers as well as the protectors and managers of our natural, cultural and recreation resources. We share in the mandate to be responsible stewards of these resources.

Office of Parks, Recreation and Historic Preservation

Mission Statement and Guiding Principles

Mission Statement

The mission of Parks, Recreation and Historic Preservation is to provide safe and enjoyable recreational and interpretive opportunities for all New York State residents and visitors and to be responsible stewards of our valuable natural, historic and cultural resources.

Guiding Principles

- A Commitment to Leadership. We recognize the preeminence of the New York State Park and Historic Site System. We are committed to excellence, innovation, professionalism and to forging partnerships. We are committed to seeking the means by which operational and maintenance needs are met as recreational and cultural opportunities are enhanced for our patrons. To meet that challenge, we are committed to pursuing compatible revenue initiatives as we continue our commitment to protect resources.
- A Commitment to People. We are committed to serving and protecting the public to the best of our ability, with courtesy and respect. We are committed to our employees and volunteers, encouraging teamwork, self-improvement and mutual support.
- A Commitment to Service. We are committed to equal access and outreach to all segments of our society, recognizing individual needs and interests. We are committed to safety, security, creativity and accountability in providing our programs and services.
- A Commitment to Preservation. State Parks and Historic Sites are unique and irreplaceable public assets. We are committed to wise acquisition, planning and where compatible, development of recreational facilities; timely and professional care and maintenance; and a responsibility to future generations in whose trust we manage resources. We are committed to providing encouragement to all agencies and individuals to identify, evaluate and protect recreational, natural, historic and cultural resources.

Revised: July 16, 1997

Figure 1.1 - OPRHP Mission Statement

The Department of Environmental Conservation's (DEC) mission is taken from Section 1-0101 of the New York State Environmental Conservation Law (Figure 1.2). DEC is charged with protecting the quality of New York State's land, water and air, the character of its scenery, the health and diversity of its fish and wildlife populations and habitats. Additionally, DEC conserves both living and nonliving resources for appropriate use. This includes managing the forest preserve in the Adirondacks and Catskills, protecting wetlands, rivers, lakes and salt water embayments, and serving as stewards of the State's plant and animal species. Saving and managing open space is a key part of this mission. In doing this, however, DEC bases its approach not just on the number of citizens who wish to participate in outdoor recreation activities, but also on the value of the resources themselves to present and future generations.

Department of Environmental Conservation

Mission Statement and Responsibilities

Mission

The mission of the Department is to:

"conserve, improve and protect its natural resources and environment, and control water, land and air pollution, in order to enhance the health, safety and welfare of the people of the state and their overall economic and social well being."

Responsibilities

The Department of Environmental Conservation is responsible for administration and enforcement of the Environmental Conservation Law. The Department's major responsibilities as assigned by the Environmental Conservation Law are:

- Regulate the disposal, transport and treatment of hazardous and toxic wastes in an environmentally sound manner;
- Manage the state program for oil and chemical spills;
- Provide for the abatement of water, land and air pollution, including pesticides;
- Monitor environmental conditions and test for contaminants;
- Encourage recycling, recovery and reuse of all solid waste to conserve resources and reduce waste;
- Administer fish and wildlife laws, carry out sound fish and wildlife management practices, and conduct fish and wildlife research;
- Manage New York's marine and coastal resources;
- Conduct sound forestry management practices on state lands, provide assistance to private forest landowners and manage fire prevention and control efforts;
- Manage the Adirondack and Catskill forest preserves and recreational facilities, including campsites and the Belleayre Mountain ski center;
- Protect tidal and freshwater wetlands and flood plains;
- Promote the wise use of water resources;
- Administer the wild, scenic and recreational rivers program;
- Regulate mining, including reclamation of mined lands, extraction of oil and gas, and underground storage of natural gas and liquefied petroleum gas;

Inform the public about environmental conservation principles and encourage their participation in environmental affairs.

Figure 1.2 - DEC Mission Statement

Planning Process

Principles

The planning process for the SCORP is predicated upon three basic principles. An understanding, acceptance and faithful adherence to these principles is fundamental to the success of OPRHP's overall goal to provide a unified State Park and Recreation System which will serve the needs of all the State's citizenry. The plan and the process must also be responsive to modification in an expeditious and practical manner as warranted to meet changes in societal values and environmental conditions.

The three principles are:

1. Planning is a Continuous Process: Planning must match the dynamics of its environment, constantly reexamining assumptions, methods and objectives, in light of changing conditions and new information. Planning does not produce a finished blueprint of the future; it is an open-ended process which places before decision-makers the range of effective options. Through careful planning and prudent action, government can then make its maximum contribution to fulfilling the universal hope for a more satisfying life.

2. Planning must be Comprehensive: The planning process, and thus the information and research base which supports this process, must encompass the entire range of human activity and the environment - social, economic and physical. Planning for recreational facilities, programs and services, accordingly, must include careful consideration of all available physical resources and their appropriate use potentials based upon ecological considerations. Recreation planning must also consider the social economic values, abilities and needs of the various segments of the population. This includes the citizenry at large and the interaction among governmental agencies and service systems.

3. Planning must be a Participatory and Coordinated Process: Coordination and cooperation among all government levels and the private sector is essential to allow for as much development of facilities and delivery of services to be a shared responsibility. Only in this way can costly duplication of services resulting in wasteful consumption of resources and finances, or omission of essential services, be avoided. No planning process should fail to include opportunity for a citizen's participation in the planning, policy formulation and implementation phases of the overall process.

Objectives

The following objectives have been established to support the above-stated goal and planning principles:

1. To formulate, maintain and update the Statewide Park and Recreation Plan as required under the Parks and Recreation Law (Consolidated Laws, L. 1972, Chapter 660) Article 3, Section 3.15, (See Appendix A) as part of a continuous planning process.

2. To develop an outdoor recreation component within the framework of the Statewide Park and Recreation Plan in accordance with the Land and Water Conservation Fund Manual, Chapter 630.1.

3. To establish a statewide recreational planning framework to serve as a guide to regional and local agencies in the formulation of plans and program policies and priorities.

4. To develop and maintain adequate information and analytic systems in support of OPRHP's planning, development, administration, coordination and review functions.

5. To establish and maintain intra- and interagency coordination mechanisms at the state, regional and local levels.

6. To establish and maintain citizens' participation through public meetings and surveys.

Process

The proper development of recreation and open space plans requires adherence to a fundamental planning process — inventory, analysis and forecasting, plan formulation, and plan implementation— supported by program goals, actions and accomplishments. Existing supply, participation, and related social-economic and accessibility data have to be researched and basic land and water resources inventoried. After the inventory process is complete, use patterns, trends, constraints and potentials have to be analyzed, forecasts developed and deficiencies and user impacts evaluated. Once the analysis and evaluation are completed, the plan formulation stage is begun, where goals, objectives and standards are established and program alternatives evaluated. As a result of the process, the areas most needing actions are identified, priorities for development are established, and implementation processes are developed and put into action.

Objectives, goals and standards necessary to define future actions should be formulated through observation and the application of accepted techniques. Input from various citizen groups and

professional organizations should be solicited along with examination of alternative strategies. After standards and objectives are considered, the needs and potentials of the State, as a whole, and each region, must be evaluated so that the best use can be made of available resources - natural, human and fiscal.

A projection to the year 2025 is provided in the identification of recreation needs. Programs and statewide initiatives have a 5-year horizon; the plan must be constantly reexamined in light of changing conditions and new information. Planning, therefore, is a continuous, open-ended process. The plan provides the overall concept and policy framework for program and facility development. The action program identifies the implementation devices and strategies necessary to effectuate the plan.

Public Participation

Public participation in the planning process provides a means for increasing the public understanding of recreation needs and opportunities within New York State as well as increasing the planners understanding of what the public desires. The goals, objectives, policies, actions, and program priorities ultimately expressed in SCORP begin to be shaped early in the planning process through the identification of the changing needs of New York's people. To insure the plan is an accurate reflection of both current and projected recreational needs, the State has sought input from citizens, state and local governmental officials, and interest groups.

In order to assure maximum opportunity for public participation, OPRHP has:

- Implemented a General Citizen Survey
- Implemented a Park Professional Survey
- Implemented a Trail Maintainer's Survey
- Formulated an interagency Working Group
- Coordinated with user groups

Additional input was obtained through the public review process for the Draft Plan. Comments have been considered and, where appropriate, included in the the final Plan. The Plan will be available for review on OPRHP's web site.

The participation of the public by no means ends the fulfillment of the above activities. Citizens will continue to be asked, periodically, what their recreation preferences are and their opinions on recreational issues and delivery of services. It is a major purpose of the SCORP to accurately anticipate the public's needs; and, in doing so, to lay the groundwork necessary to maximize the public benefit of the dollars spent for recreation and open space. It is further a purpose of SCORP to assure that the natural resources that comprise the State Park System are properly conserved and managed.

SCORP is part of a continuing planning process that evolves over time. The value of SCORP is not just in what it says but in how it is used to protect and manage the natural, cultural and recreation resources of New York State, for present and future generations. The plan assesses existing and future recreation demands, evaluates the current recreational opportunities and estimates needs. It also provides a forum for the public and recreation providers to express their needs and concerns. This information translates into major natural, cultural and recreation resource initiatives, action strategies and actions. As a result, this dynamic system is constantly changing and needs, policies, programs, and initiatives have to be revisited.

Chapter 2 - Vision and Policies

Vision for Recreation in New York State

The vision for recreation in New York State is: "to provide a system of safe and enjoyable recreational and interpretive opportunities for all New York State residents and visitors and to protect and improve the quality of the valuable natural, historic and cultural resources." In meeting this vision, the quality of life will be improved with incentives for a healthier life style and economic vitality. This vision establishes a direction and leadership role for the State in providing a "greener" environment.

Policies and Strategies

The direction for recreation in New York State is guided by ten statewide policies of which seven have been in place since the last SCORP and are still considered relevant. These policies provide direction and support for protection and management of natural, cultural and recreation resources. The policies can be grouped into the four major initiative areas that respond to the current issues impacting the State's natural, cultural and recreational resources and that are consistent with OPRHP priorities. The policies will provide a strong, statewide structure to support specific actions and administrative and legislative decisions. Action strategies that support the policies are also identified.

Revitalizing our Parks and Historic Sites

Policy

Improve recreation and historic site operation, maintenance and resource management practices.

Action Strategies

- Rehabilitate and/or adaptively re-use existing recreation and historic facilities when feasible, to satisfy existing and projected recreation, interpretive and education needs.
- Promote compatible multiple uses and maximize, as appropriate, the length of activity seasons.
- Promote public health and safety, handicapped access and energy efficiencies in rehabilitation and new construction.
- Ensure protection of natural and cultural resources in undertaking park and historic site operation, maintenance and management activities.
- Encourage the training of park, historic site and land managers in best management practices for protection of natural and cultural resources as well as for operation and maintenance of facilities to ensure public health and safety.
- Significantly increase the state's investment in the management and operations of recreation and historic facilities.
- Develop, with input from managers, a sustainability plan to identify long-range goals and best management practices for park and historic site operation, maintenance and management, and provide benchmarks for measuring success.

Policy

Improve and expand water-oriented recreation opportunities.

Action Strategies

- Encourage the acquisition, protection and/or development of park, recreational and cultural resource areas that are physically and visually accessible to water bodies and compatible with environmental limitations.
- Upgrade and protect water resources through monitoring, management programs, and ensure that water quality standards are met.
- Support management practices that reduce conflicts among water-related activities on significant natural water resource areas.
- Protect underwater lands that have significant natural, cultural and recreational qualities.
- Encourage the interpretation of and access to, where appropriate, significant underwater natural and cultural resources.
- Encourage appropriate waterfront development that provides water-dependent recreational activities and public access.
- Encourage waterfront zoning practices that protect and enhance water-related recreational activities and natural and cultural resources.

Policy

Apply research techniques and management practices to improve and expand parks, trails and other open spaces.

Action Strategies

- Establish long-term development strategies that have short-term action programs.
- Develop master and management plans for parks, recreation, natural, historic and cultural areas.
- Facilitate inventories and analyses, through Geographic Information Systems (GIS) and other technologies, of park, recreation, natural and historic resources.
- Research and analyze new forms of leisure activities.
- Ensure appropriate public participation in planning, research and environmental review efforts.
- Promote recreation research to improve service delivery.
- Develop management information systems and support cost/benefit analyses that incorporate consideration for the intrinsic values of resources.
- Encourage the use of innovative management practices.
- Take maximum advantage of information technology (Internet, GIS, and Electronic Media) to provide access to research and information at parks, recreational and cultural resource areas.
- Develop a series of technical documents that provide additional guidelines for the development, management and operation of recreational facilities such as trails and equestrian campgrounds.
- Establish a statewide GIS internet database clearinghouse to provide accurate and reliable information to managers on invasive species.
- Create an institute for invasive species research.
- Encourage scientific research and information sharing and establish a research agenda that will inform ecosystem-based management decisions and enhance ecosystem management capabilities.
- Create an ocean and coastal resources atlas to make information available to the public and decision makers.

Resource Stewardship and Interpretation

Policy

Preserve and protect natural and cultural resources.

Action Strategies

- Ensure that recreation development is compatible with the environmental characteristics and carrying capacities of resource areas.
- Ensure that the acquisition of open space resources is consistent with the approaches and recommendations identified in the NYS Conserving Open Space Plan.
- Encourage the preservation of open space in metropolitan areas.
- Encourage the acquisition of in-holdings and important properties adjacent to existing public landholdings.
- Be responsible stewards of the land and water resources that sustain plant and animal species and their habitats.
- Encourage the use of fee and non-fee acquisition as well as other techniques in the protection of important open space, scenic, historic, and ecologically sensitive areas.
- Develop, maintain, evaluate and support natural and cultural resource inventories and assessments.
- Promote efforts to increase knowledge and awareness of biodiversity and develop statewide, local and regional approaches to biodiversity protection and maintenance.
- Identify and protect biodiversity "hot spots" and expand protection of habitat corridors and buffer areas
- Seek to restore environmentally sensitive areas adversely impacted by past land and water use practices.
- Prepare a comprehensive invasive species management plan to ensure that New York State is fully prepared to prevent and combat invasive species.
- Ensure compliance with state and federal environmental and historic preservation regulations and guidelines.
- Identify threats to important natural, cultural, and recreational resources and take action to address such threats.
- Conduct studies of the impacts of the parks and trails on the state and local economies.

Policy

Support compatible recreation and interpretive programs.

Action Strategies

- Coordinate, improve and expand environmental, historical and cultural interpretive programs within recreational facilities.
- Encourage appropriate training in environmental and cultural interpretation and education for staff and volunteers.
- Improve outreach services and technical assistance provided by the State that helps to strengthen recreational and interpretive opportunities for the public.
- Develop a state park facility environmental interpretation plan including staffing, training, infrastructure and cooperation with partners.
- Encourage and support youth camp experiences, where appropriate.
- Encourage various forms of organized athletic competition that are compatible with natural, cultural and recreational resources.
- Encourage the preservation and interpretation of significant natural and cultural resources.
- Identify and encourage the creation and preservation of greenway systems connecting significant habitat areas and protecting biodiversity.
- Provide patron opportunities for observation, interpretation and education about significant natural and cultural resources.
- Through education and interpretive programs, work to reconnect people with nature and empower the public with a greater role in, and involvement in, environmental protection and sustainability.
- Establish a comprehensive education and outreach effort as a critical component of a strategy for controlling invasive species.
- Continually update and expand the New York State Museum's exhibits and interactive computer kiosks on different regions of the State and on important natural and cultural resource issues.
- Encourage regions and communities to provide the New York State Museum with appropriate information and web links for accurate data input for electronic kiosks, signs, booths and publications.

Creating Connections beyond the Parks

Policy

Develop comprehensive, interconnected recreationway, greenway, blueway and heritage trail systems.

Action Strategies

- Identify and encourage the creation of recreationways, greenways, and blueways in and around metropolitan areas, along major water corridors and along other natural, abandoned railroad and utility corridors.
- Encourage the development of an interconnecting system of trails, recreationways, blueways and greenways.
- Encourage partnerships between federal, state and local governments, not-for-profit organizations, trail groups and private landowners in the development and maintenance of trails.
- Encourage full completion of the 534-mile canalway trail system.
- Encourage improvements to the canal recreationway system.
- Encourage trail uses of highway, abandoned rail, and utility corridors.
- Encourage local volunteer participation in the development and management of trail segments.
- Strengthen the statewide trails program for the coordination, planning and technical assistance of trail development.
- Incorporate protection and management of biodiversity within the recreationway and greenway system plans.
- Encourage the expansion of the Wild, Scenic and Recreational Rivers System.
- Promote and interpret the State's rich heritage through the development of Heritage Trails.

Policy

Protect natural connections between parks and open space areas.

Action Strategies

- Inventory and identify important ecosystems and natural connectors.
- Encourage the protection and/or acquisition of critical connectors.

Policy

Improve access to opportunities for regular physical activity that is in close proximity to where people live, work and/or go to school.

Action Strategies

- Encourage the development of trails, parks, and recreational facilities that can be reached by walking and bicycling.
- Modify existing facilities and develop new recreational facilities so they are universally accessible.
- Protect existing open spaces within urban areas.
- Encourage the development of trails within subdivisions to provide pedestrian access to neighboring communities and facilities.
- Encourage trails and open spaces to be incorporated in the revitalization of urban areas.
- Utilize transportation systems to provide continuity of trail systems, where appropriate.

Policy

Improve cooperation and coordination between all levels of government and the private sector in providing recreational opportunities and in enhancing natural and cultural resource stewardship.

Action Strategies

- Improve communication and coordination among public and private recreation providers.
- Facilitate citizen and broad public participation and input in planning, stewardship, management and development activities.
- Cooperate with communities and organizations seeking to improve recreation for underserved populations such as persons with disabilities, the economically disadvantaged, youth and older persons.
- Ensure cooperation and communication between parks, historic sites and cultural areas and colleges, universities, and other educational institutions.
- Increase public awareness of recreation and cultural opportunities.
- Support urban recreation initiatives.
- Support the development of a public constituency for park, recreation, and cultural resources.
- Encourage innovative partnerships in open space protection, the stewardship of natural and cultural resources, and the provision and maintenance of recreation facilities compatible with the character and goals of those facilities.
- Assist local communities in the development of effective zoning and other approaches to protect and enhance cultural and natural resources.
- Strengthen consistency among state, federal and local programs and policies.
- Work with and encourage the private sector to participate in performing resource recreation, environmental and cultural education and resource preservation functions.
- Take maximum advantage of conservation and youth service corps in the preservation of natural and cultural areas.
- Facilitate regional coordination and cooperation to address complex resource issues which cross political and jurisdictional boundaries.
- Support the functions of grassroots partnerships around the State to ensure prevention and rapid response to new invasive species.
- Support the Natural Heritage Trust and Legislative Assistance Programs that seek to expand the provisions of recreation services and resource protection.
- Expand the recreation resource base through nontraditional providers such as securing permission/easements from private land owners for recreational use of their lands.
- Encourage volunteer assistance in maintaining natural, cultural and recreation resources.
- Support efforts by all levels of government and not-for-profit organizations to eradicate existing invasive species infestations, both in our waters and on our lands.

Sustainability

Policy

Employ ecosystem-based management to ensure healthy, productive and resilient ecosystems which deliver the resources people want and need.

Action Strategies

- Ensure that activities in and uses of resources are sustainable, so that ecological health and integrity is maintained.
- Promote understanding of coastal systems.
- Inform decisions based on good science that recognizes ecosystems and their interconnections between land, air and water.
- Ensure that caution is applied when risks to ecosystems are uncertain.

Policy

Improve and expand the statewide commitment toward environmental sustainability in all parks, recreation and historic sites and support facilities.

Action Strategies

- Develop policies and procedures for reductions in energy consumption, reduction in the production of greenhouse gases through increased energy efficiency and increased use and support of renewable energy sources.
- Develop policies and procedures for the procurement of "green" products and services. Maximize the procurement of environmentally preferable or 'green' products and services.
- Evaluate opportunities to become a "carbon neutral" agency.
- Develop policies and procedures for waste reduction and minimizing or eliminating the use of toxic materials.
- Ensure practices that promote waste reduction, reuse, and recycling.
- Minimize or eliminate the use of toxic substances in park, recreation and historic site operation and maintenance. Use only non-toxic 'green' cleaning products.
- Purchase only Energy Star rated or 'green' equipment.
- Promote the procurement of locally produced commodities.
- Increase the use of non-fossil-fuel-based transportation, public transit and alternative transportation to and within recreational areas and open spaces.
- Increase the use of alternative fuels and non-fossil fuels in heavy-duty vehicles and construction equipment.
- Adopt Leadership in Energy and Environmental Design (LEED) standards for new construction where feasible and appropriate.
- Retrofit and renovate existing buildings to reduce energy use, conserve water, and improve indoor environmental quality, with consideration of possible LEED certification.
- Develop "green" design standards for small buildings where LEED certification may not be feasible.
- Use energy efficient equipment when upgrading water and wastewater infrastructure.
- Maximize the use of water conservation practices.
- Incorporate criteria into recreational grant/project rating systems that provide additional credits/points for incorporating the use of sustainable design and green technologies.
- Provide training and funding to park, historic site and land managers for energy efficiency and sustainability.

Chapter 3 - Trends, Issues and Needs

The 21st century has brought many challenges in meeting the recreation needs and desires of the citizens of New York State and its visitors. The State is part of a dynamic system that is constantly changing. As the population composition, land use and environmental conditions change so do the types and demand for recreation activities and available resources. To project future demand for recreation, all the factors need to be considered. This includes an assessment of existing recreation supply, participation rates, demand, demographics, and issues and trends.

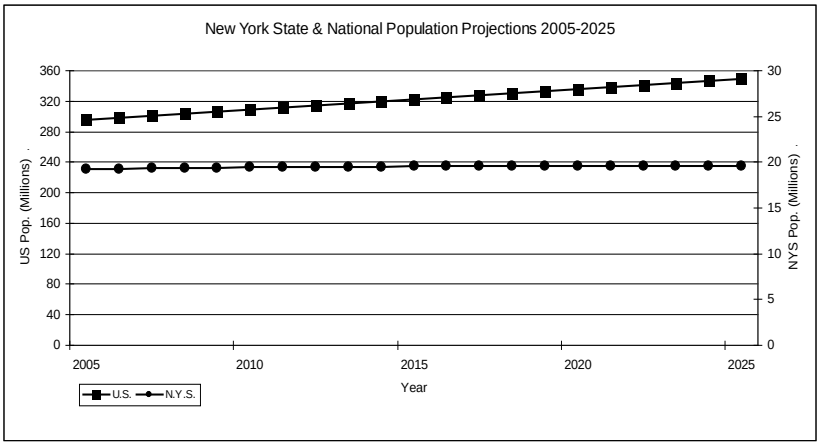


Figure 3.1 - NY vs. US Population Growth

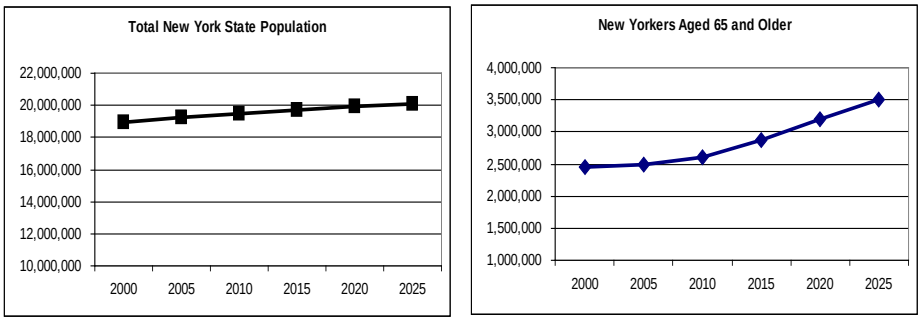


Figure 3.2 - New York State's Aging Population

Population Trends

New York State is the third most populous state in the United States with a U.S. Census population of 18.9 million in 2000 and a projected population of 19.2 million in 2005. (Population projections are based on data that was available from the Cornell Institute for Social and Economic Research in late 2005). The population level will remain fairly level through the year 2025 by which time it is estimated to be 19.9 million.

The population of New York State will increase by 3.3% for the period 2005 to 2025, a fairly small increase, especially considering it takes place over the course of 20 years. However, changes in the composition of the population are substantial. These changes are a result of the large number of immigrants from abroad; a net out-migration especially among younger New Yorkers; an increase in racial diversity; and the increased proportion of the elderly population resulting from both the continuing increase in life expectancy and, most importantly, the aging of the baby boomers. In particular, the number of residents over the age of 60 is projected to increase by 52.6%. These changes, more than the change in total population will have the greatest effect on recreation patterns.

Aging

The baby boom generation (those born from 1946 to 1964) will transition from being the most elderly part of the workforce to retirement. By 2025, the youngest baby boomer will be 61 years old. For recreation providers, this means a trend away from activities typically associated with youth: team sports, court games and other high physical activities and a growth of other activities such as golf, relaxing in the park, walking, and other passive activities. Although New York's population is increasing slightly over the projected period, the number of senior citizens is increasing dramatically. This will have a dramatic effect on the quantity and types of outdoor recreation taking place within New York State.

The increased elderly population will result in changes in the way New Yorkers use their leisure time and the amount of leisure time New Yorkers have available. This will require changes to the recreation infrastructure of OPRHP facilities, other government facilities and the private sector as well.

The changes to the state's population will require OPRHP to adapt to its new clientele. Attendance is expected to increase. Much of the increase may occur during the week when many of OPRHP's services are provided free or at reduced cost to seniors. However, this increase in attendance (as any increase in the use of facilities, trails, etc.) will

Table 3.1 - The 10 Most Popular Activities Among New York Residents Age 60 or Greater.

Rank	Activity	Percent Participating
(1)	Relaxing in the park	73.7%
(2)	Visiting Historic Sites	61.9%
(3)	Walking for pleasure	57.0%
(4)	Gardening	38.7%
(5)	Swimming	25.5%
(6)	Boating	22.5%
(7)	Bicycling	20.5%
(8)	Bird Watching	20.2%
(9)	Fishing	13.4%
(10)	Camping	14.5%

Source: General Public Recreation Survey, 2004

cause increased impacts on the environment and the aging recreation facility infrastructure. An aging population will also require greater adherence to ADA standards in order to be able to enjoy these facilities and services. Further, additional training of OPRHP staff to work with the aged will be required.

Based on the 2004 General Public Recreation Survey, the ten most popular activities, with participation rates, among New Yorkers, age 60 or greater are shown in Table 3.4.

In addition, there are a large number of activities in which older adults can be expected to participate. These include activities in the following categories:

- Work (full or part-time job)
- Political causes
- Sleeping, eating, exercising
- Shopping
- Travel
- Gardening and flower arranging
- Arts and crafts
- Media entertainment such as the internet, radio, and television
- Religious practices that are purposeful, traditional, and ritualistic
- Education or training
- Cooking
- Housekeeping chores (Successful Aging, 2007).

In terms of a leisure-time activity, internet usage is expected to grow significantly as the population ages (see Table 3.2).

Table 3.2 - Internet Usage Among New York Residents Age 50 or Greater.

Older Adults and Seniors Online in the US (% of population in each group)		
	Percentage of Users	
	Age	
Year	50-64	65+
2003	61.0	23.9
2004	63.2	25.8
2005	65.9	27.7
2006	68.3	30.0
2007	70.9	32.2
2008	73.7	34.1

Source: Department of Commerce , May 2005

As the population ages, these activities will become more important in terms of the total recreation picture in New York State.

The charts in Figure 3.3 show the age/sex breakdown for New York State in the years 2007 and 2030. The most notable change is the movement of the baby boomers, born between 1946 and 1964 from the age group 43 to 62 years old to 66 years old and older. This effect exists for all counties in the State.

Youth

While there has been a focus on research devoted to meeting the recreation needs of senior citizens because of the aging of the population, there is also a need to improve the quality and quantity of recreational experiences of younger New Yorkers as well.

Today's youth are spending less time participating in outdoor recreational activities. This is a factor in the rise of obesity and associated health concerns. There is a need to increase the public's awareness and value of connecting children and nature toward a goal of improving the knowledge of our state's natural resources and health and welfare of the present and future generation of our youth.

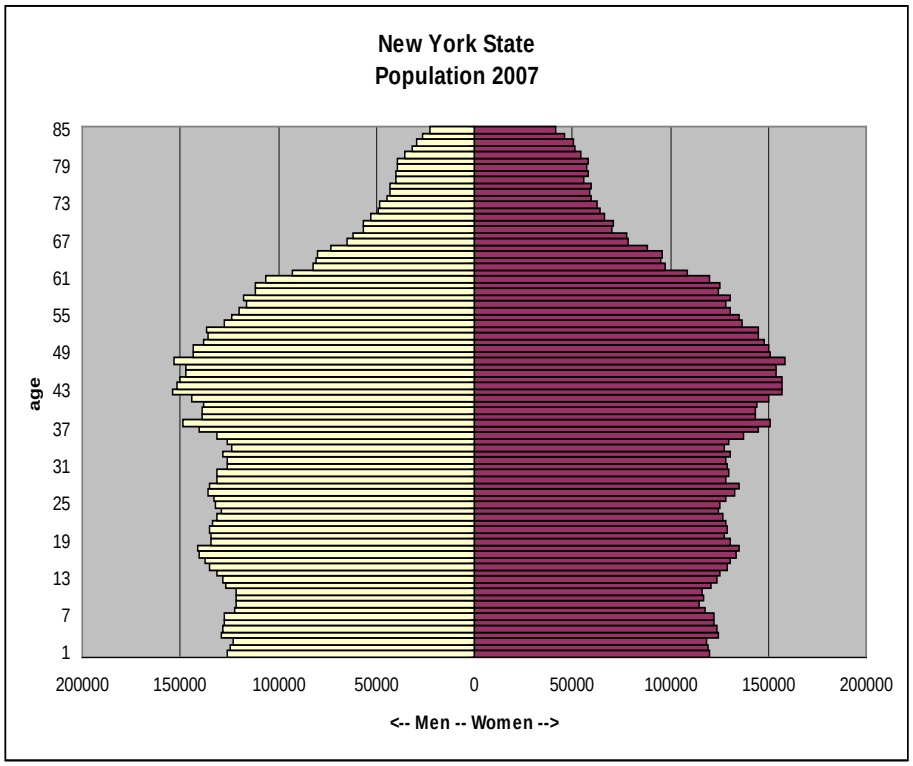
Finally, the rewards of participation in recreation by youths can last a lifetime, providing not only physical, but emotional and psychological benefits as well.

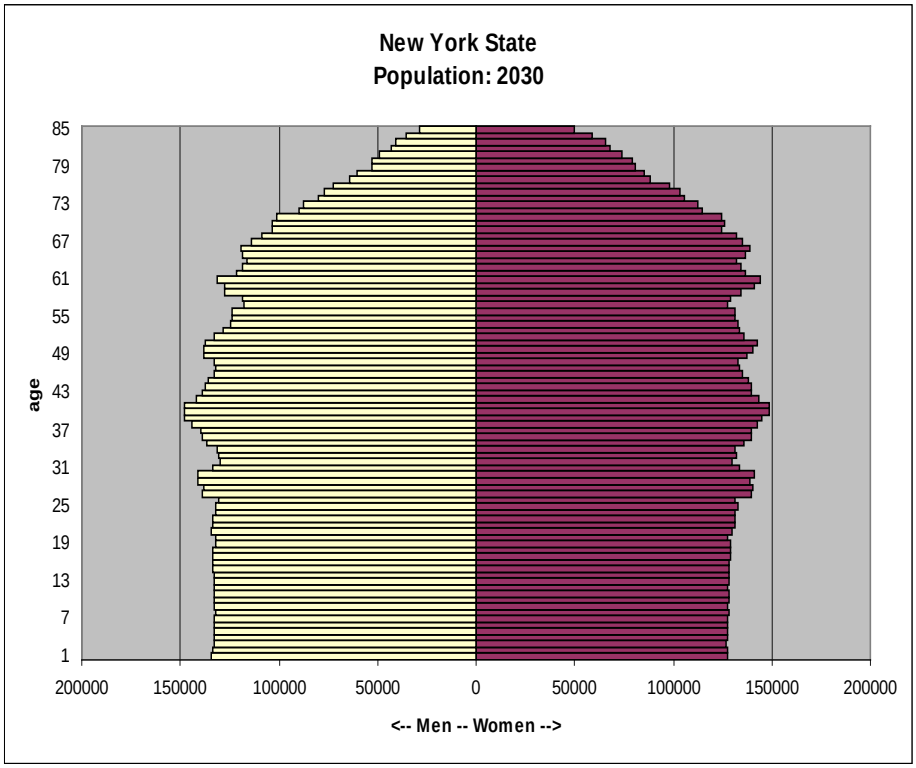
Connecting Children and Nature

Children today are less connected to the natural world than ever before. They spend half as much time outdoors than they did 20 years ago and the effects of sedentary indoor lifestyles have become increasingly evident as the childhood obesity rate has more than doubled and the adolescent obesity rate has more than tripled. Associated with obesity is a decreased life expectancy and higher risk of diabetes, cardiovascular disease, and joint problems.

Meanwhile, studies show that children who play and learn outside have less stress, fewer sleep disorders, a more positive outlook on life, improved test scores, and greater conflict resolution skills, are more creative, motivated, and physically fit, and develop stronger immune systems. Research has also found that exposure to nature helps reduce the severity of Attention Deficit Hyperactivity Disorder, diagnosed in over two million U.S. children (White, 2008).

Richard Louv began a nationwide movement in 2005 with the publication





Source: New York Office for the Aging.

Figure 3.3 - New York State's Changing Population

of his book about the disconnection between children and nature, Last Child in the Woods. In his book, Louv describes a concept he coined called "nature deficit disorder" as "not an official diagnosis but a way of viewing the problem… diminished use of the senses, attention difficulties, and higher rates of physical and emotional illnesses". The World Future Society ranked nature deficit disorder as the fifth-most-important trend of 2007 and the years to come (Charles et al, 2008).

The No Child Left Inside Coalition, representing more than 300 environmental, educational, business, public health, outdoor recreation and conservation groups nationwide, was created in 2006 to help connect children with nature and to advocate for environmental education and funding. Another initiative spearheaded by Louv, the National Forum on Children and Nature was launched in 2007 and is supported by The Conservation Fund. The Forum will select and fund 20 nationally significant demonstration projects in four key areas of health, education, the built environment, and media/culture.

Reasons for our children's nature deficit are many, but particularly strong is the parental perception that nature is unsafe, including fears of strangers, getting lost, unfamiliar plants and animals, insect bites, traffic hazards, and other causes of physical injury. Other reasons are lack of awareness of opportunities, cost, lack of time, transportation difficulties, liability concerns, and competition with structured sports and electronic media. But with increasing attention focused on the problem, solutions are plentiful. One solution in particular, greater access to parks, is associated with more physical activity and less sedentary behavior among youth according to a 2006 study published in Psychological Science (Krisberg, 2007).

With public attendance dropping sharply at many state and national parks, the National Association of State

Park Directors and the National Park Service agreed on a joint "Children and Nature Plan for Action" in September of 2007. This initiative calls for state and national parks to work collaboratively to increase public awareness of the value of connecting children and nature, discuss common issues and solutions, share information about opportunities, engage other agencies and organizations in shared technology, programs, and activities, and promote a national campaign to highlight the importance of connecting children and nature.

Urban Areas

There are 61 cities in New York State. Not including New York City, 2 million people live in these cities. However, most of the cities, particularly those in the "rust belt" (that portion of America most affected by the decline of manufacturing) are losing population. However, with the aging of population and change in living styles by the younger working class, there is renewed interest in residing in urban areas that provide services and cultural opportunities. Revitalization of these areas should be guided by smart growth principles. Past development and transportation practices will need to be revisited to make communities more walkable and pedestrian friendly.

Universal Accessibility

Approximately 20.6% of the New York State population above the age of 5 is considered to have a disability. Providing recreational opportunities to this segment of the population will require existing and future recreation facilities to be universally accessible.

Composition of the Population

The population of New York State will increase very slightly over the next twenty years, but the composition of this population will be quite different from what it is today. Higher birth-rates among minority populations as well as immigration will continue to increase ethnic diversity. The recreation preferences of minority groups can be different from those of the previously more dominant ethnic groups. Facility design, signage and public awareness will need to consider the populations being served.

Research has shown that on the federal level, minority groups are under-represented among the visitors to national parks. A number of reasons for this have been proposed. One is that both majority and minority groups have an equal affinity to experience the outdoors but, with other things being equal, minority groups having less income, have less money available to spend on recreation. Another theory holds that there are historic and cultural reasons why minority groups may not wish to participate in traditional recreational activities to the extent that the majority does.

Leisure Time

Recent research has shown a decrease in the number of hours devoted to work over the past generation. However, it has been noted that passive, indoor activities such as watching television have increased at an even greater rate, thus decreasing the availability of the increased leisure time for outdoor activities. One possible cause of the lack of free time for recreation is that although more leisure time has become available, it is becoming available in smaller pieces rather than large contiguous blocks favorable to family outings and the like. It has also been noted that the time devoted to outdoor recreation has increasingly been occurring during peak hours causing increasing pressure on limited resources.

In the report "New York State Strategic Plan for Overweight and Obesity Prevention", released in December 2004, the New York State Department of Health emphasizes the importance of physical activity during leisure time for the promotion of health. The report states that New Yorkers' most frequently mentioned physical activities during leisure time are: walking, running, weight-lifting, gardening and bicycling. The report also stresses the importance of accessibility to places for physical activity. Further, in dealing with strategies and objectives, the report states, as a goal:

> *Increase the number of facilities or places for physical activity (e.g. parks, playgrounds, gyms, community centers, schools, etc.) open for community use.*

Despite the reports indicating an increase in leisure time, time was the number one reason cited by individuals in the 2004 General Public Recreation Survey for not participating in as much outdoor recreation as they wished. This was true across all age groups except for the elderly, who for the most part were either retired or working part-time.

Social Conditions

There continues to be a decrease in the average household size and an increase in single parent households. This has an impact on the amount of leisure time. The economic gap between the affluent and the poor continues to increase. As a result activities with high entry costs, such as golf and

downhill skiing, will decrease in total participation.

Energy

The future of travel, tourism and recreational activities dependant on gasoline will become more uncertain due to cost and availability. This can impact such recreational activities as snowmobiling, ATV usage, boating and camping. As a result, there will be an increase in non-fuel related activities.

Climate Change

As Chapter 6 describes climate change will undoubtedly impact the landscape, environmental resources and recreational activities. The composition of the fauna and flora will change. The warming of the climate will impact both winter and summer activities. The potential rise in sea level will impact water related facilities and ecosystems. These and other impacts will need to be considered in the future location and design of recreational facilities.

Where the public stands on recreation and conservation issues

As part of the 2004 General Public Recreation Survey, the public was asked its opinion on issues related to recreation and conservation. Given nine statements, the respondents indicated the degree to which they agreed or disagreed. A similar set of questions was asked, in 2005, of the municipal officials throughout the state. Both groups showed support, in varying degrees for all these issues as indicated by the ranking of the issues from 1 highest to 9 lowest.

Table 3.3 - Issues Regarding Recreation in New York State

Issue	General Public	Municipal Officials
More money should be spent on public park maintenance and repair.	1	1
More land should be purchased by government to preserve open space.	2	8
Government should increase/create additional public access to water resources such as lakes, streams, beaches and oceanfronts.	3	4
Federal financial assistance to support state and local recreation development and land acquisition should be increased.	4	3
Government should increase spending for development of recreation facilities, e.g. pools, marinas, trails, campgrounds, etc.	5	3
Public/private partnerships should be considered to expand and develop recreational facilities.	6	2
More land should be purchased by government for recreation.	7	7
Government should preserve more open space by means other than acquisition, e.g. easements, zoning, etc..	8	6
Patrons should help support programs and services that have been provided through government subsidies in the past.	9	n.a.

Recreation Supply

There are over 14,000 public and private recreation sites within New York State. OPRHP's facilities inventory maintains information on the location of each of these sites and the number and types of recreation facilities each provides.

There are fewer facilities operated by State agencies as compared to other operators but the sites are larger in acreage. Commercially operated sites account for about one-quarter of the total sites but are generally smaller in acreage than government run facilities. An important difference between these two groups is that one function of the government is to provide recreation opportunities of various types and locations which are not profitable for the private sector. This would include large areas that are set aside for conservation and passive recreation.

There is a considerable difference in the distribution in the number of recreation sites and recreational acreage through the state. The table and charts show this information by OPRHP regions:

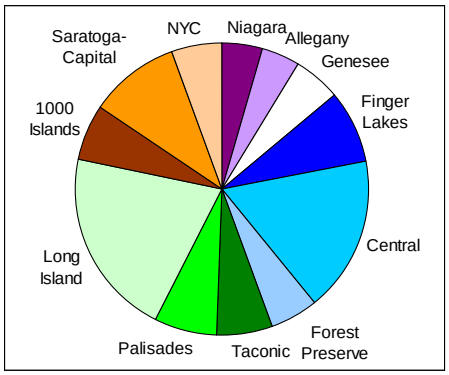
Additional details on the supply of recreation facilities for selected activities is presented in tables in the following section on activity analysis. The data in these tables are derived from the New York State Outdoor Recreation Inventory.

Figure 3.4 - OPRHP State Park Regions

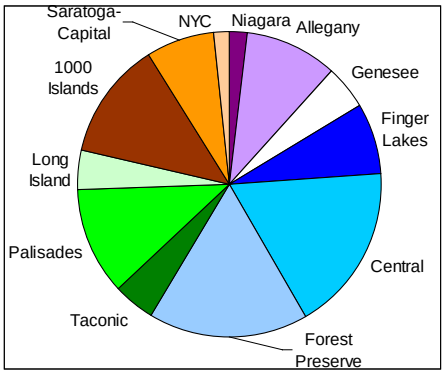
Table 3.4 -Recreation Facilities in New York State by OPRHP Region

The table to the right includes only sites presently on the Outdoor Recreation Inventory. Note that not all sites reported acreage. The state acreage figure in the chart below includes DEC acreage within the Adirondack and Catskill Parks.

Region	Number of Sites	Acreage
Niagara	397	43,106
Allegany	370	220,553
Genesee	480	106,866
Finger Lakes	738	166,243
Central	1,536	399,333
Forest Preserve	495	383,487
Taconic	535	100,657
Palisades	644	251,360
Long Island	1,867	98,210
1000 Islands	547	276,942
SaraCap	902	163,139
NYC	509	39,421



Number of sites by Region



Acreage of sites by Region

Figure 3.5 - Number and Acreage of Sites by Region

Recreation Demand

The demand for recreation facilities is derived from the 2004 General Public Recreation Survey that addressed levels of participation and attitudes toward recreation/open space issues. This was supplemented through a survey of the local governmental park professionals which focused on facility needs, issues and trail concerns.

The 2004 General Public Recreation Survey was directed at a geographically stratified selection of households residing in New York State for at least 18 months. The survey is an component of the process because it is one of the few opportunities to receive input from the entire citizenry, rather than special interest groups, park visitors, activity club members and the like. Findings from the survey were analyzed and demographic variables were assessed as to their influence on recreation choices. The results of this analysis were used together with U.S. Census data to make projections for current and future levels of recreation by activity and county within New York State.

Relaxing in the park continues to be the recreation activity enjoyed by most New York residents. This is followed by walking/jogging, visiting museums/historic sites, swimming and biking. However, the walking/jogging experiences the highest total of activity days followed by relaxing in the park, swimming, visiting museums/historic sites, and biking.

As mentioned previously, in 2005 the New York State Office of Parks, Recreation and Historic Preservation collected data from approximately 2,300 individuals on participation in outdoor activities and attitudes toward environmental and recreational issues. As part of the General Public Recreation Survey, New Yorkers were asked what recreation facilities they felt were needed within 30 minutes of their home. Similarly, also in 2005, park professionals and local government officials were asked about the need for recreation facilities in their community. The results, while similar, did show some differences, notably the absence of swimming facilities from the park professional's list of needed facilities, this need having been rated #1 by the public. A possible explanation for this being the large capital investment, ongoing operational costs and liability concerns that swimming pools involve.

Table 3.5 - Participation 2005 and 2025

Activity	2005 Participants	% pop 2005	2025 Participants	% pop 2025	Growth	% Growth
Relaxing in Park	12,495,807	78.03%	12,994,075	77.79%	498,268	3.99%
Walking	10,259,380	64.06%	10,704,563	64.09%	445,183	4.34%
Swimming	7,193,165	44.92%	7,201,111	43.11%	7,946	0.11%
Biking	5,148,247	32.15%	5,304,582	31.76%	156,335	3.04%
Historic Sites	9,279,275	57.94%	9,776,268	58.53%	496,993	5.36%
Boating	4,296,624	26.83%	4,327,552	25.91%	30,928	0.72%
Fishing	2,917,010	18.22%	2,883,353	17.26%	-33,657	-1.15%
Hiking	3,084,106	19.26%	3,080,203	18.44%	-3,903	-0.13%
Field Sports	3,015,000	18.83%	2,969,291	17.78%	-45,709	-1.52%
Court Games	3,947,521	24.65%	3,943,761	23.61%	-3,760	-0.10%
Tennis	1,734,461	10.83%	1,751,914	10.49%	17,453	1.01%
Golfing	2,031,215	12.68%	2,044,693	12.24%	13,478	0.66%
Camping	4,314,756	26.94%	4,261,150	25.51%	-53,606	-1.24%
Hunting	1,003,858	6.27%	1,027,296	6.15%	23,438	2.33%
ATV	1,029,832	6.43%	992,248	5.94%	-37,584	-3.65%
Local Winter	4,956,576	30.95%	4,954,269	29.66%	-2,307	-0.05%
Downhill Skiing	1,252,905	7.82%	1,223,477	7.32%	-29,428	-2.35%
X-Country Skiing	1,084,119	6.77%	1,105,715	6.62%	21,596	1.99%
Snowmobiling	762,384	4.76%	722,935	4.33%	-39,449	-5.17%

Table 3.6 - Activity Days 2005 and 2025

	2005	per participant	2025	per participant	Activity Growth	Day % Growth
Walking	347,294,417.00	33.85	366,896,973	34.27	19602556	5.64%
Field Sports	33,723,802.00	11.19	33,582,420	11.31	-141382	-0.42%
Golfing	22,215,328.00	10.94	22,521,577	11.01	306249	1.38%
Biking	51,482,470.00	10.00	53,047,831	10.00	1565361	3.04%
Court Games	36,507,669.00	9.25	36,759,810	9.32	252141	0.69%
Relaxing in Park	104,170,358.00	8.34	109,449,427	8.42	5279069	5.07%
Swimming	60,966,850.00	8.48	60,309,198	8.37	-657652	-1.08%
Hunting	7,702,896.00	7.67	7,790,958	7.58	88062	1.14%
Hiking	20,821,392.00	6.75	21,068,539	6.84	247147	1.19%
ATV	6,634,812.00	6.44	6,376,121	6.43	-258691	-3.90%
Historic Sites/Mus.	54,959,437.00	5.92	58,611,800	6.00	3652363	6.65%
Fishing	16,763,916.00	5.75	16,470,258	5.71	-293658	-1.75%
Boating	24,665,177.00	5.74	24,618,653	5.69	-46524	-0.19%
Camping	24,156,268.00	5.60	23,667,935	5.55	-488333	-2.02%
Tennis	8,140,674.00	4.69	8,245,728	4.71	105054	1.29%
Downhill Skiing	6,400,664.00	5.11	6,366,777	5.20	-33887	-0.53%
X-Country Skiing	4,456,481.00	4.11	4,531,456	4.10	74975	1.68%
Local Winter	19,386,352.00	3.91	19,164,445	3.87	-221907	-1.14%
Snowmobiling	2,109,036.00	2.77	2,003,940	2.77	-105096	-4.98%

Table 3.7 - Recreational Facilities Needed

Expressed Need	General Public	Park Professionals
In the columns to the right, the top five facility needs expressed by each group are listed in order of need.	Swimming Pools/Beaches	Trails
	Trails	Facilities for picnicking
	Facilities for picnicking	Nature study facilities
	Playgrounds	Fields for sports
	Open Space	Fishing access points

Activity Analyses

Swimming

Of the activities studied in the 2004 General Public Recreation Survey, swimming was the third most popular when measured by activity days and fourth most popular in terms of number of participants. This activity is most popular in the southern areas of the state, where a longer season combined with more available facilities make it the recreation of choice for many people. When asked what type of recreation facility was needed within 30 minutes of their homes, respondents mentioned swimming facilities more than any other type of facility although trail access was a close second.

Swimming is very popular in the southern areas of the state, including New York City and Long Island. Based on information from the Outdoor Recreation Facilities Inventory, the 2 county Long Island region has almost ¼ of the New York's developed beach and approximately 1/6 of the state's pool area.

Over the next 20 years, the number of swimmers and frequency of swimming will change little.

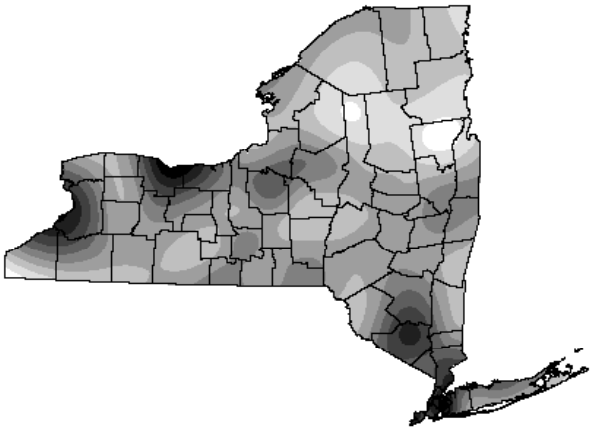
Table 3.8 - Swimming Facilities by Operator

Operator	Places with Swimming		Places with Beaches		Beach Linear Ft.		Places with Pools		Pool Sq. Ft. (est).	
State	173	5.1%	103	6.3%	97,423	17.3%	23	1.7%	386,077	10.3%
County	63	1.9%	37	2.3%	23,085	4.1%	12	0.9%	98,804	2.6%
City/Village	439	12.9%	120	7.4%	72,507	12.9%	239	17.7%	1,118,407	29.9%
Town	445	13.1%	264	16.2%	92,129	16.4%	146	10.8%	494,676	13.2%
Federal	3	0.1%	1	0.1%	9,990	1.8%	0	0.0%	0	0.0%
School District	45	1.3%	1	0.1%	100	0.02%	30	2.2%	97,325	2.6%
Non-Profit	167	4.9%	91	5.6%	22,601	4.0%	59	4.4%	99,106	2.7%
Private	401	11.8%	191	11.7%	39,542	7.0%	195	14.4%	475,568	12.7%
Commercial	1669	49.0%	823	50.5%	204,797	36.4%	646	47.9%	969,646	25.9%
Total	3405		1631		562,174		1350		3,739,609	

Source: New York State OPRHP Outdoor Recreation Facilities Inventory
(This source applies to this and all following similar tables in this chapter)

Table 3.9 - Swimming Facilities by State Park Region

Region	Places with Swimming		Places with Beaches		Linear Ft. of Beach		Places with Pools		Pool Sq. Ft. (est).	
Niagara	145	4.3%	42	2.6%	21,890	3.9%	72	5.3%	240,518	6.4%
Allegany	148	4.3%	97	5.9%	26,180	4.7%	29	2.1%	46,272	1.2%
Genesee	164	4.8%	75	4.6%	36,445	6.5%	79	5.9%	168,187	4.5%
Finger Lakes	219	6.4%	107	6.6%	36,915	6.6%	70	5.2%	174,441	4.7%
Central	436	12.8%	156	9.6%	58,556	10.4%	212	15.7%	614,524	16.4%
Forest Preserve	462	13.6%	346	21.2%	75,032	13.3%	77	5.7%	111,915	3.0%
Taconic	239	7.0%	100	6.1%	17,305	3.1%	102	7.6%	232,654	6.2%
Palisades	365	10.7%	134	8.2%	32,251	5.7%	200	14.8%	432,282	11.6%
Long Island	526	15.4%	295	18.1%	135,970	24.2%	216	16.0%	628,744	16.8%
Thousand Islands	245	7.2%	152	9.3%	58,264	10.4%	36	2.7%	68,386	1.8%
Saratoga-Capital District	405	11.9%	113	6.9%	23,526	4.2%	225	16.7%	537,737	14.4%
New York City	51	1.5%	14	0.9%	39,840	7.1%	32	2.4%	483,949	12.9%
Total	3405		1631		562,174		1,350		3,739,609	



(On this and following maps, darker areas indicate greater need)

Figure 3.6 - Need for Swimming Facilities

Day Use Activities

This category includes picnicking, relaxing in the park and playground use. Requiring minimal physical exertion and almost no equipment costs, these activities can be enjoyed by the young and old, rich and poor. It is therefore no surprise that the number of participants for picnicking/day use/relaxing in the park is the largest of all the activities studied for this report – almost ¾ of the State's population.

Because of the reasons mentioned above, the level of participation in this activity is not sensitive to the overall aging of the population. The projections indicate that there will be almost 4% more people engaging in this activity in 2025 and the total number of activity days will increase by 5%. The percent increase in activity days is second only to that of "visiting museums/historic sites" and "walking/jogging".

Table 3.10 - Day Use Facilities by Operator

Operator	Places with Picnicking		Picnic Tables # (est.)		Places with Tennis		Places with Basketball	
State	292	5.9%	41,044	39.6%	33	1.8%	40	2.2%
County	188	3.8%	21,931	21.2%	55	3.0%	28	1.6%
City/Village	1,238	25.0%	10,193	9.8%	538	29.4%	496	27.8%
Town	998	20.1%	9,240	8.9%	385	21.0%	375	21.0%
Federal	6	0.1%	48	0.0%	1	0.1%	-	0.0%
School District	658	13.3%	132	0.1%	330	18.0%	528	29.6%
Non-Profit	138	2.8%	1,289	1.2%	35	1.9%	41	2.3%
Private	189	3.8%	2,476	2.4%	142	7.8%	41	2.3%
Commercial	1,246	25.2%	17,285	16.7%	311	17.0%	233	13.1%
Total	4,953	100.0%	103,638	100.0%	1,830	100.0%	1,782	100.0%

Table 3.11 - Day Use Facilities by State Park Region

Region	Places with Picnicking		Picnic Tables # (est.)		Places with Tennis		Places with Basketball	
Niagara	275	5.6%	16,164	15.6%	133	7.3%	91	5.1%
Allegany	179	3.6%	2,512	2.4%	32	1.7%	25	1.4%
Genesee	232	4.7%	8,808	8.5%	77	4.2%	57	3.2%
Finger Lakes	406	8.2%	8,576	8.3%	73	4.0%	116	6.5%
Central	838	16.9%	13,635	13.2%	289	15.8%	373	20.9%
Forest Preserve	360	7.3%	6,330	6.1%	106	5.8%	42	2.4%
Taconic	370	7.5%	7,912	7.6%	199	10.9%	169	9.5%
Palisades	353	7.1%	9,358	9.0%	122	6.7%	104	5.8%
Long Island	816	16.5%	11,558	11.2%	385	21.0%	434	24.4%
Thousand Islands	327	6.6%	7,695	7.4%	94	5.1%	100	5.6%
Saratoga-Capital District	560	11.3%	8,889	8.6%	197	10.8%	247	13.9%
New York City	237	4.8%	2,201	2.1%	123	6.7%	24	1.3%
Total	4,953	100.0%	103,638	100.0%	1,830	100.0%	1,782	100.0%

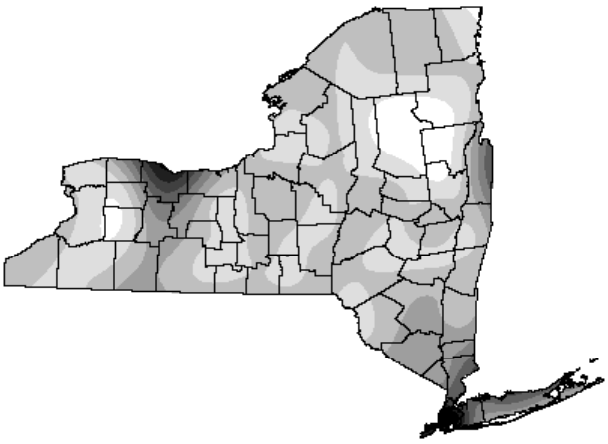


Figure 3.7 - Need for Day Use Facilities

Camping

Camping differs from most other outdoor recreational activities in that it is a multi-day activity frequently involving other activities such as hiking, fishing, boating, etc. The style of camping, e.g. tent, RV, etc. changes over the course of the individual's lifetime. Younger campers are more likely to participate in backpacking and tent camping. Older campers prefer cabins and RVs.

Camping facilities are available throughout New York State except within New York City and they are fairly limited on Long Island. Because travel is an important component of this activities, campers in New York City and Long Island are willing to travel to the more remote areas of the state.

Based on the projections for this report, camping in New York State is expected to decline slightly, the number of campers decreasing 1.24% and the number of camping-nights decreasing 2.02%.

Table 3.12 - Camping Facilities by Operator

Operator	Places with Camping		# of Campsites (est.)		Places with Cabins		# of Cabins (est.)		Places with Group Camps	
State	180	6.7%	15,934	14.3%	29	6.3%	810	22.8%	21	2.7%
County	68	2.5%	1,853	1.7%	4	0.9%	39	1.1%	14	1.8%
City/Village	20	0.7%	559	0.5%	0	0.0%	0	0.0%	3	0.4%
Town	50	1.9%	1,466	1.3%	1	0.2%	1	0.0%	5	0.6%
Federal	6	0.2%	43	0.0%	0	0.0%	0	0.0%	2	0.3%
School District	3	0.1%	10	0.0%	15	3.2%	0	0.0%	2	0.3%
Non-Profit	265	9.9%	1,220	1.1%	0	0.0%	138	3.9%	214	27.7%
Private	148	5.5%	1,072	1.0%	21	4.5%	155	4.4%	108	14.0%
Commercial	1936	72.3%	88,948	80.1%	394	84.9%	2404	67.8%	404	52.3%
Total	2676	100.0%	111,105	100.0%	464	100.0%	3547	100.0%	773	100.0%

Table 3.13 - Camping Facilities by State Park Region

Region	Places with Camping		# of Campsites (est.)		Places with Cabins		# of Cabins (est.)		Places with Group Camps	
Niagara	100	3.7%	6,583	5.9%	10	2.2%	66	1.9%	31	4.0%
Allegany	161	6.0%	8,639	7.8%	17	3.7%	557	15.7%	27	3.5%
Genesee	123	4.6%	8,344	7.5%	9	1.9%	119	3.4%	36	4.7%
Finger Lakes	235	8.8%	19,902	17.9%	22	4.7%	185	5.2%	67	8.7%
Central	348	13.0%	15,241	13.7%	40	8.6%	453	12.8%	82	10.6%
Forest Preserve	424	15.8%	18,162	16.3%	100	21.6%	1532	43.2%	103	13.3%
Taconic	140	5.2%	2,803	2.5%	6	1.3%	111	3.1%	77	10.0%
Palisades	368	13.8%	9,206	8.3%	47	10.1%	112	3.2%	199	25.7%
Long Island	129	4.8%	1,846	1.7%	7	1.5%	7	0.2%	34	4.4%
Thousand Islands	397	14.8%	10,824	9.7%	161	34.7%	292	8.2%	62	8.0%
Saratoga-Capital District	251	9.4%	9,555	8.6%	45	9.7%	113	3.2%	55	7.1%
New York City	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	2676	100.0%	111,105	100.0%	464	100.0%	3547	100.0%	773	100.0%

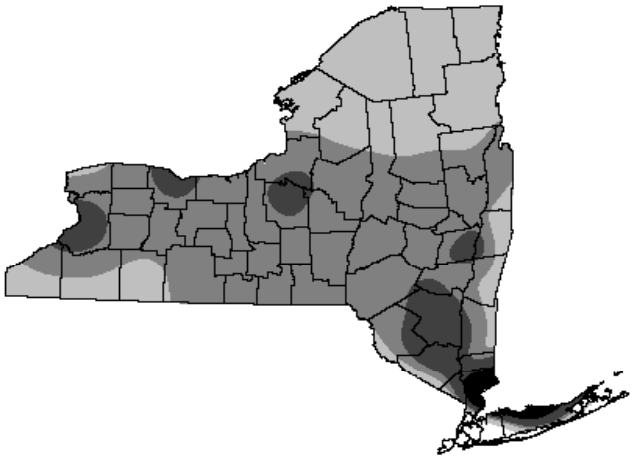


Figure 3.8 - Need for Camping Facilities

Local Winter Activities

For a number of reasons, the shorter season and school attendance, to mention two, total participation in winter sports is generally lower than summer activities. This category includes a number of outdoor winter activities, e.g. ice skating, sledding, snowboarding, etc. It does not include snowmobiling or downhill skiing as these two activities require considerably more of an investment by their participants in both equipment expenses and travel time.

Table 3.14 - Skiing and Ice Skating Facilities by Operator

Operator	Places with Ski Areas		Lifts (#)		Places with Ice Skating	
State	17	7.4%	8	4.1%	64	9.0%
County	10	4.4%	3	1.5%	54	7.6%
City/Village	20	8.7%	1	0.5%	229	32.3%
Town	22	9.6%	10	5.2%	211	29.8%
Federal	0	0.0%	0	0.0%	0	0.0%
School District	0	0.0%	0	0.0%	19	2.7%
Non-Profit	4	1.7%	2	1.0%	17	2.4%
Private	16	7.0%	9	4.6%	18	2.5%
Commercial	140	61.1%	161	83.0%	97	13.7%
Total	229	100.0%	194	100.0%	709	100.0%

Table 3.15 - Skiing and Ice Skating Facilities by State Park Region

Region	Places with Ski Areas		Lifts (#)		Places with Ice Skating	
Niagara	11	4.8%	7	6.9%	49	6.9%
Allegany	12	5.2%	8	7.9%	13	1.8%
Genesee	9	3.9%	2	2.0%	44	6.2%
Finger Lakes	8	3.5%	5	5.0%	35	4.9%
Central	39	17.0%	23	22.8%	121	17.1%
Forest Preserve	38	16.6%	20	19.8%	42	5.9%
Taconic	16	7.0%	6	5.9%	78	11.0%
Palisades	35	15.3%	12	11.9%	60	8.5%
Long Island	6	2.6%	1	1.0%	80	11.3%
Thousand Islands	18	7.9%	9	8.9%	49	6.9%
Saratoga-Capital District	27	11.8%	8	7.9%	91	12.8%
New York City	10	4.4%	0	0.0%	47	6.6%
Total	229	100.0%	101	100.0%	709	100.0%

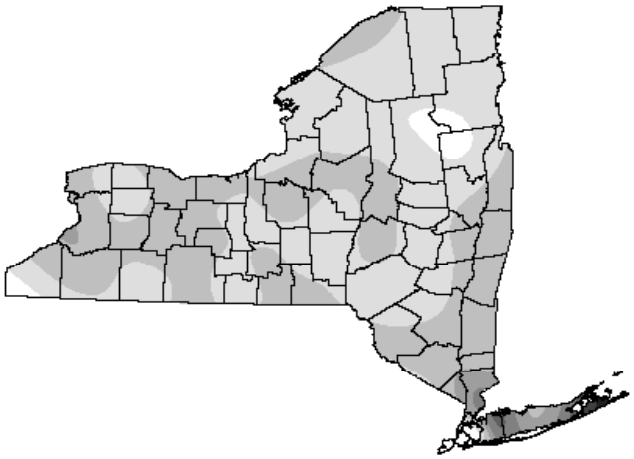


Figure 3.9 - Need for Local Winter Facilities

Trail Activities:

Hiking

Hiking is an activity enjoyed by many people at different levels of difficulty. As an activity, Hiking range from a short, informal walk at a nature center to a multi-day trek through the wilderness including backpacking. Involvement in hiking is predicted to be fairly flat over the projection period with a very slight decrease in number of participants offset by an increase in the number of days of hiking per participant. More information on this and other trail activities is available in the section Chapter 3 Trails and Greenways.

Bicycling

Bicycling is one of America's major outdoor recreation and transportation activities. While this document is more focused on the recreational aspect of bicycling, it should be noted that the transportation component will likely grow in importance as the cost of gasoline and concerns over environmental issues increase in the future. Projections based on the 2004 General Public Recreation Survey indicate both the number of participants and bicycle days/year will increase about 3% by 2025.

Because bicycling is an important mode of transportation, and because even much of the recreational bicycling takes place on public roads, an important component of improving this activity in increased safety. This can be accomplished in a number of ways including the use of helmets, traffic law education and the construction or designation of separate lanes for bicyclists.

Cross-Country Skiing / Snowshoeing

Over 1 million New Yorkers participate in this activity at least once a year, generating over 4 million activity days. Both the number of participants and activity days are expected to increase between now and 2025, although the potential effects of global warming have not been taken into account in these projections.

Equestrian

Horse ownership and ridership is a popular activity throughout New York State and is important to many local economies. Based on information from the New York State Horse Council, there are over 200,000 horses in New York and this activity produces $2.4 billion worth of goods and services within the state providing the equivalent of over 35,000 full-time jobs.

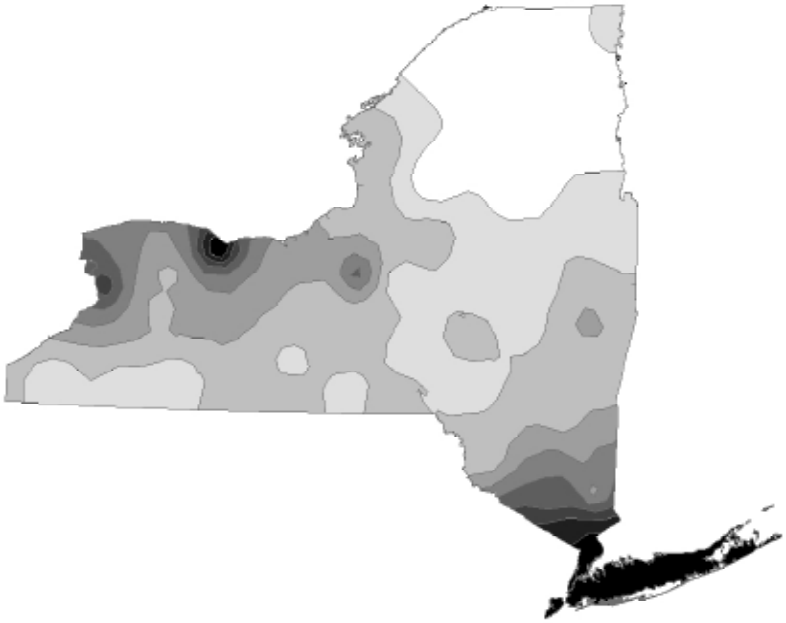


Figure 3.10 - Need for Equestrian Facilities

Results from the 2004 General Public Recreation Survey indicated that over 5% of the state's population had participated in this activity at least once during the previous 12 months. The average number of days per participant was 22, with those under 20 years old riding more than 30 days/year and senior citizens about 10. Additionally, when respondents to this survey were asked "What 2 activities would you most like to participate in, but can't for any reason?", 4.3% listed horseback riding, the 7th highest non-winter activity mentioned.

Horseback riding is not limited to the suburban and rural areas of the state. The Outdoor Recreation Facilities inventory lists equestrian trails in every county, including New York City. Within New York State, many of the trail networks provided by DEC provide support facilities such as hitching rails, horse shelters, lean-tos for riders and parking amenities.

The projections for this activity indicate that between 2005 and 2025 there will be a modest increase of about 1.77% in the number of participants. However, a small decrease in the number of activity days per participant will result in the number of equestrian activity days remaining flat for this period. Nonetheless, there are areas of the state for which these participants need additional trails and other facilities.

ATV/Off-Road Vehicles

Based on analysis of the 2005 General Public Recreation Survey, participation in ATV/ORV has increased since the previous SCORP. In 1998, approximately 5% of the respondents

to the Recreation Survey indicated that they had participated in this activity. Among the 1998 group, the median level of participation was 5 days per year. By 2005, the percentage of ATV/ORV participants increased to 6.2% and the median number of days/year for participants had increased to 10.

Analyzing the results of the survey, various predictive variables can be quantified as to the extent that they influence participation in this recreational activity. One of the strongest predictors for ATV/ORV use is the type of community in which the respondent lives. The survey asked people to describe their community as 'inner city', 'urban', suburban or rural. Those living in rural areas were much more likely to be ATV/OVRers (16% vs. 1.2% for inner city residents). A similar finding was made for frequency of participation (15.0 days vs. 1.8 days).

Similarly, age is also a strong influence in the decision to participate in this activity. A higher percentage of youths participate than other age groups and they also participate more days per year. Similar findings regarding the effects of age and location on participation were noted in a study by the U.S. Forest service. This survey noted a higher overall rate of participation in these activities, but the activities were more broadly defined.

Using the findings of the survey in conjunction with US Census data to determine the extent of this activity in New York State, it appears that approximately 1.03 million people participated. This represents about 6.2% of the population between the ages of 12 and 85.

In January 2006, a report issued by Camoin Associates, Tug Hill Region ATV Economic Impact Study, estimated, based ATV sales data from 1996 to 2005 that statewide there were 320,000 ATVs operating in New York State. The sales data was provided by a number of industry sources. This figure seems high in comparison to DMV registration numbers.

There is limited access to public lands for this activity. Currently, access to state lands by the general public is limited to some forest access roads on DEC administered lands. Additional access for the mobility impaired is available on a permit basis for hunting purposes. Most of the trails are on private lands, which may or may not be limited to use by ORV club members.

The future of ATV use in New York State is difficult to predict. At the time of this writing, gasoline prices have been fluctuating widely, but the overall trend has been an increase relative to income. Further, as upstate rural communities lag well behind the nation, and even the rest of New York in population growth and the average age of the population continues to increase, the demographics favorable to ATV usage are declining. (Applying parameters from the 2005 recreation survey to population predictions for 2025 indicates a decrease in this activity of about 3.5%.) On the other hand, the population trends have been in place for years and the number of registered ATVs has dramatically increased at the same time.

Table 3.16 - ATV Revenues

Fiscal Year	ATV Revenues Collected by DMV
2002-03	$1,526,939
2003-04	$933,066
2004-05	$1,716,959
2005-06	$1,340,434
2006-07	$1,027,487

Source: NYS Department of Motor Vehicles

Snowmobiling

Snowmobiling is an important part of the economy in many remote New York communities. A recent report (2003) indicated that spending attributable to snowmobiling to be in excess of $800 million. This figure includes expenditures not only on equipment, but insurance, maintenance, gasoline and travel.

However, in recent years the number of snowmobiles registered in New York State has decreased from approximately 166,000 in 2002-03 to 130,000 in 2006-07. The current projections in this report are that snowmobiling will continue to decrease by about 5% both in number of participants and activity days by 2025. Rising gasoline costs along with changing demographics may explain this decrease. Snowmobiling could become more popular should the industry continue to become more "green" in terms of noise and pollution abatement and fuel efficiency.

Other Activities

Fishing

New Yorkers can choose from a variety of fishing experiences. Salt water fishing, both surf casting and deep water fishing are popular throughout Long Island and New York City. Because of the abundant sources of water throughout New York, freshwater fishing is also popular. In the winter, ice fishing is popular in many areas.

Tennis

Participation in tennis continues to be tied to household income despite the relatively low start-up cost for this sport. Individuals living in a household where the income is greater that $75,000 are about two and one-quarter times as likely to play tennis as those with household income less than $50,000. Further, among those who participate, the rate of participation,

measured in days per year is about double for the highest income group.

Although tennis declined in popularity for many years, it now is projected to increase, albeit at a rate slightly below that of the general population. By 2025, the number of New Yorkers enjoying this sport is expected to increase about 1.01% and the number of Tennis activity-days will increase about 1.29%.

Table 3.17 - ATV* Registrations by County 2002 - 2006**

COUNTY	2006	2005	2004	2003	2002
Albany	2,414	2,246	2,014	1,913	1,530
Allegany	1,182	1,165	1,032	1,004	795
Bronx	313	251	201	178	120
Broome	1,779	1,644	1,456	1,438	1,161
Cattaraugus	2,050	1,822	1,520	1,400	1,071
Cayuga	1,431	1,338	1,161	1,073	873
Chautauqua	1,774	1,722	1,505	1,572	1,332
Chemung	1,125	1,079	962	964	780
Chenango	1,108	1,067	968	1,017	835
Clinton	2,951	3,005	2,903	3,015	2,475
Columbia	881	802	673	672	561
Cortland	955	940	865	801	613
Delaware	1,791	1,792	1,614	1,510	1,262
Dutchess	3,801	3,523	3,106	2,807	2,288
Erie	8,509	8,170	7,176	6,460	4,562
Essex	1,572	1,609	1,494	1,480	1,205
Franklin	2,961	3,019	2,886	2,963	2,699
Fulton	2,024	1,965	1,841	1,825	1,414
Genesee	1,564	1,482	1,254	1,242	991
Greene	1,291	1,258	1,107	1,015	822
Hamilton	312	310	292	284	239
Herkimer	2,081	2,103	2,036	1,974	1,487
Jefferson	5,919	5,759	5,071	4,948	4,004
Kings	523	461	435	441	341
Lewis	3,156	3,505	3,348	3,610	3,164
Livingston	1,225	1,172	1,040	987	771
Madison	1,407	1,420	1,269	1,274	1,026
Monroe	4,066	3,931	3,516	3,258	2,470
Montgomery	1,148	1,141	1,067	1,104	880
Nassau	3,733	3,237	2,878	2,394	2,055
New York	233	170	141	144	108
Niagara	4,255	4,243	3,846	3,702	2,591
Oneida	3,956	4,058	3,844	4,199	3,465
Onondaga	3,627	3,404	3,049	2,927	2,262
Ontario	2,024	1,943	1,738	1,642	1,339
Orange	4,826	4,629	4,041	3,645	2,783
Orleans	1,139	1,148	1,043	1,071	851
Oswego	4,716	4,601	4,197	4,010	3,404
Otsego	1,627	1,626	1,486	1,393	1,043
Putnam	1,378	1,239	1,100	907	647
Queens	1,397	1,216	1,083	1,013	791
Rensselaer	2,359	2,107	1,880	1,746	1,336
Richmond	650	570	473	423	351
Rockland	880	862	763	636	470
Saratoga	4,254	3,831	3,367	3,090	6,642
Schenectady	1,542	1,392	1,165	1,031	2,665
Schoharie	1,141	1,143	1,065	1,067	853
Schuyler	408	408	346	386	794
Seneca	549	567	495	513	359
St. Lawrence	7,544	7,847	7,445	7,456	456
Steuben	2,121	2,028	1,841	1,563	1,338
Suffolk	8,629	7,446	6,737	5,403	4,721
Sullivan	1,950	1,889	1,710	1,728	1,389
Tioga	1,055	998	887	757	573
Tompkins	740	710	664	558	484
Ulster	3,284	3,159	2,857	2,622	2,148
Warren	2,263	2,181	1,861	1,679	1,482
Washington	1,930	1,785	1,543	1,459	1,188
Wayne	2,675	2,635	2,316	2,219	1,717
Westchester	2,301	1,938	1,676	1,442	1,096
Wyoming	1,229	1,143	968	935	676
Yates	527	509	444	420	394
Out of State/Uncoded	990	809	719	644	498
Total	143,245	137,172	123,480	117,053	94,740

**DMV defines ATVs as having 2 or more wheels; therefore, dirtbikes, trikes and quads are included in this data.*

***Does not include suspended, revoked or surrendered registrations.*

Source: NYS Department of Motor Vehicles Data Services

Golfing

Golfing is one of the few activities that seem to increase with age, although an increase in income over the same years of the lifetime may also be a contributing factor. With the aging of the baby boomers, this has been a rapidly growing activity for many years. Now, however, with the youngest baby boomer turning 44, the number of golfers may not increase as rapidly as before. The projections generated from the 2004 General Public Recreation Survey indicate a small increase in golfers (0.66%) and golfing-days (1.38%). Thus, golfing is increasing despite the advancing age of the population, but at a rate behind that of other activities that increase with age, e.g. visiting museums, walking.

Table 3.18 - Golf Facilities by Operator

Operator	Places with Regulation Golf		# of Holes		Places with Miniature Golf		Places with Driving Ranges	
State	17	1.9%	351	2.4%	1	0.5%	11	3.4%
County	25	2.7%	423	2.8%	7	3.4%	12	3.8%
City/Village	47	5.1%	774	5.2%	6	2.9%	12	3.8%
Town	34	3.7%	549	3.7%	2	1.0%	14	4.4%
Federal	3	0.3%	36	0.2%	0	0.0%	1	0.3%
School District	2	0.2%	36	0.2%	0	0.0%	2	0.6%
Non-Profit	0	0.0%	0	0.0%	1	0.5%	0	0.0%
Private	297	32.4%	5175	34.7%	5	2.4%	46	14.4%
Commercial	493	53.7%	7567	50.7%	185	89.4%	221	69.3%
Total	918	100.0%	14911	100.0%	207	100.0%	319	100.0%

Table 3.19 - Golf Facilities by State Park Region

Region	Places with Regulation Golf		# of Holes		Places with Miniature Golf		Places with Driving Ranges	
Niagara	57	6.2%	936	6.3%	10	4.8%	20	6.3%
Allegany	36	3.9%	531	3.6%	7	3.4%	9	2.8%
Genesee	75	8.2%	1404	9.4%	20	9.7%	25	7.8%
Finger Lakes	78	8.5%	1249	8.4%	27	13.0%	29	9.1%
Central	170	18.5%	2538	17.0%	32	15.5%	48	15.0%
Forest Preserve	36	3.9%	459	3.1%	18	8.7%	7	2.2%
Taconic	95	10.3%	1629	10.9%	5	2.4%	18	5.6%
Palisades	75	8.2%	1089	7.3%	25	12.1%	41	12.9%
Long Island	130	14.2%	2502	16.8%	12	5.8%	36	11.3%
Thousand Islands	57	6.2%	819	5.5%	17	8.2%	22	6.9%
Saratoga-Capital District	87	9.5%	1386	9.3%	34	16.4%	60	18.8%
New York City	22	2.4%	369	2.5%	0	0.0%	4	1.3%
Total	918	100.0%	14911	100.0%	207	100.0%	319	100.0%

Boating

New York State has abundant water resources and most areas of the state provide numerous facilities for this activity.

Table 3.20 - Boating Facilities by Operator

Operator	Cartop Launches	Boat Ramps (#)	Places with Docks or Anchorages	# of Docks or Moorings	Boat Rental
State	189	342	73	3,377	77
County	12	86	12	1,303	36
City/Village	19	143	42	4,322	28
Town	10	230	55	6,807	25
Federal	0	2	0	0	0
School District	0	0	0	0	0
Non-Profit	5	44	4	35	34
Private	9	312	177	12,314	56
Commercial	144	1,272	1,279	98,261	1,026
Total	388	2,431	1,642	126,419	1,282

Table 3.21 - Boating Facilities by State Park Region

Region	Cartop Launches	Boat Ramps (#)	Places with Docks or Anchorages	# of Docks or Moorings	Places with Boat Rental
Niagara	5	179	59	6,846	40
Allegany	15	86	25	1,835	53
Genesee	18	90	57	3,562	49
Finger Lakes	40	208	125	7,624	97
Central	91	228	112	10,250	133
Forest Preserve	66	250	85	2,131	204
Taconic	14	126	92	8,576	38
Palisades	24	153	64	6,311	109
Long Island	12	487	562	47,876	295
Thousand Islands	68	322	228	11,709	141
Saratoga-Capital District	34	155	84	3,760	84
New York City	1	146	149	15,939	39
Total	388	2,431	1,642	126,419	1282

Downhill Skiing

As with snowmobiling, this activity is an important component of the local economy for certain areas within New York State. Skiing is a commercially viable operation and the private sector provides most of New York's facilities. Between 2005 and 2025, the number of downhill skiers is expected to decrease by 2.35% although the number of activity-days for downhill skiing should remain almost the same.

Impediments to recreation participation

Respondents to the 2004 General Public Outdoor Recreation Survey were asked what prevents them from participating in more outdoor recreation. They were presented with the following choices: work/school takes too much time; financial limitations; preference for indoor activities; physical (health) limitations; few facilities available in their area; and nothing, I participate as often as I like. Their responses, grouped by the age of the person answering the question, are shown in the graph below and may total to more than 100% because of multiple responses.

As might be expected, for all except those old enough to be retired, time is the most limiting factor. For the elderly, health issues replace time as the most mentioned restriction on their ability to recreate outdoors. One of the results shown above, that may have long term implications for outdoor recreation providers, is the preference among the youngest group, those under 20, for indoor recreation. This group showed a higher preference for indoor recreation than any of the other age categories, whether or not this is the beginning of a long term trend for those who have grown up being entertained by electronic video or just a statistical anomaly remains to be seen.

Additionally, as a measure of wanting to participate in recreation, the people surveyed were also asked to mention up to 2 activities in which they would like to participate but couldn't for any reason. Over 45% of those surveyed mentioned at least one activity. The most frequently mentioned activity was boating at 10.9%, followed by swimming (9.1%) and camping (8.0%). Among the winter activities, the most mentioned activity was downhill skiing (5.3%).

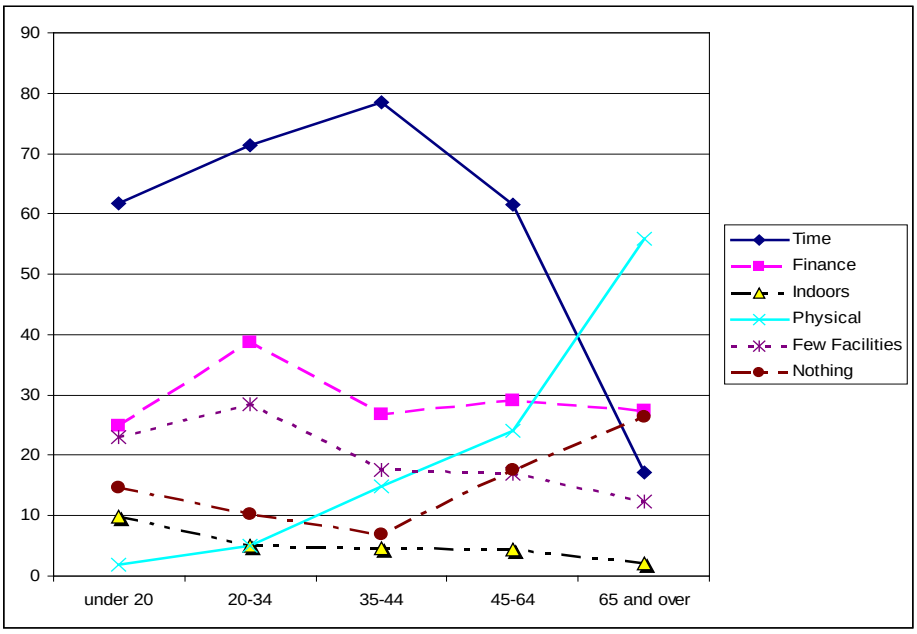


Figure 3.11 - Impediments to Recreation Participation

Recreation Need

Recreation need considers the supply of recreation facilities and the level of participation (demand) in estimating how this level of participation will change, both geographically and quantitatively in the future. The "Relative Index of Needs" translates this need by county into a numerical scale, +10 the highest level of need and +1 the least. Five is considered the statewide average in the current year (2005). In all cases, there is a future need for all activities but the relative level will be different among activities and counties.

One of the factors used in calculating the Relative Index of Needs is the current and projected population of New York State by age and county. These figures are available from estimates developed by Cornell University together with the U.S. Census Bureau. The Relative Index of Needs also takes into account the fact that people travel for recreation by using available information on the location of parks and other recreation facilities. Comparing the number of future recreationists at the destination counties with the availability of present facilities helps to project the future needs for both new and rehabilitated facilities.

As mentioned above, the relative index of needs depends on a number of input variables for which reliable data must exist. If the input variables for the calculations cannot be determined with a reasonable degree of accuracy, the outputs of the equations will not be accurate. For some activities, not enough participants responded to the 2004 General Public Recreation Survey. For other activities, the data on the supply side, that is location and quantity of recreation facilities, were inadequate. Another possible data shortfall could be a lack of information on willingness to travel to participate in an activity. For these reasons, relative index of need figures were unfortunately not computed for certain activities, e.g. surfing, ATV riding, and birding, although these were included in the 2004 General Public Recreation Survey.

Due to the low level response for some activities, an alternate means is utilized to provide a RIN at the county level for grant rating purposes. In these cases, an estimated RIN can be calculated on an *ad hoc* basis using information from the available RIN table. For instance, if a RIN figure were needed for ATV activity, its value might be estimated by averaging the values in the snowmobiling column with those in the hiking column. While ATV use is distinct from both of these activities, there are certain commonalities. ATV use appeals to participants that enjoy using vehicles to explore the outdoors and, at the same time, often requires the availability of trails such as those that are enjoyed when hiking. This approach, while not optimal, would provide an approximation of real-world needs. If this methodology is applied, the inputs will be determined by OPRHP and maintained for future use so that figures are applied consistently through time.

While this figure is valuable in looking at the big picture, often, the number presented for the county represents an average for the county as a whole and the actual need is not homogeneous within a county. As a simple example, a county may have a river or other natural resource that would attract great numbers of recreationists with limited facilities while at the same time having largely undeveloped areas elsewhere in the county that satisfy the recreational needs in those locations. The county-wide figure would consider both areas. It would over-estimate the needs in certain areas of the county and under-estimate it in others. Nonetheless, the Index of Need is relevant in comparing one county to another.

The "relative index of needs" is a valuable tool to determine need for facilities at geographic areas over the next twenty years, but other factors can and should be taken into account for any final decisions.

Abbreviations used in the Relative Index of Need Table

Park – Relaxing in the park, picnicking, playground use, other generic day use.

Swim – Outdoor swimming, either pool, lake, ocean or other.

Bike – Non-motorized use of bicycles whether on trails, established paths, off-road or on highways for recreational purposes.

Golf – Golfing on either regulation 18 or 9-hole courses as well as par 3 and pitch and putt courses.

Walk – Walking/Jogging on paths and trails. Walking for pleasure, generally requiring less equipment than hiking.

Tenn – Outdoor Tennis on any type of surface.

Cort – Court Games, includes basketball, handball and similar sports.

Fild – Field Games, includes baseball, football, soccer and other similar sports.

Equine - horseback riding

Hist – Visiting historic sites, museums, etc.

Camp – Camping including tent, RV camping and backpacking.

Hike – Hiking, usually along established trails and for greater distances than what is considered in the walking for pleasure category.

Boat – Boating including canoeing, sailing, motor boating, row boating.

Fish – Fishing, Salt and Fresh Water fishing from either shore or a boat, but not ice fishing..

LocW – Miscellaneous local winter activities: Ice Skating, Sledding, Hockey

Xski – Cross country skiing and snowshoeing

Dski – Downhill skiing

SnoM – Snowmobiling

Table 3.22 - Relative Index of Needs

Index of Needs	Park	Swim	Bike	Golf	Walk	Tenn	Cort	Fild	Equine
Albany	3	5	6	5	6	4	3	4	6
Allegany	4	4	3	4	2	3	4	6	4
Bronx	8	7	10	6	10	6	7	9	10
Broome	3	5	5	5	8	4	3	4	5
Cattaraugus	3	4	3	4	2	3	4	4	4
Cayuga	3	4	4	4	3	4	3	3	5
Chautauqua	3	4	3	4	3	4	3	4	4
Chemung	3	5	4	4	4	3	3	4	5
Chenango	3	4	3	4	2	3	3	4	4
Clinton	2	3	4	4	3	4	4	3	4
Columbia	3	4	4	4	2	3	4	4	5
Cortland	3	4	4	4	3	3	4	5	5
Delaware	3	4	4	4	2	3	3	4	4
Dutchess	4	5	6	5	5	4	5	5	6
Erie	3	7	7	6	7	4	3	3	8
Essex	3	3	3	4	2	3	4	4	3
Franklin	4	4	3	4	2	3	4	5	3
Fulton	3	4	4	4	4	3	3	3	4
Genesee	3	4	4	4	3	3	3	3	5
Greene	3	4	4	4	3	2	3	4	5
Hamilton	1	3	3	3	1	1	2	2	3
Herkimer	3	4	3	4	3	3	3	4	4
Jefferson	3	4	3	4	3	3	3	4	5
Kings	10	7	10	7	10	6	7	10	10
Lewis	3	3	3	4	1	4	4	4	3
Livingston	5	5	4	4	3	4	4	7	6
Madison	3	4	4	4	3	3	3	4	4
Monroe	9	8	7	5	7	6	5	8	10
Montgomery	3	4	4	4	3	3	3	4	4
Nassau	7	6	9	6	7	5	7	6	10
New York	10	7	10	6	10	6	7	10	10
Niagara	3	6	5	5	6	4	4	4	7
Oneida	3	5	4	4	4	4	3	4	5
Onondaga	4	6	5	5	6	4	3	4	7
Ontario	4	5	4	4	4	4	4	5	6
Orange	5	7	7	5	6	4	4	6	7
Orleans	4	4	4	4	3	4	3	5	6
Oswego	3	4	4	4	3	4	3	4	5
Otsego	3	4	3	4	2	4	4	4	5
Putnam	5	5	6	5	5	5	4	6	6
Queens	10	8	10	6	10	6	7	10	10
Rennselaer	3	5	5	5	4	4	3	4	5
Richmond	10	7	10	6	10	6	5	10	10
Rockland	5	6	8	5	7	6	4	4	9
St. Lawrence	3	4	3	4	2	3	4	5	3
Saratoga	3	5	5	5	5	4	4	4	5
Schenectady	4	5	5	5	6	4	3	5	5
Schoharie	3	4	3	4	2	4	4	4	4
Schuyler	2	4	3	4	2	3	4	3	4
Seneca	2	4	3	4	3	4	3	3	5
Steuben	3	4	3	4	2	3	4	5	5
Suffolk	6	5	8	6	6	7	5	5	10
Sullivan	3	4	4	4	3	3	4	5	5
Tioga	3	4	3	4	2	4	3	4	4
Tompkins	3	5	4	4	3	4	4	4	5
Ulster	4	5	5	5	4	4	4	5	5
Warren	3	3	4	4	3	3	4	4	4
Washington	5	4	3	4	2	4	4	6	4
Wayne	4	6	4	4	3	4	4	5	6
Westchester	7	7	9	6	8	10	5	5	10
Wyoming	2	4	3	4	2	3	4	3	5
Yates	3	4	3	4	2	4	4	4	5

Table 3.22 (*Continued*) - Relative Index of Needs

Index of Needs	Hist	Camp	Hike	Boat	Fish	LocW	Xski	Dski	SnoM
Albany	4	6	6	7	6	4	6	5	5
Allegany	3	4	4	6	5	5	4	4	5
Bronx	8	10	10	6	6	10	10	10	10
Broome	4	5	6	7	5	3	6	5	5
Cattaraugus	3	4	4	5	4	6	4	4	5
Cayuga	3	5	6	4	5	3	6	5	4
Chautauqua	4	4	5	4	4	4	5	4	4
Chemung	3	5	5	6	5	4	5	5	4
Chenango	3	5	4	5	5	5	4	4	5
Clinton	3	4	4	4	4	5	4	4	5
Columbia	3	5	5	5	5	5	5	5	5
Cortland	3	5	5	5	5	4	5	4	5
Delaware	3	5	4	5	4	3	4	5	5
Dutchess	5	6	7	6	6	4	7	6	6
Erie	3	6	10	6	7	4	10	6	6
Essex	3	4	3	3	4	3	3	4	5
Franklin	3	4	3	4	4	4	3	4	5
Fulton	3	5	4	4	4	3	4	5	4
Genesee	3	5	6	5	5	3	6	4	4
Greene	3	5	5	5	5	4	5	5	5
Hamilton	2	4	3	3	4	2	3	4	4
Herkimer	3	5	4	5	5	6	4	4	5
Jefferson	3	4	5	3	4	4	5	4	5
Kings	10	10	10	6	6	9	10	10	10
Lewis	3	4	3	3	4	4	3	4	4
Livingston	3	5	5	6	5	7	6	4	5
Madison	3	5	5	4	5	3	5	4	4
Monroe	9	6	9	7	7	5	10	5	5
Montgomery	3	5	5	5	5	3	5	5	5
Nassau	6	10	10	5	6	5	10	9	10
New York	9	10	10	6	6	10	10	10	10
Niagara	3	5	9	5	5	5	9	5	5
Oneida	4	5	5	5	5	4	5	5	5
Onondaga	4	6	8	6	6	4	8	5	5
Ontario	4	5	6	5	5	4	6	4	5
Orange	5	7	7	7	6	4	7	6	6
Orleans	3	5	6	4	5	4	6	4	4
Oswego	4	5	5	4	5	4	5	5	4
Otsego	3	5	4	5	5	5	4	5	5
Putnam	5	6	7	5	5	7	7	6	5
Queens	10	10	10	6	6	8	10	10	10
Rennselaer	4	5	6	6	5	4	5	5	5
Richmond	9	10	10	7	7	8	10	10	10
Rockland	5	7	9	5	6	6	9	8	6
St. Lawrence	3	4	3	4	4	6	3	4	6
Saratoga	4	5	5	5	5	5	5	5	5
Schenectady	4	5	6	6	5	3	6	5	5
Schoharie	3	5	4	5	4	4	4	4	5
Schuyler	3	5	4	4	4	4	4	4	5
Seneca	3	5	5	4	5	3	5	4	4
Steuben	3	5	4	6	5	7	4	4	5
Suffolk	5	8	9	5	5	7	10	8	8
Sullivan	4	5	5	4	4	4	5	5	6
Tioga	3	5	5	5	4	5	5	5	4
Tompkins	3	5	5	5	5	4	5	5	5
Ulster	4	6	5	5	5	3	6	5	5
Warren	3	5	4	4	4	5	4	4	5
Washington	4	5	4	4	5	6	4	4	5
Wayne	4	5	6	5	5	4	6	5	4
Westchester	8	8	10	6	7	6	10	8	7
Wyoming	3	5	5	5	5	5	5	4	5
Yates	3	5	5	4	4	5	5	4	5

Chapter 4 - Land Conservation and Resource Stewardship

Land Conservation

In many urban areas, different recreation interests are competing for the same limited open space; having regional and State parks within a short driving distance can help to alleviate this demand. At the same time, in rural landscapes there is increasing development pressure and environmental issues on the larger open space and recreation areas. Addressing these needs will depend on the ability for the State to work with local governments, private land owners, conservation organizations and other interested parties to preserve the quality of life in communities throughout New York.

State forest and agricultural lands provide a large and valuable open space resource. The 700,000 acres of State forests in addition to the Forest Preserve in the Adirondack and Catskill Parks provide extensive trail, hunting and passive recreation opportunities. Agricultural working landscapes are critical components of the State's open space, and offer opportunities for numerous recreational activities.

Economic Benefits of Recreation and Open Space

Recreation and open space provides many benefits to society, direct and indirect, short-term and long-term. There are both tangible and intrinsic values that together make it difficult to fully quantify the true benefits. Our quality of life depends on the surrounding environment and the use and conservation of the natural, cultural and recreational resources. This impacts the water, air, view sheds, forests, agricultural lands, seashores, heritage, solitude or in other words our well-being. There is also an economic value associated with open space and recreation that is associated with where we live, work and recreate. The following is an assessment of some of these benefits.

Tourism and Visitor's Expenditures

Open space, natural, cultural and recreation resources are key in attracting visitors from outside the local area that can stimulate the local economy. For the major destination regions, tourism is the primary industry and source of jobs. The benefits of recreation tourism result from expenditures by non-local visitors associated with travel, lodging, eating, retail and service businesses. These are both direct, (e.g., income to motels, restaurants, bike shops, etc.), and indirect (from the spending by the local businesses on salaries, wholesale goods, etc.). These expenditures support jobs, personal income, and governmental revenue.

Parks, beaches, scenic landscapes, historic sites, lakes, streams and coastal areas are central to New York State's tourism and travel industry. A study in 1994 indicated that State Parks and Historic Sites alone generate almost $500 million in sales to local area businesses from visitors from out-of-state. Another $20 million is generated through tax revenues. These figures, converted to 2008 dollars, using data from the U.S. Bureau of Labor Statistics Consumer Price Index for Urban Consumers become $739 million and $29.57 million respectively. Other changes may affect these figures. For instance, a 2007 study of park and historic site visitors indicates that the percentage of visitors from outside New York State has increased. Further, additional local and regional economic benefits are derived from New York residents.

Environmental Protection

Open space protection is a critical component in maintaining the quality of the air and water resources and the sustainability and biodiversity of fish, wildlife and plant species. Economically, this can impact the level of treatment needed for water supplies, costs associated with air pollution, and industries dependent on the natural resources.

Retaining open land can be the least costly approach to environmental protection. For example, New York City can buffer its watershed from intensive development through the historic watershed agreement, avoiding much of the estimated $5 billion cost to construct treatment facilities for the Delaware and Catskill sources of its drinking water.

The State of New Jersey contributed $10 million for the acquisition and protection of Sterling Forest® State Park to protect the watershed. In 2007, NYS was given a gift of 100 acres of land in Orange County that became part of Sterling Forest State Park, adding to the protection of the New York/New Jersey watershed (OPRHP Sterling Forest Announcement, 2007).

Open space and trees in urban environments can significantly reduce

residential and commercial heating and cooling costs, reduce air pollution, lower consumption of nonrenewable fossil fuels, and make communities more livable at the same time. Recent studies have documented the pollution reduction potential of trees and a study project is under way to develop a proposal to EPA for ozone mitigation using tree planting in New York City as part of the State's Implementation Plan for Air Quality Management. If approved, this plan could substantially reduce costs and provide direct improvement in urban air quality.

The protection of open space is vital to conserving and sustaining fish, wildlife and plant species, as well as the overall biological diversity of the State. The economic value associated with protecting open space for the purpose of conserving and sustaining the diversity and richness of the State's fauna and flora species is staggering. Many critical economic goods and services provided by the preservation of open space and the species and habitats contained within, serve as an important source of food, fuel, fiber and medicine. For example, the most commercially exploited fish and shellfish species depend on tidal marshes and other coastal environments for spawning and development. Furthermore, many wild plant species have important commercial value for medicinal, food and energy sources.

Forests and agricultural lands are critical in preserving open space and providing recreational opportunities. Timber harvesting on forested lands generates an estimated $230 million per year in revenue to landowners, public and private. New York's Agriculture industry grossed $3.4 billion from goods sold in 2001.

Quality of Life

Open space and recreation are important elements in maintaining and improving the quality of life an area can offer. Areas that provide open space resources and recreation opportunities attract residents and businesses to those communities and stimulate revitalization efforts. This is also the case for areas that have maintained the historic integrity of their communities. Property values increase in areas that possess these values.

A study of property values near greenbelts in Boulder, Colorado, noted that housing prices declined an average of $4.20 for each foot of distance from a greenbelt up to 3,200 feet. The same study determined that, other variables being equal, the average value of property adjacent to the greenbelt would be 32 percent higher than those 3,200 feet away (Correll, Lillydahl, and Singell, 1978).

The State's 17 Heritage Areas have experienced preservation of their character and heritage and economic vitality of their urban areas.

New open space and parklands and rehabilitated historic structures have helped the revitalization of various waterfront communities utilizing grants through the Coastal Zone Management Program, EPF, Clean Water/Clean Air Bond Act and other programs.

Reduction in Public Service Requirements

Open space and recreation areas can result in reduced costs to local governments and other public agencies. By conserving open space rather than permitting intensive development, local agencies may reduce costs for public services such as sewers, roads and school facilities. They can reduce potential damages in flood areas. In addition, open space areas can promote physical fitness through exercise and a relaxing atmosphere thereby reducing health care costs.

A number of recent studies conducted in the Hudson Valley and elsewhere have demonstrated that undeveloped open space, including forest and agricultural land, generates more in real property tax revenue than it requires in municipal services - representing a net economic benefit to local governments.

Exercise derived from recreational activities lessens health related problems and subsequent health care costs. Every year, premature deaths and lost workdays cost Americans billions of dollars. Further, additional costs are incurred when finding and training replacement employees.

A recent study found that the current levels of physical inactivity in New York State cost the State over $3 billion annually in medical costs, workers' compensation and lost time due to injuries. The study estimated that a 5% increase in physical activity levels could reduce costs by about $180 million per year.

Another study on cardiovascular disease, published by the NYS Department of Health, ranks NY as 16th in the US in age-adjusted deaths due to cardiovascular disease; the cost of the disease to New York was almost $16 billion. Coronary heart disease is the leading cause of death in the United States and approximately 35% of coronary heart disease mortality is due to physical inactivity (NYS DOH Physical Inactivity, 2007). The risk of cardiovascular disease can be reduced by increased access and participation in physical activity which can be achieved through the New York State Park System (NYS DOH Cardiovascular Health, 2007).

A study in a poor, rural area of Missouri found that the installation of walking trails resulted in significant increases in physical activity. The majority of the trails were within residential park areas, often around sports fields or playgrounds. The availability of the trails was associated with an 8% increase in physical activity in the overall population.

Cognitive health can be maintained through exercise as well. In 2001, women over 65 were studied for an article that was published in Archives of Internal Medicine. The research was to determine the relationship between cognitive health and physical activity. The study found that for every 10 blocks walked per day the women had a 13% lower rate of cognitive decline (Yaffe et al., 2007). The ability to get away from the stress of everyday life will also have a positive effect on users well being.

American adults should get at least 30 minutes of moderate-intensity physical activity most days of the week. The proximity and accessibility of trails to an individual's place of work and residence is a major factor in how often they will use it. The more parks and trails that are available to the public the better, especially in terms of physical and cognitive health.

For purposes of the Open Space Conservation Plan, open space is defined as land which is not intensively developed for residential, commercial, industrial or institutional use.

Open space can be publicly or privately owned, including agricultural and forest land, undeveloped shorelines and scenic lands, public parks and preserves and may contain water bodies such as lakes and bays.

What land is defined as open space depends in part on its surroundings. A vacant lot or a small marsh can be open space in a big city. A narrow corridor or pathway for walking or bicycling is open space even though it is surrounded by developed areas.

And while not strictly open space, the OSP also discusses cultural and historic resources which, along with open space, are part of the heritage of New York State.

Figure 4.1 - Definition of Open Space

Open Space Conservation

The quality and character of the recreation opportunities within New York depend upon the quality and character of the land on. Our mountains, lakes, rivers, forests and coastline, our natural landscapes, urban park and historic resources shape the way we spend our leisure time, affect the long term strength of our economy, determine whether we have clean air and water, support the web of living things of which we are a part, and affect how we think about ourselves and relate to other New Yorkers.

New York's fields, forests, waters and wetlands, however, are vulnerable to human intervention. We have the power to change the landscape, to conserve what is valuable to us as a people, or to destroy places which may be important to our future. How we manage change, how we protect and conserve open land and historic sites while providing space for the homes, commercial centers and industrial plants we need, will have a profound impact on future generations.

New York State's first Open Space Conservation Plan (OSP) was authorized by a 1990 Act of the State Legislature. It was prepared through a joint effort by the Department of Environmental Conservation (DEC) and the Office of Parks, Recreation and Historic Preservation (OPRHP), working with nine Regional Advisory Committees (RACs) appointed jointly by the State and local governments. The initial OSP received final executive approval on November 18, 1992. It has been updated as required in 1995, 1998, 2002 and 2006. The public response to the OSP has been overwhelmingly positive as it serves as the blueprint for the State's land conservation program.

The 2006 OSP builds on the 2002 OSP. Similar to past versions, the OSP proposes what open space and historic sites should be protected for New York State's future and describes how we can conserve and manage these resources in a sensible and affordable way. The OSP does not confine itself to public land acquisition, but recognizes that encouraging private land stewardship is also important. The OSP recognizes that open space conservation efforts must be fiscally prudent and they must be pursued in all fiscal climates; because, once developed, forests and fields, lakeshores and seashores will seldom, if ever, be open land again. Similarly, once destroyed, historic and archaeological sites cannot be replaced.

In order to suggest the policies and actions which define the kind of New York we leave for those who follow us, the OSP brings together: 1) an objective analysis of the State's resources; 2) the knowledge and insight of professionals inside state agencies; and most importantly, 3) the informed and valuable ideas of the public, local government and the private sector.

Goals of the Open Space Plan

The Open Space Conservation Plan adopts the following goals for conservation of open space and historic resources in New York State:

- To protect water quality in New York State including the quality of surface and underground drinking water supplies and the quality of lakes, streams and coastal and estuarine waters needed to sustain aquatic ecosystems and water based recreation.
- To provide high quality outdoor recreation, on both land and water, accessible to New Yorkers regardless of where they live, how much money they have, or their physical abilities.
- To protect and enhance those scenic, historic and cultural resources which are readily identifiable as valued parts of the common heritage of New York's citizens.
- To protect habitat for the diversity of plant and animal species to ensure the protection of healthy, viable and sustainable ecosystems, as well as the conservation and preservation of biological diversity within the State.
- To protect habitat to sustain and enhance populations of endangered species, threatened species and species of special concern.
- To protect habitat to sustain the traditional pastimes of hunting, fishing, trapping and viewing fish and wildlife.
- To maintain the critical natural resource based industries of farming, forest products, commercial fishing and tourism.
- To provide places for education and research on ecological, environmental and appropriate cultural resources to provide a better understanding of the systems from which they derive.
- To preserve open space, particularly forest lands, for the protection and enhancement of air quality.

Figure 4.2 - Goals of the Open Space Plan

The Open Space Conservation Plan identifies nine goals (Figure 4.2). The primary strategy for achieving these goals is for the State government to work cooperatively and in partnership with local governments, the federal government, not-for-profit organizations, the private sector and individual property owners to conserve a cohesive framework of open space around which all New Yorkers can build better, more rewarding lives.

While the acquisition of public land and easements by the State is part of this strategy, it is central to the recommendations of this OSP that land acquisition by the State is only one of several tools for conservation of open space. Most of New York State's open land is not, nor should it be, publicly owned. Rather it should include working landscapes managed by farmers, woodland and shoreline owners and nonworking open space maintained by private organizations and citizens. In this context, it should be clear that when the OSP discusses conservation of land or creation of a framework of open space it does not always imply acquisition by the State. The guiding principles outline the strategy for achieving the goals of the OSP (Figure 4.3).

The State, working in cooperation with others, should continue to focus its attention on conservation of the high priority open space projects described in the OSP. Conservation of these areas, before they are lost forever to subdivision or development, has been determined to be critical to achieving the goals of the OSP. The approach to land conservation recommended by the OSP is complex and involves not just land protection but also ongoing care, management and stewardship.

Guiding Principles for the Open Space Conservation Plan

- The State should work in partnership with others including local governments, not-for-profit conservation organizations and private land owners to establish and achieve land conservation goals.
- Along with the State's Quality Communities Initiative, the Open Space Conservation Plan strives to combat sprawl through conservation of important ecological areas and community resources through local, regional and state planning to grow intelligently.
- State acquisition of land and easements on land are only two of a number of strategies for conserving open space, recreational, historical and cultural resources with public values. The key to the success of this Plan is fitting the appropriate strategy to the resource.
- Given limited public dollars and overall economic concerns, it is essential to establish careful and understandable priorities for state action to conserve specific open space parcels and cultural resources.
- Such priorities ought to be established through the combination of objective measurements of land conservation needs and broad based citizen opinion.
- In pursuing open space conservation goals, the State must deal fairly and openly with property owners on a willing seller/willing buyer basis, local governments and citizens in general.
- In setting out proposals, the plan should try to define costs of implementation and propose methods for meeting those costs.
- When conveying land for public purposes, the cost of adequate management and stewardship must be taken into account.
- Maintaining working landscapes is important to mitigating the causes of global warming through sequestration of carbon in forests and agricultural fields, while also retaining land in private ownership with public benefits.
- Open space has been shown to have an economic value in the maintenance of water quality, air quality and the quality of life of New York's residents.

Figure 4.3 - Guiding Principles of the Open Space Plan

Accomplishments

The State Open Space Conservation Plan has guided an unprecedented level of investment, and subsequent achievement, in a variety of open space protection projects by the State, often in partnership with local governments, non-profit conservation organizations and private landowners. The OSP has helped guide the expenditure of more than $700 million to protect more than 1 million acres since its inception, nearly a twenty percent increase in State land holdings since 1995.

The State's Environmental Protection Fund has grown to $250 million annually for a variety of important State and local environmental programs, including funding for State-level land acquisitions and stewardship, farmland protection programs and local park projects.

Highlights include the largest land conservation agreement in the State's history: a monumental working forest conservation easement with the International Paper Corporation covering nearly 260,000 acres of land within the Adirondack Park, in 21 separate tracts covering 34 towns in 9 counties. The deal will simultaneously protect the forest resource on these lands forever (and all the benefits that are derived from forests including superior water quality and wildlife habitat), require sustainable forestry, restrict non-forestry related development on the property, provide new public access and recreational opportunities and enhance the local tax base.

Many other important open space acquisitions have been made during this time period, from the Pine Barrens of Long Island, to remote wilderness areas in the Adirondacks and Catskills, to waterfront properties along the Great Lakes, Lake Champlain and Lake George. Exciting new urban parks in New York City, including the Hudson River Park, and new State Parks in Western New York and on Long Island have been acquired and developed for public use and enjoyment.

Since 2002, the EPF has also provided $2 million to land trusts throughout New York to work with private landowners and local communities to help save important open space resources.

The Department of Agriculture and Markets is successfully implementing New York's Farmland Protection program, working closely with local governments and farmers to preserve more than 41,000 acres of productive farmland, using $102.9 million in EPF funds that has leveraged significant private donations. It also has worked proactively to develop alternative methods to preserve farmland in areas that have not yet experienced strong development pressures.

Through the State's Clean Water State Revolving Loan fund, the Environmental Facilities Corporation has administered low interest loan funding for the acquisition of fee and easement on about 76,000 acres of land within the New York City watershed in the Catskills and Westchester County, and on lands protecting the aquifer that supplies clean water for Long Island residents.

Through the Department of State's Coastal Management Program (CMP) and Local Waterfront Revitalization Program, funded by the EPF, dozens of coastal and inland waterfront communities have prepared comprehensive plans and implemented programs to conserve valuable natural resources and enhance

public access while redeveloping their waterfronts or coast lines. $83 million in Stewardship funding from the Environmental Protection Fund also has helped augment available funding to ensure that existing and newly acquired lands are properly cared for and opened to public use and enjoyment.

The Bird Conservation Area Program (BCA) is modeled after the National Audubon Society's Important Bird Areas Program. The BCA program seeks to provide a comprehensive, ecosystem approach to conserving birds and their habitats on state lands and waters, by integrating bird conservation interests in agency planning, management, and research projects, within the context of agency missions. Subsequent to passage of the BCA program, the legislature also authorized the State Natural Heritage Areas program to designate Natural Heritage sites on state-owned lands. To date, 48 BCAs have been designated.

The Coastal and Estuarine Land Conservation Program (CELCP) was established in 2002 to protect important coastal and estuarine areas that have significant conservation, recreation, ecological, historical, or aesthetic values, or that are threatened by development. Since 2002, New York State has received nearly $10 million through CELCP to fund important coastal land protection projects, including the acquisition of 4 acres to extend the Hempstead Harbor Shoreline Trail in North Hempstead (Nassau County), the acquisition of 35 acres for habitat conservation on Lake Ontario in Parma (Monroe County), and the acquisition of 123 acres for habitat conservation on Montauk Point in East Hampton (Suffolk County).

The State has secured more than $10 million in federal Forest Legacy funding for a variety of forest land conservation projects identified in the Open Space Plan, including Sterling Forest, East Branch Fish Creek, and the Adirondack Lakes project. These funds, administered by the United State Forest Service, are focused on conserving forest resources for environmental and economic benefit and are used to augment funding available from the State's Environmental Protection Fund.

The following is an extensive list, compiled regionally, of conservation successes from the priority projects listed in the 2002 Open Space Conservation Plan. It demonstrates the value of a coordinated, integrated open space program that includes extensive partnerships among various levels of government, private landowners, conservation and land preservation organizations and interested citizens. These partnerships have worked to conserve an enduring outdoor legacy of which all New Yorkers can be proud.

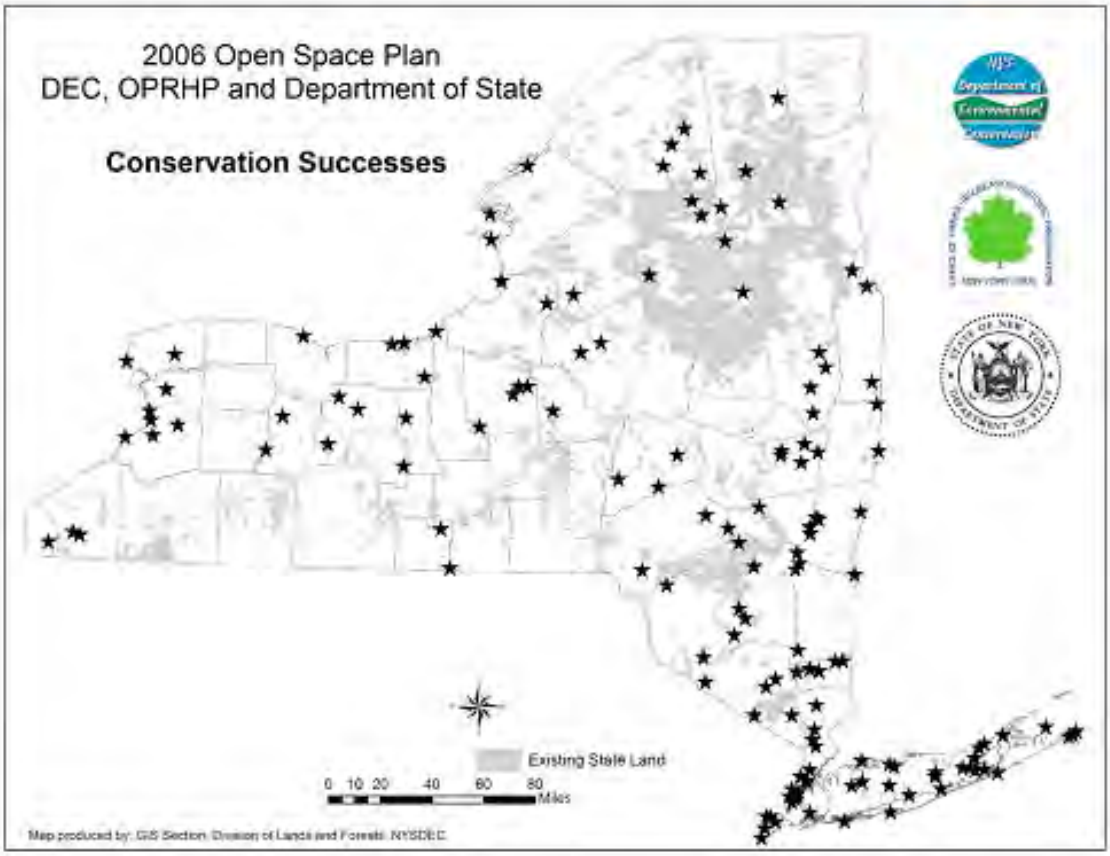


Figure 4.4 - 2006 Conservation Successes

Region 1

In 2003, the OPRHP acquired 225 acres and more than one mile of shoreline along the north shore of Long Island in the town of Jamesport. The former KeySpan site, now known as Jamesport State Park and Preserve is part of 525 acres of open space that was protected for parkland and agricultural use. Approximately 300 acres of land was sold by the Trust for Public Land for agricultural use by local farmers and is subject to a conservation easement. The proceeds from the sale totaling $3.3 million will support development and environmental interpretation at the park. The shorefront Park and Preserve encompasses both environmentally significant natural resources as well as areas for more traditional active recreation. Jamesport marks the 7th State park on Long Island to be opened since 1996.

DEC added to its holdings on the western shore of Mattituck Creek in the Town of Southold. Since 2002, DEC has purchased three parcels, totaling 5.6 acres. The former Petersen's Marina is the site for a new public boat launch facility, providing needed Long Island Sound Access to the general public.

In addition to the Long Island Access initiative, significant open space has been acquired that increases access to the South Shore, protects environmentally significant areas and expands recreational opportunities.

DEC acquired 2.5 acres on the Shinnecock Bay in the Village of Southampton. The acquisition consolidates public ownership of back-barrier marsh important to Shinnecock Bay fish and shellfish stocks. The parcel was paid for, in part, with a $500,000 Coastal Wetlands Grant from the U.S. Fish and Wildlife Service. To date, approximately 800 acres have been protected by the State, Suffolk County, the Town of Southampton, the Villages of Southampton and Quogue, the Peconic land Trust and The Nature Conservancy.

In July of 2005, OPRHP acquired 122 acres of oceanfront land on the bluffs of Montauk Point in the Town of East Hampton for a new State Park. The property, known as Amsterdam Beach, includes 54 acres of sensitive wetlands and maritime grasslands and is one of the last remaining significant tracts of undeveloped land in Montauk. The property will become the eighth new State Park to open on Long Island since 1995. The property has over 1,288 feet of ocean frontage on the Montauk Peninsula. The $16.5 million acquisition will be made by the OPRHP, Suffolk County and the Town of East Hampton. The State's $4 million share of the purchase will be supported through the Environmental Protection Fund. Additionally, the Town's $7 million share of the purchase price is supported through a $1 million grant secured by Congressman Timothy Bishop in 2004 through the federal Coastal and Estuarine Land Preservation Program.

The old Bethpage Parkway right-of-way in Nassau and Suffolk Counties has been re-designated as Trail View State Park. The 488 acre linear park, which runs 7.4 miles north from Bethpage State Park to Cold Spring Harbor State Park, offers multi-use trails for hiking, cycling, birding and other trail-related activities.

Gardiner's Island has been encumbered with a donated twenty-year conservation easement, held by the Town of East Hampton. The easement ensures that the 3,400 acre island filled with virgin oak forest and threatened and endangered species will remain in an undeveloped state for at least the next twenty years.

In a cooperative venture, the Town of Southold utilized a $1 million Coastal Wetland Grant awarded to DEC by U.S. Fish & Wildlife Service to acquire a 47 acre parcel in the Pipe's Cove wetland complex on Southold Bay in the Peconic Pinelands Maritime Reserve. The Town paid for the $2.25 million keystone property using DEC's federal grant, Town funds and funds contributed by The Nature Conservancy. Existing Town and County land holdings in Pipe's Cove area were used as land-value match for DEC's million dollar grant.

On Earth Day 2004, DEC and the Town of Brookhaven together protected 34 acres on the Carmans River in the Hamlet of Yaphank. The property, known as Connecticut River Estates, had conditional final approval in place for a 25-lot subdivision. The Town bought six lots abutting its Camp Olympia property for $600,000 and DEC purchased the remaining nineteen lots for $1.9 million. Located in the Compatible Growth Area, the property also fronts the Carmans (a.k.a. Connecticut) River, a State-designated Scenic and Recreational River and home to the largest naturally reproducing brook trout population on Long Island.

DEC purchased 60 acres of land in the Core Preservation Area of the Central Pine Barrens Preserve on Long Island adjacent to State and County preserve lands. The property, encompassing two separate parcels, is located in the Hamlet of Westhampton in the Town of Southampton, Suffolk County. The purchases, 21.8 acres located on Route 31 across from Gabreski Airport and 38.2 acres straddling Sunrise Highway east of Route 31, will consolidate public ownership of dwarf pine plains and are prime habitat for the largest and most dense population of buck moths in New York State.

Suffolk County and the Town of Brookhaven together purchased the Foxlair-Yaphank property, 205 acres located primarily in the Core at the southern end of Suffolk County's Warbler Woods. In July 2005, DEC, Suffolk County, and The Nature Conservancy closed on a landmark deal protecting the single largest privately

owned parcel remaining in the Core. The WJF Property consists of 308 acres of industrially- zoned land in the globally rare dwarf pine plains between Gabreski Airport and Sunrise Highway in Westhampton. DEC and Suffolk County each took title to 154 acres for a combined purchase price of about $7.4 million. DEC completed six additional acquisitions in the Core totaling 154.73 acres, including 90 acres in the dwarf pine plains.

DEC, Suffolk County and Town of Southampton holdings within the 1,200 acre Chardonnay Woods area of Hampton Bays and East Quogue, together with the clustering of residential development, have successfully preserved 667 acres of pine barren watershed forest, including deep drinking water recharge areas, glacial knoll and kettle topography, rare lepidoptera habitat, and red maple tupelo swamp.

DEC, Nassau County and the Town of Oyster Bay preserved 50 acres of the 81 acre Underhill Property. In February 2004, DEC acquired 25 acres for $7.5 million, Nassau County acquired 16.67 acres for $5 million, and the Town of Oyster Bay acquired 8.33 acres for $2.5 million. In addition, a conservation easement over an adjoining 15 acre parcel has been donated to the Nassau Land Trust, bringing total protected land to 65 acres. The new public land is comprised of mostly of rolling, grassy hills which will be managed as grassland habitat, and rare kettle hole ponds that were formed by glaciers during the Ice Age. The parcel is located in the Oyster Bay Special Groundwater Protection Area (SPGA).

A transfer of jurisdiction from the New York State Office of Mental Health to OPRHP resulted in creation of the new 52 acre Brentwood State Park, located in the Oak Brush Plains SGPA in the Town of Islip.

Region 2

In September 2004 the State and the City of New York announced more than $220 million worth of improvements for Bronx Parks. The City Council approved a Memorandum of Understanding (MOU) with the State that allows the City to move forward with the construction of a water filtration plant for the Croton Water Supply System under the Mosholu Golf Course in Van Cortland Park. As part of the agreement, more than $220 million generated from water and sewer revenue will be spent on improvements to Bronx Parks through 2009. The agreement represents a rare opportunity to invest more than triple what would be spent on Bronx parks through 2009. The projects fall into five categories and include improving neighborhood parks, renovating regional recreation facilities, developing the Bronx Greenway, improving and expanding access to the Bronx waterfront, building and "greening" the borough.

In May 2003 a new segment of Brooklyn Bridge Park was opened. The 1.5 acre segment was converted from a parking lot into lush green parkland.

A $350,000 Environmental Protection Fund (EPF) grant to the New York Restoration Project NYRP will be used for improvements to waterfront parkland in the Bronx. The grant will support the NYRP's efforts, in partnership with the New York City Department of Parks and Recreation, to develop and rehabilitate Bridge Park, located adjacent to Robert Clemente State Park along the Harlem River in the South Bronx. Bridge Park was designated as parkland in 1995 but has never been developed. Owned by New York City Parks, the 3.4 acre parcel is located at the base of the George Washington and Alexander Hamilton Bridges. The EPF award will support a rehabilitation project which includes the creation of pathways, barbecue and picnic areas, removal of invasive vegetation, and the installation of fishing piers along the waterfront. The property offers dramatic views of the Harlem River and the Highbridge Park bluffs.

Progress has been made with several Inner City/ Under served Community Park properties. These areas include densely populated urban areas with limited or no open space resources and are representative of small parks, community gardens and other open space areas in need of protection. For example, the Gantry Plaza property, donated to OPRHP, will provide access to East River waterfront. The 5.3 acre property features two gantry float bridges and four piers jutting into the river. Additions to East River State Park made in 2006 unify the park by acquiring a piece of roadway that transects the park. This nearly 10 acre site provides active recreation and waterfront access in a community under served by open space and is adjacent to an existing city park.

Legislation was signed that will allow for a one-year moratorium on any development of wetlands in the mid-Island section of Staten Island to give New York City additional time to develop a program to protect the environmentally sensitive "Bluebelt" area and to provide for effective storm-water management in the area. The "Bluebelt" program is a pioneer program to preserve streams, ponds, and other wetland areas so that these systems can, through natural means, convey, store and filter storm water. The program will allow the City to save millions of dollars in construction costs which would otherwise be spent on new sewers in southern Staten Island to keep pace with residential and commercial development. Compared to sewers, wetlands management has been determined to be a more environmentally-sensitive and cost-effective method of managing storm water runoff. The new law authorizes the New York State Department of Environmental Conservation to place a moratorium on issuing building permits in certain

designated wetlands in Richmond County for one year. The protected areas are bounded by Great Kills Park to the South, the Staten Island transit line to the West, Sand Lane to the North and Raritan Bay to the East.

The State has invested more than $4.3 million to acquire 119 acres of valuable wetlands in the Harbor Herons Complex on the west and north shores of Staten Island, including Goethal's Bridge Pond and Old Place Creek.

In May 2005, the Hudson River Park's 3.2 acre Pier 40 Athletic Field was opened. The new field is the culmination of a joint governmental, philanthropic and community effort to bring more athletic playing fields and public open space to Manhattan and its waterfront. Also in 2005, the State committed to an additional $15 million in funding, $5 million in EPF and $10 million in Port Authority of New York and New Jersey funding, for the Chelsea segment. New York City will provide matching funds for this segment

In May 2003, the opening was announced of the Hudson River Park's Greenwich Village Segment, which stretches across more than nine and one-half acres of dry land and three piers, from Clarkson Street to Jane Street. This first new section of the park, known as Segment 4, is linked to the rest of Hudson River Park, as well as the Battery, Battery Park City and Riverside Park along the Route 9A Greenway, which was constructed by the State Department of Transportation. The park will include sunning lawns, a display fountain, two comfort stations, a dog run, food concessions, and magnificent display garden donated by the Garden Club of America. The three piers include: Pier 45 which will feature a large, partially shaded lawn; Pier 46 which will feature a passive recreation field; and Pier which will 51 feature a playground with a children's ecology stream.

The State also announced $70 million in funding from the Lower Manhattan Development Corporation for completion of the Tribeca section of Hudson River Park into a vibrant community resource.

Legislation was signed into law that preserves open space parkland on Roosevelt Island in New York City. The legislation designates four parkland areas on Roosevelt Island – Lighthouse Park, Octagon Park, Blackwell Park and Southpoint Park – as statutory open space areas. The legislation ensures that these park areas will be preserved and developed for park purposes, forever guaranteeing public access and appreciation of their priceless views of the Manhattan skyline. Southpoint Park, which will be protected from development by the new law, has been referred to by some developers as one of the most valuable properties in the world.

Region 3

Through a series of acquisitions since 1995, Clarence Fahnestock State Park has more than doubled in size, from 6,670 acres to 16,171 acres (over 9,000 acres). This has been accomplished through fee simple acquisitions and conservation easements ranging from 26 acres to several thousand acres. These acquisitions have protected wooded areas, panoramic vistas, geological features, significant habitats, streams, shorelines and watersheds. The 1,390- acre Clear Lake Reservation was protected through a conservation easement that was coordinated with the assistance of the Trust for Public Land (TPL) and OSI. This parcel which was provided to OPRHP as a gift from OSI limits future development and provides public access to the trail network on the northern portion of the site. It will continue to be operated as a Boy Scout Camp. Other large acquisitions included 143 acres near Roaring Brook Lake, 700 acres adjacent to the Appalachian National Scenic Trail, 501 acres along East Mountain Road, 261 acres along the ridge of Candle Hill and a 496 acre conservation easement on the Wiccopee Reservoir.

The State purchased 291 acres in the Great Swamp, located in the Town of Patterson, Putnam County. The Great Swamp is one of the largest freshwater swamps in the State and the largest wetland of its type in southeastern New York. It covers approximately 4,200 acres and stretches 20 miles across parts of Dutchess and Putnam counties. The Great Swamp is an ecological treasure that is rich in biological diversity and provides an important source of drinking water for Putnam County and New York City, as well as outstanding recreational and educational opportunities. A portion of the Swamp, including the parcel to be acquired by the State, is within the Croton River Drainage basin and flows directly into the East Branch of the Croton Reservoir, a New York City reservoir. The Great Swamp also anchors the eastern portion of the New York Highlands Resource Area. It contains vital habitat for avian and aquatic species and has been designated as an Important Bird Area by Audubon New York in recognition of its importance for migratory and breeding birds. The State has purchased the 291 acres from The Nature Conservancy using approximately $1.8 million from the State Environmental Protection Fund.

Similar to Clarence Fahnestock State Park, a series of acquisitions has resulted in over 860 acres being added to Hudson Highlands State Park. Significant acquisitions included 150 acres of DMNA Camp Smith; nearly 300 acres on the north side of County Route 10 that is key in providing a connection between Hudson Highlands and Clarence Fahnestock State Parks; 645 acres at Surprise Lake Camp and 100 acres that abuts the City of Beacon reservoir inholdings and provides trail connections and expansive views of the Hudson River.

The State has agreed to purchase more than 250 acres of open space, known as the Baxtertown property, in the Town of Fishkill, Dutchess County. The land abuts the State Department of Environmental Conservation (DEC)-operated Stony Kill Farm Environmental Education Center and the Town of Fishkill's public water supply well field and contains wetlands, vernal pools, and forests. Purchase of the property will help protect the Town's public water supply by ensuring this land is not developed. The land will be added to the Stony Kill Farm Environmental Education Center and be open to public access for passive recreation and expand the Center's educational offerings.

Lying midway between public lands in Kent and the Great Swamp in Patterson, Putnam County, Wonder Lake State Park is a critical link in the Northern Putnam Greenway. OPRHP made acquisitions adding 28.6 acres in 2003, 54.5 acres in 2004 and 106.8 acres in 2006 have expanded the park to 983.4 acres. These acquisitions provide the opportunity to increase public access and complete missing segments of the extensive trail network.

In December 2003, the State acquired the 617 acre Feldman/Roth property, part of the Northern Putnam Greenway in the Town of Kent, Putnam County. The property contains an excellent example of the oak forest typically found within the rugged Hudson Highlands. The property also contains much of the 90 acre Waywayanda Lake. The acquisition will create an approximately 1,000 acre state forest devoted to sustainable forest management, recreation and watershed protection. The State will pay local property taxes on the parcel. $2.96 million in EPF funds were used to acquire the property.

OPRHP and PIPC are making progress in the Rockland County Highlands area with the acquisition of 88 acres of the former High Tor Vineyard and various tax parcels. The vineyard abuts the existing High Tor State Park and contains a wide variety of natural and cultural resources. The property boasts historically important vineyard activity, a raptor breeding and feeding area, views of the Hudson Valley floor, and views to High Tor.

Schunnemunk Mountain which was acquired in 2004 was New York's 163rd State Park. Located in the Orange County towns of Cornwall, Woodbury and Blooming Grove, the 2,466 acre property is nearly 1,700 feet in elevation and extends more than 8 miles. The mountain is covered by deciduous hardwoods, scrub and pitch pine, an understory of blueberry and large stands of mountain laurel. OSI assisted in the acquisition of the site. Another 144 acres was gifted to enlarge the park to 2,610 acres.

The State purchased 942 acres of land encompassing five separate parcels, which expanded hiking and recreational opportunities in the Catskills and protected critical natural resources along the Shawangunk Ridge and Trail in the Town of Mamakating in Sullivan County. The acquisitions expands and enhances the Shawangunk Ridge hiking trail, providing a link from the Bashakill Wildlife Management Area to the Wurtsboro Ridge State Forest and northeast to the Shawangunk Ridge State Forest. The 'Gunks' hold a special place in the minds of hikers, rock climbers and nature lovers, a remarkable landscape which supports outstanding biodiversity, including eight rare natural communities, 27 rare plant and seven rare animal species. It also provides outstanding recreational opportunities for the 500,000 New Yorkers and visitors to the area each year. The purchase price for the five properties was $937,700 and was paid for through the State EPF.

In 2003, the State purchased 510 acres of undeveloped forest on the Shawangunk Ridge in the towns of Greenville and Deerpark, Orange County. The property was purchased from the Fini Brothers Partnership for $826,000 and was funded by the EPF. DEC manages the property as a reforestation area, which is utilized for hunting, hiking, bird watching, nature study and sustainable forestry. The state pays local taxes on the property. The purchase also included a portion of the Shawangunk Ridge Trail.

Minnewaska State Park has been expanded by 8,091 acres to protect the Shawangunk Mountains and its exemplary natural communities including the globally rare dwarf pine ridge community. These acquisitions include 3,799 acres in Wawarsing known as Sam's Point, 1,228 acres along the north-facing slopes of the Shawangunk Ridge, 192 acres near Roundout Creek Valley, 290 acres on the western escarpment, 62 acres that provide access to the Stony Kill Falls area, and the 2,518 acre Awosting Reserve that protects the eastern slopes.

There have been significant acquisitions west of the Hudson River that have resulted in new and expanded State parks including Sterling Forest, Minnewaska, Schunnemunk Mountain, High Tor and Bristol Beach State Parks.

Sterling Forest State Park has now expanded to 18,915 acres making it one of the largest state parks in New York. The acquisition was to protect a major source of drinking water for New Jersey and protects significant forests, lakes, streams and other natural resources from development. In addition to serving as a watershed for millions of residents in New Jersey and New York, Sterling Forest and its habitats are vital for the survival of many resident and migratory species, including the black bear and a variety of hawks and songbirds, as well as many rare invertebrates and plants.

In April 2006, the donation of two parcels in Westchester and Putnam Counties was announced, which created the 436 acre Donald J. Trump State Park.

Included are the 282 acre Indian Hill site located in the towns of Putnam Valley and Yorktown and the 154 acre French Hill site in Yorktown. The 282 acre Indian Hill is situated east of the Taconic State Parkway, in close proximity to both the Clarence Fahnestock and Franklin Delano Roosevelt State Parks. The new parkland is a mix of heavily wooded lands, large open meadows, and a large wetland running north/south along the eastern boundary. French Hill is a heavily wooded 153 acre parcel and contains a centrally located 20 acre state delineated wetland. This wetland is the origin of two headwater steams, French Hill Brook and Dogwood Creek. The entire property is located within the NYC Watershed Area. French Hill got its name because French General Rochambeau's troops camped in the vicinity before and after they helped the Americans win a decisive battle in October 1781 against the British at Yorktown, Virginia. It is part of the Washington-Rochambeau Revolutionary Route, included in Heritage New York's American Revolutionary War Heritage Trail and the Hudson River Valley National Heritage Area.

Region 3/4

The State has acquired 337 acres in the Town of Roxbury, Delaware County, which has become part of Bearpen State Forest. The parcel was acquired using $362,100 in EPF funding. The parcel will enlarge Bearpen State Forest to encompass 3,250 acres while protecting the 3,440-foot Roundtop Mountain and a portion of the 3,380-foot Bloomberg Mountain. The parcel contains sweeping views of the Catskill Mountains and provides hiking, hunting, trapping, wildlife observation, snowshoeing and camping opportunities.

In 2006, the State purchased a 162 acre parcel in the Town of Lexingotn, Greene county, which was added to Halcott Mountain Wild Forest in the Catskill Park. The parcel cost $134,000, which was funded by the EPF. The parcel includes a portion of the ridge to the northwest of Halcott Mountain that divides Condon Hollow from Turk Hollow. This addition to the Catskill Forest Preserve will help to further protect the wild forest character of the Halcott Mountain Wild Forest from neighboring development as well as provide increased protection for the New York City watershed. The parcel will provide hunting, trapping, fishing, hiking, wildlife observation, snowshoeing, cross-country skiing and camping opportunities.

In October 2005, the State purchased four properties totaling 403 acres of land on Overlook Mountain in the Catskill Park. The lands were added to DEC's Overlook Mountain Wild Forest in the Catskill Forest Preserve. Funds from the Environmental Protection Fund were used for the acquisition. DEC was assisted in these land purchases by the Open Space Institute and the Woodstock Land Conservancy, two non-profit conservation organizations who have worked closely with the State to expand open space protection efforts in the Catskills. All four of these parcels are adjacent to existing Forest Preserve lands and were identified as possible future acquisitions by the State in the DEC's Overlook Mountain Wild Forest Unit Management Plan.

The 187 acre Peck Hollow parcel in the Town of Lexington was added to the Catskill Forest Preserve in December 2003. $197,000 in EPF monies was used for the acquisition. The parcel is within the NYC watershed and links 197,000 acres of existing forest preserve. The purchase increases recreational opportunities and consolidates state lands in the Preserve's Westkill Wilderness Area. It offers camping, hiking, hunting, trapping, fishing and nature observation and will protect the undeveloped shoulders of Mount Sherrill and North Dome, Catskill High Peaks.

The State worked with the environmental organization Scenic Hudson and its land trust to preserve more than 62 acres of open space in the Town of Red Hook, Dutchess County that adjoins the existing Tivoli Bays Wildlife Management Area and the Hudson River National Estuarine Research Reserve. The parcel will further protect this critical habitat and provide additional public access to the Hudson River. The waterfront portion of the property is adjacent to, and creates a preservation buffer zone for the Tivoli Bays section of the Hudson River. Tivoli Bays Wildlife Management Area is part of the Hudson River National Estuarine Research Reserve, which protects 4,800 acres of coastal wetlands located along a 100 mile stretch of the river. These areas are prized natural laboratories for research and education and are vital areas for fish, reptiles, mammals and more than 150 species of birds, including bald eagles. The property Scenic Hudson and the State are purchasing is characterized by upland forests that buffer the Bay's cattail marshes, tidal creeks and pools.

The state acquired nearly 200 acres of open space known as Taxter Ridge Park Preserve in the Town of Greenburgh, Westchester County. This unique parcel is considered the "Gateway to Westchester" and is the largest undeveloped tract of land in the County. It features stunning natural rock ledges, woodlands, streams and wetlands. The site links 400 acres of existing municipal parkland and another 45 acres in the Town of Irvington. The property was acquired with the assistance of TPL and will be operated by the Town of Greenburgh.

Since 1998, Rockefeller State Park Preserve has expanded by 676 acres through gifts by the Rockefeller family, conservation easements and fee title. This has included the 88-acre Rockwood Hall property and approximately 588 acres of other parcels that provide essential links in the equestrian trail

network and safeguard the character of the approach to the park from the east.

New York State acquired the Turkey Point Multi-Mission property in the Town of Saugerties, Ulster County, through a surplus land transfer from the National Park Service. The no-cost Turkey Point acquisition was a key project of this initiative and Congresswoman Sue W. Kelly was the catalyst to making the transfer a reality. The 8.2 acres of woodland property at Turkey Point has been incorporated into the adjacent DEC Turkey Point Unique Area, a 133 acre parcel of forest and fields. The property also includes a 200-foot wharf on the Hudson River and a navigational light. It is managed for recreation, environmental and historic interpretation, and Hudson River fishing access. The property is a component of the Hudson River Valley Greenway Trail and also a site for a designated Hudson River Greenway Water Trail currently under development. The partners have worked closely with the Coast Guard to develop historic displays of the rich Coast Guard history in the area. The Coast Guard maintains the Hudson River navigational light on the wharf.

Projects in three separate areas will permanently protect 550 acres of grassland, woodland, tidal flats and Hudson River shoreline. The projects were assembled by The Scenic Hudson Land Trust, which is working with the State, local governments and area land trusts to protect the properties and develop access and recreational facilities.

DEC purchased 61 acres at Brandow Point in the Town of Athens, Greene County, for $879,300 using funding from the EPF. Brandow Point boasts a half mile of Hudson River shoreline in the scenic area of the Olana State Historic Site, the historic home of Frederic Church, one of the most significant members of the Hudson River School of Art. With direct access to the Hudson River, the property provides stunning panoramic views of the Hudson River, Olana and the Rip Van Winkle Bridge. The site is characterized by diverse habitats, which include open fields, deep ravines, coves, hardwood forests and tidal flats and wetlands. The parcel lies just 200 feet north of the Greene County Cohotate Preserve, and will be managed by the Greene County Soil and Water Conservation District (GCSWCD) under an agreement with the State.

Four miles upriver in the Town of Coxsackie, Greene County, Scenic Hudson has acquired 123 acres at Four Mile Point, including a significant portion of Vosburgh Swamp. DEC and Scenic Hudson are working to transfer this keystone property to the State of New York as well. It is also anticipated that this parcel will be managed cooperatively with the GCSWCD. As demonstrated by its State designation as a significant coastal fish and wildlife habitat and significant tidal habitat, the Vosburgh Swamp is an ecologically rich area of freshwater wetlands and forest. Four Mile Point is comprised of rocky headlands, tidal flats, and beaches.

In another series of acquisitions directly across the Hudson River from Vosburgh Swamp and Four Mile Point, two properties totaling 193 acres of land that buffer the DEC-owned Stockport Flats Estuarine Research Reserve site will be acquired by DEC from Scenic Hudson, with the assistance of the Columbia County Land Conservancy (CCLC). The land, located along Rod and Gun Club Road in the Town of Stockport, Columbia County, has open fields, meadows, and woodlands with spectacular views of the Hudson River and Catskill Mountains. These properties serve as important habitat for grassland bird species. The State is working with Scenic Hudson to add the land to the State-administered Research Reserve, which was established in 1982 to serve as a field laboratory for research and education on estuarine ecosystems.

In addition to establishing the public lands, Scenic Hudson purchased the development rights to the abutting 173 acre Kilcer family farm. The conservation easement allows for the farm to expand and diversify its agricultural operation, while ensuring that the property will always be available for farming. The easement also contains a public trail that will connect to the public lands. Public access on the Kilcer farm will be limited to the designated trail.

In January 1997, the historic New York City Watershed Memorandum of Agreement ("Watershed Agreement") was signed, which cemented a partnership among New York State, New York City, federal government, environmental organizations, and the 80 Watershed host communities. This landmark agreement formed a new partnership to protect the drinking water supply for nine million New Yorkers, while ensuring the economic vitality of the upstate Watershed communities. This innovative, cooperative watershed protection program is the first and only of this magnitude in the entire Nation. The Watershed Agreement consists of a comprehensive, long-range watershed protection and water quality enhancement program that consists of land acquisition, watershed regulations, and watershed protection and partnership programs. Implementing such a program will ensure that New Yorkers continue to enjoy high-quality, affordable drinking water long into the 21st century.

Given the success of this program, in 2003, it was announced that the State would commit an additional $10 million towards land acquisition within the Croton Watershed to protect the New York City drinking water supply. Since then, the State has acquired a 291 acre parcel in the Town of Patterson, Putnam County and conservation easements on a 111 acre parcel in the Town of Lewisboro, Westchester County and a 370 acre parcel in the Town of Somers, Westchester County. Nearly 1,470 acres

of land have been acquired by the State for water quality protection purposes within the Croton Watershed.

In June 2006 the State announced it will purchase 426 acres of land to be added to the Harvey Mountain State Forest. The property, which consists of two parcels in the Town of Austerlitz, is part of the former homestead of American poet Edna St. Vincent Millay. One of the most popular writers in her time, Edna St. Vincent Millay was a major figure in 20th-century American literature and was the first American woman poet to win the Pulitzer Prize. DEC is using the State's Environmental Protection Fund to acquire 230 acres from the Edna St. Vincent Millay Society for $1.69 million and 196 acres from the Millay Colony for the Arts for $1.42 million. The acquisitions will improve public access to Harvey Mountain State Forest, with substantial new road frontage on East Hill Road and State Route 22. DEC was assisted in these land purchases by the Columbia Land Conservancy.

In 2005, OPRHP purchased 255 acres of woodlands, the Liebeskind Property located in the Town of North East, Dutchess County to expand Taconic State Park. The $830,000 acquisition, which runs along the Taconic Ridge on the New York/Connecticut state line, increases the total size of the park to 6,054 acres. The new property is adjacent to the Rudd Pond Area of the State Park and is a critical link in protecting the Taconic Ridge and insuring the potential for an extension of the South Taconic Trail. It includes part of the steep west escarpment. This parcel, along with the 40 acre Jarvis property, furthers the effort to eliminate in-holdings within the park. The State acquisition is being supported through the EPF.

Region 4

In the Albany Pine Bush Preserve, administered by the Albany Pine Bush Preserve Commission, a total of 3,010 acres has been protected by Commission partners exceeding the goal of expanding the size of the Preserve by 3,000 acres. A formal protection plan is outlined in the 2002 Albany Pine Bush Preserve Management Plan and Final Environmental Impact Statement, adopted by the Commission in April 2002 to guide the future management and protection of the unique Inland Pine Barrens habitat, home of the endangered Karner blue butterfly. Since 1995, the State has invested more than $12 million in land acquisition funds and $2.9 million to support the work of the Commission from the EPF and Bond Act. The Towns of Guilderland and Colonie, City of Albany and The Nature Conservancy also have acquired lands for inclusion in the Preserve. The acquisition of 11.5 acres of the State Employees Federal Credit Union (SEFCU) property located on New Karner Road in Albany continues to preserve the unique and fragile ecology of the Pine Bush and the existing two-story building has been adapted to house the Albany Pine Bush Discovery Center. The Discovery Center, which opened to the public in June 2007, will enable thousands of school children, families and other visitors to learn about and enjoy this magnificent resource. Funding for the Discovery Center was made possible through a donation from Trustco Bank Corp NY of $1 million to create and endowment for the operation of the Discovery Center; OPRHP made three awards totaling $350,000 towards the design and retrofitting of the building; and, the 2006-7 EPF provided $1.5 million in funding.

The State acquired two properties adjacent to the Five Rivers Environmental Education Center totaling 57 acres through the use of EPF monies in partnership with Five Rivers, Ltd., a local support group for the Center. This acquisition expands the Center property to 402 acres and provides open space protection in an area experiencing accelerated development. The State plans to develop new trails and footpaths on the properties that will further enhance the outdoor recreational and educational opportunities for the ever-growing number of visitors that come to the Center each year.

In 2007, OPRHP added 190 acres to John Boyd Thacher State Park purchased from the Open Space Institute for $874,000 supported through the EPF. Referred to as the Jeff Thomas property, it is adjacent to the northern border of Thacher State Park and fronts the Helderberg Escarpment with views to the north and east. The parcel includes "High Point," reported to be the highest elevation along the escarpment, and will provide for trails to be extended, most notably the Long Path, a 150 mile trail that begins near the George Washington Bridge in New Jersey.

Extending north from John Boyd Thacher State Park, 638 acres have been acquired to protect the open space on the top of the Helderberg Escarpment. These additions to the Park contain rolling to hilly terrain with wooded areas, cleared fields and deep ravines. There are trail opportunities and good vistas.

Betty and Wilbur Davis State Park is a scenic 199 acre hilltop property in the town of Westford donated to OPRHP. Two-thirds of the park is forested with a mix of northern hardwoods and conifer plantations. The remainder of the property is open field that was once actively farmed. The park is near Cooperstown and Glimmerglass State Park and is used primarily as a day use area.

In December 2004, the family of Robert V. Riddell donated to the State 1,036 acres in Otsego County, in the Towns of Milford and Maryland, for the new Robert V. Riddell State Park. DOT surplus lands were added to the Park in January 2007 to expand the new park to 1,343 acres. The park provides an extensive woods road/hiking trail network and access to Schenevus Creek, a popular trout fishing stream.

The State also acquired 1,130 acres, which is now General Jacob Morris State Forest in the Town of Morris, and 392 acres to expand State Forest land in the Town of Plainfield. Together, the three properties will open up new public recreational opportunities, protect water quality and natural resources and promote sustainable forestry in the county.

Region 5

In October 2004, a $320,000 grant from the Federal Land and Water Conservation Fund was made to the Town of Clifton Park in Saratoga County, for the acquisition of 250 acres toward the creation of the Dwaas Kill Natural Area, one of the last undeveloped open spaces in the region. The Dwaas Kill Watershed is a critically important natural area and includes several diverse ecotypes for birds and other wildlife. The 250 acres are approximately half of 500 acres known as the Dwaas Kill Natural Area. The site is adjacent to the local historic site, the Stone Viaduct, and close to the Northway (I-87) Exit 10, Ushers Road and an active rail line. The property will be owned and managed by the Town for public access including natural and cultural interpretation and recreational use such as hiking and fishing.

An agreement was announced to permanently preserve approximately 10,000 acres in the heart of the High Peaks region of the Adirondack Mountains, including the headwaters of the Hudson River and the historic site of the abandoned Village of Adirondac in the Town of Newcomb, Essex County. The preservation of these lands, which includes the site of the former Tahawus Club and the first iron ore mining operations in the Adirondacks, will protect the upper Hudson River watershed and the "southern gateway" to the High Peaks Wilderness Area. The Open Space Institute (OSI) purchased the Tahawus property for $8.5 million from NL Industries using a loan it received from the State's Clean Water State Revolving Fund (SRF) and private funds. OSI is working closely with the State to add approximately 6,000 acres to the northern portion of the property, immediately adjacent to the High Peaks Wilderness Area, to the State Forest Preserve.

Of the remaining 4,000 acres, approximately 3,000 acres remains a working forest and several hundred acres comprising the historic Village of Adirondac will be managed as an historic district. Both the forest management area and the historic district will be protected by conservation easements to be purchased by the State. The working forest conservation easement requires sustainable forestry, provides for public access and preserves the mineral deposits known to exist on a portion of the lands. During its ownership, OSI will continue to pay property taxes on the parcel.

Originally settled in 1826 as the Village of Adirondac, the historic site retains many important structures, including the McIntyre Works and other early blast furnaces, which illustrate the evolution of iron smelting technology. Also on the site are a dam and water wheel system, several domestic foundations, and the community cemetery. Industrial operations in the Village were abandoned in 1856, but a portion of the property was redeveloped 20 years later into a sportsmen's club, the Tahawus Club, the oldest such organization in the Adirondacks.

In September 1901, then Vice President Theodore Roosevelt was staying at the McNaughton Cottage at the Tahawus Club when he received the news that President William McKinley had been shot. Roosevelt immediately embarked from the club on an historic midnight carriage ride along the back roads of the Adirondacks to the North Creek Railroad station. At the station, Roosevelt received a telegram informing him that President McKinley had died. As a result, Roosevelt became the nation's 26th president. The Tahawus Club and the Village of Adirondac (also known as McIntyre) are part of the Upper Works: Adirondack Iron and Steel Company, a 400 acre site on the National Register of Historic Places.

In 2004, Saratoga Spa State Park was expanded with the acquisition of two properties totaling 345 acres in the Town of Malta and the City of Saratoga Springs. The acquisitions increase the size of Saratoga Spa State Park, a National Historic Landmark, to 2,545 acres and provide greater public recreational access along the north and south banks of Kayaderosseras Creek. The 239 acre Malta parcel is on the south side of Kayaderosseras Creek and north of Old Post Road and the 106 acre property in the City of Saratoga Springs is on the north side of the Creek and east of Route 50. Improvements will be made for canoe, paddling and fishing access to the Creek. The purchase will also provide further protections for environmentally sensitive wetlands. The addition of these parcels will ensure the viability not only of the Kayaderosseras wetlands but the quality of adjacent upland forested areas. The wetlands are critical to the protection of the water quality of the Creek which is a major tributary to Saratoga Lake. These parcels also greatly enhance the protection of the Kayaderosseras Creek corridor, which in turn contributes to the quality of the ecosystems along Geyser Creek, which also flows through the Park.

In December 2003, the preservation of 1,310 acres of open space on Lake George in the Town of Bolton, Warren County was announced. The acquisition of the Northwest Bay property will protect valuable lands in the region, helping to enhance water quality in Lake George and critical habitat of the area. The Northwest Bay property includes Pole Hill Pond, a pristine, spring-fed pond that drains into the Northwest Bay of Lake George. The property is adjacent to thousands of acres of Adirondack Forest Preserve lands, stretching north

to the Pharaoh Lake Wilderness Area, south across Tongue Mountain Range, and to the lake's eastern shore to include Black Mountain and parts of Washington County. The State purchased the parcel from The Lake George Land Conservancy with funds from the EPF. Maintaining the intact woodland is important to preserving Lake George's pristine water quality. This land is the watershed of Northwest Bay Brook, one of the largest streams that feed Lake George. The woodlands and wetlands of Lake George act as natural filters to catch impure nutrients before they reach the lake's water. The most cost-effective method of preserving water quality in Lake George is to protect the natural lands surrounding the lake.

It was announced in early 2005 that the State reached agreement with The Nature Conservancy and Lyme Timber Company to ensure the protection of 104,000 acres of Adirondack forestland formerly owned by Domtar Industries, Inc. in the "Sable Highlands" region of Clinton and Franklin counties. The agreement represents the third largest land acquisition in State history. The Lyme Timber Company, a private timber investment company headquartered in Hanover, New Hampshire, has purchased 84,448 acres of forestland from Domtar Industries and will continue harvesting timber on the property. New York State will acquire a working forest conservation easement on these lands that will require sustainable forest management and timber harvesting, prohibit residential development and restrict subdivision, and create a balance of public recreational access and continued traditional private recreational leasing on the property.

The Nature Conservancy purchased 19,960 acres of the remaining Domtar property, which it will hold for ultimate transfer to the State. Of these lands, 16,918 acres will be added to the State Forest Preserve including Lyon Mountain and its fire tower, the highest peak in the northern region of the Park, and a portion of Ellenberg Mountain. The remaining 3,042 acres, located in the Town of Dannemora, will become State Forest land. Local property taxes will continue to be paid on all of the properties. The agreement provides full public recreation rights to more than 47,000 acres of lands and waters that are not under private lease agreement and have not previously been open to the public. Public recreational opportunities will include hiking, camping, hunting, fishing, cross-country skiing and snowmobiling. Partial public recreation rights, including opening more than 44 miles of recreational corridors for public motorized access, will be acquired on more than 56,000 acres of Lyme Timber's lands that are currently leased to private hunting clubs. The agreement also permanently secures public hiking trails on Lyon Mountain, Owls Head, and the Norton Range. Lyme Timber is retaining the right to maintain private recreational leases, and no hunting clubs on Lyme Timber's land will be eliminated.

Since 2000, Domtar's lands have been enrolled in the Forest Stewardship Council (FSC) forest certification program, an independent entity that certifies adherence to a comprehensive set of sustainable forestry requirements. The easement the State will acquire requires Lyme Timber to maintain FSC certification or another independently audited certification system, assuring that timber harvesting on the land is conducted in a sustainable and environmentally-sound manner. The agreement protects habitat for a wide array of mammals, such as moose, black bear, and pine marten, as well as forest nesting birds such as warblers and thrushes, and pristine streams that harbor native brook trout and other fish species. It also ensures the conservation of significant wetlands, high rocky summits, and extensive northern hardwood and spruce-fir ecosystems.

DEC purchased 512 acres of the McLenithan property in the Town of Jackson, Washington County. The McLenithan property is an ecologically important parcel containing a number of habitat types including a section of the Batten Kill, grasslands, deciduous and mixed woodlands, and wetlands. The northern boundary of the parcel consists of 2,800 feet of frontage on the Batten Kill - a river renowned for its trout fishing and paddling opportunities. More than half of the 175 acre Eldridge Swamp is contained on the parcel and is now protected. Several wetland types are represented in this large wetlands complex, which not only provide habitat for a variety of wetland plants and animals but also serves to protect the water quality of the Batten Kill. The property will be named Eldridge Swamp State Forest and this forest designation will allow for harvesting of timber, mowing of grasslands and maintaining the scenic views.

Interpretation of the actual events that occurred at the Bennington Battlefield State Historic Site was greatly enhanced with the 145 acre acquisition of the Cottrell Farm. The acquisition is important since it now allows the telling of the full story of the Battle by protecting the earthworks on the two hills that controlled the route from Saratoga to Bennington. This includes the Tory Fort Hill site that remains very much intact as it was in the 18th century.

The acquisition of the Susan B. Anthony House on State Route 29 in the Village of Greenwich, Washington County preserves the house that was the adolescent home of the well-known social reformer. Susan B. Anthony, later in life, became famous as an advocate of women's rights in the United States and also made significant contributions to the Abolition and Temperance movements.

Region 5/6

In December 1998, an agreement was announced for the protection of

139,000 acres in the Adirondacks. The agreement was part of a comprehensive transaction coordinated by The Conservation Fund involving 300,000 acres of Champion International lands in New York, Vermont and New Hampshire. The New York land is in three non-contiguous blocks known as the Santa Clara, Tooley Pond and Croghan tracts, covering portions of 10 towns in St. Lawrence, Franklin, Herkimer, and Lewis counties. New York State and The Conservation Fund worked on the agreement with a private timber management organization, The Forestland Group, LLC (TFG). The Conservation Fund purchased all of Champion's lands in New York and simultaneously sold the land. TFG purchased 110,000 acres of Champion's commercial timber land in the Adirondack Park, and 4,300 acres outside the Park. The State then purchased a working forest conservation easement on the 110,000 acres of TFG land in the Adirondack Park, making the land available for hiking, hunting, camping, nature observation, motorized access and other outdoor recreational activities.

The State purchased 29,000 acres along the Deer, Grass, St. Regis and Oswetgatchie rivers for addition to the Adirondack Forest Preserve. The lands contain more than 70 miles of river corridors as well as ecologically sensitive wetlands and boreal forest. The State paid $24.9 million for the land and easements using Clean Water/Clean Air Bond Act funds. The New York State DEC will develop Unit Management Plans with public input to guide long-term public use of the land. DEC developed a land management plan with TFG to guide public recreational uses of the land on which the State purchased an easement. The easement prohibits logging along the river corridors and adjacent to other environmentally sensitive water bodies. Thirteen subdivisions, ranging in size from 2,500 acres to 12,000 acres, were made on the land to be owned by TFG to make the land affordable for smaller-scale, local timber operations in the future. TFG pays its share of all local, school and county taxes with the State paying the balance of these taxes on the easement lands. The State also pays full taxes on the 29,000 acres it purchased.

Protection of nearly 16,000 acres in the heart of the Adirondack Park was achieved through a working forest conservation easement on lands owned by International Paper in the Town of Long Lake, Hamilton County. The easement, one of the largest ever donated to New York State, is a gift from International Paper in honor of its former Chairman and Chief Executive Officer, John Dillon. The working forest conservation easement consists of a total of 15,810 acres, including two adjacent parcels – the 2,166 acre Whitney Triangle, and the 13,644 acre Sperry Grampus tract – separated by Route 30. The easement allowed DEC to work with IP and Paul Smith's College to develop International Paper John Dillon Park containing wilderness style recreational facilities for people with disabilities on Grampus and Handsome Lakes. The property is located immediately east of the William C. Whitney Wilderness Area and south of the Horseshoe Lake Wild Forest; it abuts the 26,000 acres of land preserved under an agreement with The Nature Conservancy and was announced in January 2001 (IP Lakes). The Sperry Grampus tract includes Sperry Pond, Grampus Lake, Handsome Pond, Mohegan Lake, and Moonshine Pond, and is surrounded by forested hills, low mountains, and wetlands. The Whitney Triangle parcel includes Bog Stream and Buck Mountain. It is bounded on two sides by the Sabattis Circle Road, which links visitors to Little Tupper Lake at the William C. Whitney Wilderness Area. Both properties are currently heavily forested and will be managed under the terms of the easement for sustainable forestry activities that help support the regional economy. The working forest conservation easement will limit new industrial, commercial or residential development of the parcel and require sustainable forestry activities to protect water quality and other natural resources. Existing camp leases on the property will not be affected. The State will pay property taxes on the easement.

On Earth Day 2004, the largest land conservation agreement in State history was announced – an agreement between the State and the International Paper Company to preserve nearly 260,000 acres encompassing 9 counties and 34 towns within the Adirondack Park. The State will purchase working forest conservation easements on more than 255,000 acres, subject to local government approval, and will purchase an additional 2,000 acres in fee to provide new recreational opportunities for residents and visitors to the Adirondack Park, while supporting the local economy through the continuation of sustainable forestry. The lands consist of 21 separate tracts, spanning nine counties within the Adirondack Park, including Warren, Washington, Franklin, Clinton, Hamilton, St. Lawrence, Essex, Saratoga and Herkimer. The properties represent nearly all of IP's Adirondack Park holdings, covering about 9 percent of the Park's privately-owned forest land. They include productive forest land, miles of rivers and stream corridors and a wealth of recreational opportunities, including more than 250 miles of existing or potential hiking and snowmobile trails. This agreement is one of the largest ever brokered within the Northern Forest region of New York, Vermont, New Hampshire and Maine and was facilitated by The Conservation Fund, an Arlington, Virginia-based non-profit conservation organization that works to protect America's land and water legacy including wildlife habitat, working landscapes and open space.

The easement will restrict subdivision and further development on the property, provide public recreation rights and require sustainable forestry operations that protect water quality and wildlife habitat to ensure the long term

maintenance of the forest resource. The State will pay its proportionate share of local taxes on the easements it holds within the Park. Also as part of the agreement, the State will acquire full public recreation rights on about 84,000 acres and partial public rights, including the ability to maintain and build hiking and snowmobile trails, on about 171,000 acres. IP will retain ownership of these lands. The agreement was structured to preserve the rights of various private recreation club organizations that currently lease large portions of the property for hunting, fishing and other outdoor recreational activities, while expanding public recreational opportunities.

Region 6

In March 2006, the State announced an agreement to preserve 1,800 acres of wilderness in the northwestern Adirondacks, including 4.5 miles of undeveloped shoreline on Lows Lake. Under the accord with the Adirondack Land Trust and The Nature Conservancy, the state bought 1,000 acres previously owned by Sabattis Land Co. to become part of the state Forest Preserve, as well as a conservation easement protecting 800 acres retained by the Sabattis Land Co. The state plans to acquire the land and easement using the Environmental Protection Fund.

The acquisitions will fill a gap in the network of historic canoe routes that are opening to the public for the first time in more than a century, while leaving the southern shoreline of Lows Lake undeveloped and protecting wildlife. The agreement will conserve habitat for loons, bald eagles, waterfowl and other wildlife. The family-owned Sabattis Land Co. had owned the land since 1962.

An agreement was made in June 2003 between the State, the Adirondack Nature Conservancy and the Northeastern Loggers Association to protect the 840 acre Minnehaha Tract. The tract includes lands in the Moose River Corridor and the Adirondack Scenic Railway in the Town of Webb, Herkimer County. The agreement transfers 333 acres to the Forest Preserve, which includes 5 miles of shoreline along the Moose River. A working forest conservation easement on 512 acres supports sustainable forestry and outlines public recreation rights that provide access to opportunities on an extensive network of trails, including a snowmobile trail that will help relocate an existing trail off State Route 28.

In September, 2005, the State announced the approval of plans to transfer more than 720 acres of New York State Canal Corporation-owned lands in Oneida County to the Office of Parks, Recreation and Historic Preservation to expand Delta Lake State Park. Additionally, in May 2006, approximately 900 acres of lands underwater at Delta Lake were added to the transfer, for a total of 1,700 acres. The lands, identified as surplus to the needs of the Canal System, will more than double the size of Delta Lake State Park and provide new and expanded opportunities for waterfront recreation in the region.

Delta Lake State Park is located on a peninsula with views of Delta Lake and offers camping, a boat launch, fishing, picnic areas, swimming, playgrounds, ball fields, and hiking trails as well as cross-country skiing, snowmobiling, and ice fishing in the winter. State Parks has held a permit to operate and maintain the park on approximately 350 acres of land currently owned by the Canal Corporation since 1962. The land transfer agreement will allow State Parks to formally acquire those lands, as well as an additional 370 adjacent acres of land above water and 900 acres underwater, to expand and protect additional natural resources near the park and connect to a network of local trails.

Region 6/7

In 2003, the State acquired 970 acres of valuable habitat along the eastern shoreline of Lake Ontario on Point Peninsula in the Town of Lyme, Jefferson County for $285,000 in EPF resources. The Nature Conservancy assisted the State in the acquisition, which includes more than a half mile of undeveloped coastal sand and gravel barrier beach and extensive wetlands. The property provides habitat for the endangered short-eared owl and black tern, as well as Blanding's turtles and northern harriers, both listed as threatened species in New York. The project is part of the Eastern Lake Ontario shoreline and Islands priority project area.

Oswego County developed Sandy Island Beach, which compliments State efforts to encourage public access to the shore in appropriate locations while protecting fragile dune ecosystems. OPRHP assumed administration of Sandy Island Beach in 2004 while the transfer of property was finalized. The transfer from Oswego County was completed in July 2006. Due to fiscal constraints and in jeopardy of permanently closing, the 13 acre scenic park along Lake Ontario, also part of the Eastern Ontario Dune and Wetland Area stretches a white sandy shoreline 17 miles from Oswego to Jefferson County. It is the only significant freshwater dune site in the northeastern United States, attracting and providing a unique habitat for several species of migratory birds and waterfowl to its sand dunes, wetlands, woodlands, creeks, and ponds. The scenic property will continue to offer premium waterside recreation for public use, a spectacular view and unique natural resources. Committing to further enhance the park and its facilities for patrons of all ages, General Electric with assistance of Sithe Energies, has provided $250,000 through the County Industrial Development Agency for construction of the beach's bathhouse.

After the acquisition by DEC of the 1,067 acre Wehle property in southwestern Jefferson County, the property was transferred to OPRHP for development of a new state park, Robert Wehle State Park. The park has approximately 17,000 linear feet of shoreline with spectacular vistas of Lake Ontario. The park offers trail, day use and hunting opportunities along with the rental of the main house. Prior to Wehle family ownership the property was used by the US Army as a gunnery range before and during World War II.

Region 7

Progress has been made to protect the 17th century Seneca Village at Ganondagan State Historic Site. The purchase of 295 acres between 1998 and 2004 by OPRHP allowed the rejoining of Ganondagan's village core and associated burial grounds on Boughton Hill to the Fort Hill granary site and provides added protection to the viewshed of this significant historic property. The acquisition will allow the continuation of an existing interpretive trail system on each site and will allow the development of an accessible trail opportunity to the Fort Hill area.

In 2006, Fair Haven Beach State Park was expanded with the acquisition of 291 acres. This acquisition consists of Sterling Marsh, Springbrook Creek and a golf course. The site includes a significant wetland that provides a staging area for migratory water birds such as loons, grebes and a variety of ducks. The golf course will allow the park to expand the variety of recreational opportunities it has to offer.

In July 2005, the Finger Lakes Land Trust, acting on behalf of the State, acquired Carpenter's Falls, a picturesque, 90-foot waterfall over which Bear Swamp Creek, a major tributary to Skaneateles Lake, flows. Carpenter's Falls and the entire Bear Swamp Creek corridor is an identified priority in the Open Space Plan in recognition of the importance of the area for water quality protection, outdoor recreation and scenic appreciation. The Finger Lakes Land Trust will transfer the property to the State.

An April 2005 gift of 83 acres to OPRHP provides a buffer for Old Erie Canal State Park. Located in Onondaga County, the parcel protects the viewshed northward from upper elevations of Poolsbrook Day Use Area and places a relatively large section of vulnerable wetland in state ownership.

In a settlement with Niagara Mohawk, the State will receive 2800 acres of open space, once subjected to sub-division and private development, along the Salmon River in Oswego County. A nationally renowned Salmon and Steelhead fishery, home of the Salmon River Fish Hatchery, the River attracts tens of thousands of fishing enthusiasts every year making it the most intensively fished river in the State. The property includes over 15 miles of shoreline along the River and the Redfield Reservoir with 19 parcels of land located on or near the Salmon River in the Towns of Albion, Redfield, Orwell, and Richland, and in the Villages of Altmar and Pulaski.

Made possible in part by the support of local communities, the DEC now will be able to protect this high quality watershed, including habitat to bald eagles, and ensure public recreational access to the largest cold water tributary to Lake Ontario, providing the largest run of both stocked and natural salmon and trout to the lake. Future plans of the DEC also include the construction of a hiking and fishing access trail system along the banks of the River.

OPRHP is in the process of completing design, acquisition and development of the Black Diamond Rail Trail in the Cayuga Inlet Corridor. Since 2000, 70 acres have been acquired to develop and protect the trail corridor. Planning for the Trail is in progress and The Draft Master Plan/Draft Environmental Impact Statement is near completion.

In Spring 2005, Two Rivers State Park was created with the purchase of 474 acres in Tioga County and later expanded with the acquisition of 73 additional acres. The park is the first State Park within the county. Located in the Village of Waverly, north of the New York-Pennsylvania border where the Chemung River joins the Susquehanna River, the mix of open grass lands and forested areas makes the park an ideal location for a variety of day-use and overnight recreational opportunities.

Region 7/8

Cooperative efforts among the state and federal governments and not-for-profit organizations working with landowners have added to the Northern Montezuma Wetlands, one of the premier waterfowl areas in the North American flyway. The Nature Conservancy bought a 120 acre farm along the Seneca River and Erie Canal in the town of Montezuma using $230,000 from a federal North American Wetlands Conservation Act grant. The property features 3,000 feet of frontage on the Seneca River. The farmland on the property will be restored to wetlands to provide habitat for migratory birds. The land will be transferred to the State for addition to the Montezuma Wildlife Management Area.

TNC also purchased an 82 acre parcel of forestland, wetlands and farmland along Crusoe Lake in Savannah adjacent to the site of the new environmental education center to be built in partnership with Audubon New York, the state program of the National Audubon Society. The property will be transferred to the State.

Region 8

A $200,000 EPF grant went to the Town of Greece in June 2004

to acquire a 49 acre parcel that extends the Braddock Bay State Wildlife Management Area. The parcel will link the WMA to the 140–acre Frisbee Hill Park. Braddock Bay is identified by the Audubon Society as an Important Bird Area because of its significance as a raptor, waterfowl and songbird flyway and a habitat for several rare birds and fishes. It was in addition to a June 2003 purchase of 71.6 acres for $587,218 with EPF grants, in partnership with the Town of Greece, the county, and the Trust for Public Land. The State is planting native grasses, trees, and shrubs to provide additional bird habitat and the formation of nests structures to help foster the growth of native migratory bird populations. The land is available for public fishing, hiking, birding, hunting, cross-country skiing and other day-use activities. Input on a management plan will be provided by a committee, compromised by area homeowners, local and State officials, sporting groups, and birding groups.

The Sonnenberg Gardens and Mansion, a Finger Lakes landmark in the city of Canandaigua, was acquired in March 2006 as a State Historic Park. The Queen Ann-style mansion welcomes tens of thousands of visitors a year and is recognized by the Smithsonian Institution as having "one of the most magnificent late Victorian gardens ever created in America". Developed between 1863 and 1923, the 50 acre estate is listed on the State and National Register of Historic Properties.

Three parcels, totaling 2,000 acres along the south end of Honeoye Lake in the Finger Lakes region were acquired from The Nature Conservancy using $1.1 million in funds from the 1996 Clean Water/Clean Air Bond Act and the EPF. The lands acquired are a mix of wetlands, oak-hickory forests, and open meadows. A new Wildlife Management Area will protect critical habitat for a variety of plants, birds, mammals, and other wildlife that thrive in this wetlands ecosystem with opportunities for hiking, canoeing, birdwatching, fishing, and hunting.

In June 2002, the State acquired 3.2 miles of Public Fishing Rights on Cayuta Creek, in Chemung and Schuyler counties. The acquisition on Cotton-Hanlon Lumber Corporation, was part of an ongoing effort to acquire 5.9 miles of public fishing access along the creek's outstanding brown trout fishery. The Chemung Federation of Sportsmen provided invaluable assistance to DEC in identifying prospective properties and helping to create an overall strategy for public fishing rights on Cayuta Creek. The easements also allow DEC to maintain the stream banks stability through tree and shrub planting.

The State accepted a gift in February 2004 of 40 acres of wetland property along the Lake Ontario Shoreline in the Town of Huron. The waterfront property is bordered by the State's Lake Shore Marshes Wildlife Management Area-Beaver Creek Unit that provides critical habitat and unique recreational opportunities. The transaction was facilitated by The Nature Conservancy and includes 1,200 feet of undeveloped shoreline providing access for angling, beach walking, birding, hunting and wildlife observation.

Nearly 89 acres of land were purchased by OPRHP in the Town of Portage from the Nunda Rod and Gun Club. This land has been added to Letchworth State Park to enhance and enlarge the open space attributes of the park. It consists of second generation growth mixed hardwoods, conifer plantations, a 5 acre pond and minor wetland features.

Beechwood State Park, formally a Girl Scout Camp, acquired in 1999 by OPRHP was expanded by 146 acres in November 2006. The 317-acre park is located on the shores of Lake Ontario in the Town of Sodus, Wayne County. It's diversity of natural communities, significant habitats and variety of plant and animal species provide excellent opportunities for educational and environmental interpretive programs.

Region 9

In 2006, the State acquired the remaining 23.7 acres of the Cheney Farm on Chautauqua Lake with an additional 2,246 feet of shoreline. The $3,391,500 purchase was funded by the EPF. DEC will manage the Cheney Farm lakefront parcels as a low-intensity access site offering shoreline fishing.

In an agreement with the State and the Chautauqua Watershed Conservancy, Inc., $800,000 in EPF funds went to the purchase of the 18.6 acre Stow Farm Lakeshore property, one of the few remaining undeveloped parcels on Chautauqua Lake. The Conservancy contributed $115,000 toward the acquisition from the Stow family and then turned it over to the State. The Ralph C. Sheldon Foundation, Johnson Foundation and Arnold Holmberg Foundation of Jamestown with more than 300 individuals, businesses and organizations were involved in preserving this parcel. The Lake is designated as a Statewide Important Bird Area. The purchase protects important fish and bird habitats along the lakeshore and culminates several years of work by the Chautauqua Watershed Conservancy and the DEC to preserve this ecological sensitive portion of the shoreline.

$1.7 million in EPF grants were used in Niagara and Erie Counties for recreation, historic preservation, and waterfront revitalization. In May 2004, $658,500 went to completing the development of Lockport's Historic Canal Park, spurring growth of the Niagara Region's recreational facilities and contributing to long-term waterfront revitalization and historic preservation. The acquisition will complete the development of the Lockport Historic Canal Park Project, establishing a public park and interpretive museum. In addition,

Niagara County received $280,376 for development of a Gateway Point and restoration of the historic Carnegie Art Center Library in North Tonawanda, rehabilitation of a pier and boat launch in South Waterfront Park on the Niagara River, and for public access enhancements on the Niagara River in the Village of Lewiston.

The EPF grants in Erie county included: $350,000 to Buffalo to restore the former Delaware-Ashbury Church for re-use as an entertainment venue; $87,423 to the Town of Lancaster to acquire and preserve reaming parcels of the historic Warren Hull House and Farmstead; $300,000 to the Town of Evans to develop Sturgeon Point Bluffs Park on Lake Erie as a multi-use public recreation area; $40,000 to the City of Tonawanda to construct a 640-linear foot dock to accommodate increase boating in the Gateway Harbor and provide boater access to Longs Point Park, the Canalway Trail and downtown businesses; and $12,500 to the Town of Grand Island for the development of a master plan for the Bicentennial Park/ Scenic Woods. All projects are used to reconnect local businesses to the historic waterway.

Multi-Region

In May 2005, the State unveiled a new vision to create "The Erie Canal Greenway," representing a new chapter in the future development of the Canal. This new direction for the Canal will restore, revitalize and afford greater protection of one of New York's most valuable resources and become a central link in the long-term strategy of creating an Empire State Greenway.

A potential Greenway designation would incorporate a more regional approach to land-use planning, tourism, recreational trail development and other collaborative initiatives. The fundamental concept behind a Greenway is to partner with communities and assist them in local grassroots planning that balances their economic and environmental resources. The establishment of an Erie Canal Greenway would strengthen local ties across the Canal Corridor and protect and enhance its natural and cultural resources for future generations.

The State has protected over 613,000 acres under working forest conservation easements. These easements maintain the economic vitality of forest lands while allowing for public recreational access to thousands of acres of privately owned forest land. Any development of those lands is also prevented with the exception of that associated with continued timber production. Much of the working forest conservation easement acreage is included in a few large easements: Champion, International Paper and Domtar/Sable Highlands. Descriptions of these projects can be found in the sections for Regions 5 and 6.

OPRHP has protected a total of over 30,000 acres to improve access, eliminate in-holdings and provide buffers to protect the resources as well as to enhance recreational and cultural opportunities at our existing State Parks and State Historic Sites. These were accomplished through fee acquisition and gifts. Please note that many of these acres have already been described previously in this chapter and may meet the criteria for more than one priority project.

The Department of Agriculture and Markets has awarded farmland protection planning funds totaling over $2 million to 51 counties and 45 farmland protection plans have been completed by their respective county governments and approved by the Commissioner of Agriculture and Markets. Each county agricultural and farmland protection board is eligible to receive up to $50,000 from the State to assist in the development of such plans.

Since 1996, the Department of Agriculture and Markets has also awarded $95 million in State funds to local municipalities to purchase development rights or conservation easements on eligible farms totaling over 41,000 acres. To date, 95 conservation easements on farms totaling over 17,500 acres have been permanently protected. An additional $23 million is included for this program in the State's 2006/2007 Budget.

Since 1995, DEC has purchased more than 40 equivalent miles of Public Fishing Rights covering more than 115 acres.

Priority Projects

The open space planning process identifies projects, which deserve immediate conservation attention from DEC, OPRHP and their partners in land conservation. These projects have been identified as a result of:

- An analysis by agency staffs of New York State's resources including hydrology, rare and endangered species, population and density, water supplies, existing State land ownership patterns, recreational and cultural resources preservation needs;
- The recommendations of the Regional Advisory Committees;
- Recommendations of those testifying at public hearings or providing written comments on the draft OSP;
- Geographic distribution across the State.

The projects have also been reviewed through the first three screens of the projects selection process identified in the OSP.

Taken together, the list of projects represents the best current thinking regarding those places, which should be conserved to achieve the goals of the OSP and to protect the open space heritage of the people of New York State. The priority projects, however,

only represent a small number of those projects identified through the public input process. The selectivity in identifying priority projects is required by fiscal prudence and by the basic approach of the OSP, which suggests the need to establish clear priorities for open space conservation.

The priority projects are listed by DEC regions and alphabetically and numbered sequentially; no priority should be inferred by the listing order. Project numbers have been revised; numbers for projects which appear both on the 2002 list and on this list generally will be different. Some progress towards conservation has been accomplished for many of these projects. A detailed description of each of the projects is provided in the 2006 OSP.

Region 1

- Atlantic Coast {1}
- Central Pine Barrens {2}
- Long Island Sound Coastal Area {3}
- Long Island. South Shore Estuary Reserve (SSER) {4}
- Long Island. Trail and Greenway System {5}
- Peconic Pinelands Maritime Reserve {6}
- Special Ground Water Protection Areas (SGWPA) {7}

Region 2

- Bronx River Trailway {8}
- Eastchester Bay Waterfront {9}
- Harbor Herons Wildlife Complex {10}
- Harlem River Waterfront {11}
- Inner City/Underserved Community Parks {12}
- Jamaica Bay Protection Area {13}
- Long Pond/Butler Wood {14}
- New York City Historic Preservation Sites {15}
- Northeastern Queens Shoreline {16}
- Putnam Railroad {17}
- Staten Island Bluebelt {18}
- Staten Island Greenbelt {19}
- Staten Island North Shore Greenbelt {20}
- Staten Island Wet Woods {21}
- Upper Hudson River Waterfront {22}

Region 3

- Great Roundout Wetlands {23}
- Great Swamp {24}
- Karst Aquifer Region {25}
- Long Island Sound Coastal Corridor {26}
- Mongaup Valley Wildlife Management Area {27}
- Neversink Highlands {28}
- New York Highlands {29}
- Northeastern Westchester Watershed and Biodiversity Lands {30}
- Plutarch/Black Creek Wetlands Complex {31}
- Rockland Riverfront Communities/ Palisades Ridge {32}
- Schunnemunk Mountain/Moodna Creek/Woodcock Mountain {33}
- Shawangunk Mountains {34}
- Turtle Conservation Sites {35}
- Wallkill Valley {36}

Regions 3 & 4

- Catskill River and Road Corridors {37}
- Catskill Unfragmented Forest {38}
- Hudson River Estuary/Greenway Trail Corridor {39}
- New York City Watershed Lands {40}
- Taconic Ridge/Harlem Valley {41}

Region 4

- Albany Pine Bush {42}
- Black Creek Marsh/Vly Swamp {43}
- Drowned Lands Swamp Watershed {44}
- Five Rivers Environmental Education Center {45}
- Franklin Vlaie Wildlife Management Area {46}
- Hand Hollow Conservation Area {47}
- Helderberg Escarpment {48}
- Hoosick River Corridor {49}
- Mohawk River Valley Corridor/ Barge Canal {50}
- Oomsdale Farm and Surrounding Landscape {51}
- Rensselaer Plateau {52}
- Schoharie Valley Corridor {53}
- Susquehanna River Valley Corridor {54}
- Woodlawn Pine Barrens-Wetlands Complex {55}

Region 5

- Adirondack Mountain Club Lands {56}
- Battenkill Watershed {57}
- Big Cedar Swamp {58}
- Boeselager Forestry {59}
- Domtar/Lyme Fee Lands {60}
- Douglas Property {61}
- Floodwood (Northern New Jersey Council Boy Scout Camp) {62}
- Follensby Park {63}
- Hudson River Projects {64}
- Lake Champlain Watershed {65}
- Lake George Watershed {66}
- International Paper Fee Lands {67}
- National Lead/Tahawus {68}
- Roden Property {69}
- Saratoga County {70}
- Whitney Park {71}

Regions 5 & 6

- Bog River/Beaver River Headwater Complex {72}
- May's Pond Tract {73}
- Northern Flow River Corridors {74}
- Recreational Trail Linkages & Networks {75}
- Region 6
- Black Creek Watershed {76}
- Black River Corridor {77}
- For Drum Conservation Partnership Priority Project {78}
- Imman Gulf {79}
- Massawepie Mire {80}
- Maumee Swamp {81}
- Moose River Corridor {82}
- Rome Sand Plains {83}
- St. Lawrence River Islands, Shorelines and Wetlands {84}
- State Park Battlefields {85}

Regions 6 & 7

- Tug Hill Core Forests and Headwater Streams {86}

Region 7

- Camillus Valley/Nine Mile Creek {87}
- Carpenter Falls/Bear Swamp Creek Corridor {88}
- Clark Reservation State Park {89}
- Cortland County State Park {90}
- Fair Haven Beach State Park {91}
- Genny-Green Trail/Link Trail (92}
- Minoa Lakes/Green Lakes State Park {93}
- Nelson Swamp {94}
- North Shore of Oneida Lake {95}
- Old Erie Canal State Historic Park Trailhead Development, Buffer and Historic Protection {96}
- Peter Scott Swamp {97}
- Salmon River Corridor {98}
- State Parks Greenbelt/Tompkins County {99}
- Summerhill Fen and Forest Complex {100}
- Two Rivers State Park {101}

Regions 7 & 8

- Emerald Necklace {102}
- Finger Lakes Shorelines and Wetlands {103}
- Northern Montezuma Wetlands {104}

Region 8

- Catharine Valley Complex {105}
- Chemung River Greenbelt {106}
- Hi Tor/Bristol Hills {107}
- Indian Hills Golf Club {108}
- Jinnus Ponds {109}
- Seneca Army Depot Conservation Area {110}
- Sonnenberg Gardens {111}
- Westbury Bog {112}
- Western Finger Lakes: Conesus, Hemlock, Canadice and Honeoye {113}
- Wolf Gully {114}

Regions 8 & 9

- Genesee Greenway/Recreationway {115}
- Tonawanda Creek Watershed {116}

Region 9

- Allegany River Watershed {117}
- Buffalo/Niagara River Corridors {118}
- Cattaraugus Creek and Tributaries {119}
- Chautauqua Lake Access, Vistas, Shore Lands & Tributaries {120}
- Ecological Corridors {121}
- Exceptional Forest Communities {122}
- Grassland Preservation and Restoration {123}
- Indian Lakes {124}
- Lake Erie Tributary Gorges {125}
- Niagara Escarpment {126}
- Significant Wetlands {127}
- Urban Wetlands {128}

Region 6, 7, 8 and 9

- Great Lakes Shorelines and Niagara River {129}

Multi-Region

- State Forest and Wildlife Management Area Protection {130}
- New York State Canal System {131}
- Working Forest Lands {132}
- State Park and State Historic Site Protection {133}
- Statewide Farmland Protection {134}
- Long Distance Trail Corridors {135}
- Statewide Small Projects {136}
    1) Public Fishing Stream & River Access Projects
    2) Waterway Access
    3) Enhancement of Public Lands
    4) Rare Habitats
    5) Historic & Archeological Resources
    6) Trail & Greenway Connections

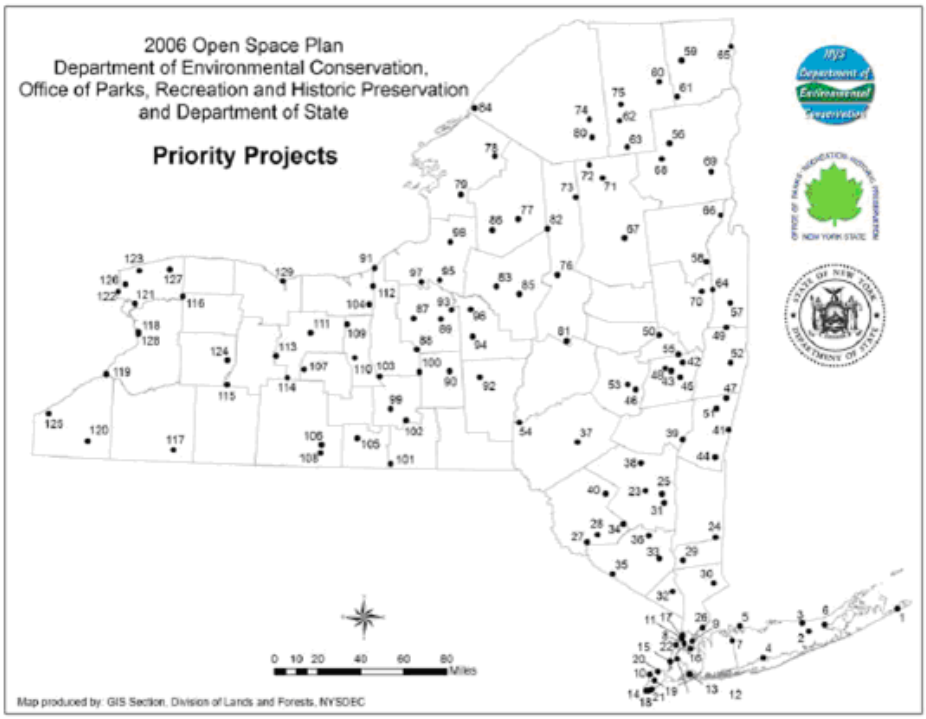


Figure 4.5 - 2006 Priority Projects

Coastal and Estuarine Land Conservation Program

The Coastal and Estuarine Land Conservation Program (CELCP) is a federal initiative established in 2002 to protect coastal and estuarine areas with significant conservation, recreation, ecological, historical, or aesthetic values. Priority is given to lands with significant ecological value, those that can be effectively managed, and which are threatened by imminent conversion.

In order to qualify for funds under this program, coastal states must develop a CELCP plan that provides as assessment of priority conservation needs and clear guidance for nominating land conservation projects. State CELCP plans are developed and submitted by the state's coastal management program in conjunction with other state or federal agencies involved in coastal land acquisition, conservation, or management; any National Estuarine Research Reserves in the state; and other interested parties.

The Department of State, working closely with its state partners in open space protection - the Department of Environmental Conservation and the Office of Parks, Preservation and Historic Preservation - developed a CELCP plan that was included in the 2006 New York State Open Space Conservation Plan. With completion of the expanded Open Space Conservation Plan that includes the State's CELCP plan, New York is eligible to compete for National Oceanic and Atmospheric Administration funds for the acquisition of coastal and estuarine lands.

New York's CELCP priorities are protecting tidal and freshwater wetlands, coastal floodplains, coastal erosion hazard areas, significant coastal fish and wildlife habitats, wild and scenic rivers, and lands suitable for providing coastal-based recreation and water-related access. The CELCP plan also establishes New York's priority coastal and estuarine waters as the Long Island marine district (Peconic Estuary, Long Island Sound, and the Long Island South Shore/Atlantic Ocean), the Hudson - Raritan Estuary, the Hudson River Estuary, the Great Lakes (Lake Erie and Lake Ontario), and the St. Lawrence River.

DOS works with coastal and inland waterfront communities throughout the state to prepare LWRPs, which can be used to identify potential CELCP projects through community-based plans. LWRPs also contain policies and recommendations related to resource, habitat and open space protection that can be used to protect coastal and estuarine lands with significant conservation, recreation, ecological, historical, or aesthetic values.

Goals

Protect coastal and estuarine lands with significant conservation, recreation, ecological, historical, or aesthetic values.

Accomplishments

New York State's CELCP plan was prepared and adopted as part of the 2006 New York State Open Space Conservation Plan. The plan was approved by NOAA in 2007.

The Division of Coastal Resources submitted requests for funding in response to the FY 2007, FY 2008 and FY 2009 CELCP Announcement of Federal Funding Opportunity for land acquisition projects.

In 2008, the State received nearly $2 million in CELCP funds for the acquisition of approximately 36 acres on Pipes Coves on Long Island on the Peconic Estuary, a federally designated estuary of national significance.

Through 2008, New York State has received nearly $11.8 million in federal CELCP funds for land acquisition.

Actions

- Utilize LWRPs, the State's CELCP plan and the Open Space Conservation Plan to identify important coastal and estuarine lands for protection.
- Seek funding for protection of important coastal and estuarine lands through CELCP, EPF, land trusts and municipal sources.

Farmland Protection

The State has two major programs in place to prevent the conversion of agricultural land to nonfarm uses. The Agricultural Districts Program and the Agricultural and Farmland Protection Program are complementary approaches to maintaining land in active agricultural production. The former relies on voluntary landowner initiative and municipal and state government cooperation to protect active farm operations from the threats of conversion; the latter actually seeks to preserve the land base where the benefits and protections available through agricultural districting may not be sufficient to overcome local development pressure. The following summarizes each of these major strategies which serve as the cornerstone of the State's farmland protection efforts.

Agricultural Districts Program

New York's Agricultural Districts Law (Article 25-AA of the Agriculture and Markets Law) was enacted in 1971 to protect and conserve the State's agricultural resource base. The Agricultural Districts Program has its foundation in Article XIV of the State Constitution which concludes that it is the policy of the State "...to conserve and protect its natural resources and scenic beauty and encourage the development and improvement of its agricultural lands for the production of food and other agricultural products." The Constitution recognizes that agricultural lands are a necessary and irreplaceable resource that must be protected to assure economic stability and growth within the agricultural industry.

The Agricultural Districts Law prescribes a locally-initiated program involving both land owners and local governments. The Program is based on the principle that land will remain in agricultural production only insofar as an economic and land use climate exists which encourages farmers to remain in farming.

The 30-year old Agricultural Districts Program, the first of its kind nationally, has been endorsed and broadly adopted by landowners and local governments across the State. Since the beginning of the Program, first administered by the DEC from 1972 to 1979 and, thereafter, by the Department of Agriculture and Markets, total land area within districts has increased yearly. The number of districts grew from 19 in 1972 to 295295 in 2007and the total amount of land in districts has also increased markedly, from 171,528 acres to over 8.5 million acres containing approximately 21,991 farms during the same time period. The number of districts has declined in recent years due to consolidation, but the number of acres in districts continues to rise modestly.

The popularity of the Program is attributable to its grassroots orientation and to the protections and economic incentives extended to agricultural enterprises within a district. These provide farmers with immediate economic benefits in the form of real property tax reduction as well as assurances that protections against public acquisitions, nuisance suits, and unreasonably restrictive local ordinances are available if needed.

Agricultural and Farmland Protection Program

Article 25-AAA of the Agriculture and Markets Law complements the Agricultural Districts Law in that it authorizes the Commissioner to administer programs to assist counties and municipal governments in developing agricultural and farmland protection plans and to assist both county and municipal governments in the implementation of such plans. The purpose of the Agricultural and Farmland Protection Program is to fund local initiatives that are intended to maintain the economic viability of the State's agricultural industry and its supporting land base and to protect the environmental and landscape preservation values associated with agriculture. Article 25-AAA is a logical complement to other State statutes that address open space preservation and authorize local governments to expend public funds to acquire interests or rights to real property for the preservation of open space including land used in agricultural production.

State assistance payments for farmland protection projects may cover up to 50% of the costs for counties and municipal governments to develop agricultural and farmland protection plans, and up to 75% of the costs for the purchase of development rights (PDR) on farms as implementation grants. Since 1995, the Department has earmarked approximately $22 million in farmland protection planning funds for 5252 counties, which have been completed by their respective county governments and approved by the Commissioner of Agriculture and Markets. Each county agricultural and farmland protection board is eligible to receive up to $50,000 from the State to assist in the development of such plans.

Legislation enacted in 2005 authorizes grants for the development of municipal agricultural and farmland protection plans. Municipal governments will be eligible to receive up to $25,000 from the State to assist in the development of such plans. Additionally, as of 2007, counties are eligible for up to $50,000 to update their plans after 10 years.

Since 1996, the Department has awarded over $116 million in State funds to counties and towns to purchase development rights to protect a total of over 50,000 acres. To date, 125 projects totaling over 24,000 acres have been protected using these state funds.

Pursuant to Article 25-AAA, the Commissioner must give priority to proposed implementation projects that:

a) will preserve viable agricultural land (defined as "land highly suitable for agricultural production and which will continue to be economically feasible for such use if real property taxes, farm use restrictions, and speculative activities are limited to levels approximating those in commercial agricultural areas not influenced by the proximity of nonagricultural development");

b) are located in areas facing significant development pressure; and

c) serve as a buffer for a significant natural public resource containing important ecosystem or habitat characteristics.

The Agricultural Districts and Agricultural and Farmland Protection Programs are critical components of the State's overall land protection and open space programs. Farmland protects valuable open space and associated intrinsic benefits and supports the many farm businesses across the state. It contributes to scenic vistas and provides recreational opportunities including hunting, fishing and trail activities. Farms help to preserve the State and local heritage while providing educational and interpretive opportunities. The farming industry also contributes to the economy by supporting agro- and eco-tourism. They will continue to play an important role as the State continues to expand its goals for protection the rural character and associated open space across its many regions.

Stewardship

Natural Resource Stewardship and Interpretation

State lands provide habitat for an incredible diversity of plants, animals, and ecosystems, many of which are rare or endangered. Proper stewardship of these natural resources require an understanding of biodiversity, identification and protection of important plant and animal habitats; restoration of degraded ecosystems and enhancement of freshwater and marine habitats; control of existing invasive species and prevention of new introductions; and preparation for the long-term ecological impacts of climate change and sea level rise. In order to expand the public's awareness, develop an environmental ethic and support stewardship initiatives, there is a need for enhanced natural resource interpretation and education programming. Therefore, proper stewardship of these natural resources is achieved through:

- Understanding biodiversity
- Inventory and identification of ecological communities and habitats.
- Designation of important communities and habitats.
- Management of communities and habitats.
- Regulations for the protection of communities and habitats.
- Interpretation and education of ecological systems and their importance.

Understanding Biodiversity

Biodiversity is a shortened form of the term "biological diversity." As defined by the premier ecologist, Edward O. Wilson, it is simply the variety of all life on earth. There are several components to this variety. First is species diversity, or the sum of the variety of all living organisms at the species level. Within individual species or populations, there can also be a tremendous amount of genetic diversity. This genetic diversity is essential to the process of evolution by natural selection, because it provides the raw materials by which new species arise. Ecosystem diversity is another element affecting total biodiversity. An ecosystem is comprised of a geographical location, its physical features and the organisms that survive and interact there.

Loss of habitat, loss of species in a community, or pollution changing physical and chemical processes can result in ecological simplification. Such simplification means a reduction in the number and complexity of interrelationships between organisms and their environments. This simplification often results in complex, insidious changes, further reducing the number of species and variety among individuals. Scholars believe that we are currently experiencing extinction rates rivaling or exceeding the rates of the prehistoric mass extinctions. Mass destruction attributable to our own species is apparently unique in the earth's history. Biodiversity loss does not just mean that certain species are going extinct. As population sizes and the numbers of populations decrease, genetic diversity is lost as well. The net result may be that major ecosystems may become imbalanced and crash.

Research is essential to understanding biodiversity. The Biodiversity Research Institute, described in Chapter 7, is the state's primary program that advances biodiversity research, through

a partnership with scientific and natural resource management agencies and organizations. Biodiversity and ecosystem research is also carried out by educational institutions and other entities such as the Cary Institute for Ecosystem Studies.

Inventory and Identification

In order to protect natural resources and biodiversity, it is critical to know what exists and requires protection.

The NY Natural Heritage Program (NHP) is a partnership between NYS DEC and The Nature Conservancy (TNC). Its mission is to enable and enhance conservation of rare animals, rare plants and significant natural communities (which are different types of forests, wetlands, grasslands, etc.). THE NY NHP accomplishes this mission through field inventories, scientific analyses, and New York's most comprehensive database on the status and location of rare species and natural communities (NY NHP, 2007). The NY NHP delivers the highest quality information for natural resource planning, protection and management. NYNHP was established in 1985 and is a contract unit housed within DEC's Division of Fish, Wildlife and Marine Resources. The program is staffed by more than 20 scientists and specialists with expertise in ecology, zoology, botany, information management, environmental review and geographic information systems. It is partially supported by state taxpayer voluntary contributions to the Return a Gift to Wildlife program (DEC 2007).

Currently, the NY NHP monitors 174 natural community types, 737 rare plant species, 431 rare animal species, and 6 types of animal concentration areas across New York, and keeps track of more than 11,700 locations where these species and communities are found. The database also includes detailed information on the relative rareness of each species and community, the quality of their occurrences, and descriptions of sites. The information is used by public agencies, the environmental conservation community, developers, and others to aid in land-use decisions. The information is used for prioritizing those species and communities in need of protection and for guiding land-use and land-management decisions where these species and communities exist.

Ecological Communities of New York State, published by the NYNHP in 1990, classified and described ecological communities (such as forests, wetlands, and other habitat types) representing the full array of biological diversity in the state. Information for the report was provided by NYNHP/DEC staff, field biologists and other state agencies such as the State Museum's Biological Survey (Reschke 1990.) The report quickly became the primary source for community classification in the state. Despite the prevalence of human land use in the northeast, Ecological Communities of New York State remains the only classification that includes a comprehensive treatment of cultural communities along with the natural types. This allows users of this classification to describe and map nearly any ecological community encountered in the state. A draft revised and expanded edition (Edinger et.al. 2002) is available at http://www.dec.ny.gov/animals/29392.html.

The NYNHP has published online comprehensive fact sheets ("Conservation Guides") about individual rare species and natural community types designed to help land managers, decision-makers, planners, scientists, consultants, students, and the interested public better understand the biodiversity that characterizes New York (NYNHP 2007)

DEC has also provided a new Environmental Resource Mapper online at http://www.dec.ny.gov/animals/38801.html. This interactive mapping application shows the general areas where rare animals, rare plants, and rare and significant natural communities have been documented by the NYNHP. The Environmental Resource Mapper also displays locations of New York regulated freshwater wetlands and of protected streams, rivers, and lakes. These maps are intended as one source of information for landowners, land managers, citizens, local officials, and project sponsors engaged in land use decision making, conservation, or environmental assessment.

Numerous other entities and programs within the state provide ways to identify important natural resources. Estuary programs, the State Museum (under State Education), universities, and not-for-profit research bodies such as Hudsonia are just a few of the ways in which to approach this important step. Hudsonia, for instance, developed a Biodiversity Assessment Manual for the Hudson River Estuary Corridor. The Manual is distributed free of charge to municipal conservation commissions, land trusts, and public libraries throughout the region, and a training program instructs local agencies and organizations in using the Manual to identify the biodiversity resources at greatest risk and to help establish policies and practices for biodiversity protection (Hudsonia, 2008). Similar training can be extended around the state to provide municipalities and managers with the tools needed to identify and protect biodiversity resources.

Designation

One tool to enhance protection of biodiversity resources is designation of special areas or species to increase the public's awareness for the need for management and protection. DOS's Significant Coastal Fish and Wildlife Habitats, designation of Wild, Scenic and Recreational Rivers, and

establishment of greenways are just a few examples of designation programs. Two relatively new designation programs are highlighted in this section.

Bird Conservation Areas

Legislation establishing the New York State Bird Conservation Area (BCA) Program was enacted by the State legislature and signed into law on September 5, 1997. The BCA program is the first of its kind in the United States and is modeled after the National Audubon Society's Important Bird Areas Program, which recognizes special bird habitats on both private and public lands across the country.

This program applies criteria for designating BCAs to state-owned lands and waters and seeks to "safeguard and enhance" bird populations and their habitats in these areas. The BCA program seeks to provide a comprehensive, ecosystem approach to conserving birds and their habitats by integrating bird conservation interests into agency planning, management, and research projects, within the context of agency missions.

To date, New York State has designated 49 BCAs in New York State. Sixteen BCAs have been designated on State parkland including the latest addition, Moreau Lake. Thirty-two have been designated on lands owned by DEC, including latest additions Carlton Hill, Peconic River Headwaters, Lake Shore Marshes, Three Rivers and Keaney Swamp. The NYS Canal Corporation also now boasts a designated BCA at Vischer Ferry. Additional areas are continually being prepared for designation by state agencies.

Natural Heritage Areas

Legislation establishing Natural Heritage Areas (NHA) was enacted in 2002. Modeled in part after the Bird Conservation Areas program, the purpose of the Natural Heritage Areas program is to heighten awareness of state-owned land that supports important natural heritage resources and to better ensure stewardship of those areas compatible with the long-term conservation of these resources.

Sites that are eligible for designation as a NHA must meet one or more of the following criteria: provide habitat for endangered or threatened species (as defined in ECL §11-0535, for animals and ECL §9-1503 for plants) ; provide habitat for species designated as rare by the NY Natural Heritage program, or support a significant ecological community. Sites may be designated by the DEC commissioner, or by any other state agency owning land eligible for designation, subject to the commissioner's approval.

OPRHP designated Moreau Lakes State Park as the first NHA in 2006 as part of its master planning process. In 2007, DEC designated its first NHA at Tivoli Bays Wildlife Management Area in the Hudson Valley. It is expected that additional designations will be forthcoming in the ensuing years.

Management

Management actions required to protect and perpetuate ecological systems occur on a statewide level down to a site specific area. Such actions are described throughout SCORP, and encompass such programs as State Wildlife Grants, estuary programs, Biodiversity Research Institute grants, OPRHP resource protection projects and BCA Management Guidance Summaries. Two new state programs in particular have been instituted since the last SCORP and are described further in this section.

Ecosystem-based Management

Ecosystem-based management (EBM) is an integrated, adaptive approach to managing human activities to ensure the coexistence of healthy, fully functioning ecosystems and human communities. The goal of EBM is to maintain an ecosystem in a healthy,

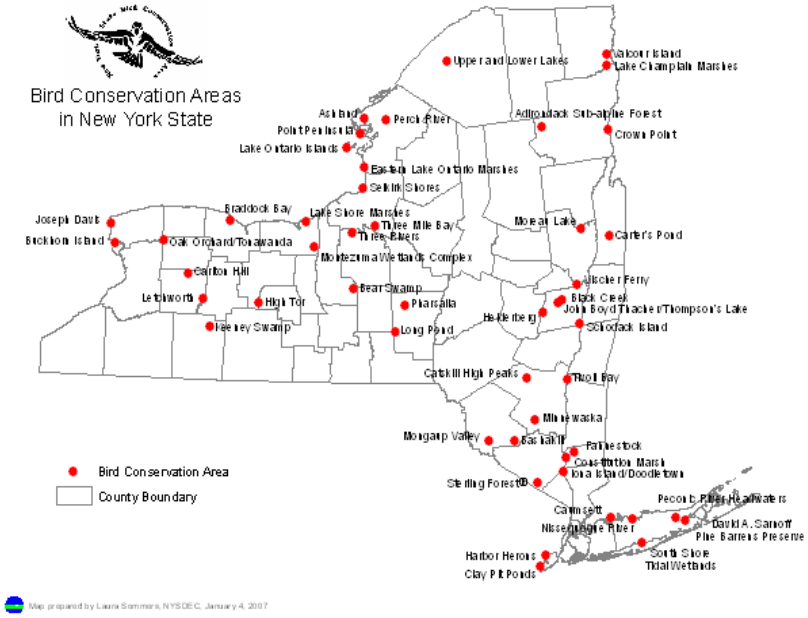


Figure 4.6 - New York State Bird Conservation Areas

productive and resilient condition so that it can provide the services humans want and need. An ecosystem is the dynamic complex of plants, animals, microbes and physical environmental features that interact with one another. Ecosystems come in many sizes with smaller ones embedded within larger ones. Ecosystems provide many services such as habitat and food.

The Ocean and Great Lakes Ecosystem Conservation Act, described in greater detail in Chapter 7 under DOS programs, calls for the integration and coordination of EBM with existing laws and programs. EBM would evolve the current regulatory system and governance structure which is largely sector-based, (e.g. air, water, transportation, agriculture) and sometimes conflicted (independent regulatory and economic growth goals), toward a system which will: lead to decisions based on a holistic understanding of ecosystems; be adaptive and responsive to change; promote coordination and cooperation among sectors; balance competing uses; and inspire compromise (DOS, 2007).

EBM is different from current management approaches that focus on a particular issue or on a single ecological component such as a single endangered species or isolated water quality parameters. By focusing on interacting systems, EBM requires participation of many state agencies and requires the integration of knowledge from individuals with local experience as well as experts in biological, social and economic fields. EBM is a tool that can cut across programmatic and geographic jurisdictions with the components of EBM providing a language that allows for improved communication between citizens, scientists, the private sector and government officials (DOS, 2007).

Each Agency is charged by the Act to integrate and coordinate EBM practices into their programs to advance the policy and principles of the Act (refer to Chapter 7 under DOS). OPRHP is working to integrate EBM principles into its many diverse programs and regional operations. OPRHP is developing guidelines to ensure that activities, programs and goals related to coastal ecosystems and their management are aligned with ecosystem-based management. This SCORP demonstrates this effort. Refer also to sustainability and ecosystem-based management policies and strategies identified in Chapter 2.

Invasive Species

By federal Executive Order and by NY state law, an invasive species is a species that is: 1) nonnative to the ecosystem under consideration, and; 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health. In the latter case, the harm must significantly outweigh any benefits. (NYS ISTF, 2005)

Invasive species are a form of biological pollution. As a threat to our biodiversity, they have been judged second only to habitat loss. Invasive species come from all around the world; the rate of invasion is increasing along with the increase in international trade that accompanies globalization.

Invasive species have caused many problems in the past, are causing problems now, and pose threats to our future: our ecosystems, including natural systems and managed forests; our food supply, including not only agriculture but also harvested wildlife, fish and shellfish; our built environments, including landscaping, infrastructure, industry, gardens, and pets. Invasive species have implications, too, for recreation and for human health.

Some of the more well-known invasive species in New York are zebra mussels, milfoil, chestnut blight and the Asian Long Horned Beetle, and new ones are being found at a rapid rate (DEC 2007). Last summer, DEC confirmed the presence of the algae Didymo (*Didymosphenia geminata* or "rock snot")" in certain locations of the state including a section of the Batten Kill, a fabled trout stream in Washington County. The algae can wreck trout habitat by harming the bottom-dwelling organisms on which fish feed (DEC 2007).

In recent years, thousands of migratory birds that stop at Lake Ontario and Lake Erie have died after consuming two particular invasive species (quagga mussels and a fish called the Round Goby) that helped spread type E botulism in the Great Lakes. Ballast-water discharge from ocean-going vessels is a likely suspect in the spread of the Round Goby, the mussels and viral hemorrhagic septicemia (VHS) a fatal fish disease that has been found in the Great Lakes and – just last summer – in several smaller New York lakes and ponds. As part of a multi-state lawsuit, the Commissioner of DEC called on federal officials to force ocean-going ships to clean out their ballasts before entering the nation's waterways (DEC 2007).

Invasive species have also spread to forests. DEC has been combating the Sirex wood wasp, which spreads a fungus that can devastate trees, especially red and white pines. Also, foresters are preparing for the possible emergence of the Emerald Ash Borer, a tree eating beetle that has been spreading east from the Midwest and has recently appeared in Pennsylvania (DEC 2007).

An example of an invasive species and the degree of impacts on the environment, kudzu (*Pueraria montana*) is a legume that has become highly invasive in the U.S., and is known to fix nitrogen in its native range. Kudzu's tendency to form dense stands and its extensive coverage in the southern U.S. may increase rates of nitrogen cycling and accumulation in soils, potentially leading to changes in community composition, soil acidification, and increased fluxes of nitrogen gases and leached nitrate to neighboring ecosystems. Preliminary

results of a study (Hickman and Lerdau 2006) suggest striking effects of kudzu invasion on ecosystem processes, with large increases in nitrogen-cycling parameters occurring in the invaded sites. Initial findings show that nitric oxide fluxes from soil in invaded areas are twice those from uninvaded patches. The excess nitrogen may make it easier for other fast-growing invasive plants to take over, and rains may wash excess nutrients into rivers, causing algal blooms that deplete waters of oxygen and lead to fish kills. As soil nitrogen levels rise, so will emissions of nitric oxide and nitrogen dioxide. Hickman has confirmed that kudzu causes small increases in emissions of nitrogen dioxide, which is 300 times more potent a greenhouse gas than carbon dioxide (Cabreza 2007). Since nitrogen dioxide readily converts to ozone in the presence of sunlight, it could also lead to spikes in low-level ozone. Kudzu is currently found in Long Island, New York City, and Albany County (New York Flora Association 2005).

Recreational impacts of invasive species include visual impacts such as when common reed (*Phragmites australus*) grows so tall along the shoreline as to obstruct views, and physical impacts such as Eurasian watermilfoil (*Myriophyllum spicatum*) obstructing boat access or swimming. In the latter case, at least one death has been attributed to milfoil (Cabreza 2007). Other health and safety impacts impeding recreation use are also caused by certain invasive species, such as Giant hogweed (*Heracleum mantegazzianum*) that may increase sensitivity to sunlight causing painful, burning blisters similar to severe skin burns that may last for months.

Management of a threatened or endangered species or unique habitat may occur at a site, regional, or watershed level. The development of natural resource stewardship/management plans will identify management actions. Actions can also be identified through the development of a master plan, unit management plan, or more specific invasive species management plan.

As described more fully in Chapter 7 (under DEC), a State Invasive Species Task Force produced a report with recommendations to address invasive species. Since the Invasive Species Task Force first convened in 2004, at least eleven new organisms have invaded New York. A new Invasive Species Council (ISC), a permanent body within state government, was established in law in 2007. EPF resources have been used to deliver invasive species programs primarily through partners. In 2006-07, $3.25 million, and in 2007-08, $5 million have been provided for agency action, contracts and grants to implement the recommendations. Funding has been or will soon be provided to advance planning, database, research, eradication projects, and Partnerships for Regional Invasive Species Management (PRISMs) to ensure prevention and rapid response to new invasives.

A number of other partnerships promote the management of invasive species. The Plant Conservation Alliance (PCA) is a consortium of ten federal government member agencies and over 260 non-federal cooperators representing various disciplines within the conservation field (PCA 2007). The PCA's Alien Plant Working Group works to promote the conservation and restoration of native plants and natural ecosystems by preventing the use and introduction of invasive species and by removing invasive plants from natural areas. The APWG is addressing these goals by gathering information on invasive species that affect natural areas in the US; sharing this information with the public, land managers, scientists, researchers and policy makers; supporting regional and local invasive plant management efforts; and forming partnerships from the local to international levels (PCA APWG 2006). Participation in this Weeds Gone Wild project is open to anyone interested in getting involved and includes federal, State, and local government agencies, non-governmental organizations, universities, private firms and individuals (PCA APWG 2007).

TNC's Global Invasive Species Initiative – a network of Conservancy scientists and specialists focused on invasive species – provides worldwide leadership by catalyzing high impact partnerships, developing policy strategies and leading research, science and innovation about invasive species and conservation. TNC applies an approach to prevent invasions, provide science-based solutions, and eradicate invasive species when populations are still small. An "adaptive management" approach sets realistic targets for control, identifies the best response, and evaluates how effective the efforts have been once implemented. Stringent guidelines are followed to reduce any potential side effects of control efforts. Minimizing risk to the native species and ecosystems being protected must always be a priority when selecting a control method (TNC 2008). In NYS, TNC has taken an active leadership role to assist in formation of PRISMs and to assure the principles of the global initiative are being applied.

Regulation

Regulations are an important tool utilized in the protection and management of the natural resources including fish and wildlife, lands and forests, parkland, water quality (fresh and saltwater), and air quality. Freshwater and tidal wetland regulations, for instance, provide protection for these resources as well as the plant and animal species that rely on them. Protecting water quality through SPEDES permits not only protects the aquatic habitat but also the quality of the recreational experience.

Regulations controlling bait fish and other species-specific regulations

will help reduce the spread of invasive species. Under the state law establishing the ISC, the council will recommend a four-tiered system for classifying invasive species, with the most harmful species made illegal to possess without a permit. The regulations need to be done very carefully with all the parties, especially the business community, involved. A 2010 deadline will not stop DEC from issuing emergency regulations for threats that have to be addressed immediately. Such rules already have been put into place for viral hemorrhagic septicemia, a fatal disorder of fish that has spread into western upstate from the Great Lakes; chronic wasting disease in whitetail deer; and Didymo discussed earlier.

Interpretation/ Education Programs

Educating the public is vital for the protection of natural resources. Education provides a better understanding of the complexity of ecosystems and their interrelationships with people and their actions. This understanding will also lead to increased support for protection and management.

Programs

Environmental educators prepare and carry out educational and interpretive programs related to natural resource and environmental quality management. They prepare multimedia and written material, conduct guided programs for a variety of public audiences and school groups and conduct training and teacher education workshops. Professional educators are sometimes assisted by seasonal staff and members of the Student Conservation Association. DEC and OPRHP have often worked in conjunction with the Adirondack Park Agency and the State Education Department in planning and implementing cooperative education and interpretive endeavors. A renewed and expanded cooperative effort will be essential to enhancing our natural resource interpretation and education programming. The goal of such enhanced programming is to help create an environmental ethic and appreciation for the natural world among visitors to our parks and other open spaces, particularly among children and urban residents.

Facilities

OPRHP and DEC maintain nature centers and interpretation and education facilities and environmental camps throughout the state. These centers are dedicated to developing an awareness of the value and beauty of natural areas and knowledge of the habitats and species.

OPRHP administers several outdoor education centers, many of which are listed here, dedicated to developing an awareness of the value and beauty of natural areas and knowledge of the habits and worth of creatures, along with unique museums that chronicle the historic and cultural resources of an area. The Theodore Roosevelt Nature Center at Jones Beach State Park and the Emma Treadwell Thacher Nature Center at Thompson's Lake State Park are two relatively new nature centers that evolved through public/private partnerships. Similar types of facilities exist at the Taconic Outdoor Education Center's residential program as well as its day program at Clarence Fahnestock State Park and Minna Anthony Common Nature Center at Wellesley Island State Park. Other similar programs are provided at museums at Bear Mountain, Allegany, Niagara Reservation and Gilbert Lake State Parks.

DEC operates a number of interpretation and education facilities throughout the State. The Bureau of Environmental Education operates four Environmental Education Centers (EECs): Five Rivers EEC in Delmar; Rogers EEC in Sherburne; Stony Kill EEC in Wappingers Falls and Reinstein Woods Nature Preserve and EEC in Cheektowaga. The Bureau is currently developing a Catskill Interpretive Center in Mt. Temper.

EECs offer a variety of personal and non-personal service activities. Staff-conducted interpretive and education services include guided walks, slide-illustrated lectures, workshops, curriculum-based lessons, and professional training and continuing education seminars in both on-site and off-site contexts. Other services include audio visual programs, exhibits, interpretive publications and self-guided interpretive trails.

The Bureau of Environmental Education also operates three conservation education camps: for youths aged 12-14 at Camp Colby in Saranac Lake, Camp DeBruce in Livingston Manor, and Camp Rushford in Caneadea. The summer of 1998 marked the opening of a new camp at Pack Forest in the southern Adirondacks. Here DEC offers week long ecology workshops for teens who are15-17 years old. Throughout July and August, campers enjoy week-long residential outdoor education programming focusing on natural resources and environmental conservation.

Cultural Resource Stewardship and Interpretation

Existing Resources/Inventories

New York State possesses extensive archeological and historic resources. It is important that these cultural resources are identified, protected and interpreted for current and future generations. The benefits of preserving the past can enhance today's quality of life and function as economic generators.

New York's State Historic Preservation Office (SHPO) within OPRHP helps communities identify, evaluate, preserve, and revitalize their historic, archeological, and cultural resources. The SHPO administers programs authorized by both the National Historic Preservation Act of 1966 and the New York State Historic Preservation Act of 1980. These programs, including the Statewide Historic Resources Survey, the New York State and National Registers of Historic Places, the federal historic rehabilitation tax credit, the Certified Local Government program, the state historic preservation grants program, state and federal environmental review, and a wide range of technical assistance, are provided through a network of teams assigned to territories across the state. The SHPO works with governments, the public, and educational and not-for-profit organizations to raise historic preservation awareness, to instill in New Yorkers a sense of pride in the state's unique history and to encourage heritage tourism and community revitalization.

State Preservation Historical Information Network Exchange (SPHINX)

This newly revamped system tracks survey data on more than 250,000 properties in the state. Users can seek out information regarding historic resources within specific municipalities.

Document Imaging Program

The State and National Registers of Historic Places Document Imaging program provides access to scanned images of New York's nomination documents and other related materials. Users of the system can take advantage of a powerful search program that can sort these nomination files based on a variety of information including Location, National Register Criteria, Architectural Styles, Building Materials and Areas of Significance.

The Geographic Information System for Archeology and National Register

Begun in 1989 this system provides a map depicting the approximate boundaries of each of the New York's State and National Register properties and districts. A second overlay depicts the general boundary of the state's known archeological areas. The user can simply select a county and town and then zoom into the map of the community to find the location of a listed property or known areas of archeological sensitivity. (All archeological sites are protected by a buffer zone)

Management and Resource Protection

The Field Services Bureau (FSB), acting as the State Historic Preservation Office (SHPO), administers state and federal preservation programs authorized by the New York State Historic Preservation Act (1980) and the National Historic Preservation Act (1966 as amended). Each of these laws authorizes the agency to conduct a range of program initiatives designed to protect and enhance privately owned historic properties as well as resources not specifically under the management of OPRHP.

The mission of FSB is to advocate the preservation of New York's cultural heritage through the identification, evaluation, registration, and protection of its significant buildings, structures, objects, places, and landscapes. This is supported by the following goals:

- To promote the use, reuse, and conservation of significant properties for the pleasure, education, inspiration, welfare, recreation, prosperity, and enrichment of the public.
- To protect, enhance, and preserve those resources which are significant to New York's diverse history and culture.
- To foster pride in our collective heritage by education and advocacy, in active partnership with public and private organizations, schools, and institutions.
- To coordinate state and federal preservation programs through consultation with individuals, organizations, and governmental agencies.

The New York SHPO has earned national recognition as an outstanding and progressive program. FSB is committed to fulfilling its mission to advocate for preservation while meeting the broad needs of the public for preservation services and programs.

The framework for New York State's preservation program involves four basic activities: identification, evaluation, protection, and incentives. The corresponding programs are:

- Cultural Resource Survey (identification and evaluation)

- Data collected on over 257,500 properties since the beginning of the program in 1969
- State and Natural Register of Historic Places (designation)
- More than 85,000 structures, buildings, sites, and other features listed
- Protection (project review)
- 6,500+ reviews conducted annually
- Historic Preservation Tax Credits (incentives)
- Since 1976 has leveraged more than $3 billion of investment in rehabilitation and reusing NYS historic structures
- Historic Preservation Grants (incentives)
- 50% matching grants under the EPF and Bond Act awarded to 249 projects ($27.5 million) since 1995
- Over 100 grants to owners under the Barn Restoration and Preservation Program
- Certified Local Governments (incentives)
- 57 participating communities
- A newsletter for member communities
- An active listserv for member communities
- Outreach (education and technical assistance)
- Continued individual efforts (meetings, letters, phone calls, site visits)
- Produced and distributed program brochures
- Produced and distributed the newsletter, The Preservationist
- Produced and distributed a video promoting the registers program and community revitalization

Each of these programs are managed according to state and federal law regulations and standards and with exception of the State grants program, each is monitored by the National Park Service which matches the State's contribution to these external programs. The Bureau responds to a large demand by private citizens, government officials, consultants, and institutions for assistance and access to the full range of preservation concerns and initiatives.

Interpretive Programs

The oversight and technical services for the 35 State Historic Sites are provided by OPRHP's Bureau of Historic Sites. It provides specialized technical services (i.e. services impractical to decentralize or not readily available for other sources) which are necessary for the professional management of a statewide historic site system. These services include archeology survey and resource management, historic and landscape architecture, engineering, exhibit design and fabrication, historic research and interpretation, collection management, curation and conservation, and protective services.

Friends groups play an important part in the operation and maintenance of historic sites. At the present time, there are 15 not-for profit organizations, chartered by the New York State Board of Regents and recognized by OPRHP as "friends groups" of the State historic sites. (Note: This is exclusive of the nine sites, which are regarded as "affiliates" and are administered by local organizations via cooperative agreements with OPRHP.) Site specific in nature, these friends groups provide volunteer and monetary support for a wide range of site programs and activities, ranging from landscape restoration to collection acquisition, from office support to equipment purchase, from special event sponsorship to research and publication. Collectively, the friends groups represent over 5,000 members who volunteer well over 20,000 hours annually.

The Bureau of Historic Sites was established in 1972 to provide technical support and program assistance to OPRHP's State historic sites. Today the Bureau not only serves the needs of the 35 State Historic Sites, it also serves dozens of State parks which have significant cultural and historic resources. With support from the Bureau, the public's understanding of the rich history of the State, as represented by its sites and parks, is immeasurably advanced. Comprehensive preservation and interpretive services are provided by nine bureau units.

Archeology – Conduct excavations and analysis of archeological resources at State historic sites in order to preserve the cultural record, interpret archeological evidence to the public, and manage a collection of over one million State historic site archeological artifacts.

Building and Landscape Conservation – Provide sites and parks with a full range of technical advice and assistance necessary to preserve historic structures and cultural landscapes, including: materials research and contract specifications; project compliance with state and federal preservation law; resource documentation, evaluation and planning (e.g. historic structures and cultural landscape reports); and, staff training.

Collections Management – Create and maintain automated records for OPRHP's historic, archival and artistic collections including inventories, collection acquisition and storage, and loan management.

Conservation – With expertise in eight different disciplines (e.g. paper, paintings, furniture, textiles) examine and undertake the treatment of historic and artistic collections, conduct surveys of environmental conditions at sites and parks, and advise and train staff, interns and volunteers on the proper care and handling of museum collections.

Curatorial Services – Undertake research into historic collections and social and cultural history necessary to furnish historic houses, support and curate orientation and thematic exhibits, interpret site collections, create authentic period reproductions, and produce

publications and scholarly reports (e.g. historic furnishings reports).

Exhibit Design and Fabrication — Collaborate with other Bureau units and facility staff to create exhibits for State historic site and park visitor centers, nature centers and museums, and create computer-assisted designs for publications and related graphics.

Interpretive Services – Work with other units and facility staff to produce a wide variety of interpretive materials, including: exhibit scripts, on-site and school outreach program materials, promotional and educational brochures, visitor surveys and audience research, and signage.

Protective Services – provide sites and parks with technical assistance, system designs and training necessary to protect historic resources from fire, theft and natural disasters.

Research – Undertake primary and secondary research necessary to create interpretive materials and exhibits, planning studies and publications.

In addition to the above-mentioned services, the Bureau works with Albany office and regional staff to foster the formation of nonprofit friends organizations and other partnerships to support the preservation, development and public use of OPRHP's facilities. The Bureau also provides collections care and conservation services, on a contractual basis, to other state and federal agencies which have responsibility for cultural property.

Generally, the Bureau's primary mission is public service through preservation and education. More specifically, the Bureau aspires:

- To interpret the history of New York State for present and future generations through properties preserved and managed in the public trust and designated as New York State Historic Sites because of their associations with persons, places or events, of state and national importance; and to develop the educational potential of these sites to foster public awareness, understanding, and appreciation of New York State's heritage;
- To advise other bureaus and regions within OPRHP on the preservation and interpretation of historic resources within their jurisdiction; and,
- To advise and educate individuals, organizations, and other state agencies on the preservation and interpretation of historic resources related to national, state and local history.

Chapter 5 - Creating Connections Beyond Parks and Open Spaces

New York's landscape is comprised of a large patchwork of protected parks, greenways, trails and open spaces. Landscapes and buffer lands that surround these important open spaces need to be protected from encroaching development and incompatible uses. Development of "connections" among these areas is critical to allow people and wildlife to move across these landscapes. Local communities must consider parks, trails and historic preservation as essential elements of community infrastructure. The must also advance recreation and open space projects in and around urban centers in order to meet the needs of underserved populations and "Smart Growth" principles.

Protection of Existing Protected Lands

There are over 4 million acres of state open space areas with thousands of miles of boundaries throughout the state. Their primary focus is on the protection of important recreational, natural or cultural resources. However, assuring this protection goes beyond the borders. Habitats, watersheds, viewsheds and quality of experiences are not limited by man made boundaries. Therefore, sound land use of adjacent areas is important to ensure the quality of the resource. Although state agencies, local governments and non-for-profit organizations can protect some areas through acquisitions and easements, the solution is broader in scope. This includes an awareness and understanding of the need for protection and connections by the general public.

Protecting Connections to Protect Our Natural Resources

Biodiversity is the variety of plants, animals and ecological communities found across the landscape as discussed in Chapter 4. A key factor in biodiversity protection and enhancement is maintaining connectivity between natural areas. Scientific studies have shown the importance of securing connections at both small and large scales for the protection of biodiversity and ecosystem processes (Noss, 1983; Noss, 1991b; Soule, 1991b). Protecting large swaths of natural areas are critical in providing a variety of natural habitat types which are needed to support healthy and viable populations of plant and animal species. In addition, connectivity is protected and maintained throughout these large, contiguous blocks of natural habitat. Preserving connectivity at this larger scale is particularly important because it facilitates the resurgence of biodiversity following natural disturbances such as floods, droughts, fires and blown-downs.

Protecting small-scale connections is equally important as these connections are often needed to allow for the movement of species between habitats. Small patches of natural land act as stepping stones and can provide refuge and/or linkages when connections between larger natural areas are not feasible. For example, large isolated parks, in their vastness, hold a larger proportion of wildlife than smaller parks. But large, isolated parks may become islands of refuge for many species (Robinson and Quinn, 1992; Robinson et al., 1992). In particular, the persistence of a rare or endemic species may be dependent upon interactions between neighboring populations. The effects of isolation are further exacerbated in species with limited motility, such as freshwater mussels and salamanders. When adjacent land uses are incompatible or thwart movement between populations, the persistence of that species may be jeopardized. In small isolated parks, land area is even more of a limiting factor since essential habitat and resources may only be present in the park itself. In this case surrounding land uses are extremely important especially in those parks that have endemic populations. Without influx from neighboring populations and presence of essential habitat, the species could very well be extirpated from a particular area. By protecting connections between natural areas at both scales, there is a greater opportunity to maintain genetic variability and prevent local extirpations, thus allowing species' persistence and viability over time (Meffe et al., 1997).

A number of factors threaten connectivity; habitat loss and habitat fragmentation are the two largest contributors to connectivity loss. Loss of natural habitat through land use change is the single, most significant threat to wildlife in the United States (Wilcove et al., 2000). Habitat loss occurs when land is converted or cleared for uses that are incompatible with natural resource protection. Statistical surveys have shown

that in the United States between 1997 and 2001 land development (which includes infrastructure, housing, commercial and industrial use) claimed an average of 2.2 million acres each year (Natural Resources Conservation Service, 2000). Studies have also shown that natural vegetation remains on just 42% of the total land area in the United States (Bryer et al., 2000). While this estimate is alarming in itself, it does not indicate the land's ownership, the quality of the vegetation, the extent of impact from invasive non native species, and pressures from adjacent land uses. Additionally, vegetation removal, chemical and nutrient inputs, and noise, motion and light disturbance can further degrade ecosystems essentially rendering habitat dysfunctional for the viability and persistence of native plants and animals over time.

Habitat loss is closely followed by habitat fragmentation as a threat to species viability. With fragmentation, habitat is broken into smaller and often times isolated patches thereby restricting or altering the movement of species and populations. Requirements for movement differ by species. Some require daily movements while others require seasonal and lifetime movements. For example, there are species of turtles, such as the wood turtle, that nest in terrestrial habitats and then overwinter in streams. Most plants and trees require connections for their pollen, seed, cone, or fruit dispersal (Damschen et al., 2006). Habitat fragmentation affects not only the movement of plants and animals, but also the natural processes critical to completing plant and animal life cycles. Periodic flooding is essential for the successful reproduction of certain species and/or maintaining suitable plant and animal habitat. Networks of roads or areas containing large amounts of impervious surface can impede the natural flow and movement of water across the landscape, thus altering the functionality of natural systems. Reduction in large unfragmented or core habitat and an increase in habitat edge also facilitates the introduction of non-native species. These non-native species compete with native species for limited resources, and in some cases prey upon native species. They can also reduce diversity by colonizing an area thus leading to potentially substantial changes in system dynamics.

Ultimately, the severity of impact on species viability and ecosystem functionally depends on the type and intensity of human activity. Sometimes these impacts can be mitigated by land protection strategies. These strategies may lead to active or passive conservation management of the potentially affected natural resources.

Ways to Protect and Enhance Connectivity

Two tools commonly used to protect and enhance connectivity are the creation of corridors and protection of buffer zones. This is often accomplished directly through public or private land purchases, through land donations, or indirectly by the creation of conservation easements or the implementation of environmentally sensitive guidelines for land use.

To maintain biodiversity and ecosystem functions in both the short and long-term it is necessary to maintain habitat connectivity so that species can continue to move across the landscape. Human development and activities often disrupt these movements by fragmenting habitats, thus restricting natural movements throughout the landscape. Corridors, which are described as man-made or natural linear strips of land connecting two habitat types, can be an effective means of providing connectivity. Examples of natural corridors include river and stream corridors, while man-made corridors can include unpaved trails and right-of-ways. Corridors providing maximum benefits will encompass broad tracts of land containing a variety of habitats. Currently attempts are being made by a consortium of conservation organizations to identify such maximum benefit corridors in the Adirondacks (Frisch, 2007). However, it is important to note that corridor sizes are variable and are dependent upon the species, habitats and landscapes they seek to protect.

Buffer zones, defined as areas adjacent to protected lands with resource protection provisions, are commonly used to augment conservation goals or cushion detrimental effects caused by adjacent, incompatible land practices (Sayer, 1991). The most effective buffers contain undeveloped land with native vegetation. Uses of these areas are often limited to passive activities that are compatible with conservation objectives. Buffer areas are most commonly used to protect riparian shorelines, wetlands, and vernal pools. However, there is no prescribed buffer size that can be applied to all situations. Similar to corridors, buffer sizes are often variable and dependent upon the species, habitats, and ecosystems at risk. For example, a minimum of 80 feet may help in removing pollutants from run-off (Kennedy et al., 2003), while a minimum buffer of 750 feet is needed to protect critical terrestrial habitat for vernal pool breeding species (Calhoun and Klemens, 2002). Land buffers as large as 535 feet may be needed to protect the long-term heath of the ecosystem (Howard, 2004). Therefore, site specific information is needed in determining the size of buffer needed to protect the natural resources present.

Both corridors and buffers are key components in creating a network of conservation lands because they increase the total amount of protected land area needed for the satisfactory persistence of species, populations, habitats and communities. A conservation network can be defined as a system of land (and water) managed solely for conserving the representative ecological qualities of that region (Defenders of Wildlife, 2005). At national, regional, and local levels developing conservation

networks is an important strategy in protecting and sustaining biological diversity over the long-term. These networks may have similar or different uses but the focus of their management is for natural resource preservation. Sub-units of a network collectively hold their own unique characteristics, yet the properties governing these relationships are consistent across networks. Size and location of the subunits, in addition to the total size of the network, also contributes to the behavior of the network (Detours et al., 1994). It is important also to provide specific attention to the individual parameters influencing networks. This enables us to discover and examine concepts that contribute to the viability of entire networks. This strategy of applying protective measures in cooperative and compatible ways, results in the continuity of habitats and resources and ultimately the preservation of ecosystem functionality which is the essence of biological conservation.

Parks, Connections and Biodiversity Conservation

Parks and other natural areas are clearly important to the conservation of biodiversity. Without such designated areas plants, animals, habitats and entire ecosystems would eventually be eliminated by habitat destruction and fragmentation. At a minimum, these protected natural areas provide important areas of refuge. However it should not be surprising that many such areas also serve as home to a high diversity of plant and animal life. This point is driven home by recent biological surveys that found New York State Park lands hold 21% of the state-listed animal populations, 21% of the state-listed plant populations, and 20% of the globally rare (G1-G3) species and significant natural communities found on NY State public lands (New York Natural Heritage Program, 2005).

But the potential for biodiversity protection through parkland designations and management is severely limited as natural connections within the landscape diminish. Historically many parks were acquired in relatively small chunks and for a variety of reasons, ranging from protecting open space and scenic vistas to providing recreational opportunities. Protection of biodiversity may not even have been the driving force behind such designations. As a result, some of these smaller areas that are now scattered across the landscape with little or no natural linkages to one another have become more like islands of refuge rather than viable, functioning ecosystems.

Clearly more connections are required. Because resources for acquisition and other protection mechanisms are limited, areas that will serve as corridors or buffers should be selected using a sound, scientific basis. It is likely that these areas will contain the greatest biodiversity value and will have the highest potential for biodiversity conservation improvements. Although it may not be possible to completely protect a corridor or buffer area all at once, the identification and protection of high biodiversity nodes or "hot spots" can serve as a starting point for eventual corridor designation. Plans already in place, such as the New York State Open Space Plan (2006) and the Hudson River Estuary Action Plan (2005), serve as good models for addressing the need for biodiversity protection through acquisitions and connections.

Connectivity evaluations can and should be based on the potential for contribution to biological conservation. Such evaluations can be based on biodiversity alone or in combination with connections that also move people between and along natural areas. Fostering open space connections for people via the greenways, trail corridors and right-of-ways may or may not provide a viable connection for the protection of species, habitats, and ecosystems. Biodiversity protection and recreation use can be compatible but they need to be carefully melded together. At times park attendance can even be driven by the unique biodiversity it holds. However some types of recreation may actually consume habitat and contribute to habitat fragmentation.

Recreational activities, if not properly located or managed, can lead to natural resource degradation and can ultimately result in the decline of visitation rates. Impacts by recreational use can disrupt the valuable benefits provided by healthy ecosystems and lead to a reduction of benefits to people and/or increased costs associated with facility construction to mimic the benefits provided by natural systems. But because parks can play such an important role in both environmental conservation and human well being, there is a constant need to strike a balance between the two. Without establishing an acceptable equilibrium, goals for neither will be achieved and visitors will no longer be able to enjoy the resources that we strive to protect. The key is in recognizing the potential for conflicts between recreation use and resource protection and to take steps to minimize, if not eliminate, such conflicts.

Striking a balance between natural resource protection and recreational use can be achieved through environmental education and environmental planning. Environmental education can be viewed as a connector of a different kind because it connects people with a better understanding of the beauty and value of our biological diversity. Environmental education also raises the public's awareness of environmental issues such as habitat loss and fragmentation. As a result the public becomes aware that they are stakeholders in environmental protection. Education is a means of empowering the public with a greater role and involvement in environmental protection. Environmental planning is equally important to the

use and protection of natural resources. Those parks with similar ecological and geological characteristics often contain similar habitat-dependent species and have similar recreational uses. Sensitive management, incorporating the needs and requirements of biodiversity, can be identified within master plans or other types of recreation plans. As such, the development and implementation of statewide management plans, like the Open Space Plan and the State Comprehensive Outdoor Recreation Plan, are imperative in assuring that high use areas are located away from sensitive natural areas.

Trails

New York's natural and cultural resources provide for a broad range of land and water based trails that offer multiple recreational experiences. They range from hiking the gorge at Niagara Falls, cross-country skiing at Allegany State Park, biking along the Finger Lakes, and snowmobiling in the Tug Hill, climbing the high peaks in the Adirondacks, horseback riding in the Hudson Valley, bicycling along the Erie Canal on the Canalway Trail or walking the beaches on Long Island. Each region of the State offers a unique setting and different opportunities.

Figure 5.1 - The New York State Water Trail System

Vision

The vision for trails in New York State is to have a statewide network of interconnecting shared and single use trails that connect parks, open spaces, historic sites, communities, business districts, and residential areas to allow people and wildlife to move across New York's landscapes. This would be accomplished through a system of federal, state and local trails and partnerships with not-for-profit groups and private landowners. Support facilities would be provided for trail users and to enhance the local economy. The trail system would promote the health and well being of the users, enhance the economy, provide alternative means of transportation, reduce the dependency on fossil fuels and benefit the quality life in general.

Trail Definition

A trail in its simplest form is a linear corridor, on land or water, which provides access for recreation and transportation as well as related outdoor education and sport activities. A trail may link two or more points or be a looped system with the same start and end point. It may accommodate single or shared use; allow non-motorized and/or motorized uses; be open for a single season or year round; be narrow or wide; in an urban and/or rural area; and comprised of various types of surfaces. It may be a stand-alone entity or part of a broader corridor such as a greenway. The term trail has evolved to include routes on existing transportation systems that link points of a specific theme usually of a historical, cultural or scenic in nature. These types of trails are commonly referred to as heritage trails or corridors and are addressed later in this chapter.

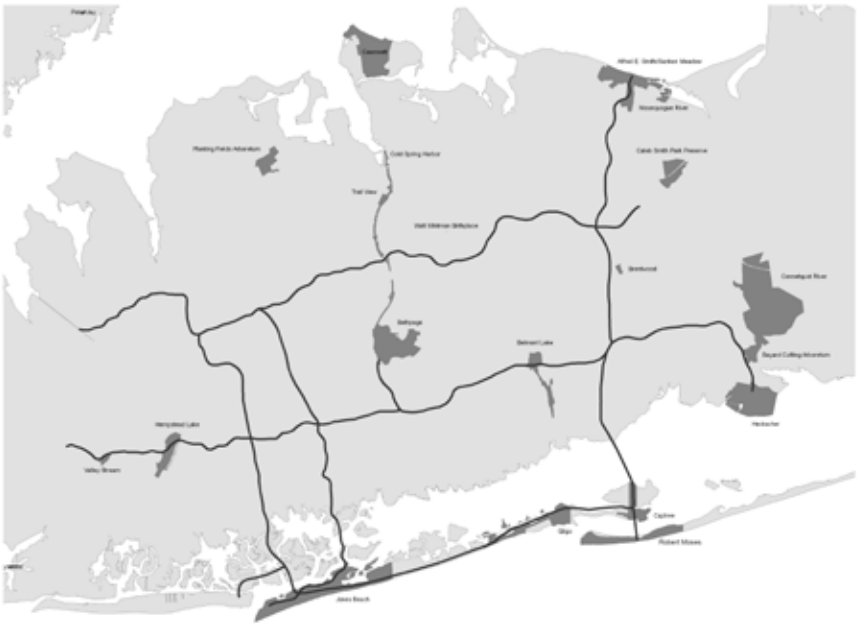


Figure 5.2 - The Long Island Parkway System

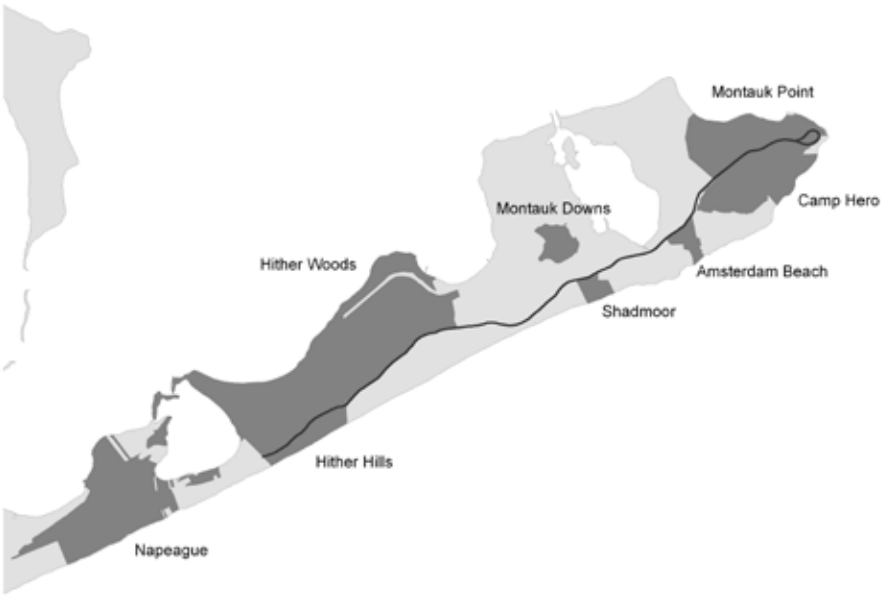


Figure 5.3 - Montauk Point Parkway System

Figure 5.4 - Niagara Parkway System

Types of Trails

There is a broad spectrum of trails that support a variety of trail activities. Each trail activity may be supported by various types of trails that provide different recreational trail experiences. This may reflect the level of difficulty, size and type of group (e.g., individual versus family), type of desired experience or geographic location. The range of activities associated with trails includes:

- Walking
- Hiking
- Jogging/Running
- Cycling (Biking)
- Mountain Biking
- In-line Skating (roller blading)
- Nature Study
- Horseback Riding
- ATV Trail Riding
- Trail Biking
- Boating/Canoeing/Kayaking
- Cross-Country Skiing
- Snowmobiling
- Snowshoeing

These activities represent only a sampling of types of trail activities. There are others that currently exist and ones yet to be developed.

Terminology

As trails have evolved over time, so has the terminology. In some cases, the same term can mean different things to different people. It is helpful to have a set of terms that are consistent for all user groups. This provides a common baseline and helps to avoid misunderstanding and potential conflicts. A listing of the definitions for the various types of trails and trail elements is provided in Appendix D.

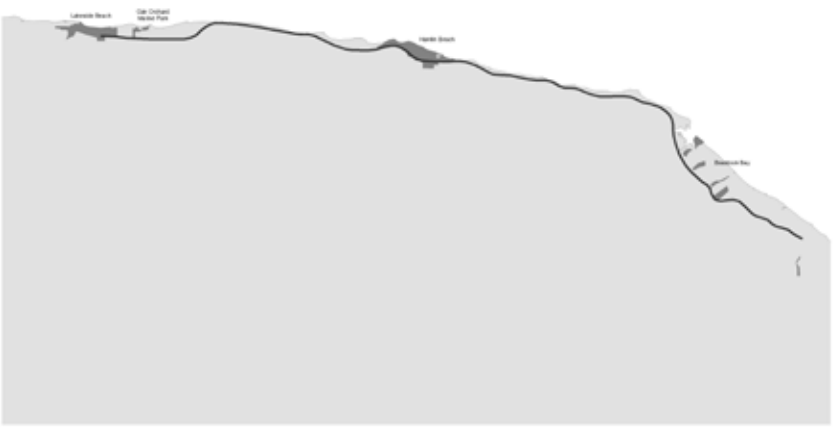


Figure 5.5 - Lake Ontario Parkway System

Existing Systems

There are estimated to be over 16,000 miles of trails in New York State with new trails constantly being developed. They range from short nature trails to the 4,600 mile North Country National Scenic Trail. A comprehensive inventory effort is underway to identify all the major trails within the State and all the trails within State Parks. The inventory will include such information as owner, maintainer, location, physical attributes, allowable use and accessibility. Exclusive of the 11,000 miles of the state funded snowmobile trail system, nearly 10,000 miles of trails have been identified

The opportunity now exists to use Geographic Information System (GIS) technology as a tool for inventory and planning of a comprehensive trail system. As part of the inventory effort, a systematic process is underway to locate all the trails within State Parks using Global Positioning System (GPS) units. Many counties have also mapped their trail system in GIS. The New York State GIS Clearinghouse provides the means to share information at all levels of government. Figures 5.1 to 5.8 identify the existing statewide trail systems.

To achieve the vision, the statewide trail system would be comprised of primary, secondary and stand-alone trails. Each type of trail is important even though its purpose and function may differ.

Primary Trails

The primary system is comprised of trails of national, statewide or regional significance. These are considered long distance trails that have generally been developed over the years by intergovernmental initiatives and efforts by paid and volunteer trail organizations. The long distance trail system forms a framework for other governmental planning initiatives, as well as support for efforts of municipalities and volunteers to develop inter-connective local systems. These trail systems have potential or existing interconnections along very long stretches of open space or transportation systems (abandoned or active).

Long distance trails include federally designated trails such as the Appalachian National Scenic Trail (AT), North Country National Scenic Trail (NCNST), Upper Delaware National Scenic and Recreation River and the Seaway Trail All American Byway. Trails of statewide significance include but not are limited to the following: the Long Path, Finger Lakes Trail, Long Island Greenbelt, Harlem Valley Rail-Trail, Canalway Trail, Hudson River Valley Greenway Trail System, Hudson River Greenway Water Trail, Genesee Valley Greenway, the Pony Express Trail and the statewide Snowmobile Trail System.

The long distance linear systems traverse many political divisions, communities, ecological habitats and adjacent residential properties. As development increases, the ability to create linear

Figure 5.6 - Palisades Parkway System

Figure 5.7 - Primary Long Distance Trails

corridors becomes more difficult. Joint and adaptive reuse of existing corridors provides some of the best opportunities. These include river corridors, canal systems (existing and abandoned), abandoned railroad rights-of-way, utility corridors and parkways. It is important to develop partnerships or acquire such corridors as they become available; once the linear system is segmented it is more difficult to develop a contiguous trail. Figure 5.1 identifies the existing water trail system and Figures 5.2 through 5.5 show the existing parkway system.

Many long distance trail systems have evolved through the hard work of trail users who develop partnerships with local landowners. This has been the case with the hiking and snowmobile trails systems, in particular. Nearly 85% of the statewide snowmobile system is on private land. These partnerships are critical in maintaining existing trails and developing new trails. To ensure the continuation and expansion of these partnerships, it is equally important that the General Obligations Law be amended to expand the level of protection for landowners who allow trail activities.

Secondary Trails

A secondary trail system ideally connects to a primary trail system. In many instances, the connection between a secondary and a primary trail does not exist but is planned. Secondary trails are generally shorter in length than primary trails and transverse fewer political boundaries. They provide linkages to support services, attractions, and communities from the primary trail system. Secondary trails are particularly important in the encouragement of physical activity for good health. Studies have shown that people who live near short or connecting trails spend more time being physically active than their counterparts who do not live near trails. Partnerships around secondary trails are equally as important.

Secondary trails include trails within parks or open space areas that connect to a primary trail. An example would be the vast trail system within Allegany State Park that connects to the Finger Lakes Trail or the extensive secondary trail system that supports the statewide snowmobile trail system.

Stand-Alone Trails

Stand-alone trails are trails of local significance that do not connect to a primary trail system. They are generally loop trails, trails that connect to points of interest or provide short connections between parks, open spaces, historic sites, and/or communities or elements

Figure 5.8 - Snowmobile Corridor Trails

of a community (residence, school, business). There may be a system of stand-alone trails within a park or other open space. Although there may be a major element of the facility or local community, they are not of regional significance. In most cases, they exist within a single political boundary or facility. These trails also provide an opportunity for safe outdoor recreation to increase health and reduce the incidence of disease.

Statewide Trails Plan

The existing Statewide Trails Plan was adopted in 1994. An effort is currently underway to update the Plan. This is being supported by surveys conducted as a part of the SCORP update process, additional trail specific survey efforts, the development of a comprehensive trails inventory and out-reach to the various trail organizations and interest groups. The updated plan will provide statewide policy direction; roles and responsibilities; identification of issues and strategies; and a framework for the statewide system of trails and greenways.

The following is a summary of the social issues identified:

Overuse

Trails are developed based on design standards and the type of experience desired. Although the level of use may be within design standards, it may exceed the level for the desired experience. This can occur on any trail from primitive trails to trails within urban areas. The perception of overuse, however, can vary from user to user.

- Design trails based on the desired experience, environmental conditions and type of trail users.
- Develop and implement a monitoring program to assess level of use, perception of trail users and trail conditions.
- If overuse is occurring:
  - Limit / control parking at trail heads.
  - Limit access points.
  - Modify design standards (trail width, surface treatment, etc.).
  - Limit group size.
  - Allow use through permits.
  - If multiple use, allow specific trail uses at specified time (temporal distribution).
  - Evaluate impact on surrounding environment.
  - Identify and encourage use of alternative locations for similar types of trails experience – dispersion of use.

Illegal Use

Illegal use of a trail occurs when the trail is used in a manner other than its intended purpose. This can have a negative impact for those users who are properly utilizing the trail as well as adversely impacting the trail and environmental resources. Illegal uses may involve the same or different type of trail activity.

- Establish clearly defined rules and regulations.
- Communicate the rules and regulations through signage, brochures, and news releases so users and landowners are aware of what is and is not allow on the trail.
- Install appropriate signage – easy to understand, symbols, rules of the road, multi-lingual (as needed).
- Educate the public – intended experience, environmental significance, potential safety and environmental impacts.
- Foster community involvement and sense of ownership.
- Develop trail friends groups comprised of trails organizations and residents.
- Communicate with the illegal users.
- Provide alternatives (locations) that provide for trail opportunities desired by illegal users.
- Conduct routine monitoring and patrolling.
- Encourage use of the trail system.
- Coordinate with local law enforcement officials.
- Use law enforcement as the last resort.

Conflict between User Groups

Conflicts between user groups can occur on shared or multiple use trails. User conflicts occur when one user group or individual objects to another user group or individual on the same trail. Conflicts are often related to activity style (i.e. mode of travel), focus of the trip and expectations, attitude and beliefs toward the environment, and the level of tolerance for others (FHWA, 1994).

- Consider the needs and demands of the various user groups early in the planning process.
- Listen and understand trail user concerns.
- Develop trail friends groups that include trail users and residents.
- Foster communication among the various groups.
- Educate the users to trail etiquette.
- Consider alternatives that can meet user needs and avoid conflicts.
- Modify the trail design standards, if needed.
- Focus the user groups' energies on issues/conditions that benefit all.

Conflicts between Landowners and Users

Conflicts between land owners and users can occur when users utilize private property without permission or engage in a trail activity that directly or indirectly impacts the environment of the land owners in the vicinity of the trail. This can take the form of physical impacts to the property, visual intrusions or noise impacts.

- Include all stakeholders in the planning process.
- Provide informational signage at the trail head and along the trail.

- Reach out to adjacent landowners – encourage participation in trail friends groups.
- Identify a contact person to address concerns to.
- Close social trails that lead to private property.
- Be clear with landowners about the level and nature of enforcement that the agency/community can provide. Do not promise what cannot be delivered.

Personal Safety

Concerns for personal safety emanates from fears of assault, robberies and other personal crimes, especially in areas where trails are in remote areas and away from populated areas. Law enforcement agencies also have concerns about responding to trespass, vandalism and other personal crimes on trails. Trails can cross jurisdictional boundaries involving more than one local police force. Also incidents on trails are not always in locations that are easily accessible to emergency service vehicles.

- Provide information (i.e. maps, trail conditions, access points, mileage, etc.) at the trailheads and point of reference along the trail (i.e. mile markers).
- Maintain trails and parking areas in a clean and inviting manner.
- Parking areas should be visible to the general public.
- Monitor trail use and have routine patrols.
- Educate the trails user in ways to improve personal safety (i.e. being familiar with the area, aware of weather conditions, participating with friends, letting others know where you are going and when you expect to return, etc.).

Littering/Dumping

The appearance of the trail can influence a person's willingness to use a trail. Littering and dumping send messages about the types of users and the level of security and maintenance that occurs on the trail.

- Develop and implement a maintenance plan.
- Cultivate a carry-in carry-out ethic.
- Utilize volunteer trail adopters or friends group to periodically remove litter and dumping.
- Install gates or other means to control trail access to prevent motor vehicles from accessing the trail to dump.
- Encourage community "buy in / ownership" to the trail.
- Periodically check and post the boundary.
- Institute penalties and follow through with convictions to discourage dumping.

Trail Vandalism

Vandalism results from the lack of ownership the user has for a trail as well as from inadequate maintenance and monitoring. It can range from destruction of the trail surface, illegal use, to stealing or defacing signs. Vandalism can occur on any trail at any time but is most often seen on trails that have low use and are infrequently monitored.

- Design trails and associated elements to discourage or resist vandalism.
- Increase ownership of the trail within the community.
- Encourage more use of the trail.
- Maintain the trail conditions.
- Repair vandalized property quickly.
- Increase monitoring and patrols in problem areas.
- Post emergency numbers at the trail head.
- Publicize arrests and court results to send a message that perpetrators will be arrested and prosecuted.

Trail Guidelines

Trail guidelines provide guidance in design, construction and maintenance. Table 5.1 provides a listing of guidelines for various types of trails. These should be used as a starting point and modified, as necessary, to address the natural characteristics of the resource and specific needs. For instance, the snowmobile guidelines provide general statewide guidance and would be modified for the conditions within the State lands of the Adirondack Park.

Additionally, the following Best Management Practices should always be considered when designing, constructing and maintaining any types of trails:

- Locate trails to minimize necessary cut and fill;
- Wherever possible, lay out trails on existing old roads or clear, or partially cleared areas;
- Locate trails away from streams, wetlands, and unstable slopes wherever possible;
- Use proper drainage devices such as water bars and broad-based dips;
- Locate trails to minimize grade;
- Use stream crossings with low, stable banks, firm stream bottom and gentle approach slopes;
- Construct stream crossings at right angles to the stream;
- Limit stream crossing construction to periods of low or normal flow;
- Use stream bank stabilizing structures made of natural materials when feasible such as rock or wooden timbers;
- Use natural materials when feasible to blend the structure into the natural surroundings.

Table 5.1 - Trail Guidelines

Trail Type	Vertical Clearance	Corridor Clearance	Treadway Width	Surfacing Materials	Trail Length	Sight Distance	Slope	Turning Radius	Users / Mile
Biking Class 1 (Path)	8-10 feet	5-6 ft. (1 Lane) 8-10 ft. (2 Lane)	2-3 ft. (1 Lane) 6-8 ft. (2 Lane)	Smooth pavement, asphalt, concrete, crushed stone, clay or stabilized earth.	Min. -5 mi. loop (1.5-2 hrs.) 15-25 mi. of linear or loop trails (day trip)	Min. of 50 ft. up to 100 ft. on downhill curves or road crossings	0-5% Max: 5-10% sustained 15% shorter than 50 yd. Out slope of 2-4%	8-14 ft. depending upon speed.	40
Mountain Biking	8-10 feet	1.5-6 ft. (1 Lane)	Novice -36 in. Intermediate -24 in. Expert -6-12 in.	Firm natural surface with some obstacles such as roots, grade dips or rocks	Min.-5 mi. loop (1.5-2 hrs.) 15-25 mi. of linear or loop trails (day trip)	Min. of 100 ft. up to 150 ft. on downhill curves or road crossings	Over all grade not to exceed 10%. Climbing turns not to exceed 7-12% Out slope of 3-5%	Novice/ Intermediate -8 ft. min. Expert -6 ft. min.	10
Cross-Country Skiing	8-10 feet above snow depth (10-12 ft. in summer)	8 ft. (1 Lane) 10-12 ft. (2 Lane)	4-6 ft. (1 Lane) 7-8 ft. (2 Lane) 8-10 ft. (up and down hill)	Snow with underlying bare soil, rocks or wood Out sloped, chips, underlying material. Can be groomed or ungroomed	0.5 -3 mi. loops up to 4-8 mi. (2-4 hour trip)	Down hill runs, stream or road crossings -50 ft. otherwise not critical	0-5% Max. -10% sustained 15-25% shorter than 50 yds. 25-40% shorter than 50 yds. experts only Out slope -0-2%	Avoid sharp turns. Never locate a turn at the base of a downhill run. Min.-50 ft. Preferred -100 ft.	5-30
Hiking (developed, interpretive, group or connector)	8-10 feet.	4-8 ft.	4-6 ft.	Bare soil, rocks, stone dust or wood chips. May have hardened surface (concrete, asphalt or boardwalks) in high use areas.	0.25-5 mi.(1/2 day) 5-15 mi. (full day)	Not critical, barriers on reverse curves may be used.	0-5% Max. -15% sustained 40%+ shorter than 50 yds. Out slope -4% max.	N/A	0-30
Hiking (primitive, back packing)	8-10 feet.	4-6 ft.	18-30 in	Bare soil, rocks, gravel, wood hardened surface for wet areas.	Min. -5 mi. 5-15 mi. (full day) 15-25+ (multi day)	Not critical	1-5% Max. -15% sustained40-50% shorter than 50 yds.	N/A	1-5
Horse	10-12 feet.	5-6 ft (1 Lane)	18-30 in. (1 Lane)	Soils having a large percentage of rocks, clay and/or organic matter. Void of rocks football sized or larger. Little treadway development required if soils are appropriate. Problem areas, water control measures may be installed Brush and saplings should be cut flush or below ground level. Remove dead or leaning trees.	Min -5 mi. (11.5 hrs.) 15-25 mi. of looped trails (full day)	Not critical unless 2-way traffic. 50-100 ft. 100-200 ft. at motorized road crossings	0-10% Max. -10% sustained 20% shorter than 50 yds. Outslope -4% max.	Not critical but avoid sharp turns on steep slopes or using switchbacks (30 in. if they are necessary)	5-15
Snowshoe	8-10 feet above snow depth (10-12 ft. in summer)	8 ft. (1 Lane) 10-12 ft. (2 Lane)	4-6 ft. (1 Lane) 7-8 ft. (2 Lane) 8-10 ft. up and down hill	Snow with underlying bare soil, rocks or wood chips. Outsloped underlying material. No grooming is needed.	0.3 mi. loops mi. (2-4 hr.4-8 trips)	N/A	0-5% Max. -10% sustained 15-25% shorter than 50 yds. for experienced snowshoers	N/A	5-30
Snowmobile	8-12 feet above snow depth (10 -12 ft. in summer)	14-16ft.1A16ft.-141B12ft.-8C8ft. min.D	1A -12 ft. 1B -8-12 ft. C -4-8 ft. 4 ft. min.-D	Groomed snow Groomed snow Groomed snow Ungroomed snow	5-50 mi.	Min 50 ft. 100 + ft.	10-15% Max -25% sustained 40% shorter than 50 yds.	Min-50 ft. 100 ft.	15

Table 5.1 - Trail Guidelines (Continued).

Trail Type	Vertical Clearance	Corridor Clearance	Treadway Width	Surfacing Materials	Trail Length	Sight Distance	Slope	Turning Radius	Users/ Mile
ATV -novice	6 ft	10 ft	6 ft	Smooth, no rocks over 3" diameter, tread plane flat, wet crossings 6" deep,10' long	20-40 mi	100+ ft	Max-20% over 200 ft	Min-20 ft	25
ATV - Intermediate	6 ft	9 ft	5 ft	Some rough sections, no rocks over 5" diameter, tread plane 5%, wet crossings 10" deep, 10' long	30-60 mi	50+ ft	Max-25% over 300 ft	Min-10 ft	15
ATV – expert	5 ft	8 ft	4.5 ft	Some very rough sections, no rocks over 10" diameter, tread plane 10%, wet crossings, 18" deep, 10' long	30-80 mi	20+ ft	M ax-35% over 500 ft	Min-5 ft	10
Trailbike – novice	8 ft	8 ft	4 ft	Smooth, no rocks over 3" diameter, avoid loose material	20-40 mi	100+ ft	Max-15%	Min-15 ft	20
Trailbike-intermediate	8 ft	6 ft	2	Some rough sections, no rocks over 6" diameter, loose material, logs less than 6" diameter	30-60 mi	50+ ft	Max-30%	Min-10 ft	15
Trailbike-expert	8 ft	4 ft	1 ft	Very rough sections, no rocks over 12" diameter	30-80 mi	20+ ft	Max-50%	Min-5ft	10
4-Wheel Drive rated from Class 1* (easiest) to 4 (most difficult). Half-day ride (~4 hrs) Full-day ride (~6 hrs)	8-10 ft	12-14 ft (1 lane) 19-24 ft (2 lane)	8-10 ft (1 lane) 15-20 ft (2 lane)	Soils having a large percentage of rocks, clay and organic matter. Including (obstacles) ruts, hill climbs, ledges, and rocks foot ball size and larger, In problem areas, water control measures may be installed. Class 1* - obstacles to 8" Class 2 – obstacles 12"-16" Class 3 – obstacles 18"-24" Class 4 – obstacles 24"+	2-30 mi (20 mi easy to 2 mi hard) A 2-mile Class 4 trail can provide a full-day of trail riding.	Not critical, unless on multi-use trail (50-100 ft)	0-40%	Not critical, but avoid sharp turns on steep slopes. (25 ft avg)	5-15

** See Table 5.1a for descriptions*

Table 5.1a - 4-Wheel Drive Vehicle Class Requirements

Class 1:	Only general safety requirements. Recommended: disconnected sway bar. Stock vehicles
Class 2:	Disconnected sway bar. Recommended: aggressive tread tire.
Class 3:	Disconnected sway bar, 30" or larger aggressive tread. Recommended: winch and locker
Class 4:	Disconnected sway bar, 32" or larger aggressive tread, minimum one locker, winch. Recommended: both front and rear lockers (Note: vehicle size restrictions generally – 80" width, 105" wheelbase)

Trail Accessibility

New trails and existing trails that require maintenance/repair should be designed or modified to maximize the opportunity to improve accessibility for persons with disabilities. Universally accessible trails not only provide opportunities for persons with disabilities, but also for seniors and persons with other mobility impairments. Proposed accessibility guidelines that include trails have been developed by the Regulatory Negotiation Committee on Accessibility Guidelines for Outdoor Developed Areas. A broader discussion on the Americans with Disabilities Act of 1990 (ADA) is provided in Chapter IV.

The proposed accessibility guidelines are for newly constructed and altered trails connected to accessible trails or designated trailheads. There are some departures from the technical provisions that are permitted. A detailed explanation of the guidelines, exceptions to the categories and departures can be found on the Access Board's website at www.access-board.gov. The following is an abbreviated listing of the proposed trail guidelines without the exceptions:

Surface - The trail surface shall be firm and stable.

Clear Tread Width - The clear tread width of the trail shall be 36 inches (915 mm) minimum.

Openings - Openings in trail surfaces shall be of a size that does not permit passage of a 1/2 inch (13 mm) diameter sphere. Elongated openings shall be placed so that the long dimension is perpendicular or diagonal to the dominant direction of travel.

Protruding Objects - Protruding objects on trails shall have 80 inches (2030 mm) minimum clear head room.

Tread Obstacles - Where tread obstacles exist, they shall not exceed 2 inches (50 mm) high maximum.

Passing Space - Where the clear tread width of the trail is less than 60 inches (1525 mm), passing spaces shall be provided at intervals of 1000 feet (300 m) maximum. Passing spaces shall be either 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum space, or an intersection of two walking surfaces which provide a T-shaped space provided that the arms and stem of the T-shaped extend at least 48 inches (1220 mm) beyond the intersection.

Slopes - Slopes shall comply with the following:

Cross Slopes - The cross slope shall not exceed 1:20 maximum.

Running Slope - Running slope of trail segments shall comply with one or more of the provisions of this section. No more than 30 percent of the total trail length shall exceed a running slope of 1:12.

Running slope shall be 1:20 or less for any distance.

Running slope shall be 1:12 maximum for 200 feet (61 m) maximum. Resting intervals shall be provided at distances no greater than 200 feet (61 m) apart.

Running slope shall be 1:10 maximum for 30 feet (9150 mm) maximum. Resting intervals shall be provided at distances no greater than 30 feet (9150 mm) apart.

Running slope shall be 1:8 maximum for 10 feet (3050 mm) maximum. Resting intervals shall be provided at distances no greater than 10 feet (3050 mm) apart.

Resting Intervals - Resting intervals shall be 60 inches (1525 mm) minimum in length, shall have a width at least as wide as the widest portion of the trail segment leading to the resting interval, and have a slope not exceeding 1:20 in any direction.

Edge Protection - Where edge protection is provided along a trail, the edge protection shall have a height of 3 inches (75 mm) minimum.

Signs - Newly constructed and altered trails and trail segments that are accessible shall be designated with a symbol at the trail head and all designated access points. Signs identifying accessible trail segments shall include the total distance of the accessible segment and the location of the first point of departure from the technical provisions.

Roles and Responsibilities

The trails in New York include national, state, regional and local trails. They occur on public and private property and are developed and maintained by the public and private sector. Through cooperative efforts by both these sectors, statewide and regional trail systems have evolved. Their larger systems provide links to local or secondary trails. In many cases, national and State designated trails provide the foundation for a primary trail system. Such is the case with the Appalachian National Scenic Trail, Lake Champlain Bikeway, Canalway Trail and Statewide Snowmobile System that link to local trail systems.

Trail systems are acquired, developed, maintained and promoted through a variety of relationships among units of government, organizations and individuals. There is no single set of roles and responsibilities for all trails. In many cases, a single trail may consist of various trail segments that have been acquired and developed by different units of government

utilizing different methods. The trail may be maintained by the land owner or through an agreement with another unit of government or trail organization. A good example of this is the Canalway Trail. To the public it is perceived as a single trail when in fact many agencies and levels of government each have responsibilities for various segments of the trail. Although there is some overlapping of roles and responsibilities, there are some general distinctions among the various providers and maintainers of New York State's trails.

Federal

Provider: The US Fish and Wildlife Service (USFWS) and the National Park Service (NPS) are the primary federal agencies in New York State with land holdings that provide trail opportunities. This includes the Appalachian National Scenic Trail (AT), Upper Delaware Scenic and Recreational River, the North Country National Scenic Trail, and the numerous trails within national parks, seashores, wildlife, and recreation areas.

Operations / Maintenance: The federal agencies manage the trails within their facilities. However, management of long distance trails such as the AT is accomplished through an agreement with state agencies and trail organizations.

Funding: Various federal grant programs are available for acquisition and development. Most are administered by a state agency such as the Land and Water Conservation Fund (LWCF) and Recreation Trails Program through OPRHP, and SAFETEA-LU through the DOT. Almost all the grants require a local match of funds received. Although the NPS Rivers and Trails Program does not direct or fund projects, it can assist citizens and community leaders who have decided to conserve close-to-home landscapes and get them started.

Technical Assistance: Technical assistance to state and local agencies, not-for-profit groups and trail organizations is provided through NPS's Rivers, Trails and Conservation Assistance Program. Additional assistance is provided through design, construction and maintenance manuals produced by various federal agencies.

State

Provider: The State has a dual role in providing trails on state-owned lands and in developing statewide and regional trail systems. Many trail opportunities exist within the open space resources managed by OPRHP and DEC. Over 1,350 miles of trail are maintained within the 167 State parks, 35 historic sites and 9 trail corridors administered by OPRHP. DEC manages more than 2,000 miles of recreation trails on nearly four million acres of land statewide. In addition, the DOT has signed 1,200 miles of bicycle routes along the State's road system.

Operations/Maintenance: Trails on lands administered by OPRHP and DEC are maintained by park personnel, friends groups, volunteers or through formal agreements with trail organizations. DEC's Adopt-a-Natural Resource (AANR) Stewardship Program is an example of the success of local municipal volunteer services used to establish and maintain access to trails. Volunteer recognition is given with the placement of appropriate signs on or near the adopted trail. Other forms of recognition, including but not limited to certificates, press releases, and newsletters may be provided.

Funding: The state agencies, such as OPRHP, DOS and DOT, administer various federal and state funds for trail-related projects. This includes EPF, LWCF Grants, Snowmobile Grants, Recreation Trail Program (RTP) Grants, EPF- LWRP Grants, Hudson River Valley Greenway Grants, SAFETEA-LU Grants and Scenic Byway Grants. It is the responsibility of the administering agency to establish a fair and equitable system to distribute funds.

Technical Assistance: State Agencies provide technical assistance in the form of standards and guidelines, technical information, grant assistance and, to a limited extent, training. DOS, as part of its LWRP planning process, provides communities with planning assistance. Regional programs such as the Tug Hill Commission and the Hudson River Valley Greenway provide additional assistance.

Local Government

Provider: Many counties, towns, villages and cities have developed trails that link open spaces, parks, schools and/or residential and business areas within their communities. Some of the trails are segments of or connect to broader systems that extend beyond the unit of government's boundaries. Trail lengths and activities vary. In many cases a municipal government will enter into a partnership to develop a trail on linear corridors owned by a state agency. Local governmental support is critical in the development of regional and statewide systems and determination of the types of allowable trail activities. Local municipalities often develop formal community trail plans that include references to regional nodes or corridors and encourage or mandate that developers design trail systems within new community complexes.

Operations/Maintenance: Local government involvement is important in the operations and maintenance of local, regional and statewide trail systems. Agreements are commonly developed with counties, municipalities and not-for-profit organizations to manage the segment of a regional or statewide trail system that is within their boundaries. Local law enforcement, in particular, is critical in maintaining safe and enjoyable trail systems.

Funding: County and municipal governments can provide funding through their own budgets and bond acts, seek funding through various state and federal grant programs, or function as a pass through for grants to local organizations.

Technical Assistance: Technical assistance among counties and municipalities varies considerably.

Private / Not-for-Profit / Trail Organizations

Provider: A percentage of trails in the State are on private lands and lands owned by land trusts or other not-for-profit organizations. For example, approximately 85% of the snowmobile trails are on private lands. These trails are the result of the efforts of various trail organizations to facilitate agreements with landowners. Not-for-profit and trail organizations play an important role in advocating for land acquisition and development of trails. Such is the case with the acquisition of Sterling Forest® State Park and the Genesee Valley Greenway. As part of their role, not-for-profit organizations are lobbying the legislature and decision makers to raise funds and create a vision for a statewide trail system. The private sector is also critical in providing support and facilities, such as lodging, food and other amenities.

Operations/Maintenance: Not-for-profit and trail organizations maintain trails on lands they own, on privately held lands via an agreement with the owners, and on various public lands. Maintenance agreements range from formal agreements, such as management of the AT to informal assistance from friends groups, such as the Green Lakes Friends Group; and individual volunteer efforts. An Adopt-A-Trail program provides a formal means of establishing partnerships between state agencies and local governmental entities and trail organizations for maintenance of specific trails.

Funding: The private sector has the ability to directly raise funds for projects, apply for various grants, assist with negotiations and direct funding, provide in-kind and monetary match for grants, and donate land and resources. In some cases, not-for-profits are able to move faster than a governmental body to advance a project, such as an acquisition of a piece of land which would otherwise be lost. They also have the ability to advocate for funding, legislation and other support.

Technical Assistance: Not-for-profit and trail organizations play an important role in providing technical assistance and disseminating information about various aspects of development, including acquisition, design, construction, maintenance, and management. This is accomplished through training manuals, workshops, conferences, inventories, informational brochures, and maps.

Implementation

There are a number of issues and needs relative to trails in New York State. The following list summarizes accomplishments over the past 5 years and outlines the goals and actions for the next 5 years. In order to work towards the statewide trails vision, a variety of local, state and federal agencies in partnership with one another, trails user groups, academic institutions and/or the private sector will be responsible for carrying out these goals and actions.

Goal

Encourage federal and state funding and program initiatives that enhance trail and other recreation opportunities for the public.

Accomplishments

- The EPF, funded at $225 million a year, now contributes more than $50 million annually to the conservation of priority projects identified within the Open Space Conservation Plan.
- $224 million have been received from the LWCF to be utilized for state and municipal recreation projects.
- $12.7 million through the Recreation Trails Program (from 1993 and 1996-2007) has funded 247 trail projects statewide.
- 260 miles of trail exist along the Canalway Trail.
- 675 miles of riverside community trails, bike routes and water trails exist within the Hudson River Valley Greenway Trail System.
- Four heritage trails have been developed and the development of two more is underway.
- Legislative bills have been proposed to strengthen the General Obligation Law.
- The snowmobile fund supports the maintenance and development of 11,000 miles of snowmobile trails statewide.

Actions

- Continue to fully fund the EPF.
- Provide for a separate funding category within the EPF for trails.
- Encourage the federal and state governments to increase funding for outdoor recreation.
- Work towards the reauthorization of the LWCF.
- Work towards continued and increased funding of motorized and non-motorized trails projects, scenic roads and other eligible trail and historic transportation projects through the Transportation Enhancements, Recreational Trails Programs and other funding programs provided through the federal transportation bill.
- Give priority to projects through the grant rating systems to reflect specific needs such as the need for the acquisition and development

of new trails and the protection of existing trails within areas experiencing rapid growth.

- Support and recognize the efforts of adopt-a-trail programs, friends groups and volunteers and expand their involvement in the maintenance, management and development of trail resources.
- Create and distribute educational materials for landowners concerned about liability and trespassing.
- Continue efforts through constituency groups to strengthen, as needed, provisions of the General Obligations Law, to protect landowners who allow responsible public recreational use of their lands.
- Update liability statutes to establish hold-harmless mechanisms, whereby the State underwrites a landowner's defense against personal injury suits and assumes costs for property damage and littering from public use.
- Provide incentives for landowners who allow responsible public use of their lands.
- Strengthen enforcement of trespass, littering and dumping laws.
- Encourage the acquisition of trail corridors through willing sellers.
- Support user based fee initiatives for snowmobile trails.
- Create regional advisory groups comprised of local governments, trail interest groups and other interested parties to coordinate and promote the development of regional trail systems.
- Annually convene an interagency working group to provide input on trail planning for New York State and coordinate trail development, operation, maintenance and promotion across al applicable state and federal government entities.

Goal

Strengthen the State Trails Planning and Development Program.

Accomplishments

- OPRHP has initiated the Statewide Trails Plan updating process.
- An Empire State Trails booklet has been produced that identifies trail opportunities on OPRHP and DEC lands and highlights selected trails throughout the State.
- A statewide snowmobile trails map is now produced every 2 years.
- The snowmobile plan for the Adirondack Park has been completed.
- Comprehensive trail plans are being prepared for Sterling Forest®, Trail View State Parks.
- Trails are being planned along the Robert Moses, Palisades, Bethpage and Ocean Parkways.
- Trail organizations are being included within the master planning process of State parks and the unit management planning initiative for DEC lands.
- 300,000 acres in fee title and easements have been acquired by OPRHP and DEC that provide trail opportunities.
- Sharing of GIS data has expanded the ability to obtain geographic information on trail corridors.
- Planning and development is continuing for the NCNST through the Adirondack Park.
- OPRHP has begun the development of a statewide trail inventory that will store data on local, regional, statewide and interstate (long distance) trails.
- OPRHP has started collecting data using Global Positioning System (GPS) units on trails within the State Park System.
- OPRHP is in the process of updating their rails-to-trails inventory.
- OPRHP has conducted a trails survey of trail maintainers, local municipalities and State Park managers.

Actions

- Continue to develop and maintain a statewide inventory of trails and recreationways.
- Update the Statewide Trails Plan every 5 years.
- Encourage public involvement in the planning and development of trails.
- Secure the public use of trails through the purchase in fee title or easements by state and local governments of trail corridors.
- Encourage the use of easements to maximize available funds.

Goal

Strengthen stewardship of the State's trails systems.

Accomplishments

- Formal agreements exist with trail organizations to maintain various trail systems such as the Finger Lakes Trail, North Country National Scenic Trail, Long Path, AT and various trail systems within OPRHP and DEC lands.
- Friends groups have been formed to assist with trail planning, development, and maintenance at various state parks such as Grafton Lakes State Park.
- A Snowmobile Trail Management Manual has been produced.
- Over 11,000 miles of snowmobile trails have been established and are maintained using state funds.
- DEC's Adopt-a-Natural Resource (AANR) program has involved numerous individuals, groups, and organizations in a variety of stewardship activities across the State. A number of projects have been advanced through DEC's AANR program.
- 296 miles of Hudson River Valley Greenway Walking trails have been designated.
- The Canalway Trails Association New York (CTANY), a voluntary organization dedicated to the completion and proper maintenance of the Canalway Trail, was established. CTANY acts as a coordination and communication group for Canalway Trail stakeholders, including State

agencies, local municipalities, civic organizations, individual volunteers and trail users. In cooperation with the Canal Corporation, CTANY also organizes and guides the Canalway Trail Adopt-A-Trail program.
- A draft State Park System Trail Signing Manual is being prepared that provides guidance to State Park managers on how to properly mark and sign trails within State Park facilities.

Actions

- Assess the trail conditions on public lands and develop a comprehensive program for management and protection.
- Support and recognize the efforts of adopt-a-trail programs, friends groups and volunteers and expand their involvement in the maintenance, management and development of trail resources.
- Foster partnerships or friends groups to help promote and maintain local trail systems.
- Encourage trail users to join trail organizations and friends groups.
- Develop a "Trail Management Manual" that incorporates policies, guidelines and standards for the planning, construction, operation and maintenance of trail systems.
- Improve trail information and signage to include accessibility information and multiple language text.
- Finalize the State Park Trail Signing Manual.
- Develop a unified Adopt-a-Trail Program that applies to OPRHP, DEC and Canal Corporation.

Goal

Encourage coordination of trail planning and development across lines of political jurisdictions, agencies and levels of the government.

Accomplishments

- Interagency efforts have been or are underway for various trail projects and planning processes that involve trails such as: the Sterling Forest®, Bethpage and Allegany State Parks Comprehensive Trails Plans and trail development along the parkways.
- A bi-state and international bikeway has been developed along the shores of Lake Champlain.
- The Niagara River Greenway Plan has been completed and adopted.

Actions

- Integrate trails into the regional, state and local planning processes, including zoning.
- Establish a federal and state interagency forum and encourage interagency efforts in trail planning and development.
- Improve intermodal transportation facilities to support trail user needs and improve accessibility.
- Encourage partnership agreements between trail user groups, private and not-for-profit organizations, and land management agencies to enhance or develop new trail opportunities.

Goal

Strengthen communication and cooperation among all types of trail users and providers.

Accomplishments

- The New York State Trails Council has been expanded to include more trail activities; produced a brochure; continues to be a forum to discuss major trail issues and take appropriate action; and functions as the trails organization for the Recreation Trails Program.
- Parks and Trails New York hosted its third Statewide Greenways and Community Trails Conference and published the 2nd edition of "Cycling the Erie Canal Guidebook".
- The Canal Corporation published the 3rd edition of the "The Cruising Guide to the NYS Canal System".
- OPRHP and Parks and Trails New York collaborated on and conducted a survey of trails organizations that maintain publicly accessible trails to help identify trail issues that need to be addressed in the Statewide Trails Plan update.
- The Governor issued a proclamation identifying the annual National Trails Day as the New York State's Trails Day.

Actions

- Improve recreation user education programs that focus on appropriate trail etiquette, use and maintenance.
- Maintain the New York State Trails Council to function as a forum to discuss trail related issues.
- Promote trail etiquette on trail systems, support facilities, and user groups.
- Promote trail use as a health benefit.
- Develop and disseminate a directory of trail organizations.
- Encourage growth of the New York State Trails Coalition.

Goal

Advance the development of a statewide system of interconnected trails and greenways and provide access to them.

Accomplishments

- Various trail initiatives are being advanced to link communities and trails such as: bikeways along the Robert Moses, Bethpage, Lake Ontario, Palisades, and Ocean Parkways; the Black Diamond Trail; the Catharine Valley Trail; the Black River Trail; the Hudson River Valley Greenway Trail System; the Hudson River Greenway Water Trail; the Genesee Valley Greenway; the Canalway Trail; and, the Harlem Valley Rail Trail.

Actions

- Support trailway connections between urban and town centers, rural communities and places where people work or recreate. Include information about health improvement when advocating for trail connections to town and urban centers.
- Revise the Statewide Trails Plan.
- Assess the use of abandoned railroad lines in developing regional and statewide trail systems.
- Enhance trail connections and access to parks, historic sites, greenways, water routes, interpretive centers and other natural and cultural resources. Include health benefits when promulgating actions that will increase access.
- Encourage the development of community trails and their linkage to the statewide systems.
- Identify and coordinate linkages to long-distance land and water based trail systems in the State.
- Assess the potential use of parkway greenbelts, rail roads, utility rights-of-way, canals and other transportation systems in the development of shared use trails.
- Ensure maintenance of critical transportation systems that are part of a trail system, i.e. road shoulders and sidewalks.

Goal

Conduct research and education to improve the quality of user experiences and enhance resource protection.

Accomplishments

- GIS and Global Positioning System (GPS) units are being utilized by state agencies, trail organizations and volunteers collect better quality trail data such as location, surface material and trail/road intersections. Geographic Information Systems (GIS) are being used to map trails and make trail information more accessible to the public.
- The International Mountain Biking Association's (IMBA) Trail Care Crew, conducted a series of trail building workshops for State Park and DEC staff that develop and maintain trails on state land.
- The State's Natural Heritage Database has expanded during trail planning and design.
- A series of trail maps using GPS data is being developed for State Parks.
- A literature review has been conducted on the economic impacts of trails.

Actions

- Utilize technologies such as GIS and GPS to improve the gathering, analysis, and dissemination of geospatial data.
- Monitor trends in trail activities through surveys, registrations, sales figures, and the experiences of other states.
- Establish a clearinghouse for maps, plans, design standards and other trails information, highlighting the statewide land and water trailway system and neighboring states.
- Develop case studies on innovations and model demonstration projects.
- Sponsor workshops and educational programs on trail liability, accessibility for people with disabilities, trail design standards, maintenance and similar topics. Include health benefits of increased exercise as part of these workshops.
- Seek innovative solutions to foster multiple uses of trails.
- Collect, analyze and interpret data related to the primary and secondary economic benefits of trails.
- Continue the development of State Park trail maps utilizing GPS data.
- Establish a standardized trail count protocol that can be applied to multiuse trails throughout the state.
- Conduct economic impact study of trails and establish a model for other trail managers to use.

Goal

Increase public awareness of New York State's trails and greenway corridors and their economic, social, health, educational and environmental benefits.

Accomplishments

- National Trails Day/New York State Trails Day events were held across the State.
- An Empire State Trails booklet was produced that identified trail opportunities on OPRHP and DEC lands and highlights selected long distance trails.
- Official map and guide brochures have been produced for public lands in the Adirondack and Catskill Parks.
- OPRHP has begun development of a Statewide Trails Inventory database that will ultimately be used by the public to access trail information.

Actions

- Promote trail benefits and educate user groups to strengthen support for trail development and maintenance.
- Continue to develop and maintain a statewide inventory of trails and recreationways.
- Compile a bibliography on trails within New York State.
- Foster citizen participation in National Trails Day/New York State Trails Day activities or other events which encourage recognition and publicity of trails and trail projects throughout the State.
- Develop articles and multimedia presentations on trail benefits and opportunities for local media and civic organizations.
- Recognize opportunities for volunteers to initiate and participate

on trail projects and reward their accomplishments.
- Foster trails as an economic asset to the State and local communities, enhancing tourism.
- Promote trails in statewide and regional tourism campaigns.
- Develop a designated Trails website that includes information on the statewide system of trails on the OPRHP's website.
- Create a system of signage for trails along highways and state roads in partnership with NYS DOT.

Goal

Provide and improve trail systems for persons with disabilities.

Accomplishments

- Proposed accessibility guidelines for trails have been developed.
- Access Coordinators have been designated to educate staff on the trail guidelines and accessibility requirements.
- Staff from DEC and OPRHP have participated in Universal Trail Assessment Process (UTAP) training and support training programs to encourage the use of this process to identify access opportunities.
- DEC has constructed new accessible trails at locations across the state, including Little Pond Campground in the Catskills, Stony Kill Environmental Education Center, Lampson Falls in the western Adirondacks and Nelson Swamp in Central New York.
- OPRHP is developing new trailhead signs that provide information to the user about trail conditions, elevation changes, slopes, surfaces, etc, so that users of all abilities can make informed decisions about trail use.
- Parks and Trails New York has hosted three Universal Trails Assessment Process (UTAP) training programs, training 50 individuals so far.

Actions

- Conduct assessments of trails for accessibility.
- Improve current trail systems to increase accessibility.
- Encourage partnerships and continue education to improve trail accessibility.
- Direct efforts to prioritize assessments in areas of the state where there is either an accessibility-expectant population or a variety of hiking opportunities accompanied by a lack of accessible trails.
- Provide more information about the condition of trails at trailheads and through maps/brochures for users to make appropriated decisions.
- Conduct "train the trainer" workshops so that more UTAP training can be offered statewide.

Greenways

Greenways represent a broad spectrum of connectors for people and wildlife ranging from Genesee Greenway to the Hudson River Valley Greenway. Each greenway has a unique set of parameters, objectives and administrative structure. Therefore, each greenway is self defining with an overall objective of connecting people and places for a better quality of life.

Genesee Valley Greenway

The Genesee Valley Greenway is a linear corridor that follows the path of the former Genesee Valley Canal (1840-1878) and Pennsylvania Railroad, Rochester Branch (1882-1963), passing through five counties (Monroe, Livingston, Wyoming, Allegany, and Cattaraugus), seventeen townships, and several villages. Presently, there are 60 of its 90 miles that are open To the public.

It passes through scenic woodlands, river and stream valleys, rolling farmlands, steep gorges, and historic villages. As with most of these efforts, development of the Genesee Valley Greenway is being accomplished by local citizens, user groups, governments, and businesses working in partnership to create a resource that will:

- preserve a corridor of significant natural and historic features
- link local and state parks, cultural attractions, historic sites, quaint villages, and major educational institutions and state trail systems
- provide year-round educational, recreational, environmental, and economic benefits for the region
- complement regional efforts to improve water quality, increase tourism, and ensure natural, historic and cultural resource protection

The concept of a Genesee Valley Greenway was introduced to the region by the New York Parks and Conservation Association (NYPCA) (now Parks and Trails New York (PTNY)) in 1991 after Association personnel first established a positive level of interest among local government officials, user groups, environmentalists, and the business community. Under the direction of a 40-member steering committee and an NYPCA Local Coordinator, individual sections of the Greenway Trail were opened for public recreational use beginning in 1992. The Friends of the Genesee Valley Greenway, Inc. grew out of the interest and enthusiasm for the project generated by the initial trail development efforts.

The Greenway is owned by the City of Rochester, OPRHP and DEC. The Friends Group, in cooperation with the City, OPRHP and DEC are responsible for management and maintenance of the trail and support facilities. The Friends Group assists in marketing the Greenway and securing volunteers. A partnership agreement exists between the Friends of the Genesee Valley Greenway, DEC and OPRHP. This

agreement outlines the responsibilities of the three "Partners" in the management and operation of the Greenway outside of the City of Rochester. The City operates and maintains its portion of the Greenway trail.

The management and operation of the remainder of the Greenway is guided by a Draft Management Plan developed by the "Partners". This management plan developed a vision and series of management goals for the Greenway.

Vision

The Genesee Valley Greenway is a natural and historic transportation corridor that will be preserved for and used by the public.

Management Goals

- Public Use
  - Provide the public with recreational experiences (opportunities for walking, hiking, jogging, bicycling, horseback riding, nature observation, snow shoeing, cross country skiing, and snowmobiling) involving the natural and historic character of the Greenway corridor
  - Increase access to and encourage recreational use of the Genesee River
  - Provide access to other public resources
  - Interpret the local and natural history of the Greenway corridor
- Community Resource Protection
  - Protect, preserve, promote, and link canal and other historic and cultural resources along the Greenway corridor
  - Protect, preserve and enhance natural resources and maintain habitat linkages in the Greenway corridor
  - Provide public outreach programs and educational opportunities
  - Provide a safe, alternative transportation route between and within communities
- Community Involvement
  - Stimulate economic development through promotion of tourism and Greenway trail-related businesses
  - Encourage and coordinate individual, group, and business contributions to Greenway development and enhancement
- Alternative Transportation
  - Provide a safe, alternative transportation route between and within communities
  - Link with other regional trail systems
  - Link with other transportation systems
- Staffing and Support
  - Provide staffing for development, operation and maintenance of the Greenway
  - Establish operating budgets in DEC and OPRHP
  - Establish capital funding within each agency's capital plan as appropriate
  - FOGVG will seek additional funding in support of the Greenway

Hudson River Valley Greenway

The Hudson River Valley Greenway is an innovative state-sponsored, voluntary program created to facilitate the development of a regional strategy for preserving scenic, natural, historic, cultural and recreational resources while encouraging compatible economic development and maintaining the tradition of home rule for land use decision-making. Through voluntary participation in the Greenway, communities in the Hudson River Valley can receive technical assistance and funding for local land use planning and implementation projects, trail development, and heritage promotion that support the goals of the Greenway program.

The Hudson River Valley Greenway Act of 1991 creates a process for voluntary regional cooperation among 320 communities within the Greenway area, which includes the counties of Saratoga, Washington, Rensselaer, Albany, Greene (outside the Catskill Preserve), Columbia, Ulster, Dutchess, Orange, Putnam, Rockland, Westchester and the waterfronts of The Bronx and Manhattan. The Act specifies five Greenway Criteria through which this goal can be achieved. The five criteria include: natural and cultural resource protection; regional planning; economic development; public access; and, heritage and environmental education. The Greenway works with local and county governments to enhance local land use planning pertaining to the five Greenway criteria, create a voluntary regional planning compact, promote the Hudson River Valley as a single tourism destination area, assist in the preservation of agriculture and, work with communities to strengthen state agency cooperation with local governments.

The Greenway is also charged with developing the Hudson River Greenway Trail System from the Adirondack Park in northern Saratoga County, and Lake Champlain in Washington County to

Table 5.2 - Hudson River Valley Greenway Trail System

Riverside Trails:	251.6 miles
Countryside Corridors/Connector Trails:	54.7 miles
NYS Bike Route 9:	147.0 miles
Hudson River Greenway Water Trail:	256.0 miles
Hudson River Valley Greenway Trail System Total:	709.3 miles

Manhattan. The trail system includes a water trail, a bicycling trail and a walking trail, The Greenway supports community trail initiatives in the development of a regional trail system. The Greenway offers an annual competitive small grant program to fund trail projects including trail planning and design, trail construction and rehabilitation and trail interpretation and education. The goal of this grant program is to help local trail groups and municipalities implement community trail systems and develop new segments of the Greenway Trail.

There are currently 709.3 miles of various types of trail that comprise the Greenway Trail System (See Table 5.2).

In April 2001 the Hudson River Valley Greenway was awarded $1 million to develop a Hudson River Greenway Water Trail stretching from the Adirondack Park in the Town of Hadley, Saratoga County and from Whitehall, Washington County to Battery Park in Manhattan (256 miles). The Hudson River Greenway Water Trail has established canoe/kayak access points at least every 10 miles on each bank of the Hudson River. Campsites will be established at least every 15 miles along the Hudson River. The Water Trail includes on site interpretive centers and kiosks, parking and restroom facilities, potable water, and information on local and historical and cultural attractions depending upon the specific site location. Currently some 86sites are designated as part of the Hudson River Greenway Water Trail.

Niagara River Greenway

The Niagara River Greenway is a world-class corridor of places, parks and landscapes that celebrates and interprets our unique natural, cultural, recreational, and scenic and heritage resources and provides access to and connections between these important resources while giving rise to economic opportunities for the region. This Vision Statement has guided the development of the Niagara River Greenway, a regional planning initiative established by state legislation in September 2004. The legislation defines the Greenway as a linear system of state and local parks and conservation areas linked by a network of multi use trails within the established greenway area in Erie and Niagara counties. The stated purpose of the Greenway is to enhance waterfront access and complement economic revitalization of the communities along the river.

The Niagara River Greenway Commission was charged by the Legislature with developing a plan that includes:

- an inventory of existing parks and other lands under the jurisdiction of state agencies, public corporations and municipalities which may contribute to the purposes of the Greenway
- identifying other lands that through acquisition, dedication or redevelopment may contribute to the purposes of the Greenway
- identifying existing plans and plans under development that can contribute to the purposes of the Greenway
- considering how the region's industrial heritage can be celebrated and reflected along the Greenway
- recommending how the Greenway could be linked to upland and interior communities in order to promote linkages to the river
- considering how existing and proposed economic development activities in proximity to the Greenway can support and complement the Greenway
- identifying ways for the Commission to work cooperatively with municipal, state and federal agencies, the province of Ontario and nation of Canada, public and private corporations, not-for-profit organizations, and private property owners to advance and complement the purposes of the Greenway
- recommending how portions of the Greenway would be managed including a plan for ongoing operation and maintenance that would make the Greenway self-supporting

The Niagara River Greenway Plan, adopted in April 2007, establishes a Greenway boundary that follows municipal lines, emphasizing a regional approach that focuses on the concept of a Greenway as an organizational structure for economic development and tourism. The Plan establishes the foundation that guides collective decision-making for the Greenway, so that all stakeholders will have a sense of how their specific actions contribute to the whole. The vision for the Greenway will become a reality through hundreds of incremental steps and individual actions. The Plan identifies criteria for evaluating and forming projects and activities within the Greenway in an effort to guide project development and design. The criteria will help sponsors determine if a project submitted to the Commission contributes to the Greenway and is consistent with the principles, priorities, focus area and economic vitality as set forth in the Plan. Projects may be eligible for funding through various State and Federal programs, as well as private foundations.

Five high-priority system-wide concepts that will help promote implementation of the Niagara River Greenway are identified as:

- Gateway Identification
- Accessing, Experiencing and Connecting to the River
- Protecting, Preserving , and Restoring Important Ecological Features
- Linking Special Places and Destinations
- Heritage Tourism and Economic Revitalization

East Coast Greenway

The East Coast Greenway is the nation's first long-distance urban trail system; a city-to-city transportation corridor for cyclists, hikers, and other non-motorized users. By connecting existing and planned trails, a continuous, safe, green route 3,000 miles long is being formed linking Calais, Maine at the Canadian border with Key West, Florida. It incorporates waterfront esplanades, park paths, abandoned railroad corridors, canal towpaths, and highway corridors, and in many areas it temporarily follows streets and roads to link these completed trail sections together. (ECGA, 2008)

When completed, the East Coast Greenway in New York will follow two separate routes, (Eastern & Western) which both end in downtown Manhattan. The route uses New York's Waterway ferry service to connect to the New Jersey section of the Greenway. The two routes are in various stages of completion using completed trail sections of the New York City Greenway System, Parkway trails, Westchester County Trail System and on-road sections.

Chapter 6 - Sustainability

Human consumption of natural resources is depleting and degrading many resources faster than Earth's natural systems can replenish them. Sustainability is an approach that protects the natural systems of the planet while achieving economic prosperity, protecting the public health and social well-being.

By preserving and protecting ecosystems and natural systems, sustainability is the capability of equitably meeting vital needs of the present without compromising the ability of future generations to meet their needs. Sustainability requires the equitable distribution of resources and the empowerment of individuals to participate in decisions that affect their lives.

Climate Change

When energy from the sun reaches earth, roughly 30 percent of it is reflected back into space. The remaining 70 percent is absorbed by the land, air, and oceans, heating our planet's surface and atmosphere and making life on earth possible. As earth's surface warms, it emits thermal radiation, or infrared heat, much of which travels directly out to space allowing earth to cool. Heat-trapping gases such as carbon dioxide, nitrous oxide and methane, called greenhouses gases (GHGs), naturally occur in the atmosphere. Some of the outgoing thermal radiation is re-absorbed by these GHGs and is re-radiated back toward earth's surface. This is known as the Greenhouse effect. If there were not GHGs in the atmosphere, Earth's average surface temperature would be a very chilly 0° F instead of the comfortable 59° F that it averages today.

The burning of fossil fuels such as coal, oil and gas, for energy, transportation, heating and cooling of buildings, and for manufacturing, have resulted in an increase in the levels of carbon dioxide and other GHGs. In the last 100 years humans have increased CO2 levels from the pre-industrial concentrations by more than 35 percent -280 parts per million to 380 parts per million. In 2004, human activities released over 8 billion tons of carbon dioxide into the atmosphere. Millions of pounds of methane are also produced by decomposition in landfills. Use of nitrogen-based fertilizers and other soil management practices also contribute to the release of nitrous oxide into the atmosphere. (Riebeek, 2007)

Climate change is considered the most pressing environmental problem of this century. Many scientists have concluded that the earth's atmosphere is warming due to increased concentrations of GHGs. The Intergovernmental Panel on Climate Change (IPCC) states that climate change, associated with the increased levels of GHGs in the atmosphere is "unequivocal" and may bring abrupt and irreversible impacts to the earth's natural systems which support life on earth.

A recent collaborative effort between the Union of Concerned Scientists and a team of independent experts – the Northeast Climate Impacts Assessment (NECIA) team published "Confronting Climate Change in the Northeast: Science, Impacts and Solutions" (NECIA, 2007). The report looked at two emission scenarios – a high emissions scenario – where use of fossil fuels and resulting emissions continued to grow rapidly and emission reducing technologies are not introduced until late in the century and a lower emissions scenario whereby society relies less on fossil fuel and adopts more resource efficient technologies earlier in the century.

Most scientists conclude that emissions must be reduced by 75-80 percent below current levels by 2050 to reduce the substantial adverse impacts of global climate change on natural systems. To put the Northeast region on track to achieving this goal, NECIA indicated that a concerted, sustained effort to reduce emissions by just over 3 percent per year on average by 2030 is necessary.

Impacts to the Northeast

Changes consistent with climate change, such as rising temperatures, decreasing snow cover and earlier arrival of spring are already being experienced in the Northeast.

Temperature and precipitation

Since 1970 average temperatures in the Northeast have increased 1.5 degrees Fahrenheit (° F) with winter temperatures warming 4ºF from 1970-2000 (NECIA, 2007).

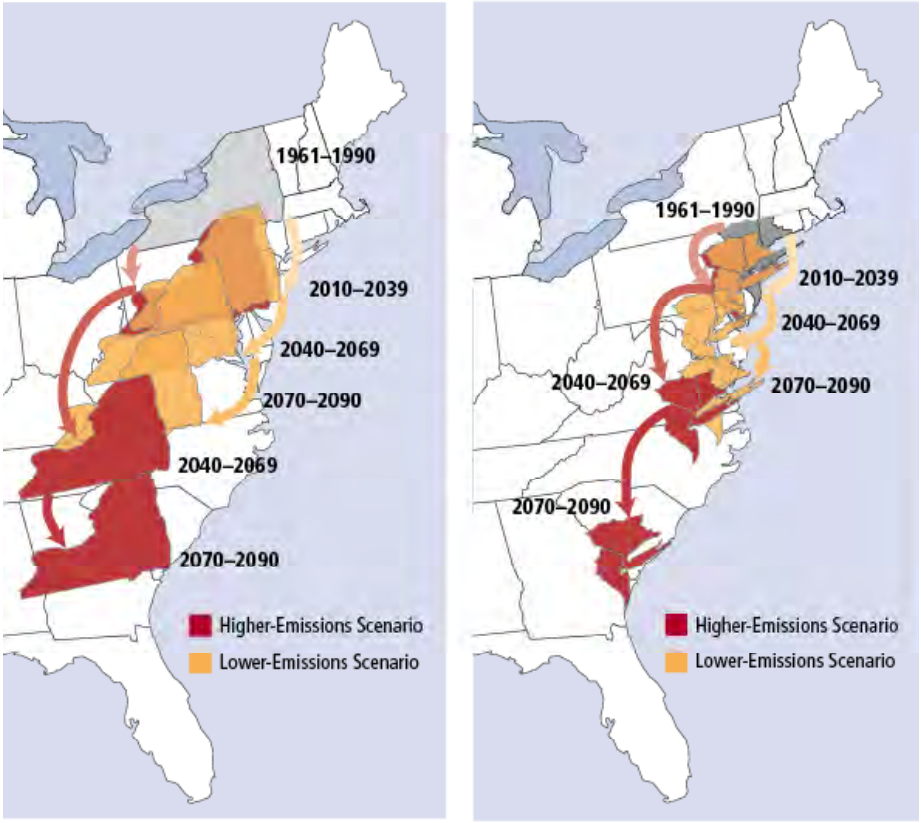
Unlike many regions of the world, winter precipitation in the Northeast is projected to increase 20 to 30 percent, but this precipitation may just be rain – not snow. If the lower emissions targets can be met the Adirondack region will be able to retain roughly three-quarters of its snow season. Under the higher emission scenario the Adirondack region snow season could be cut in half.

Due to rising summer temperatures and higher rates of evapotranspiration, the frequency of short-term droughts is

projected to increase. Historically the Catskills and Adirondack regions have such droughts every two to three years. Under the higher emissions scenario, by the end of this century these droughts are expected to occur annually.

As the current rate of warming accelerates, Albany, NY is predicted to have the climate of Washington, D.C., by 2050 and the climate of Richmond, VA or Atlanta, GA by the end of the century (Adirondack Museum, 2007).

It is not unlikely for New Yorkers to see an increasing number of extremely hot days. For example under the higher emissions s scenario, by the end of the century New York City could have approximately 25 days over 100 ° F, with only seven if emissions reduction targets can be met under the lower emissions scenario. An increase in extremely hot days is expected to worsen air quality, resulting in increases in associated respiratory diseases and conditions.



Upstate New York *NYC- Tri-State Region*

Source: "Confronting Climate Change in the US Northeast: Science, Impacts and Solutions"; Northeast Climate Impacts assessment Synthesis Team; July 2007.

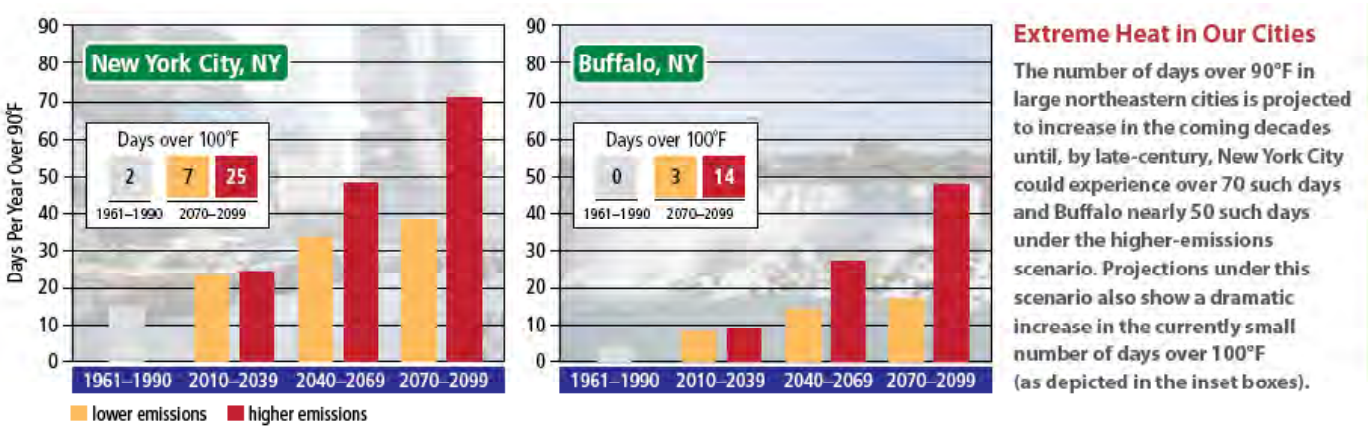
Figure 6.1 - Migrating State Climates

Sea Level Rise and Coastal Flooding

Over the last 100 years melting ice caps has caused a sea level rise of 7 inches. Under the higher emission scenario, by the end of the century global sea level is expected rise between an additional 10 inches to two feet. If recommended emission reduction targets are met sea level is still projected to rise between 7 and 14 inches (UCS, 2007).

There have been an increasing number of heavy and damaging rainfall events in recent years. The severity and frequency of heavy rainfall events is expect to increase, resulting in significant negative impacts to 1) infrastructure, such as roads, trailways and buildings, and 2) natural systems, such as stream corridors and wetlands. Under the higher emissions scenario, floods in New York City that are currently anticipated to occur every 100 years will be anticipated to occur every 10 years.

In addition to coastal homes and business being threatened, sea level



Source: "Confronting Climate change in the US Northeast: Science, Impacts and Solutions"; Northeast Climate Impacts Assessment Synthesis Team; July 2007.

Figure 6.2 - Temperature Change in our Cities

rise can adversely affect the delicate life of the ecologically rich Long Island salt marshes and Hudson River estuary which act as feeding grounds for migratory waterfowl and other birds and a nursery for many fish species.

Ecosystems and Biodiversity

All species rely on the continuation of environmental conditions to which they are adapted. Climate change will impact ecosystems- the dynamic complex of plants, animals, microbes and physical characteristics that interact with each other. Ecosystems are critical for sustaining life on earth and provide many services such as erosion control, water purification, recreation, habitat and marketable products such as seafood and forest products.

With the warming that accompanies climate change, the distribution of terrestrial ecosystems will change as plants and animals follow the shifting climate. In NY many of the deciduous tree species, such as maples, will shift northwards; this will have an effect on the maple syrup and other timber industries in the state. Other farming crops will see changes in the length of the growing season.

Biodiversity will be affected as plants and animals that can't migrate fast enough will face dwindling numbers and extinction (Riebeek, 2007). Climate change will also trigger the expansion of invasive species into wider ranges, as changes in species composition is often associated with changes in temperatures and precipitation. Shorter milder winters will fail to kill insects, increasing the risk of infestations, possibly leading to a need for additional chemical pesticide use. This, along with documentation showing that seasonal events such as egg laying and flowering of plants have been occurring 2-3 days earlier in each decade in the Northeast, shows that the climate has warmed and additional changes are expected.

Management objectives and practices for both managed and natural landscapes will have to be reevaluated. Ensuring environmental sustainability will become more urgent because the deterioration of life support systems imposes a time limit. The future depends on the ability to sustain healthy natural systems and restore those that are degraded.

Impact on Recreation and Recreation Facilities

Global climate change and the resulting effects on the environment impact recreation.

The anticipated sea level rise, increased coastal flooding, loss of wetlands, erosion and shoreline change will require adaptations by waterfront park managers and users. A rise in sea levels, will impact beach related activities and support facilities.

New facilities being considered will need to take into account these changing situations within their design and location. Recreational activities associated with natural resources such as fishing, bird watching and the study of nature will be affected as the habitat that supports these activities changes. Warmer winters with less snow will impact winter activities such a skiing, snowmobiling, sledding and ice fishing. Managers of historic sites will also need to evaluate the impacts that climate change and associated impacts may have on the environmental setting, especially historic landscapes.

Climatic changes will also impact how people recreate and their frequency of participation. Summer recreational activities will have a longer season as the climate warms, while shorter winters will curtail opportunities for winter recreational activities. These changes will impact operations of park and recreational facilities. Planning by facilities will need to take place to prepare for changes that may occur to participation in recreational activities.

Strategies for Enhancing Sustainability

The growing concern about climate change has resulted in a new movement towards the adoption of policies, practices and procedures that reduce the use of fossil fuels thus reducing GHG emissions. This effort must comprehensively promote the use of renewable and energy efficient technologies, environmental and energy efficient building design, waste reduction and recycling, fuel efficient vehicles, water conservation and chemical use reduction. It must also address the procurement of environmentally preferable products as well as undertaking carbon sequestration strategies, like tree planting and forest conservation, to off-set our remaining carbon emissions. The extent of the change and thus the choices made today will determine the climate our children and grandchildren inherit, and shape the consequences for their economy, environment, and quality of life (Riebeek, 2007; UCS, 2007).

The sustainability movement has become somewhat synonymous with the desire to be "green." In today's market one will find the ability to purchase "green" power, "green" furniture, "green" flooring "green" vehicles and design, renovate and build "green". The growing awareness of society's consumption of fossil fuels and the continued escalation of energy prices is expanding the use and development of "green" technology and creating a "green" market. The "green" movement will ensure environmental sustainability or the long term maintenance of valued environmental resources that support life systems. This transition to sustainable practices is urgent because

the deterioration of global life support systems is already occurring.

As a major emitter of GHGs, and as a global leader in technology, innovation and finance, NECIA indicates that the Northeast is well positioned to drive national and international progress in reducing emissions and ensuring the environmental sustainability of the region's recreation, manufacturing, transportation and natural systems.

Executive Order 111 (EO. 111), issued in 2001, "Green and Clean" State Buildings and Vehicles is the most aggressive and comprehensive directive issued in NYS to address energy use and environmental issues through state government procurement standards and design practices. EO.111 mandated that all state agencies reduce energy usage, follow green building standards during new construction or substantial renovation projects, procure energy-efficient products, purchase power from renewable sources, and procure clean-fuel vehicles. The Executive Order includes specific target quantities and dates for each item. To assist State agencies in developing detailed implementation plans and to help direct future projects, guidelines were developed in 2004 by the New York State Energy, Research and Development Authority (NYSERDA).

Other State policies and Executive Orders promote energy conservation, the use of renewable energy, recycling and the use of green cleaning products. The overarching goals of the Agency's sustainability initiative are to reduce greenhouse gas emissions by reducing the use of fossil fuels, reducing our energy demand, increase the use of clean renewable energy sources, while reducing waste, water use and the use of toxic chemicals.

Green Technology

"Green technology" is the application of science to conserve natural resources and the environment, including mitigation of the amount of GHGs and the effects of global climate change. Through policy, research, education, incentives, and innovative relationships with industry, government can play a central role in building a green future.

Green Energy-

(Renewable and Energy efficient technologies)

Energy is one of the most urgent technological subject areas, one that includes the development of alternative fuels and renewable methods of generating energy as well as methods of reducing energy use and increasing energy efficiency. For its energy needs, the United States currently relies heavily on fossil fuels (petroleum, coal, and natural gas), which are nonrenewable, environmentally damaging and draw on dwindling resources.

This heavy reliance on nonrenewable energy is not sustainable because fossil fuel use affects the ability of future generations to use those resources. Their use also results in the emissions of GHGs which are affecting earth's climate and resulting in negative impacts on natural systems which support life on earth. In contrast, renewable energy resources are constantly replenished. The use of renewable forms of energy helps to reduce concentrations of GHGs in the atmosphere and contributes to more stable local economies by reducing dependence on energy sources with an uncertain future.

EO. No. 111 mandated that State entities purchase a significant portion of their electric power from clean, renewable generating sources. By 2005 10 percent of the overall annual electric energy requirements of buildings owned, leased or operated by State agencies must be met by clean, renewable generating sources, increasing to 20 percent by 2010.

The mandate to purchase renewable power can be meet in the following ways:

- on-site generation of all renewable power requirements;
- a mix of on-site generation and open-market electricity procurement to meet the renewable power requirements; or
- the purchase of all renewable-power requirements from the open market.

Renewable energy sources can include:

- Solar: Solar energy comes either directly or indirectly from the sun. Sunlight, or solar energy, can be used directly for heating and lighting buildings, generating electricity, heating water, solar cooling, and a variety of other uses. Also referred to as photovoltaic.
- Wind: Energy from wind is captured using wind turbines.
- Biomass: The organic matter that makes up plants is known as biomass. Biomass can be used to produce electricity. The use of biomass for any of these purposes is called biomass energy.
- Hydrogen: Hydrogen is the most abundant element on the earth. But it doesn't occur naturally as a gas; it is always combined with other elements, such as with oxygen to make water. Once separated from another element, hydrogen can be burned as a fuel or converted into electricity.
- Geothermal: Energy stored within the earth has a variety of uses, including electric power production and the heating and cooling of buildings.
- Ocean: earth's oceans can produce thermal energy from the sun's heat and mechanical energy from the tides and waves.
- Hydropower: Flowing water creates energy that can be captured and turned into electricity. This is called hydroelectric power or hydropower.

Alternative-Fueled Vehicles & Energy Star Equipment

With the transportation sector accounting for more than a third of New York's energy usage it is essential that the state continue its efforts to obtain vehicles and equipment that are energy efficient, use clean renewable fuels and are practical for operations.

EO. 111 mandated that by 2005 at least 50 percent of new light-duty vehicles acquired by state agencies be alternative-fueled vehicles, and by 2010, 100 percent of all new light-duty vehicles shall be alternative-fueled vehicles.

Also under EO 111 State agencies are mandated to select ENERGY STAR® energy-efficient products when acquiring new energy-using products or replacing existing equipment.

Buildings -

(Environmental and energy efficient building design)

Buildings consume more energy than any other sector of our economy – including transportation and industry. More efficient use of energy, environmental, and human resources in design and construction of buildings make sense. Building "green", in either new construction or when renovating, can be cost effective. NYSERDA indicates that a one-time investment premium of less than 1% of first costs can increase energy efficiency over standard building code practices by 20-30%.

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is the nationally accepted benchmark for the design, construction, and operation of green buildings, giving building owners and operators the tools they needed to improve a buildings' performance. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water conservation, energy efficiency, materials selection, and indoor environmental quality. To achieve LEED certification, a building project must meet certain prerequisites and earn credits within each category. Depending on the number of credits earned a building can be classified as Certified, Silver, Gold, or Platinum, This comprehensive approach is the reason LEED certified buildings have reduced operating costs, provided for healthier and more productive occupants, and conserved natural resources. (USGBC, 2007)

Zero-energy buildings, buildings that produce as much energy as they consume, represent the cutting edge of environmentally responsible construction. These buildings, which require state-of-the-art energy efficient construction and renewable energy systems such as solar and wind, are challenging to design and build but can offer comfort and amenities while reducing the building's impact on the environment. (NESEA, 2007)

Landscaping

Landscaping is the alteration of the natural landscape for the benefit of people by changing the physical and biological composition and character of the land and by building structures and amenities. Architects, landscape architects, designers and facility managers must eliminate or minimize impacts of landscaping on soil, water, vegetation and human health. "Green landscaping" minimizes the impacts to the natural landscape by eliminating or reducing the use of fossil fuels and chemical inputs and maximizes the use of natural features. Water conservation measures should keep water on-site through use of green roofs, rain gardens and rainwater for on-site irrigation. Planting should reflect and preserve native species.

The American Society of Landscape Architects recently released "The Preliminary Report on the Standards and Guidelines for Sustainable Sites", highlighting the many ways to enhance how sites can be designed to protect and enhance the ability of landscapes to provide services such as climate regulation, clean air and water, and improved quality of life (ASLA, 2007).

Purchasing -

(The procurement of environmentally preferable products)

Green purchasing involves the search for and procurement of products whose manufacturing, contents and disposal have the smallest possible impact on the environment. Such products can be made from recycled instead of virgin resources and eliminate or reduce the use of toxic materials. Environmentally Preferable Purchasing (EPP) is a federal program that encourages and assists agencies in the purchase of products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. Purchasing products with recycled content is crucial to sustaining recycling markets and aids in the development of technology that conserves resources and prevents waste.

Chemical Use Reduction

Green chemistry involves the invention, design, and application of chemical products and processes to reduce or to eliminate the use and generation of toxic substances. Chemicals and synthetic substances that do not easily break down are increasing in society, producing increased toxicity in ecosystems, water supplies, soil, food, the built environment, and human health. Pesticides, herbicides, insecticides and synthetic fertilizers accumulate in natural systems and in humans. The use of toxic chemicals and synthetic compounds should

be reduced or eliminated in construction and building materials, operations, products, and services.

Reduce, Reuse, Recycle, Rebuy

Reducing the production, amount, and toxicity of waste is the first and most important step toward efficient materials use. Reuse of products prolongs the useful life of materials, delaying final disposal or recycling. Recycling is the segregation, collection, storage, and removal of recyclable or compostable materials from the waste stream. Recycling minimizes waste generation by recovering and reprocessing usable products that might otherwise be disposed of. Creating products from recycled materials saves energy and resources, and can often generate revenue. Buying products with recycled content completes the recycling loop, sustaining recycling markets and conserves valuable natural resources.

Carbon Sequestration

Carbon is captured, or sequestered, when carbon dioxide in the atmosphere is converted into carbon compounds that are held in pools, stores or reservoirs on land or in water. These pools can be in the form of living plants (such as trees, which are roughly 50% carbon), products (such as lumber), or other living organisms on land or in water (such as soil and water microorganisms). A carbon sink occurs when more carbon dioxide is held in pools than is released into the atmosphere. The ocean is the world's largest carbon sink.

When forests accumulate and hold carbon, they act as carbon sinks. When forests are disturbed through harvest or conversion to other land uses, they are a source of carbon emissions. Forests account for the second largest source of carbon dioxide emissions globally but are also the most promising carbon sink. Forests store carbon in virtually all their components: soils, litter (forest floor), and understory growth, as well as trees. Forest soil carbon is a large, stable pool, accounting for about half of total forest carbon

Scientists are investigating trying to artificially sequester carbon by injecting carbon dioxide deep below the earth's surface. While extracting CO2 and storing it underground has been suggested as one potential long-term measure for addressing climate change, it has not yet been proven or shown to work on a large scale.

There are many options to offset GHG emissions, and carbon sequestration is just one potential tool.

Sustainability at OPRHP

As climate change and global warming continues to emerge as the central environmental issue of our time OPRHP must be a leader in demonstrating "green technologies." Parks are ideally poised to showcase how sustainability can be taught, planned for, implemented, and demonstrated. Parks are places of natural beauty and environmental integrity that have been afforded protection for generations to come. By planning for sustainability, parks can fulfill that vision as well as provide a medium for educating the public about ways that everyone can participate in sustainable practices. When everyone does their part to protect earth's natural systems from continuing degradation, then parks truly will be places of beauty and integrity for many generations.

OPRHP is advancing a new agency-wide sustainability initiative to complement the State Parks' existing "Green Program". OPRHP is working with over 20 agencies, organizations and businesses as partners in green solutions. Some partners include: U.S. Department of Energy (DOE), U.S. Environmental Protection Agency (EPA), New York State Energy Research and Development Authority (NYSERDA), NYS Department of Environmental Conservation (DEC), NYS Office of General Services (OGS), the Dormitory Authority of NYS (DASNY), New York Power Authority (NYPA), Long Island Power Authority (LIPA), Niagara Frontier Transit Authority and Western New York Clean Cities, Office of the State Comptroller, Empire State Development Corporation, NYS Department of Transportation and NY Environmental Facilities Corporation. Other partners in green technology include companies such as American Honda, Daimler Chrysler, Ford Motor Company, Homeland Energy, Hydrogenics, John Deere, Jacobsen, Praxair, Toro and Toyota.

Accomplishments

Clean Fuels

- Compressed natural gas (CNG) trolleys and vans
- Bi-fuel CNG trucks
- Electric vehicles in the Thousand Islands Region
- Two compressed natural gas fueling stations
- 650 electric, zero emission vehicles
- Increased fleet of electric utility vehicles from 3 to 35
- Ordered over 160,000 gallons of biodiesel
- Will operate a fleet of Biodiesel 100 (B100) heavy mowing equipment during the summer of 2008
- Integration of a hydrogen fuel cell system into a Toro Workman utility vehicle, used for turf care and facility maintenance
- 7 gas-electric hybrid vehicles
- 65% of the light-duty fleet is alternate fuel.

OPRHP has in use over 1000 clean fuel vehicles statewide. Many of the clean fuel vehicles have replaced gasoline and diesel vehicles allowing OPRHP to make significant reductions in emissions.

Energy Efficient Equipment

Over 500 old appliances, including refrigerators, freezers, ovens, microwaves, and heaters, have been replaced with new Energy Star rated appliances that are more efficient and use less electricity. It is the policy of Parks to purchase only Energy Star rated electrical appliances.

Niagara Falls State Park has become a "green" showcase to improve air quality, and a center for alternate fuel technology. With a diverse fleet of more than 90 alternate fuel vehicles, including CNG trolleys that transport more than a quarter-million patrons annually and electric, hybrid, and biodiesel vehicles, the Park has reduced its gasoline and diesel use by over 35,000 gallons annually. This results in a reduction in nitrogen oxide of over 800 lbs, a reduction in carbon monoxide of over 11,700 lbs, and a reduction of over 195,000 lbs of carbon dioxide. The CNG fueling station at Niagara Falls State Park is one of the largest on the East Coast.

The proposed Niagara Falls State Park Hydro to Hydrogen Project, which will be one of the largest hydrogen demonstration projects in the world, is being developed by OPRHP in partnership with NYPA, NYSERDA, the Niagara Frontier Transit Authority, Western New York Clean Cities and others. This unique project will use the Niagara River to supply both the hydroelectric power and water necessary to create hydrogen to power vehicles and equipment in the Park. In essence, the Park will use its own resources to power the equipment necessary to maintain it. The hydrogen created will be the "greenest" form of hydrogen in the world.

In addition, OPRHP worked with NYPA to install new energy efficient and higher quality rapids lighting at Niagara Falls State Park. The $250,000 project will produce savings in excess of $60,000 per year in electricity, bulb replacement, and maintenance costs. Lower wattage lamps were used to decrease energy and maintenance costs while providing a higher level of controlled lighting. Precision parabolic reflectors allow the light to be directed with greater accuracy reducing light pollution due to extraneous glare.

Other 'Green' Initiatives

In addition to addressing emissions and energy issues, OPRHP has also used green technology in park buildings.

Green Energy

- Geothermal heating and cooling system using Hessian Lake at the Bear Mountain Inn at Bear Mountain State Park
- Geothermal heating and cooling system at Jones Beach Nature Center
- Photovoltaic roof slate system to provide solar-generated electricity to Jones Beach Nature Center
- Solar lighting at the Rockefeller Sate Park Preserve parking area
- Two remote solar lighting systems in the Allegany Region
- photovoltaic system used at Bennington Battlefield State Historic Site to run the well field

Buildings-

(Leadership in Energy and Environmental Design (LEED) Projects)

- Mills-Norrie State Park, Staatsburg School Renovation
  The old school building is being renovated to provide new administration offices for the Taconic Region. This is the first building renovation that OPRHP will be renovating as part of the U.S. Green Building Council's LEED program. Elements of green design can include:
  - energy-efficient geothermal heating and cooling
  - paints and carpets that emit fewer unhealthy fumes
  - low-flow toilets/waterless urinals
  - ozone-friendly refrigerants in the kitchen
  - native greenery that needs less watering
  - a cistern to collect rainwater from the roof
  - construction materials of at least 20 percent recycled materials.
  - a roof coated in white reflective materials to reduce cooling needs
  - a waste recycling program
- Creation of a Green Design Committee to develop green standards for small buildings

Water Conservation

- Waterless urinals are used throughout the State Parks system- with 20-25 in the Taconic Region
- Composting Toilets are being widely used throughout the State Parks system – some with solar powered fans
- Permeable paving (Eco-stone paver) used at Annsville Creek Paddlesport Center parking area in Hudson Highlands State Park.

Recycled/Re-used building materials

- Sterling Forest State Park - Recycled lumber - milled timber at local sawmill
- Fort Montgomery State Historic Site – two sets of counter tops made from recycled paper.
- Saratoga Spa State Park - material used for new Saratoga Performing Arts Center (SPAC) exterior includes recycled paper as a substrate.

Moving Forward

To more broadly and effectively address climate change, energy issues and resulting impacts on natural systems, OPRHP has identified sustainability as one of the Agency's Priorities and Initiatives for FY2007-08. OPRHP has hired a 'Sustainability Coordinator to

lead this effort and is one of the first State agencies to do so. The initiative will reach out and involve the programs and operations of the Albany Office, eleven regional offices, and 211 State Parks and Historic Sites.

OPRHP will develop a comprehensive Sustainability Plan that will identify specific sustainability goals to help reduce OPRHP reliance on fossil fuels and reduce GHG emissions that at a minimum meet state mandates and ensure the sustainability of natural systems. The plan will identify the specific strategies and actions necessary for achieving those goals.

Strategies may include, but are not limited to:

- energy efficiency retrofits at existing facilities (i.e. re-lamping with compact fluorescents)
- use of small scale on-site renewable energy systems such as wind, solar and geothermal
- purchase of additional renewable energy credits
- continued expansion of the clean fuel vehicle fleet
- LEED certification for any new construction of a building over a certain size
- green building design standards for small park buildings (.i.e. bathhouses)
- energy saving through waste reduction
- enhanced recycling efforts
- a comprehensive effort to reduce the amount of lawn maintained
- Energy Star rated equipment upgrades
- green product procurement policy
- water conservation efforts
- chemical use reduction minimizing the use of pesticides, herbicides, and other chemical applications in State Parks facilities
- carbon sequestration strategies such as forest conservation and tree planting
- energy efficiency and sustainability public outreach and education to Parks millions of visitors

Working with Executive and Regional management staff, Albany-based Bureau Directors, park and historic site managers OPRHP is currently undertaking an agency-wide assessment of agency activities that support sustainability. This includes a survey of OPRHP facilities that will provide a comprehensive assessment of all sustainable activities that are currently occurring at parks. With a designated Sustainability Coordinator, OPRHP has stepped up its efforts in working with other state agencies, the vendor community, elected and other public officials, federal agency representatives, leaders of non-profit and advocacy organization and the general public on increasing sustainability of the Agency.

Chapter 7 - Statewide Programs

New York State provides a variety of recreation experiences, ranging from the playgrounds of New York City to the wilderness areas of the Adirondacks. This is a dynamic system comprised of "people", "resources", and "recreation". Each element has an influence on the other two. For instance, the composition of the population will impact the need for recreation, the quality of the resource will determine the availability of recreation opportunities and the type and extent of recreation can affect resource quality and the quality of life for people. For Example, the improved water quality of a lake or river, will provide recreational opportunities, that will influence where people, live, work and play. Therefore, recreation opportunities, open space and resources are all influenced by, and a factor to be considered, within various agency programs and initiatives.

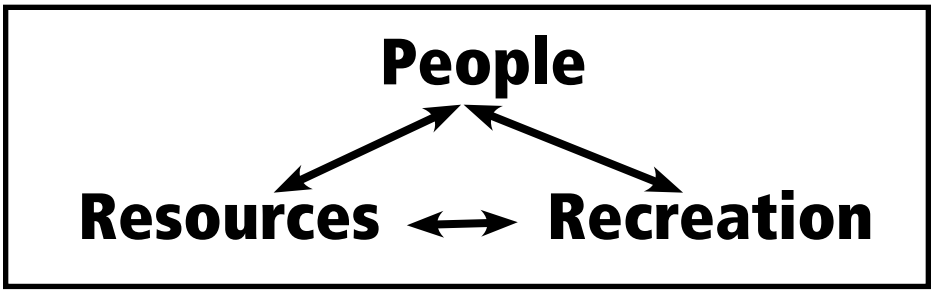


Figure 7.1 - People, Resources and Recreation

New York State's vast number of lakes, rivers and streams and oceanfront provide recreation resources that continue to be major destination locations. Participation in water related activities is often constrained by limited public access and unsuitable water quality. The State has initiated many programs to help improve water quality and increase access to the major waterbodies such as the Great Lakes, Hudson River, Long Island Sound, the Peconic and Hudson River Estuaries, and Lake Champlain. The quality of life in these areas has improved and recreational opportunities increased resulting in an overall economic benefit to the communities.

Associated with land and water resources are the wildlife and fisheries resources that enhance and provide recreational opportunities. Wildlife focuses on both game and nongame species and is less location-specific when compared to other recreation resources; as a result, stewardship of wildlife crosses geographic and political boundaries. Fisheries management is similar to wildlife except it is more location-specific and closely associated with water quality and access.

In addition to the land and water resources, cultural resources help define the character of the State and our past. New York has a rich and diverse array of cultural resources and it is becoming more important to relate several historic sites together, whether through a trail or corridor. These heritage corridors are able to tell a more complete and valuable story of past events and honor the history of the State.

Recreation and open space play a vital role in maintaining the mental and physical health of our citizens as well as supporting the economy of the State. This is apparent by the level of participation in recreation activities and sporting events. There is also an increasing awareness of the needs of all the populations. Facilities that are accessible to persons with disabilities are no longer the exception but are integrated within the design of new and rehabilitated facilities.

This chapter will explore various agency programs and initiatives that have an impact on or are impacted by the quality of the recreational and open space resources or experiences they provide. This will include programs traditionally associated with recreation and others that may not be readily apparent. Additional relevant programs are discussed elsewhere in the plan.

The following table identifies federal and state agencies and their involvement with six broad program areas. These program areas are further defined within the chapter by agency. In various cases, there is overlap among agency programs that are guided by an interagency task force within a resource area. As such, the program will be described under the primary administrating agency or may be applicable statewide.

Table 7.1 - State and Federal Program Areas

Agency	Planning	Land/ Natural Resource Management	Cultural Resources	Recreation Resources	Programs	Grants
OPRHP	x	x	x	x	x	x
DEC	x	x	x	x	x	x
DOS	x					x
DOT		x		x		x
Canals	x	x	x	x	x	
Museum			x		x	x
ORDA				x	x	
DOH					x	x
OFA					x	
Army Corps	x	x			x	x
EPA	x				x	x
NPS	x	x	x	x	x	x
NOAA	x				x	x

Planning – The Agency develops and/or coordinates recreation plans for its own facilities or provides technical assistance in planning to other agencies, local governments, organizations or individuals.

Land/Natural Resource Management – The agency owns and actively manages land and natural resources for a recreation or open space purpose.

Cultural Resources – The agency is responsible for procuring, preserving and interpreting cultural resources.

Recreational Resources – The agency is responsible for operating or maintaining recreational facilities.

Programs – The agency coordinates and oversees programs that influence or impact recreation opportunities, activities or facilities.

Grants – The agency administers grant programs that support, enhance or directly relate to recreation, natural, and cultural resources.

Office of Parks, Recreation and Historic Preservation

NYS Snowmobile Program

The New York State Snowmobile Program was legislated in response to the public's demand for places to ride snowmobiles. In 1985, the State Legislature mandated that the New York State Office of Parks and Recreation (OPRHP) be given the responsibility to plan for the development and oversight of a statewide snowmobile program. The planning, development, maintenance and administration of the program were to be funded from the snowmobile registration fees collected annually. Snowmobile registration is a two tier process. With the exception of the first ten dollars collected, the registration fees are $100.00 for non-members of a New York State Snowmobile Association (NYSSA) snowmobile club, or $45.00 if the registrant is a Club member. The fees are deposited into a Special Revenue Account, exclusively used to support snowmobiling in New York State. Financial support is provided to local government entities for Snowmobile Trail Grants, Law Enforcement training, Safety Education, Special Event Permits, Accident Reporting, Publications, Grooming Education, Trail Liability Insurance and Signage Guidelines. Revenues from the trail program have increased from approximately $179,000 (late 1980s) to more than $6 million (2005). Revenue projections for 2008 are $4.2 million. The majority of this revenue is returned to local areas as grants-in-aid for snowmobile trail development/ maintenance, trail insurance, and law enforcement. Control and supervision of the Statewide Snowmobile Program is coordinated by a legislated three person staff.

It is the goal of the Snowmobile Unit to promote the maintenance of a safe and enjoyable statewide snowmobile trail system that works in harmony with the state's natural resources while promoting economic development and tourism.

Snowmobile Trail Grants

County, Town, City, or Village governments, as local sponsors, are eligible for snowmobile trail grants within their boundaries. The local governments can sub-contract with snowmobile clubs or organizations for the maintenance of the trails. There are over fifty-five local governments and more than two hundred snowmobile clubs that participate in this program. There are approximately 11,000 miles of funded trails currently in the program. Trail mileage is reviewed and adjusted annually the Snowmobile Unit in coordination with the local sponsors to encourage safety, tourism and utilization.

Law Enforcement Program

OPRHP is the lead enforcement agency that conducts an annual training program for all Snowmobile Law Enforcement officers from state, county, and local agencies. The five day school covers snowmobile law, patrol procedure, accident investigation, field operations, and ice rescue training. Training consists of both classroom instruction and field exercise situations. The course is held each year in January. The quality of training received is relevant to each enforcement field and toward achieving an effective snowmobile law enforcement program across NYS. OPRHP offers up to 50% reimbursement for costs incurred by municipal police agencies in the enforcement of snowmobile rules and regulations. Funding is provided from state snowmobile registration fees.

Snowmobile Safety Education Courses

Anyone who is at least 18 years old may operate a snowmobile in New York State without any other qualification except as defined by state and local laws regulating that operation. However, it is recommended that all operators complete a recognized snowmobile safety course.

Youth ages 14 through 17 years old may operate a snowmobile without adult or other supervision if they have completed a snowmobile safety training course recognized by the State of New York and have their snowmobile safety certificate in their possession. Youth ages 10 through 13 may operate a snowmobile, on lands which snowmobiling is allowed, if they have completed a snowmobile safety training course recognized by the State of New York and are accompanied by (within 500 feet of) a person who is at least 18 years of age. The law requires that youth age 10 through 13 have their snowmobile safety certificate in their possession while operating a snowmobile. Children less than 10 years old or under age 14 without a safety certificate may operate a snowmobile only on lands owned or leased by their parent or guardian.

Throughout New York State hundreds of active volunteer instructors, certified by OPRHP, offer snowmobile safety courses. Individuals interested in taking a course should visit www.nysparks.com during the fall and winter in order to see a listing of safety courses being offered throughout New York State.

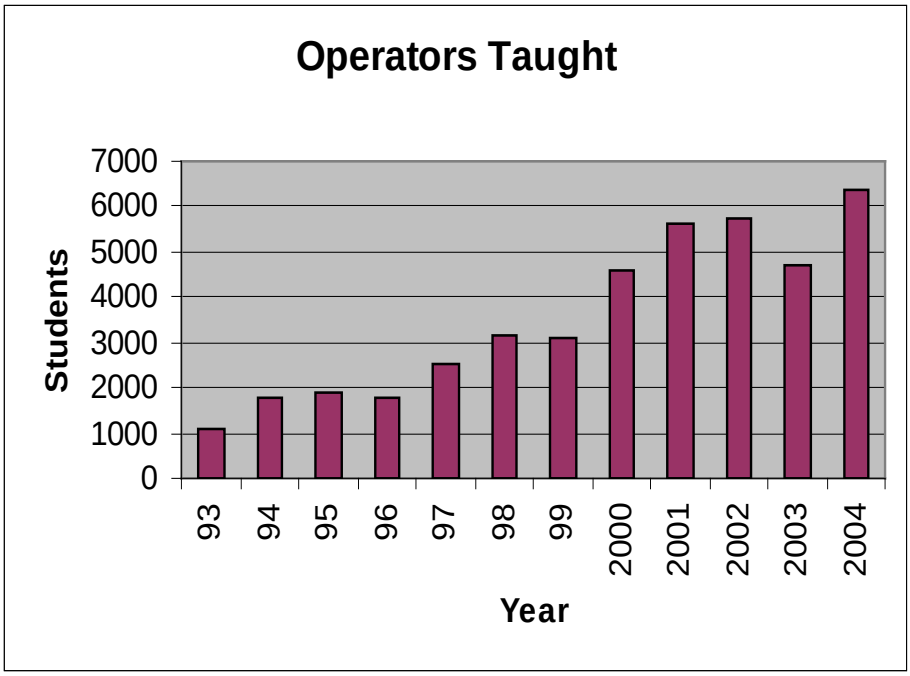


Figure 7.2 - Snowmobile Operators Taught

Snowmobile Special Events

A "special event" is an organized rally, race, exhibition, or demonstration of limited duration which is conducted according to a prearranged schedule and in which general public interest is manifested.

The sponsor of a snowmobile special event must secure a permit from the Snowmobile Unit. This permit must be secured at least 15 days prior to the snowmobile special event. Appropriate law enforcement must be notified of the event and written permission from the landowner must also be secured. It is the responsibility of the person in charge and the sponsor of the event to provide for the care and safety of the participants and spectators. There is a fee of $15.00 for securing the snowmobile special event permit. Applications are available through the Snowmobile Unit.

Snowmobile Accident Reports

The operator of any snowmobile involved in any accident resulting in injuries to or death of any person, or in which property damage exceeds the amount of $1000 dollars is sustained, must report such accident to an appropriate law enforcement agency. That agency will in turn submit to OPRHP the original snowmobile accident report. OPRHP compiles the accident reports into a yearly statistical report containing such information as: total accidents, total injuries, fatalities, location, collision with, primary cause, age of operator, engine displacement, and helmet worn.

Unsafe speed and operator error are the primary causes of snowmobile accidents. Most accidents continue to be collisions with fixed objects. While we believe that all of the fatal accidents and most of the injury accidents are reported, it is likely that there are many other accidents that go unreported.

Snowmobile Trail Mapping

The Snowmobile Unit approves all funded trails included in the statewide snowmobile trail system. Using USGS quadrangle maps, Local Sponsors delineate changes and/or updates to their trail system. Trail mileage adjustments are made, by the Snowmobile Unit, based on safety, utilization, tourism development while maintaining natural resource protection and community support.

Snowmobile Publications

A Statewide Snowmobile Corridor trail map is published on a two to three year cycle. The map is intended to show areas around the state where the funded trails are located. Local sponsors are encouraged to publish their own maps containing greater trail detail as well as tourism information and business locations.

Safety education publications are created for use by instructors and/or students participating in the New York State Snowmobile Safety Course. The primary trail safety publication is the Trail Signing Handbook. The Handbook insures consistent and uniform trail signage statewide to provide snowmobilers with trail use confidence. Publications available to the public via the Snowmobile Unit include the snowmobile guide, snowmobile trail manual, and the snowmobile trail grooming manual.

Groomer Training

The Snowmobile Unit offers a Groomer Operator Training Program. The grooming training includes technical information and advice in the art of grooming snowmobile trails. Through

the cooperation of OPRHP and NYSSA, many groomer operators have attended grooming workshops held in various locations around the state.

Trail Inspection Program

A trail inspection program was established in 1994 to monitor Trail Signing Handbook guideline compliance throughout the statewide trail system. As the trail system mileage grew so did a need to expand the inspection program. In 2004, the Snowmobile Unit formed a partnership with NYSSA to establish a more efficient inspection system. The partnership identified a need to develop a volunteer trail advisor program to insure that trail signage was adequate and consistent. A training program was designed and has been greatly improved the past three years. Training sessions for the volunteer trail advisors are held across the state annually. There are currently over 190 qualified trail advisors. Verifying trail signage placement accuracy remains as a priority for advisors. Trail advisors when called upon gather information regarding complaints, safety concerns, and accident sites. Trail advisor inspections are made when requested by the Snowmobile Unit.

Heritage Programs

New York State has a rich and varied cultural heritage. There are many sites to be interpreted and stories to be told. The importance of our heritage is being recognized on the federal, state and local levels through preservation, interpretation, designation and programming. There is also a link between preserving our heritage, revitalizing communities, and tourism that can benefit all citizens of New York.

Heritage Areas and Corridors

In March 1977, the New York State Legislature required OPRHP to prepare a plan for a statewide system of Urban Cultural Parks (UCPs) that would foster "the beneficial enjoyment and revitalization of urban areas through preservation, interpretation, development and recreational use of cultural, historic, natural and architectural resources…" In launching the planning process for UCPs, New York became the first state in the nation to undertake the development of a system of parks that focused on the use of significant historical, cultural, and recreational resources to achieve community revitalization.

The New York State Legislature recognized the merit of the program in 1994 when they amended the original Urban Cultural Park legislation to add regional heritage areas, and renamed the system the New York State Heritage Area System. The Heritage Area Program applies the same Urban Cultural Park concept to additional, non-urban parts of the State.

Today, thirty years after the initial legislation, there is an active system consisting of seventeen Heritage Areas and two Heritage Corridors. The system remains the oldest, and one of the largest, statewide heritage systems in the country. Interest continues for inclusion of other areas within the Heritage Area System. The system has grown from the initial thirteen Urban Cultural Parks, encompassing twenty-seven communities, to seventeen Heritage Areas and two Heritage Corridors in 2007, encompassing over four hundred municipalities (Figure 7.3).

A Heritage Area includes the historic, natural and cultural resources and activities that tell the story of a region's past and provide an identity for the present and future. The resources of a heritage area - main streets, neighborhoods, public building, parks, factories, landscapes – tell the story of how an area developed and why it is unique. The activities of a heritage area – festivals, special events, and regular community life – reflect what was and is important in citizens' everyday lives. Together these resources and activities create a "sense of place" and make

Figure 7.3 - New York State Heritage Area System

a heritage area a special place to live and visit. The term heritage corridor is used to describe a heritage area that is organized around and focused on one linear resource such as a river, canal, or coastline.

The cornerstone of the Heritage Area Program is a state, local and private sector partnership focused around four program goals:

- preservation of natural and historic resources;
- recreational use of these resources;
- education about local and regional heritage;
- economic revitalization through public and private investment.

In these partnerships, the State provides technical assistance, financial incentives through matching grants, and a heightened level of coordination among state agencies through the New York State Heritage Area Advisory Council. The Council is an advisory body to the Commissioner and the Governor on the development and management of the Statewide Heritage Area System; a forum to review issues by local governments and other entities; and an organizing vehicle to encourage assistance from other state agencies for the development of the Heritage Area Program.

Each Heritage Area retains complete management and operation of its program, projects, and facilities using various management mechanisms established at the local level. The private sector contributes by providing matching funds for grants, either in cash or donated services, and technical assistance in a variety of ways. The New York Heritage Area Association advocates for issues of interest to the heritage areas and provides a forum and point of information exchange for Heritage Area directors and staff. The Association is a 501c3 non-profit organization comprised of members from the Heritage Areas.

The UCP/Heritage Area Program has received funding from a variety of sources over the years to carry out its program goals. The majority of this funding has been distributed to the local heritage areas. Program grants from 1986 to 2000 totaling $28.8 million have generated nearly $100 million in local matching investment, substantiating the claim that a modest amount of funding from the State has had a significant economic impact. If state funding continues in the future, the economic impact to these special communities in the State will continue to grow.

A few specific examples of the economic impact of Heritage Area grants include the following:

- The Heritage Areas Visitor Center grant in Seneca Falls spurred a village/private sector partnership which brought about the renovation of the historic, fire-gutted Partridge Building for use as a Visitor Center/retail/office complex. The $700,000 State grant attracted a private developer who invested nearly $2 million in this building which, in turn, helped revitalize Seneca Falls' downtown district.
- OPRHP has invested over $2.5 million in the Buffalo Heritage Area. Of this amount, $1,984,500 has been invested in the Market Arcade Complex, a mixed-use development in the heart of the historic Theater District and site of Buffalo's Visitor Center. These grants, along with $15 million in public and private sector investment in the Arcade have helped drive the revitalization of the Theater District.
- The Heritage Areas Visitor Center Project in Rochester received $2.6 million dollars of OPRHP Environmental Quality Bond Act (EQBA) funds. This helped generate over $20 million in city and private funds to renovate the historic Brown's Race District where the Visitor Center is located. The City has contracted with privately owned management firms to operate the Brown's Race complex. The City is pursuing ongoing revitalization of this area.
- The Kingston Visitor Center in the Rondout district opened in 1992 as the anchor project of the revitalization efforts in this historic waterfront district. The City's commitment to invest its $530,000 EQBA grant in this district and operate its visitor center here for 23 years, provided the critical financial link for a private developer to develop and lease several nearby properties. Private investments of over $5 million, plus public investment in waterfront dockage and infrastructure, have transformed this district into a vibrant part of the city.

Many of the heritage areas have visitor centers that provide a community meeting place and point of pride for residents, and provide orientation and motivation for visitors to go out and experience other points of interest in the community. Some of these visitor facilities are modest shared facilities, a few are quite elaborate. All feature interpretative themes that each heritage area has chosen for itself are based on its own unique history. These themes provide a consistent image and identity and are the basis for interpretive programs and events.

These interpretive themes also provide a "brand" to market and promote the Heritage Areas. Tourism plays an important role in the Heritage Areas Program. These themes generate interest from visitors, encourage them to stay longer, help them remember a destination, return at a future date, and spend tourist dollars.

Heritage tourism (sometimes referred to as cultural tourism) is an important component of today's tourism economy. Heritage tourism has been defined by the National Trust for Historic Preservation as "travel to historic and cultural attractions, sites, and regions to learn about the past, and the present, in

an enjoyable way." The New York State Heritage Area Program has been a leading proponent of heritage tourism for many years and it will continue to serve in this capacity in the years to come.

New York State Designated Heritage Areas and Corridors

Albany - Since its beginnings as a fur-trading post, Albany has been a center for world trade, finance and government and a pivotal force in the development of the state and the nation. For information, call (518) 434-0405 or 1-800-258-3582. http://albany.org/

Buffalo - Since the mid-19th century, when Buffalo was booming with lake, canal, and rail traffic, the city has supported a broad range of entertainment and culture, a tradition that lives on in the city and its Theatre District. For information, call (716) 852-2356 or 1-800-BUFFALO. http://www.buffalocvb.org/

Concord Grape Belt - Fruitful vineyards, hospitable communities, breathtaking vistas, and healthy flavors abound in the 50 miles of shoreline that form the world's oldest and largest Concord grape-growing region. http://www.concordgrapebelt.org

Harbor Park (New York City) - Historic waterfront sites around New York's harbor tell the epic story of growth from a colonial trading post to the largest seaport and immigration destination in the world. For information, call (212) 344-3491. http://thebattery.org/

The Heights (New York City) - The site of Revolutionary War activity and home to waves of immigrants, the Heights Heritage Area of northern Manhattan includes bustling avenues and parkways, miles of waterfront, acres of parks, and landmarks as varied as the Little Red Lighthouse and Hamilton Grange. For information, call (212) 694-8824. http://myharlem.org/

Kingston - The city of Kingston began in the narrow streets and stone houses of the colonial Stockade District, which served as the first capital of New York State, and grew to include the bustling Hudson River port of Rondout. For information, call (800) 331-1518. For Rondout, call (845) 331-7517. For Uptown, call (845) 331-9506. http://ci.kingston.ny.us/

Mohawk Valley Heritage Corridor - The dramatic landscapes of the eight Mohawk Valley counties are layered with centuries of history, from Iroquois encounters with fur-traders and missionaries, through European settlement, colonial wars, the Erie Canal and industrialization. For information, call (518) 673-1045. http://mvhcc.org/

North Shore (Long Island) - From the historic mansions of Great Neck to the farm stands of Orient, from sunny vineyards and well-worn fishing piers to luxurious Gold Coast estates, Long Island's north shore abounds in attractions. For more information call (516) 922-8605. http://linorthshoreheritagearea.com/

Ossining - In this historic Hudson River village, unique landmarks like the Old Croton Aqueduct and Sing Sing Prison display state-of-the-art advances in 19th-century civil and social engineering. For information, call (914) 941-3189. http://www.hudsonriver.com/rivertowns/ossining.htm

RiverSpark (Hudson-Mohawk) - At the confluence of two great rivers, natural resources and cutting-edge technology were harnessed in the region's transformation from an agrarian to an industrialized society. This heritage is visible today in the landscapes and streetscapes of the RiverSpark communities: Troy, Cohoes, Colonie, Green Island, Troy, Waterford and Watervliet. For information, call (518) 270-8667 or (518) 237-7999. http://riverspark.org/

Rochester - High Falls (Natural Environment) - Where millraces and waterwheels once captured the power of the mighty Genesee River, Rochester's High Falls area now welcomes visitors day and night to revitalized factories, dramatic archaeological sites, and magnificent scenery. For information, call (585) 325-2030. http://centerathighfalls.org/

Sackets Harbor - The War of 1812 Battlefield, historic Madison Barracks, and quaint village streets bear witness to Sackets Harbor's role as a military stronghold defending the northern border during our country's turbulent first centuries. For information, call (315) 646-2321. http://sacketsharborny.com/home.html

Saratoga Springs - "Queen of the Spas" in the 19th-century, Saratoga still attracts visitors to its bubbling mineral springs, racetracks, Victorian architecture, vibrant downtown and flourishing cultural life. For information, call (518) 587-3241. http://www.saratogatourism.com/vcstuff/vchome.html

Schenectady - "The Electric City" grew from a 17th-century stockaded village into the modern industrial giant that is home to General Electric, the American Locomotive Co, Union College, and numerous historic neighborhoods. For information, call (518) 382-5147, ext. 5128. http://www.sayschenectady.org/

Seneca Falls - The righteous spirit of reform earned Seneca Falls a place in world history as the setting of the first Women's Rights Convention in 1848. Today, the historic mill town features a classic main street, canal promenade, and many mementos of women's activism. For information, call (315)568-2703. http://www.senecafalls.com/history-heritage.php

Susquehanna - Antique carousels, factories, ethnic neighborhoods and gold-domed churches tell the story of the thousands of immigrants drawn to the industries of Binghamton, Endicott, and Johnson City in the Susquehanna's "Valley of Opportunity". For information, call Binghamton (607) 772-0660, ext.255 or Endicott (607) 757-5355. http://www.roberson.org/visitors/binghamton_visitor_center.asp http://www.endicottny.com/Visitor%20Center/visitorcenter.htm

Syracuse - Salt, a precious natural resource, first put Syracuse on the map, but it was the Erie Canal that transformed the city into a modern center of business and capital. For information, call (315) 471-0593. http://eriecanalmuseum.org/urban.asp

Western Erie Canal Heritage Corridor - The Erie Canal brought pioneers, the fervor of social reform, and industrial progress to the fertile landscapes of Western New York, a legacy that survives in the fascinating cities, towns and sprawling farms that line today's canal. For more information call (585) 546-7029. http://eriecanalheritage.com

Whitehall - Whitehall's harbors, museums, parks, and charming main street evoke the village's history as home base for Benedict Arnold's Lake Champlain fleet during the American Revolution and as a prosperous port on the Champlain Canal. For information, call (518) 499-1155 or (518) 499-0716. http://www.museumsusa.org/museums/info/1155278

Hudson and Champlain Quadricentennial and Fulton Bicentennial

2009 will be a watershed year, marking the 400th anniversary of Hudson and Champlain's voyages along the river and lake that bear their names and the 200th anniversary of Fulton's successful steamboat voyage and establishment of steam commerce on the Hudson River. Hudson's and Champlain's voyages laid the groundwork for Dutch settlement of the Hudson Valley and French settlement of the Champlain Valley and Canada. Soon this region would become the center of a trade network linking the New World with the old. New traditions of freedom were forged here. And countless immigrants first set foot on these shores pursuing the American dream. Nearly 200 years later, Fulton's journey would strengthen the region's ties to the world, while heralding a new era of innovation which distinguishes the Northeast to this day.

A Hudson-Fulton-Champlain Quadricentennial Commission was formed to engage the public as well as civic, education, environmental, cultural and heritage organizations to develop and support related plans and activities in commemorating the events. The success of the Quadricentennial commemoration relies on a coordinated effort among the members of the Commission, federal partners, state agencies, and local governments, private corporations, non-profit corporations, similar commissions such as the Lake Champlain Quadricentennial Commission and the Quebec 400th, international partners and the citizens of New York State.

The signature theme of the commemoration will be Exploration and Connection in the broadest sense to denote the exploration of Champlain and Hudson, European settlement in the New World, the ongoing exploration that has characterized New York State and America in areas including the opening of the west, technology such as Fulton's steamboat, arts, multiculturalism, education, environment, and globalism among many other dimensions of society.

Boating Safety Programs

With the number of boaters increasing, there is a need to continue boater safety, education and enforcement programs to ensure the enjoyment of all boaters on New York State waters. OPRHP is the designated agency responsible for ensuring the coordination of the State's boating safety and enforcement programs.

The Marine Services Bureau is chiefly responsible for the Agency's many boating safety initiatives as it also serves as the Office of the State Boating Law Administrator. As such, Marine Services offers an educational program for young boaters and recently implemented the new mandatory education program for personal watercraft operators. Each year nearly 20,000 individuals take the program which, in many cases, is offered free of charge. The course consists of an 8-hour nationally recognized program of instruction, which includes a proctored examination.

Marine Services also fulfills a number of other diverse safety initiatives such as public vessel safety and operator licensing. New York is one of a small number of states that currently requires the annual inspection of any vessel carrying passengers for hire. In fact, the

State has a long history of this safety requirement dating back to the early 1900s. In addition, it is responsible for examining and licensing anyone who may be involved in the operation of these vessels. Currently there are approximately 350 such vessels operating upon the State's interior waters with some 800 licensed individuals who may operate them.

Marine Services also has responsibility for the specialized training requirements of the marine law enforcement community throughout the State. Each year Marine Services offers extensive training in Basic Marine Law Enforcement, Vessel Operator Training, Impaired Boater Recognition, Noise Level Enforcement, and Personal Watercraft Operation. Annually between 150 and 200 officers statewide take advantage of this training.

Marine Services is also charged with the issuance of marine regatta and floating object permits on the State's interior waters. This is just one of the many ways boating safety is ensured. In addition, Marine Services is responsible for collecting all recreational boating accident data, compiling it into usable information, and disseminating it to the United State Coast Guard. Each year this data is presented in the Recreational Boating Report. Recent trends noted in the data indicate that boating in New York is now the safest it has been in the past 30 years.

Marine Services also administers the State's Hull Identification Program. Under this program any vessel that can not authenticate its manufacturer's hull identification number must submit to Marine Services for an inspection and issuance of a new number. This simple action has made great strides in ridding the State's registration process of many vessels suspected of being fraudulently registered.

Marine Services has a number of public information brochures, informational stickers and other such promotions, like the loaner personal flotation device program, which is directed at making recreational boating safer within the Empire State.

Local Financial Assistance Program for Marine Enforcement

Marine Services administers sections 79 (a) and (b) of the New York State Navigation Law whereby the Agency provides financial assistance to those eligible governmental entities, which enforce the provisions of the navigation law. This financial assistance now exceeds $3 million dollars annually and presently reimburses 75% of the participants permitted costs for said enforcement.

This financial assistance does however support and encourage greater local marine enforcement during the very active boating months of the summer. Allowable expenses include payroll, boats, and related marine equipment necessary to fulfill the marine enforcement mission.

All applications are reviewed by a Marine Service Representatives who audit and certify the claims.

Recommendations

Goal

Participate in programs and develop partnerships with other federal, state and local governments, agencies and interest groups to improve public access opportunities to water resources.

Actions

- Continue the use of the Open Space Plan and support the continued funding of the EPF for acquisition projects statewide.
- Continue participation in the Great Lakes Programs to improve water quality and increase opportunities for recreational use on the Great Lakes.
- Participate in the implementation of the Long Island Sound Coastal Management Program and DEC's Marine Access Plan to improve public access opportunities to the marine coastline and optimize recreational fishing opportunities.
- Participate in the Lake Champlain Basin Program to help manage the lake's shorelines and its tributaries for a diversity of recreational uses while protecting its natural and cultural resources.
- Continue the partnership with the Hudson River Estuary Program and assist in the program's efforts to increase public access to the Hudson River.
- Review and when necessary participate in hydroelectric power project re-licensing processes to insure recreational access within project boundaries.

Goal

Enhance recreational boating by making it safer and more enjoyable.

Actions

- Safeguard the public through enforcement programs funded by the Federal Boating Safety Grant and State Aid programs.
- Educate the public on boating safety:
  - Continue the mandatory boating safety education programs for personal watercraft operators and young boaters.
  - Encourage voluntary safety programs for adults.
- Continue training of the marine law enforcement community through the Basic Marine Law Enforcement, Vessel Operator Training, Impaired Boater Recognition, Noise Level Enforcement, and Personal Watercraft Operation courses.
- Continue to collect, compile and report recreational boating accident data to the U.S. Coast Guard.

- Continue the boat registration and marine regatta permitting system.
- Continue the Vessel Theft and Hull Identification Program.
- Continue dissemination of information to the public through brochures, informational stickers, and the loaner personal flotation device program.
- Support boat registration fee increases to provide sufficient resources for boating safety and other recreational boating programs.

Sports and Athletics

Sports and athletic competition help keep citizens, both young and old, physically active and provide those not participating an invigorating means of entertainment. OPRHP programs and facilities vary from outdoor activities such as road races, triathlons, golf tournaments, softball and baseball tournaments, bicycle races, swimming and diving competitions, speed skating exhibitions, orienteering and cross country ski races, to such indoor activities as hockey tournaments, "Midnight Madness" basketball tournaments and swimming instruction. Many of these programs are cosponsored by the sanctioning bodies of the various sports and athletic activities.

The goal of the sports and athletic programs is to provide a broad variety of organized opportunities for recreation and competition at a variety of levels complementary with local or regional efforts.

Empire State Games

The Empire State Games began in 1978. The games are a form of competitive sports and are based on the Olympic model with preliminary qualifiers available at three levels. The scholastic division is designed for young people who are still in high school. The open division is for athletes generally of college age. Masters competition is available for age groups ranging from 24 to 85. Approximately 40,000 athletes compete yearly in preliminary competitions which are held in six regions statewide. Finalists enter a week long contest held at a chosen city in the state. Syracuse, Buffalo, Ithaca, Albany, Rochester, Long Island, Binghamton, both Mohawk and the Hudson Valley, and Westchester County have been chosen as sites in past years. While OPRHP provides professional management, organization and direction, much of the conduct of the Empire State Games is in the hands of thousands of volunteers, including coaches, officials and a medical team. Six thousand finalists compete in 28 sports ranging from archery to wrestling each summer; and 1,400 athletes participate in 11 winter events, including Nordic skiing, ski jumping and bobsledding. Twenty-two Empire State Winter Games athletes represented the United States at the 2006 Winter Olympics in Torino. Two dozen more Games athletes were part of the US team at the Summer Olympics in Athens.

The Games have been a benefit to many areas of the amateur sports world and to programs in other states. During the games, productive links with the private sector have helped funding, support and promotion. The "state games" concept, which was started in New York, has now spread across America. Forty-two states currently have programs and a State Games of America event was developed. The United States Olympic Committee has endorsed the State Games concept as a valuable developmental program for the Olympics and international competition. The Empire State Games has made computer systems, data, and experience available to every state which has developed its own program. It has also assisted the Pan Am Games.

The main goal of this program is to provide opportunities for New Yorkers whose recreational focus is competitive sports.

Empire State Senior Games

The Empire State Senior Games, which began in 1983, is a program of fitness and sports competition for New Yorkers 50 years of age and older. This six-day long program offers more than 40 competitive, recreational and drop-in activities, for which awards are given. Instructional clinics, exhibits of relevant information and social activities are also included. Competition is mixed with fun and friendship, providing something for people of all interests and abilities.

The games are one of the largest of its kind in the country and serve as New York State's qualifying event for the U.S. National Senior Sports Classic. The games have also fostered the development of a number of local Senior Games programs throughout the State.

The games are assisted in cooperation with several other state agencies and are supported in large part by participant fees and corporate sponsorships.

The goal of this program is to encourage fitness and recreation participation for older New Yorkers.

Empire State Games for the Physically Challenged

The Empire State Games for the Physically Challenged, which began in 1985, is a program of fitness and sports competition for physically challenged youngsters. The games serve to promote confidence and encourage participation in adapted sports by individuals 5-21 years of age, who have cerebral palsy or spinal cord injuries, who are blind, deaf or amputees, or "les autres."

The program includes regional competitions in Long Island and Brockport, as well as a fitness "fun day" in Syracuse. It also encourages the development of local programs and has distributed a "Training Manual on Adapted Sports."

The goal of this program is to provide opportunities for athletic competition and to encourage participation in fitness workshops for young people with physical disabilities throughout the State of New York.

Department of Environmental Conservation

Wetlands

Wetlands are transitional areas between aquatic and upland communities, and often have some of the qualities of both. Wetlands also are where the groundwater occurs near or at the surface, saturating the soil and the root zone of the plants that grow there.

Some wetlands occur where the groundwater emerges at the surface of the ground, usually on a slope; these commonly are known as hillside seeps or slope wetlands. Probably the most recognized wetland is where surface water, such as a pond, lake or stream, slopes up to land; these are known as fringe wetlands. The other common wetland type is where a depression in the land reaches down into the groundwater; these are the famous prairie potholes of the American Midwest, and the vegetated ponds on Long Island. Finally, wetlands can occur where surface water is trapped in shallow depressions by soil that will not allow the water to seep downwards. These wetlands are common on clay soils in the Lake Plains of western New York.

For the purposes of this comprehensive plan, the broadest concept of wetland is used. The plan addresses all wetlands, not just those protected by certain regulatory programs.

- Freshwater Wetlands are those areas of land and water that support a preponderance of hydrophytic vegetation that is at a competitive advantage because of the presence of wetlands hydrology or hydric soils. Freshwater wetlands commonly include marshes, swamps, bogs and fens.
- Tidal Wetlands are those areas that border on or lie beneath tidal waters, including those areas now or formerly connected to tidal water, and those areas subject to tides and upon which grow tidal hydrophytic vegetation.

New York State has an active and comprehensive wetlands conservation program. As stated in the Freshwater Wetlands Act (Article 24 of the Environmental Conservation Law): "It is the public policy in the State of New York to preserve, protect and conserve wetlands and the benefits derived therefrom, to prevent the despoliation and destruction of wetlands, and to regulate use and development of such wetlands to secure the natural benefits of wetlands, consistent with the general welfare and beneficial economic, social and agricultural development of the State." In addition, the Tidal Wetlands Act (Article 25 of the Environmental Conservation Law) states: "It is declared to be the public policy of this State to preserve and protect tidal wetland, and to prevent their despoliation and destruction, giving due consideration to the reasonable economic and social development of the State." These policies articulate the balanced approach New York takes in its efforts to conserve its wetlands resources.

New York recognizes that wetlands provide a multitude of functions and benefits for the people of the State and has developed a multifaceted program to protect and manage that resource.

In New York, protection of wetland is a priority.

Values of Wetlands

Wetlands perform numerous functions, such as removing excess nutrients from the water that flows through them. These functions in turn provide benefits to the environment and the citizens of the State. For example, the benefit derived from nutrient removal is improved or maintained water quality. This in turn is valued by society for a number of reasons such as clean drinking water, safe recreation, and secure fish and wildlife habitat.

Following are some of the functions and benefits that are important in New York State:

- Flood and Storm-water Control: During storms and periods of heavy rain or spring snow melt, wetlands serve as natural reservoirs for excess water, storing and slowing the movement of water through the watershed. Filling in wetlands often results in increased flooding, both locally and far downstream.
- Erosion and Sedimentation Control: Wetlands vegetation helps to filter sediment by decreasing water velocity. Suspended particles settle in the wetland and do not enter navigational channels, lakes and reservoirs. In much the same manner, wetlands also help prevent erosion of shorelines and valuable agricultural land by serving as buffers between wave or stream activity and adjacent lands.
- Water Quality Maintenance: Microorganisms in wetlands break down and use nutrients and can significantly reduce levels of natural and human-induced pollution in water as it filters through the wetland. Chemical processes in the soil also immobilize chemicals and heavy metals. Water leaving a wetland is frequently cleaner than water entering the wetland. Wetlands also protect fresh groundwater supplies in coastal areas by preventing saltwater intrusion.
- Recharge of Groundwater Supplies: Wetlands sometimes are helpful in recharging groundwater. This function is especially important where

groundwater is the sole-source of drinking water or constitutes the major source of usable water.

- Discharge of Groundwater: Wetlands frequently serve as groundwater discharge sites, thereby maintaining the quality and quantity of surface water supplies.
- Fish and Wildlife Habitat: Many species of fish and wildlife depend on wetlands for critical parts of their life cycle. By providing breeding, nesting, and feeding grounds and cover, wetlands are recognized as one of the most valuable habitats for wildlife. Young fish find food and shelter in the protective vegetation. Many species of endangered, threatened or special concern fish and wildlife depend on wetlands. Tidal wetlands are vital to the continued health of vertebrate and invertebrate species of the waters of State's marine district. Over two-thirds of the fish, shellfish and crustaceans harvested in the State (including both commercial and recreational harvest) are dependent on tidal wetlands for some portion of their life cycles.
- Biological Diversity: There is increasingly concern about local, regional and global biological diversity. Wetlands are important components of the landscape and contribute significantly to the State's overall biological diversity. Wetlands are habitat for many rare and indigenous species of plants and animals and many in themselves represent unique natural communities.
- Nutrient Production and Cycling: Wetlands are one of the most ecologically productive systems on earth, converting sunlight and nutrients into food sources for animals. Some tidal wetlands exceed even tropical rain forests in energy conversion. Wetlands also serve as filters for sediment and organic and chemical nutrients. These components are recycled in wetlands, where the nutrients are broken down and reentered into the food web.
- Recreation: Hiking, bird watching, hunting, fishing, trapping, boating, photography and camping are some of the recreational uses provided by wetlands. Over 12 million New Yorkers annually participate in these outdoor activities. In a 1991 report to the Legislature on the economic return from hunting, fishing and other uses of wildlife, it was estimated that these activities had a total annual worth of more than $5 million.
- Open Space: In an increasingly developed landscape, open space is gradually more important for maintaining the quality of life in our communities and many public policies support the protection of open space. Wetlands are extremely important components of open space because they are multi-beneficial and are often the only undeveloped areas along crowded river fronts and coastal regions or in urbanized areas.
- Educational and Scientific Research: Wetlands provide readily accessible outdoor biophysical laboratories, living classrooms and vast training and education resources.

Program Implementation and Coordination: Who is involved in Wetlands Planning and Protection?

In New York, the DEC has the lead responsibility for wetland conservation. Within DEC, several organizational units participate in implementing New York's wetlands protection program. Primary responsibility resides in the Division of Fish, Wildlife and Marine Resources which has the lead with both tidal and freshwater wetlands. The Division of Lands and Forests has the lead for acquisition activities. The Division of Environmental Permits processes regulatory permits. The Division of Law Enforcement and Legal Affairs support enforcement efforts. The Division of Water administers the Clean Water Act directed or funded programs that afford additional water quality programs from which wetlands benefit.

In addition, the Adirondack Park Agency (APA) administers the Article 24 permitting program in the Adirondack Park and administers land use regulations as they relate to wetlands. They have undertaken sophisticated GIS approaches to mapping wetlands in a watershed approach, which provides important tools for planning and protection.

There are additional stakeholders involved with wetlands conservation in New York State. Following is a listing of those involved players, and a brief explanation of their roles.

State Agencies

New York State Department of State (DOS): New York State Department of State (DOS): administers the coastal management program, including coastal consistency reviews on federal projects, for which wetlands conservation is a consideration. DOS also conducts and supports coastal planning efforts through the preparation of LWRPs. In recent years, DOS has taken a strong role in coastal wetlands restoration.

New York State Office of Parks, Recreation, and Historic Preservation (OPRHP): has lead responsibility for developing the State Comprehensive Outdoor Recreation Plan. In cooperation with DEC, OPRHP also jointly produced and updated the State Open Space Conservation Plan. As a significant landowner, OPRHP conserves and manages wetlands on State parklands and has an important role in biodiversity conservation on their public lands.

New York Attorney General's Office: As the State's legal representative, the New York Attorney General's Office litigates cases in both federal and state courts to ensure that wetlands are afforded the protections available under law. The Attorney General's Office also advocates for wetlands protection in consultation with federal, state and local agencies, and by advancing progressive positions in various legislative and administrative forums.

New York State Department of Transportation (DOT): affects wetlands through design and implementation of highway construction and maintenance. DOT has an environmental benefits initiative wherein they undertake positive environmental projects in conjunction with ongoing highway construction and maintenance projects. They have constructed, restored, and provided access to wetlands as part of their award-winning environmental benefit projects.

New York State Office of General Services (OGS): administers much of the State's surplus lands and all lands under water not explicitly deeded to private entities.

New York State Canal Corporation: implements the Canal Recreationway Plan and owns, operates and maintains the New York State Canal System, and leads the state effort to develop the Canalway Trail.

Federal Agencies

U.S. Army Corps of Engineers (COE): administers Section 404 of the Clean Water Act, which regulates the discharge of dredged and fill spoil material into waters of the U.S., including most wetlands. In recent years, the COE has become actively involved in restoration of the nation's waters and wetlands, including efforts on the Hudson River, upper Susquehanna, and Niagara Rivers.

U.S. Environmental Protection Agency (EPA): oversees administration of the Section 404 program. EPA supports state and local wetlands programs through funding a variety of grants that support wetlands research, restoration, education and outreach efforts, watershed planning, monitoring, and water quality maintenance.

U.S. Fish and Wildlife Service (USFWS): administers the national wildlife refuge system and the federal endangered species act, including activities to protect critical habitat. DEC and USFWS, along with other partners, cooperatively implement the North American Waterfowl Management Plan, which includes a variety of acquisition, management, and restoration activities. USFWS also supports regulatory reviews under Section 404. Between 1990 and 2003, the USFWS Partners for Fish and Wildlife Program restored over 12,200 acres of wetlands and 46 miles of riparian habitat on over 1,179 sites through technical assistance and direct restoration. The USFWS also cooperates with the Natural Resources Conservation Service to restore wetlands and other habitats under the conservation provisions of the Farm Security Act. The USFWS maps wetlands under the National Wetlands Inventory (NWI); most of New York now has digital maps and efforts were recently undertaken to update early NWI maps in the coastal Great Lakes region.

U.S.D.A. Natural Resources Conservation Service (NRCS): along with the Farm Services Agency, administers the conservation provisions of the Food Security Act (Farm Bill). Between 1992 and 2005, the NRCS restored over 47,000 acres of wetlands on 1,248 sites through the Wetlands Reserve Program. Through implementation of the Environmental Quality Incentives Program, NRCS has helped reduce agricultural nutrient runoff to surface waters and wetlands, thereby greatly improving water quality.

U.S.D.A. Farm Services Agency: administers certain provisions of the Food Security Act, especially the Conservation Reserve Program (CRP). The latest iterations of this program, the Continuous Sign-Up CRP (CCRP) and the Enhanced CRP (CREP) have become the primary means of establishing riparian buffers in the State.

U.S.D.A Farmer's Home Administration: may place easements on its inventory of repossessed farmland and may forgive loans if the borrower places easements on wetlands.

National Marine Fisheries Service (NMFS): coordinates and provides comments on permits affecting coastal wetlands. In more recent years, NMFS has participated in coastal wetlands restoration efforts.

Federal Highway Administration (FHWA): supports efforts of state transportation agencies and implements ISTEA as it relates to wetlands and mitigation. FHWA provided a $500,000 planning grant to NYS DOT and DEC to update and digitize National Wetlands Inventory maps to improve capacity for planning to protect wetlands and other aquatic resources.

Local Government

Because most land use decisions are made at the local level, local governments are very important stakeholders in wetlands conservation. There are approximately 1645 local governments in the State at the county, town, city and village levels. Their involvement in conservation efforts and their effects on wetlands vary greatly across the State.

At the local level, the following organizational units may be involved with wetlands:

- planning departments
- tax assessors
- zoning boards and zoning boards of appeals
- soil and water conservation districts
- county cooperative extension
- environmental management councils
- town conservation advisory commissions (or boards)

New York is actively involved with and supports local efforts to encourage anti-sprawl, "smart growth" development in the State with the intent to revitalize urban areas, conserve natural resources (including wetlands) and promote quality of life.

Other Stakeholders

Conservation Organizations: Numerous not-for-profit, nongovernmental conservation organizations exist. Some were formed specifically to address wetlands issues; others include wetlands conservation as part of their mission. It is estimated that over 50 nongovernmental organizations participate in wetlands conservation programs to some extent. Key participants include Ducks Unlimited, The Nature Conservancy, and local chapters of the Sierra Club and the National Audubon Society.

Academic Institutions: Many academic institutions in the State have faculty teaching about or conducting research on wetlands. Key institutions include Cornell University, State University of New York (SUNY)-College of Environmental Science and Forestry at Syracuse, and SUNY at Stony Brook. DEC recently entered into cooperative agreements with a number of SUNY colleges to use college interns to assist with wetlands delineations, compliance inspections, and mapping.

Business Sector: Many businesses own land on which wetlands occur, or affect wetlands as part of their normal operations. The business sector can fund or conduct activities that have a positive affect on wetlands, even outside of requirements or normal operation.

Landowners: Private individual landowners own the vast majority of wetlands in the State. Their activities can have a significant impact on the quality or quantity of wetlands in the State. With the advent of federal and state restoration efforts, many landowners have willingly volunteered to restore wetlands on their property and become good stewards of the resource.

Other Citizens: All citizens of the State benefit from wetlands protection. Many people support conservation organizations because of their support for wetlands. Citizens also provide political support or comments for wetlands programs and for site-specific activities, such as permits or acquisitions.

Protection Strategies

There is a wide variety of programs that affect wetlands in New York. Programs are aggregated according to their basic approach into one of seven "mechanisms":

Acquisition

Acquisition can include a wide variety of protection strategies. It most frequently is associated with purchase of all rights and title to the land — full fee title acquisition. It also can include acquisition of only some of the rights to the land, usually the right to develop the land, which leaves the property in its undeveloped, natural state. Acquisition also includes leases, conservation easements, donations, bargain sales, and transfers of development rights. It is the variety of means by which to guarantee protection or control of all or some rights to the use of the land.

New York has a proud history of wetlands acquisition. Over 12,000 acres of freshwater wetlands were purchased under the 1972 and 1986 Acquisition Bond Acts and through other state and federal funding sources. DEC also acquired 3,000 acres of tidal wetlands and associated inland buffers, and it is the goal to put all vegetated tidal wetlands into public ownership. In 1990, a third bond act failed to pass, but prompted development of the State Open Space Conservation Plan. The OSP, was discussed earlier in this chapter, is now the major guiding document for all open space acquisition efforts in the State, including wetlands.

Regulation

Regulation is governmental oversight and control of certain actions that may affect wetlands. It generally entails a review and authorization by a governmental agency before an activity can be undertaken. It includes laws, rules and regulations, plus executive orders.

Wetlands are regulated at three levels in New York. Tidal wetlands are protected under the 1973 Tidal Wetlands Act (Article 25 of the Environmental Conservation Law). The 1975 Freshwater Wetlands Act (Article 24 of the Environmental Conservation Law) regulates wetlands 12.4 acres (5 hectares) in size or larger, and certain smaller wetlands of unusual local importance. Under both programs, wetlands are mapped, and a regulated buffer zone is also protected. Wetlands are also regulated under Section 404 of the federal Clean Water Act, which is implemented by the COE. The 404 program regulates the discharge of dredged or fill materials into waters of

the United States, including wetlands. A limited number of local governments in the State also have local ordinances to protect wetlands. Some regulate wetlands explicitly, others through land use ordinances that target water resources. Some regulate only those wetlands not protected by State law; others regulate irrespective of State law. Nonetheless, not all wetlands are protected from all negative impacts and losses continue to occur.

Planning

Planning is the proactive process by which to set a vision for a desired future state and to prepare strategies for achieving that future. It analyzes needs, sets goals and establishes ways for meeting those needs. It is based on both the past and present, but identifies the desired future state. Coordinated, continuous planning should lead to better decision-making.

To be most effective, wetlands protection should be integrated into other land use protection efforts, and not addressed separately. DEC has integrated wetlands into other agency plans, such as the OSP and the Great Lakes Plan, and into other state agency plans, such as this SCORP and the Coastal Resources Plan.

Restoration, Creation and Management

Restoration, creation and management, in general, include hands-on actions taken to manipulate a wetland to create, restore, enhance or protect wetland functions and benefits. Restoration and creation add to the existing resource base, while management actions improve or maintain the quality of existing wetlands.

Restoration means reclaiming a degraded wetland to bring back one or more functions or characteristics that have been partially or completely lost by such actions as filling or draining.

Creation means making a new wetland by flooding or excavating upland.

Management includes:

- Enhancement, which involves altering or manipulating an existing functional wetland to increase selected functions; it often focuses on habitat manipulation for particular species.
- Best management practices, or BMPs, which are used to avoid negative impacts to wetlands while undertaking an unrelated activity such as timber harvest.
- Stewardship, which involves applying a conservation ethic in relating to the land. This often entails more passive management, like leaving a buffer area around a wetland in a pasture or a cultivated field.

New York has a long history of wetlands management. Traditionally they have been focused on management of State-owned lands. In the late 1940s, efforts began on private lands to cooperatively manage for habitat, and over 1000 small marshes were built for waterfowl. Restoration and enhancement efforts on municipally owned lands were funded by the 1972 Environmental Quality Bond Act (EQBA).

More recently, efforts to restore and manage wetlands have grown dramatically. Under the North American Waterfowl Management Plan, DEC and the FWS are cooperating with landowners and other organizations to restore drained wetlands on agricultural land in the Northern Montezuma Focus Area. Other restoration efforts are underway in the Lake Champlain basin, the Hudson River, Great Lakes basin, Upper Susquehanna, Upper Chemung, and the Niagara River. There are now programs specifically targeted at wetland restoration, including the NRCS's Wetlands Reserve Program. Other programs include wetlands restoration among the goals and funded projects, including New York's Bond Act, and the Hudson River Estuarine Management Plan. It is expected that wetlands restoration will continue to be a focus of resources and attention in the upcoming years.

Incentives and Disincentives

Incentives and disincentives create voluntary cooperation in conservation. Incentives are proactive, non-regulatory programs used to encourage voluntary protection. Disincentives are programs that discourage alteration of or impacts to wetlands because they result in the loss of a benefit, such as eligibility for federal funding. Incentives and disincentives usually are financial, but may include recognition, assistance, or good (or bad) public relations.

Incentives and disincentives are highly regarded, but infrequently used. They are generally endorsed in most fora and discussions on improving wetlands conservation. However, since they usually involve financial motivation, incentive programs are difficult to enact or implement. In New York, most incentives are delivered through the Food Security Act conservation programs where landowners are paid an annual rental payment or long-term easement payment for participating in a conservation program, such as the Wetlands Reserve Program.

Research and Inventories

Research and Inventories are the means by which information is gathered to answer pertinent questions. It identifies threats, develops remediation and mitigation techniques, develops details on functions and values of wetlands, and explores means to protect and augment those functions. Research includes traditional data gathering, for empirical research or to answer management or policy questions. It also includes mapping and inventory work, status and trends studies, and monitoring of wetlands.

To better understand the values of wetlands and to manage them better, the State occasionally supports research efforts. This has been augmented since 1990 when EPA began to make State Wetlands Development grants available to the states to increase capacity for wetlands protection. APA, DEC, and other grantees have used these grants to undertake an array of wetlands studies and inventories.

Education, Outreach and Technical Assistance

Education, outreach and technical assistance are the means by which information is provided to users to make decisions, affect behavior and create greater awareness. Education generally is focused on a broader segment of the public and most often has a broader theme, such as the value of wetlands. Outreach efforts are more specific, targeted at an affected group, such as landowners, about a specific topic, such as how to get a permit. Finally, technical assistance is usually very hands-on and technical in nature, such as how to restore a wetland on converted cropland.

Most mechanisms are interconnected by many common threads, and do not operate independently. For example, when we acquire wetlands, we must then manage them. Education is important to get support and involvement for other mechanisms. Technical assistance provides support to landowners to manage their own wetlands. Inventory data, available through a geographic information system, can be used by local governments to plan for wetlands protection. This interdependency will be evident in the discussions of the mechanisms.

Programs are best when developed and implemented in cooperation with all the interested and affected parties. Partnership approaches to implementing wetland programs have increased dramatically in recent years and have been responsible for improved conservation.

Effectiveness of Wetlands Protection Mechanisms

There are no mechanisms in place to directly measure the effectiveness of any conservation programs. DEC conducted a status and trends study in the late 1990s to evaluate changes in the wetlands resource between the mid-1980s and the mid-1990s, but this only indirectly assesses the effectiveness of any programs such as regulation or acquisition. Greater emphasis should be placed on assessing the effectiveness of conservation programs.

Existing Wetland Resources: Inventories

It is estimated that New York has 2.4 million acres of freshwater wetlands and about 25,000 acres of vegetated tidal wetlands. They encompass about eight percent of the land of New York. Wetland types include marshes; hardwood, coniferous and shrub swamps, wet meadows; bogs and fens; coastal marshes; and wetland open water. About 74% of all wetlands occur in the Lake Plains and Adirondack ecological regions, although these areas encompass only about 47% of the State's landmass. Statewide, approximately 80% of the wetlands are larger than 12.4 acres, the threshold for protection in the State Freshwater Wetlands Act. Forested wetlands are the most common, accounting for almost 70% of all wetlands.

There are a number of wetland inventories available in New York.

The National Wetland Inventory (NWI) maps are prepared by the USFWS for management purposes. They show all map-able units and include cover type classifications. There are now NWI maps available for almost all areas of the state outside the Adirondack Park. Maps have been digitized where they exist, and can be viewed on the web at http://wetlands.fws.gov . Using a planning grant from the FHWA, maps for the Great Lakes coastal area were updated and sections of the Capital District, where maps did not exist, were completed.

The Tidal Wetlands Act requires that all tidal wetlands be mapped. In 1991, the Division of Marine Resources initiated a program to re-inventory the entire resource continually on a five year cycle. The current inventory shows some 25,000 acres of vegetated tidal wetlands in the marine district. The acreage is classified as follows:

- Coastal fresh marsh — the upper tidal limits of riverine systems. This category accounts for 4.8 percent of the vegetated tidal wetlands in the State.
- Intertidal marsh — the area between average high and low tidal elevations. It includes 60.8 percent of the vegetated wetlands.
- High marsh — the uppermost tidal wetland zone. It includes 31.6 percent of the vegetated wetlands.
- Formerly connected — areas where tidal flow has been restricted by either human or natural causes. It includes 4.8 percent of vegetated wetlands.

The Freshwater Wetlands Act also requires that jurisdictional wetlands be mapped. All counties outside the Adirondack Park have been mapped at the scale of 1:24000 and account for 1.2 million acres of wetlands. Inside the Park, Hamilton, Essex, Warren, and Clinton Counties have been finalized. DEC continually amends maps statewide, as resources are available, to keep them updated. Major amendments to wetlands in the New York City drinking water reservoir watersheds were concluded in 2006, adding 7,736 acres of wetlands to the maps. Maps are

available for inspection at all DEC offices and at all local government clerks' offices. Maps have been digitized, and as of fall 2007, the data will be available on DEC's website for use by the public. Digital data on DEC-mapped wetlands is available for those with GIS capabilities through the Cornell University Geospatial Information Repository (CUGIR) at http://cugir.mannlib.cornell.edu/.

The APA has conducted intensive wetlands mapping on a watershed basis in the Park. The Upper Hudson, Oswegatchie/Black and St. Regis watershed are all completed and are available digitally from the APA. The Mohawk and Ausable/Boquet River watersheds will be completed soon. Mapping in the remaining Saranac River watershed and Lake George basin will begin in the winter of 2007.

Finally, a number of local governments have mapped their wetlands using varying scales, definitions, and methodologies to meet local needs.

New York does not specifically classify wetlands as rare, threatened, or functionally diverse (as per federal MARO Technical Assistance Guide for Meeting the Requirements of the Emergency Wetlands Resources Act). Under Article 24, freshwater wetlands are classified according to their relative functions and values. Wetlands are classified into one of four categories, from Class I, which provide the most important functions or are functionally diverse, to Class IV, which provides fewer benefits. Currently 26 percent of mapped wetlands are Class I, 54 percent are Class II, 17 percent are Class III, and two percent are Class IV. Tidal wetlands are classified only on the basis of their vegetated characteristics; all tidal wetlands in New York are considered critical resources of the State.

New York's Natural Heritage Program, a joint venture with The Nature Conservancy, has a detailed ecological classification system for the State's wetlands. Included in this scheme is a determination of the class's rarity and threat at both the global and state level.

Historic and Contemporary Losses: Statewide Trends

To determine the status and trends of New York's freshwater wetlands resource, DEC conducted a statewide analysis using EPA grant funds. The study looked at the status of the freshwater wetlands resource, changes in the wetlands resource between the mid-1980s and the mid-1990s, and to what causes those changes can be attributed.

While it is estimated that the State has lost over half of its wetlands since colonization to such activities as draining, dredging, filling, and polluting, results of that study indicate that after decades of wetlands loss, the State had a net gain of an estimated 15,500 acres of freshwater wetlands between the mid-1980s and the mid-1990s. The State gained a total of an estimated 37,900 acres of freshwater wetlands, but lost approximately 22,400 acres.

Most gains occurred in the Lake Plains, which accounted for the vast majority of increases-- an estimated net gain of 15,200 acres. In the Appalachian Highlands (southern tier), the Adirondack ecozone, and Coastal Plains (Long Island) losses and gains were about equal. In the Hudson Valley, there was a minor net loss of wetlands.

There were seven causes of change identified in the study: agriculture, urbanization, aggregate mining, linear development, beaver activity, modified hydrology (such as increased runoff), and plant succession. Agriculture resulted in a loss of an estimated 11,000 acres (50% of all losses) but a gain of 29,000 acres (76% of all gains) as farmland, drained decades ago, was abandoned and reverted back to wetland. This resulted in a net gain from agriculture of approximately 18,000 acres statewide. Approximately 83% of the gains and 37% of the losses from agriculture occurred in the Lake Plains. The Appalachian Highlands lost more acreage to agriculture but had only minor gains, resulting in a net loss to agriculture of about 2,000 acres.

Developmental activities (urbanization, linear development, and aggregate mining) accounted for the other 50% of wetlands losses, but with virtually no measurable gains in wetlands acreage. Urbanization accounted for a loss of about 8,000 acres, of which 58% occurred in the Lake Plains and 32% occurred in the Hudson Valley. Construction of roads and highways resulted in some losses, primarily in the Lake Plains and Hudson Valley. Aggregate mining (for sand and gravel), which coincides with road construction and urbanization accounted for the loss of about 2,200 acres, 86% of which occurred in the Lake Plains.

The second major cause of gains in wetlands was attributed to "modified hydrology," which includes impacts such as increased runoff, drainage, and altered hydrology resulting from human modification of the land. This resulted in an increase of approximately 8,600 acres or 23% of all gains in wetlands acreage statewide. Most of the gains in this category occurred in the Lake Plains and Appalachian Highlands.

This study did not attribute significant gains in wetlands acreage to beaver — only a small, and statistically insignificant 100-200 acres. However, beaver caused a change in cover type of almost 8,000 acres, as their damming activities flooded shrub/scrub and forested wetlands, changing them to open water and emergent vegetation.

Finally, the greatest overall dynamics in New York's wetlands resource resulted from natural ecological succession, the process by which fields change

to forests. The study noted a change in cover type in almost 120,000 acres of wetlands statewide.

While a net gain of an estimated 15,500 acres of wetlands is wonderful news for New York, there are many concerns this study raises. For example, most net gains occurred in the Lake Plains, and most net loss occurred in the Hudson Valley. Most gains occurred in rural areas, while half the losses resulted from urbanization, and therefore occurred in urban and suburban areas. This has resulted in a considerable geographic shift of wetlands, along with their corresponding services they provide, such as water quality protection and flood attenuation. A landowner living along a stream and who now suffers more flooding from loss of wetlands upstream will be little comforted by more wildlife habitat in the rural surrounding area. Our urbanizing population is also increasingly isolated from the open space and wildlife habitat provided by wetlands.

Similarly, most of the gains in wetlands acreage are from reverting agriculture land and altered hydrology, both of which are causes that cannot be attributed to the multitudes of wetland conservation programs in place through out the State. We can anticipate that abandonment of agricultural land will decline, as will its corresponding gains in reverted wetland. At that time, we may again see net losses of wetland acreage statewide.

In addition, the State is still losing considerable amounts of wetlands — an estimated 22,400 acres in the 10 year period of this study. Over 8,000 acres were lost to urbanization. Of that, an estimated 64% occurred in wetlands larger than 12.4 acres in size. Additional studies are needed to determine whether these losses are occurring in wetlands shown on the regulatory maps. The study also indicates there are regional differences in the pressures on the freshwater wetlands resource.

As for tidal wetlands, DEC has observed significant losses of vegetated tidal wetlands, principally Spartina alterniflora (Intertidal Marsh), in marsh islands of Jamaica Bay. Examination of historic maps reveals that between 1857 and 1924, the intertidal marsh islands area varied in size without trend, with average changes of up to 10 acres per year. During periods of significant storms, there were losses of marsh islands. But during quiescent years, the marsh islands appear to be able to rebuild.

From 1924 to 1974, 780 acres of marsh islands were lost due to direct dredging and filling (which were unregulated activities up to 1974) and 510 acres were lost (approximately 10 acres per year) due to other reasons. Since 1974, the study shows that the rate of loss of intertidal marsh islands is accelerating. Between 1974 and 1994, 526 acres of marsh islands were lost at an average rate of 26 acres per year. Between 1994 and 1999, 220 acres were lost at an average rate of 44 acres per year. The vegetated intertidal marsh is being converted to nonvegetated subtidal lands.

The data indicates significant loss of intertidal marsh (especially islands and also along the shoreline) is occurring in Jamaica Bay, but the reasons are subject to further research. Potential contributing factors include sediment budget disruption, sea level rise, dredging, wave energy, erosion and eutrophication. It is most probable that intertidal marsh islands were able to rebuild naturally during the first part of the 1900's because of the extensive shoals and mudflats replenishing sediments to the marsh islands. However, the recent loss of intertidal marsh islands may be due to "drowning" and/or erosion of the intertidal marsh. In many areas, the interior portions of marsh appear to be subsiding or drowning due to lower elevation that could be caused by sediment loss and/or poor marsh peat porosity (water logged, soft and compressed rather than "spongy" like healthy marshes).

In addition, preliminary information suggests that the disappearance of intertidal marshes, at a lesser degree and rate, is occurring in other areas of the marine district (western portions of Long Island Sound and South Oyster Bay). For example, a vegetated marsh island in the southern portion of Manhasset Bay that appears on the 1974 Tidal Wetlands map is now completely covered by water. Because intertidal marsh is critical to estuarine productivity and New York State has lost much intertidal marsh historically, it is essential to give priority attention to the assessment of the problem marine-district-wide, and develop remediation/restoration/research and monitoring strategies where possible and necessary.

Wetlands as a Priority Concern

New York considers wetlands a priority resource, and articulates that concern in statute. The State has comprehensive wetland conservation programs and works with federal and local governmental agencies and with other nongovernmental partners to better protect wetlands.

Through a suite of programs from acquisition and regulation to restoration and education, the State has successfully protected its wetlands resources and will continue to be a leader in preserving, protecting, and conserving the wealth of its wetlands resources.

Wild and Scenic Rivers Program

National Legislation

In 1968 the Wild and Scenic Rivers Act was passed by Congress in an effort to create a national system of protected rivers. The Act declared:

> "It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations. The Congress declares that the established national policy of dams and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes."

The program has been successful at preserving a large number of the nation's premier rivers. A large portion of the designated rivers are located in the northwest; Oregon and Alaska have the highest number of segments and most miles of river designated, respectively. New York State only has one river designated as part of the National system, that river is the Delaware (Upper) River. The Delaware (Upper) was designated in 1978 as a Wild and Scenic River for the portion between Hancock, NY and Sparrow Bush, NY; the designation is listed as both scenic (23.1 miles) and as recreational (50.3 miles).

The protection of the Delaware River through the Wild and Scenic River program has allowed the river to remain a productive source of drinking water for 17 million people as well as maintaining a natural recreational resource for visitors.

Nationwide River Inventory (NRI)

The NRI is an inventory managed by the National Park Service of river segments that are potentially eligible to be designated as part of the Wild and Scenic Rivers program. The passage of the Public Law 90-542 (the Wild and Scenic Rivers Act of 1968) led to the creation of the inventory which was first published in 1982 after potential rivers were identified all across the United States. To be listed on the NRI the river (or segment) needs to fit the following three criteria; it needs to be a free flowing river, the river and corridor need to be relatively undeveloped, and finally the river needs to possess outstanding natural and/or cultural resources. Once a river (or segment) is listed on the NRI all federal agencies must avoid or mitigate actions that could adversely affect one or more of the NRI segments.

Currently there are more than 3,400 rivers listed on the Nationwide Rivers Inventory. New York State has a total of 184 river segments identified as eligible river segments and listed on the inventory. This listing affords the water resource protection from inappropriate use and allows all different recreation types to occur in a natural setting. The creation of conservation plans for the NRI rivers helps with decision making and the studies can provide new information to the community on the natural resources that can be found in their local waterway.

Partnership Wild and Scenic Rivers

Within the National Wild and Scenic Rivers System there is a program called Partnership Wild and Scenic Rivers Program that works with communities in their effort to preserve and manage their river-related resources locally. The program focuses on rivers that are located on private land and not managed by the government. Since there are private citizens involved, the program brings a broad range of groups together, including citizen groups and many levels of government. The Northeast has been very active in this program, with the 8 partnerships being located within New Jersey, New Hampshire, Connecticut, Massachusetts, Pennsylvania and Delaware.

To become a Partnership Wild and Scenic River it is necessary to partner with the NPS to identify the special resources that your river possesses. A bill must be passed that authorizes the NPS to work with the community to do the study, and this study process is funded by the federal government and can take 2-3 years. After the study is completed a determination will be made whether the river will be designated as Partnership Wild & Scenic River.

State Legislation

New York State has a number of rivers with significant natural, scenic, historic, ecological and recreational values. The NYS Wild, Scenic and Recreational Rivers System was enacted in 1972 to preserve, protect, and enhance these unique rivers and their immediate environs in a free flowing condition and in a natural state. The program is administered by DEC outside the Adirondack Park and on State lands within the Park. The Adirondack Park Agency has responsibility for the program on private lands within the park.

There were 14 initial rivers (segments) designated as part of the NYS

Wild, Scenic and Recreational Rivers system; these were located within the Adirondack Park boundaries. After the legislation was first passed, additionally designated segments were proposed to the legislation and added to the list. This included seven rivers outside the Adirondack Park with the classifications of scenic and recreation: The Carmens River, Nissequogue River, Peconic and Connetquot Rivers in Suffolk County; the Genesee River through Letchworth State Park; the Ramapo River in Orange and Rockland County and the Shawangunk Kill River in Ulster and Orange Counties. Throughout the year the Commission or agency can propose additional segments to the Governor and legislature for inclusion on the list.

The legislation designates three classes of rivers: wild, scenic, and recreational. Wild rivers are those that are free of diversions and impoundments, and inaccessible to the general public except by water, foot, or horse trails. The river areas are primitive and undeveloped with human intrusions limited to forest management and foot bridges. The minimum length of any one section shall be five miles and there shall be a minimum distance of one half mile from the shore of the river to a public highway or private road open to the public for vehicular use, except where a physical barrier effectively screens the sight and sound of motor vehicles. These strict criteria dictate that few, if any, rivers outside the boundaries of the Adirondack Park will be designated wild.

Scenic rivers are also to be free of diversions or impoundments, except log dams, with limited road access and with river areas largely primitive and undeveloped or which are partially or predominantly used for agriculture, forest management and other dispersed human activities which do not substantially interfere with public use and enjoyment of the rivers and their shores. Recreational rivers are generally readily accessible by road or railroad, may have development in the river area, and may have undergone some impoundment or diversion in the past. Currently, 66 rivers, encompassing over 1200 miles, have been designated as wild, scenic or recreational rivers in New York State.

Water Access/ Water Recreation

New York State has 3.5 million acres of lakes and ponds, 70 thousand miles of rivers and streams, 10 thousand miles of lake and marine shorelines, wetlands and canals all of which constitute 14% of the total surface area of the State. With the Great Lakes and Lake Champlain, the Atlantic coasts of Long Island, the Hudson River and the Mohawk River, the Canal System, the Finger Lakes and other inland lakes, ponds and streams, New York has abundant resources for water-based recreation. Boating, fishing and swimming are popular activities for New Yorkers and this places greater demands on existing facilities and services which create a need for more public access to the State's waters. The past three years have seen a 30% decrease in boater registration, but the numbers remain high with over 500,000 registrations in 2005; NY remains among the top states with number of registered vessels. High numbers of boater registrations has a positive effect on the state, regional and local economy through job creation. Statewide, recreational boaters generated $1.8 billion towards the economy and 18,700 jobs. (OPRHP Recreational Boating, 2005)

DEC sells fishing licenses to both New York residents and nonresidents for additional revenue and to authorize individuals. Over the past 25 years the number of resident fishing licenses sold has ranged from a low of 8 thousand in 1984-85 to a high of over 1 million in 2002-03 and 2003-04. Reported sales for the most recent year available (2005/2006) are 978 thousand. Current (2005/2006) nonresident sales are 148 thousand. Other recreation activity experiences that are not directly dependent on water access can be enhanced by water access. Picnicking or relaxing in the park, visiting nature areas and gardens, camping, hiking or backpacking, bird watching, and horseback riding could all be enhanced by proximity to water bodies.

Water Based Resources

Across the State, there are 3,251 facilities that offer swimming. Of these, 1,863 offer beach swimming with 562,174 linear feet of beach and 1,571 have swimming pools (some sites offer both pools and beaches). Private and commercial sectors provide over three-fifths of the number of facilities. State operated beaches and pools constitute less than 6% of the swimming facilities statewide but tend to be larger facilities. These figures do not include privately owned backyard pools which satisfy a fairly large percentage of the State swimming demand. Similarly, most boating facilities in New York State, aside from car top launch sites, are owned and operated by the private sector. Also since 1935, DEC has been acquiring public fishing rights easements along the bed and banks of the State's major trout streams. These easements allow the public walking and wading access, for the purpose of fishing only. To date DEC has acquired 1,230 miles of such easements along trout streams across the state.

In 1990, a survey of boaters was conducted jointly by OPRHP and DEC. This survey attempted to determine boater use patterns and boater perceptions of boating access in New York State. The survey indicated that generally there is greater use of public sites on weekends and holidays as compared to weekdays.

Launches from public sites contribute less than 1/3 of all boats in use on lakes in 1990. This percentage increases during the spring and fall although the absolute number of boaters during those seasons is much lower (DEC and OPRHP, 1992).

The level of utilization of boating resources varies according to time of day, day of the week and from season to season. Boaters expressed concern with the worst case conditions that exist when use is the highest. In fact, the most important result of the 1990 survey was that the public identified 459 water bodies across the State as needing new or enhanced boat access sites. OPRHP and DEC have been using this list to guide acquisition of new sites and the modernization of existing sites. There is a need to conduct another survey to identify currently water access needs.

The 2004 General Public Survey asked New York State residents if additional recreation facilities were needed within approximately 30 minutes of their home. Their responses indicated a desire for many types of recreation amenities. Of those indicating a specific need, approximately 24% mentioned boating and water access facilities. (OPRHP General Public Survey, 2004) A similar survey of local park professionals also indicated a need for more water based recreation services. Among the professionals, approximately 35% identified fishing and 25% identified boating as activities in their communities in need of additional facilities. Swimming pools were also identified as needed, although beaches were not mentioned as often. Beaches may not be feasible in many of the areas surveyed because of physical constraints. (OPRHP General Public Survey, 2004)

Over 75% of the general public indicated that they believe that the government should increase and/or create additional public access to water resources such as lakes, streams, beaches and ocean fronts (OPRHP General Public Survey, 2004). Park professionals responded to this issue positively as well; over 70% of the respondents agreed that government should purchase additional public access to water resources (OPRHP General Public Survey, 2004).

Great Lakes

New York State borders two Great Lakes. Lake Erie and Lake Ontario have more than 1,500 miles of shoreline and nearly half of that along New York State's border (Great Lakes Regional Waterways Management Forum, undated). Approximately 40% of New York's lands are within the Great Lakes watershed and more than 20% of its population resides within the basin. Recreation and tourism continue to be a major contributor to the economy of the Great Lakes region. As responses from the urban areas of Buffalo and Rochester demonstrate, increasing demand for swimming, boating and fishing opportunities are placing more pressure on management agencies to "clean up", maintain water levels, protect wildlife habitat areas, restore fish and wildlife populations, and provide more public access for improved public uses of the Lakes and their resources. Recreational use of the Great Lakes waters is often listed as an impaired use. With the anticipated expansion of recreational interests, greater demands will be placed upon existing facilities and resources in the Great Lakes region, many of which are not in sufficient supply or condition to satisfy these increasing needs.

The following organizations and programs recognize the importance of the Great Lakes to the economic vitality of New York State and the role of recreational use and water access as part of the regional economy. OPRHP and DEC work with and participate in these programs to ensure public recreation and access issues to the Great Lakes are addressed.

Council of Great Lakes Governors

New York's Governor, along with the other seven Great Lakes governors comprises the Council of Great Lakes Governors. The mission of this council is: "To encourage and facilitate environmentally responsible economic growth." This is accomplished by establishing a cooperative effort between the public and private sectors among the eight Great Lakes states and with the Canadian Provinces of Ontario and Quebec. Through the Council, Governors work collectively to ensure that the entire Great Lakes region is both economically sound and environmentally conscious in addressing today's problems and tomorrow's challenges.

The Council works directly for the eight Great Lakes Governors on projects and issues of common concern to them. The Council develops, implements, and coordinates project-specific initiatives to improve the region's environment and economy. The Council is unique among regional and national Governors' organizations because the member-Governors insist that the initiatives and projects pursued have a direct impact on the health and welfare of the region's citizens.

The Council currently represents the eight states on an Executive Committee charged with coordinating the implementation of the Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes, adopted December 2005. This comprehensive strategy establishes eight strategic restoration and protection priorities (aquatic invasive species, habitat/species, coastal health, AOC/sediments, nonpoint sources, toxic pollutants, indicators and information, and sustainable development) and calls on federal agencies, states, local municipalities, non-government organizations, the business community, and native American tribes to contribute to implementing over 40

key actions designed to address the eight priorities. The SCORP serves as an important mechanism for enabling New York to help achieve the Strategy's priorities and recommended action targets.

The Great Lakes Commission

The Great Lakes Commission (Commission) is a binational agency that promotes the orderly, integrated and comprehensive development, use and conservation of the water and related natural resources of the Great Lakes Basin and the St. Lawrence River. The Commission was established by joint legislative action of the Great Lake States in 1955 and was granted congressional consent in 1968. The Commission is comprised of representatives from the eight Great Lake States and associate members from the Canadian Provinces of Ontario and Quebec (The Great Lakes Commission, 2007).

The Commission has been applying the principles of sustainability to the development, use and conservation of the natural resources of the Great Lakes Basin and St. Lawrence River. The Commission addresses a range of issues involving environmental protection, resource management, transportation and economic development. The Commission's vision for the basin is to have a strong and growing economy, a healthy environment, and a high quality of life for all citizens. To accomplish their vision, the Commission adheres to three supporting principles: 1) information sharing among the membership and the entire Great Lakes-St. Lawrence Community; 2) policy research, development and coordination on issues of regional interest; and, 3) advocacy of those positions on which members agree.

The Great Lakes Fishery Commission

The Great Lakes Fishery Commission (GLFC) was established by the Convention on Great Lakes Fisheries between Canada and the United States in 1955. The Commission has two major responsibilities: (a.) to develop coordinated programs of research on the Great Lakes, and, on the basis of the findings, to recommend measures which will permit the maximum sustained productivity of stocks of fish of common concern; and (b.) to formulate and implement a program to eradicate or minimize sea lamprey populations in the Great Lakes.

The GLFC established a strategic plan with a common goal to secure fish communities, based on foundations of stable self-sustaining stocks, supplemented by judicious plantings of hatchery-reared fish, and provide from these communities an optimum contribution of fish, fishing opportunities and associated benefits to meet needs identified by society for wholesome food, recreation, cultural heritage, employment and income, and a healthy aquatic ecosystem.

The fishery resources of the Great Lakes are held in trust for society by government. The agencies responsible for them have been charged to manage the fishery resources and fisheries to provide continuing valuable contributions to society. These contributions include such benefits as a healthy aquatic environment, aesthetic and recreational values, scientific knowledge and economic activity as well as fish and fishing opportunities. The Commission carries out these activities through Lake Committees. Each Lake Committee has adopted Fish Community Objectives that outline specific resource management and stocking targets for various fish species. New York State participates on both the Lake Erie Committee and Lake Ontario Committee.

New York State's Great Lakes Basin Advisory Council

The Great Lakes Basin Advisory Council (Council) was established by statute (ECL Section 21-0917) in 1988. The Council was formed to assist the State in its effort to protect the environmental, social and economic health of the Great Lakes Region. The Council functions as a link between state and local governments, private sector businesses, academic community and the public. (DEC, 2007)

The Council consists of 19 members who advise the Governor, State Legislature and the DEC Commissioner on matters relating to the State's role in regional, federal and international activities and programs aimed at protecting the quality and quantity of water in the Great Lakes. Domestic, municipal, industrial and agricultural water supplies; navigation; hydroelectric power and energy production; recreation; fish and wildlife habitat; and a balanced ecosystem are all vital to the future environmental, social and economic health of the Great Lakes Region. Some examples of what the Council is responsible for are:

- Advising the Governor and DEC Commissioner regarding the implementation and modification to any comprehensive long-term Great Lakes management plan developed by DEC or others;
- Advising the State's members on the board of directors of the regional Great Lakes Protection Fund;
- Annually identifying specific research or program needs for funding from the New York Great Lakes Protection Fund; and,
- Evaluating and reporting to the Governor and Legislature on projects funded by the New York Great Lakes Protection Fund.

Since its creation, the Council has assisted in the development of "New

York State's 25-Year Plan for the Great Lakes" (DEC, 1992), advised the Governor and the State Legislature on major water withdrawal proposals, and advised and assisted the Governor and the State Legislature in the development of the "Annex 2001" – an amendment to the Great Lakes Charter (Council of the Great Lakes Governors, 2001) and the proposed legislation on the "Great Lakes – St. Lawrence River Basin Water Resources Compact." In addition, through its partnership with the Great Lakes Research Consortium, the Council has approved the award of 21 large grants totaling one million dollars and 36 small grants totaling nearly a quarter of a million dollars from New York's Great Lakes Protection Fund. The grant program promotes research, information collection and public outreach to support the various Great Lakes programs, plans and strategies.

The Council plans on continuing its role and responsibilities to advise the Governor and State Legislature on water withdrawal proposals, identify and recommend research regarding New York's Great Lakes and to recommend special projects to restore and enhance the water quality and wildlife habitat of New York's Great Lakes Basin.

Lakewide Management Plans (LaMPs)

The development of Lakewide Management Plans (LaMPs) stem from the Great Lakes Water Quality Agreement originally signed by the United States and Canada in 1972 and amended in 1978 and 1987. In the 1987 amendment, the two governments agreed to develop Lakewide Management Plans that will "restore and maintain the chemical, biological and physical integrity of the waters of the Great Lakes Basin" (Great Lakes Information Network, 2007). The LaMPs are intended to (1) identify critical pollutants that affect beneficial uses of the waters of the Great Lakes and (2) promote ecosystem-based management approaches to restoring the basin's integrity.

Lake Erie, the twelfth largest freshwater lake in the world (in water surface area), is the shallowest and most biologically productive Great Lake. The Lake Erie LaMP focuses on measuring ecosystem health, teasing out the stressors responsible for impairments, and evaluating the effectiveness of existing programs in resolving the stress by continuing to monitor the ecosystem response. The role of the LaMP, as a management plan, is to define the management intervention needed to bring Lake Erie back to chemical, physical and biological integrity, and to further define agency commitments to those actions. Although Environment Canada (EC) and the U.S. Environmental Protection Agency (U.S. EPA) are the lead agencies for the LaMP, it takes an array of federal, local, state and provincial agencies and stakeholders to successfully design and implement the Lake Erie LaMP. (US EPA, 2007)

Lake Ontario, the fourteenth largest freshwater lake in the world, is nearly four times deeper than Lake Erie but is the most vulnerable to upstream and upwind pollution sources. The LaMP for Lake Ontario was completed in 1998. This document identified four lakewide impairments, activities that further develop source reduction strategies for six critical pollutants (PCBs, DDT and metabolites, Mirex, Dioxins and Furans, Mercury, and Dieldrin), and actions that were designed to restore beneficial uses in Lake Ontario. Problems identified include: loss of natural habitat for fish and wildlife; restrictions on eating some fish and wildlife; degradation of wildlife populations; and, bird or animal deformities or reproductive problems (Environment Canada, U.S. Environmental Protection Agency, et al, 1998). The goal is a healthy Lake Ontario Basin that contains thriving fish and wildlife populations and that basin residents can enjoy to the fullest extent. An update report issued in 2007 states that the management of critical pollutants has been effective in reducing their presence and that fish and wildlife populations are responding positively – especially bald eagles, colonial waterbirds, mink, otter and snapping turtles. Healthy populations of these species now exist within suitable habitats around Lake Ontario. (US EPA, 2007) The LaMP is currently developing a Biodiversity Strategy focusing on protection and conservation of important fish and wildlife habitats in and around the lake basin. The SCORP will be vital mechanism for achieving the goals of this developing strategy.

Remedial Action Plans

As part of the binational Great Lakes Program, six areas of concern were identified within New York as required by the 1987 amendment to the Great Lakes Water Quality Agreement (International Joint Commission, 1994). "Areas of Concern" are areas where beneficial uses of the lands, shores, and water are impaired due to water quality issues and do not meet the objectives of the Water Quality Agreement. The six areas identified in New York are the Buffalo River, the Niagara River, the Rochester Embayment, the Oswego River, Eighteen Mile Creek in Niagara County and the St. Lawrence River at Massena, NY (U.S. EPA, 2007).

The Water Quality Agreement outlines a process for bringing these areas into compliance. This process involves the development of a Remedial Action Plan (RAP). The purpose of the RAP is to develop strategies and consensus approaches to restoring beneficial uses that have been impaired within specific areas of concern. This process has four stages outlined. The first stage is problem identification, in which impaired uses and the causes of those impairments are identified. The second stage is to develop methods to address or correct these impairments. The third phase is to implement the actions identified in step two. Finally, the fourth

stage is to remove the area of concern from the list.

The ultimate goal of the Remedial Action Plans is to have all areas "de-listed". In New York State, only the Oswego River AOC has achieved the goal, being the first of the U.S. AOC to be delisted in July 2006. The remaining five areas are in various stages of the process. After completing environmental review under the NY State Environmental Quality Review Act (SEQR), DEC included all six RAPs as part of the State's Water Quality Management Plan (DEC, 1998).

New York State 25-Year Plan for the Great Lakes

An important objective specified in the 25-Year Plan for the Great Lakes (25-Year Plan), prepared in 1992, is to increase opportunities for the public to gain access to the Great Lakes Coastal areas (DEC, 1992). A jointly prepared OPRHP and DEC "Strategic Plan for Economic Development through Expansion of Waterway Access to the Great Lakes" and the 25-Year Plan identified the existence of many water access sites which have the potential to maximize the recreational and economic benefits associated with the Great Lakes fisheries program (DEC and OPRHP, 1982). Current listings of State and Municipal boat launch sites show that there are 7 launches on Lake Erie, 9 on the Niagara River, 28 sites on Lake Ontario, and 14 sites along the St. Lawrence (DEC, 2007). A site identified within plans for boat access, Woodlawn Beach was acquired and developed as a State park with beach swimming south of Buffalo. Efforts continue to increase public access to the shores of the Great Lakes through land acquisition and the development of partnerships with local governments and other agencies.

DEC is in the process of evaluating the State's progress in implementing the 25-Year Plan and developing an action plan for the next five years of the plan's implementation. This action plan will identify short-term activities recommended within the 25-Year Plan that have not yet been accomplished and identify new priorities that have been identified since the creation of the 25-Year Plan.

Finger Lakes

The Finger Lakes Region is comprised of a series of long narrow lakes created by glaciations during the last Ice Age that ended about 14,000 year ago. The 11 primary lakes span from Conesus Lake south of Rochester to Otisco Lake south of Syracuse. The lakes from west to east include:

- Conesus Lake
- Hemlock Lake
- Canadice Lake
- Honeoye Lake
- Canandaigua Lake
- Keuka Lake
- Seneca Lake
- Cayuga Lake
- Owasco Lake
- Skaneateles Lake
- Otisco Lake

The lakes serve as a major water recreation resource for the area, providing extensive fishing, swimming, boating and hunting opportunities. Eleven OPRHP facilities are located along the shores of the Finger Lakes. Seneca and Cayuga Lakes are also part of the Barge Canal System. With the increase in shoreline and upland development and the use of the lakes' resources, there has been a growing concern to improve, maintain and protect the water quality and water resources. To better guide future efforts aimed at protecting and improving water quality, the Division of Coastal Resources has encouraged the completion of intermunicipal watershed plans as a means of establishing a consensus on priority actions needed to protect or improve water quality. Within the Finger Lakes, the Department of State awarded EPF grants for the preparation of such plans for Cayuga, Canandaigua, and Conesus Lakes.

In addition to the watershed plans, the Division of Coastal Resources is working with several municipalities within the Finger Lakes through the LWRP process. Finger Lakes communities which are preparing, or have completed, an LWRP include: City of Auburn; Tompkins County communities along Cayuga Lake (City of Ithaca, Towns of Ithaca, Lansing, Ulysses; Villages of Cayuga Heights and Lansing); City of Geneva; Town and Village of Seneca Falls/ Town and Village of Waterloo; and Village of Watkins Glen.

Hudson River

The Hudson River flows 315 miles from the Adirondack Mountains to New York Harbor. The Hudson River is used by half of the residents of New York State for water supply, waste disposal, power generation and recreation. The 150-mile estuarine section extends from the federal dam at Troy to New York City Harbor. With improvements in its water quality there has been an increased interest in the vast recreation potential of the river. However, public access to the Hudson is severely limited by private ownership, topography and high speed rail lines that run parallel to the river. There are 1081 recreational facilities within the towns along the lower Hudson River. Of this total, only 43 are State-owned and can thus expect to provide some guaranteed long-term public access.

In 1989, The Hudson River Access Forum, which consisted of representatives from the National Park Service (NPS), the Division of Coastal Resources of DOS, OPRHP, DEC, DOT and three nonprofit organizations, produced a report that identified sites of potential public access to the Hudson River shoreline. A major thrust of the study was to identify potential railroad crossings that connect existing and potential water access sites (Hudson River Access

Forum, 1989). This effort was intended to take advantage of a DOT program that will raise railroad overpasses and increase public railroad crossings along the Hudson River between Albany and Westchester Counties. Providing safe crossings of the rail system has been a major impediment to accessing public recreation land and private lands, directly on the shoreline. In addition, New York State awarded a $1 million grant to the Hudson River Valley Greenway to develop a Hudson River Greenway Water Trail. A complete description of the Hudson River Valley Greenway Program can be found in the "Connectivity Chapter".

The Hudson River Estuary Program

The Hudson River Estuary Program was established in 1987 in response to Section 11-0306 of the Environmental Conservation Law, the Hudson River Estuary Management Act. The program is a regional partnership designed to protect, conserve, restore and enhance the estuary, associated shorelands as well as related upland resources. DEC serves as manager of the program in collaboration with OPRHP, DOS, OGS, DOT, the Metro-North Railroad, the Hudson River Valley Greenway, the Hudson River Foundation, Cornell University, New England Interstate Water Pollution Control Commission (NEIWPP), Soil and Water Conservation Districts and a citizen advisory committee along with municipal governments (DEC, 2007).

The long-range goals for the Estuary Program are outlined in the *Hudson River Estuary Action Agenda 2005-2009.* For each goal, interim targets have been set in quantitative terms, wherever possible, with specific dates for achievement. The *Action Agenda* undergoes revision every four years. The current edition of the Estuary *Action Agenda* is available from DEC's website at http://www.dec.ny.gov

Encouraging people to get to the river and enhancing recreational opportunities have been a major goal of the Estuary Program. In 1999, the Estuary Program initiated a grants program to provide opportunities for implementing *Action Agenda* goals at the local level. Grants are available to municipalities and not-for-profits in five categories, including access to the Hudson River estuary for recreation. To date, more than 300 grants, totaling nearly $10 million have been awarded to these local efforts. (DEC, 2007).

Since its inception in 1987, the Estuary Program, along with OPRHP, Hudson River Valley Greenway, DOS, Hudson River Park Trust and Metro-North Railroad has been actively working to establish new or improved river access, including boat launches, docks, piers, railroad crossings, new local parks and waterfront walkways. Some public access accomplishments include:

Trailered Boat Launches:

New boat launches have been constructed at Henry Hudson Park in the Town of Bethlehem, Schodack Island State Park (joint project with OPRHP), and the Haverstraw Bay County Park.

Existing boat launches have been upgraded at: Cities of Newburgh and Peekskill, Mills-Norrie State Park (joint project with OPRHP), Village of Athens (joint project with OPRHP), Village of Rhinebeck and the Village of Coxsackie.

Hand Launches:

Grants approving funding for 25 hand launches on the estuary as well as multiple locations with floating docks for launching canoes and kayak. Additional grants have approved design studies for other sites.

Fishing Piers:

The Estuary Program provided angling opportunities at fishing piers through the use of cooperative agreements and grants. Three piers have been completed at Verplanck, Peekskill-Annsville Creek, and Rensselaer.

Access Across the Railroad Tracks:

Working from the Governor's Task Force on Estuary Access 1999 recommendations, two new shore fishing sites have been built at railroad crossings in the Metro-North corridor at the Riverdale and Greystone stations. Further, there is enhanced access across the railroad tracks at Dennings Point, Little Stony Point, Cold Spring station, Arden Point, and Annsville Creek and the Beacon waterfront.

Other Estuary Program Initiatives highlighting recreational access to the Hudson River:

- Conducting surveys of recreational striped bass fishing on the Hudson. Estimated catch rates and total harvest for striped bass
- Implementing a four season creel survey of recreational fishing for all species
- Releasing findings of its swim study, *Swimming in the Hudson River Estuary*, Feasibility Report on Potential Sites, NYS DEC, NYS OPRHP, June, 2005. This report identifies 18 feasible sites for development of swimming beaches on publicly owned lands.
- Offering hikes and educational events led by Estuary Program staff and members of the estuary advisory committee that feature the estuary or its tributaries as part of the Hudson Valley Ramble
- Developing an interactive CD which will provide to the public nearly 100 locations along the estuary for shore fishing and boat launching for a wide variety of recreational activities including fishing, hunting, bird watching, canoeing, kayaking, sail and power boating

The *Action Agenda's* goal is to establish a regional system of access points and linkages so that every community along the Hudson has at least one new or upgraded access point to the river for fishing, boating, swimming, hunting, hiking, education, or river watching.

Marine Coast

New York State has over 2,000 miles of marine coastline and one million plus acres of marine surface waters. The marine district, which includes New York City, Nassau, Suffolk and Westchester Counties, is home to 10 million people or 60% of our State's population. Development pressures have been progressing at such a rapid rate that significant remaining access to the waterfront is being lost. Programs such as the Open Space Plan and the DOS's Coastal Management Program, provide methods and funding sources to provide access and to protect and preserve diminishing, recreational coastal resources.

Marine Recreational Fishing/Artificial Reef Program

DEC's Bureau of Marine Resources is responsible for the management of living marine resources and their habitats within the Marine and Coastal District of New York State. The Finfish and Crustaceans Unit monitors and develops management recommendations for the principal finfish and crustacean species of the State including; striped bass, shad, sturgeon, weakfish, winter flounder, scup and many others. All these species migrate up and down the coast and occur in the waters of many states. Data collection and management responsibility of these species is shared among states and federal agencies. The management efforts of the bureau strive to provide a healthy and stable marine fish population and maintain the habitat for these species for marine recreational and commercial fishing interests.

Recreational marine fishing access is developed on State properties or in cooperation with local municipalities. Program activities include property acquisition, construction of new access facilities such as fishing piers and boat ramps on existing properties, and rehabilitation or improvement of existing facilities.

The Artificial Reef Program, administered by the Finfish and Crustaceans Unit, is committed to optimizing marine recreational fishing opportunities in the State. Artificial reefs may be designed and advocated to serve a dual purpose of habitat improvements and shoreline protection along the Long Island Shoreline. This program is important to the State's recreational future because of the popularity of fishing as a recreational activity.

Marine fishing reefs have long been used to enhance marine habitat and attract marine fish and other animals for harvest. Reefs are built of any hard, durable structure that simulates the habitat of particular species of fish, crustaceans or mollusks. Most artificial reefs in New York are made of rock, concrete or steel, usually in the form of surplus scrap materials. Reefs are developed to provide new fisheries habitat and more accessible fishing grounds for anglers; however, divers also visit these reefs for nature observation, photography and catching lobsters.

The Reef Program's US Army Corps of Engineers (ACOE) and NYSDEC permits for reef construction expired in 2004. Under these permits, from 1993 through 2004, the NYSDEC Artificial Reef Program has deployed the following materials on seven permitted reef sites:

- 594,838 cu. yd. of rock
- 14,410 cu. yd. of concrete (bridge rubble etc.)
- 146 pieces of concrete pipe
- 100 military surplus armored vehicles
- 100 REEFBALL modules
- 20 vessels and 13 barges
- 3 drydocks

These materials produced over three hundred individual patch reefs that are being used by fishermen and divers. This overwhelming success has been due to the extensive private funding of the program and the assistance of the NYSDEC Division of Law Enforcement, U.S. Coast Guard, Suffolk County Public Works Departments. Donations of fishing boat hulls, surplus combat vessels from the REEFEX program, concrete bridge and pier rubble and stores of rock from ACOE dredging projects have been used to create these reefs.

The Program is in the application process to obtain new construction permits for four existing reef sites and one new site in the Atlantic Ocean, and one existing site in the Great South Bay.

Fish and Wildlife

The State offers unmatched fish and wildlife recreational opportunities. The geography of the State provides a great mix of landscapes and habitats that produce diverse and abundant fish and wildlife populations. Native brook trout and the State trout stocking program attract trout fisherman to the small mountain streams. The sport fishermen may wish to try their luck in the Hudson River for the big striped bass that have returned to the river. The Great Lakes Region offers trophy size coho salmon and hosts black bass fishing tournaments. Big game hunting takes place in two zones the Northern and Southern Zones. Each zone offers a different type of hunting experience. The Southern Zone is managed intensively for deer and hence deer numbers are higher. The Northern Zone presents more of a

challenge to the hunter but larger, older deer can be found. The oceanfront beaches on Long Island, the 5,344-foot summit of Mt. Marcy in the High Peaks of the Adirondack Mountains and everything in between, provide productive habitat and places for people to enjoy fish and wildlife.

Wildlife Resources

Recreation resources generally focus on land or water areas and discrete facilities or sites. Wildlife as a recreational resource is less location-specific. Their habitat and movement are independent of property boundaries. Wildlife is viewed more in terms of species and populations than in acreage or sites. In the United States, jurisdiction over wildlife does not correspond to ownership of real property, but is vested in the people of each state. DEC acts as the steward of the people's wildlife in New York State. For migratory species, the ultimate authority is the federal government, with DEC and analogous agencies in other states as major participants and cooperators.

To help illustrate wildlife as a recreational resource, the table in Appendix E identifies some of the recreational values of various species; many of them are listed in species groupings. This material is summarized from "Wildlife Species and Ecological Community Accounts," a 1994 report of DEC's Bureau of Wildlife (BOW).

Figure 7.4 shows the State's major ecological zones on which the wildlife management units are based. It is important to recognize that ecological distinctions determine the distribution of wildlife and the opportunities for associated recreation. This gives a framework for the variety of wildlife-related recreation in New York. It should be kept in mind, however, that this is just meant to provide an indication; the actual variety is much greater.

Current Resources

Rare species occur in various places in the State. Encounters with known rare species are most likely to occur in the Adirondacks and in the coastal low lands of Long Island and New York City and to some extent in the Hudson Valley and the Catskills. Some species, such as the bald eagle, the osprey and the peregrine falcon, are of significant recreational interest.

The waterways and bays in and around New York City, including the Hudson River, the East River, Long Island Sound, Great South Bay and other bays along the south shore of Long Island, the upper and lower New York City bays, the Jamaica Bay Refuge, the Arthur Kill and the Kill Van Kull, can provide city and suburban residents with viewing pleasure for such species as gulls, terns, cormorants, herons, waterfowl and other highly visible, water dependent birds.

The Adirondacks and the Catskills provide wildlife observation, hunting and trapping in a wilderness or wild forest context unlike the rest of the State. The fauna of the Adirondacks in particular is different from the rest of the State, with elements of more boreal ecosystems. For example, there is a small growing moose population. A viable moose population will have obvious wildlife observation and tourism values and might eventually provide limited hunting recreation. Such less common species as spruce grouse, Canada jay, three-towed and black-backed woodpeckers, and loons are enjoyed as part of the wilderness experience.

People who enjoy wetland wildlife would do well to go to the shores and plains south and east of Lake Ontario and along the St. Lawrence River. These areas include major wetland complexes such as Montezuma, between Syracuse and Rochester, and the Iroquois-Oak Orchard-Tonawanda area, between Rochester and Buffalo. Wetland wildlife concentrations are found elsewhere as well, including the Champlain and Hudson Valley and the coast of Long Island.

Observers and hunters of bear will find them in the Adirondacks, the Catskills and in the Allegany Plateau. Turkey populations have been reestablished in almost all of New York, including Long Island. Deer are plentiful throughout the State, with the highest

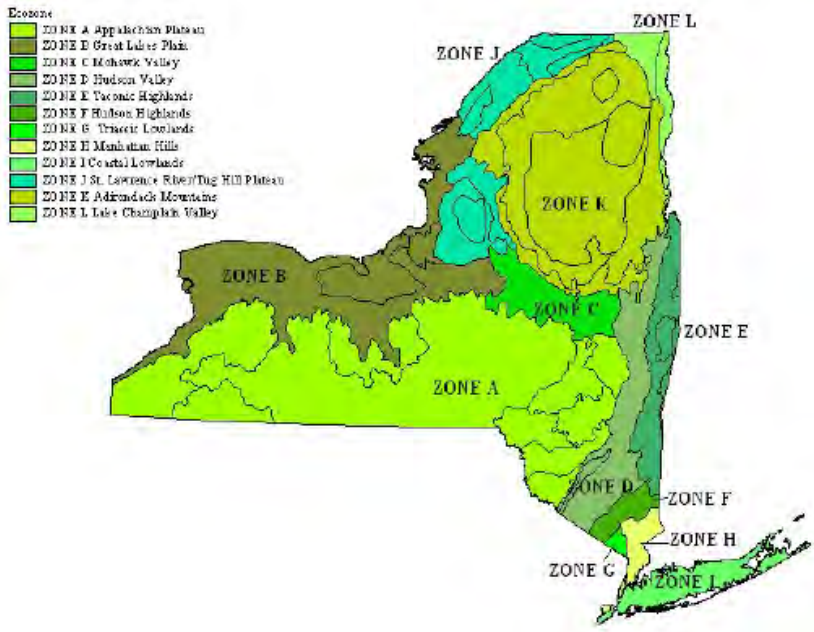


Figure 7.4 - Major Ecozones of New York State

Table 7.2 - Wildlife Recreation in New York State *

Hunters	714,000
Days of Hunting	13,187,000
Average days per hunter	18
Total hunting expenditures	$822,215,000
Average per hunter	$1,135
Total Wildlife Watching participants	3,885,000
Total non-consumptive expenditures	$1,407,194,000

** From the 2001 National Survey of Fishing, Hunting and Wildlife-Associated Recreation conducted by the U.S. Fish and Wildlife Service. Activity by participants 16 years old and older include both residents and non-residents.*

likelihood of hunting success in western, central and eastern New York south of the Adirondacks. And of course, wildlife, such as songbirds, squirrels and cotton tails, are to be seen in backyards, neighborhood parks and along roads and walkways, contributing to the quality of everyday life and recreation.

Table7.2, illustrating information on wildlife-related recreation in New York, is from the 2001 National Survey of Fishing, Hunting and Wildlife-Associated Recreation conducted by the U.S. Fish and Wildlife Service.

Program Goals

The mission of DEC's Wildlife program is to provide the people of New York with the opportunity to enjoy all the benefits of the wildlife of the State, now and in the future. This mission is embodied in five broad goals: (1) to assure that populations of all wildlife are of appropriate size to meet all the demands placed on them; (2) to assure the public desire for information is met and to obtain public input into management decisions; (3) to provide sustainable uses of wildlife for an informed public; (4) to minimize the damage caused by wildlife and wildlife users; and, (5) to foster and maintain an organization that efficiently achieves these goals.

Recreation is one of the major aspects of DEC's wildlife program. Achievement of appropriate population sizes, meeting desires for uses and exchanging information with the public are the goals most closely related to recreation. It is inevitable that program objectives will reflect compromises among several goals.

Discussion

Many people want to know that wildlife exists in its potential abundance and diversity. There are both direct and indirect recreational benefits derived from wildlife. Aside from hunting and observation opportunities, many people achieve satisfaction from the mere existence of various species, such as loons and bears in the Adirondacks, even though they may not have direct contact with them.

While engaging in such activities as camping, hiking, walking, skiing, etc., people often encounter wildlife and have the opportunity to observe many species. These incidental encounters often enhance the primary recreation experience. Recreationists often become accustomed to such encounters and eventually expect them. Observation of wildlife also has recreational value when it is a concomitant to every day living, working and traveling.

People observe and study wildlife for enjoyment. This activity includes both actively seeking opportunities and observing wildlife incidental to other activities. Therefore, an abundant and diverse wildlife population, including endangered, threatened and rare species, needs to be perpetuated and restored in order to serve wildlife recreation.

Hunters, trappers and other recreationists, current and future, should have the opportunity and resources to pursue wildlife interests. In some parts of the State, access to land is declining and/or is severely limited. In addition, political and legal challenges must be addressed.

To maximize social acceptability and public use of wildlife resources on private lands, wildlife recreationists need to develop and practice high standards of ethics, courtesy and safety. Training and educational programs to promote understanding and skill development are a high priority.

Income levels, education levels, physical health, residence in urban/suburban/rural areas, background in wildlife activities are all factors influencing people's involvement with wildlife. Programs that provide opportunities to develop skills, participate in wildlife recreational activities, and involve potential users are needed to enhance public wildlife understanding and support for wildlife resource programs.

DEC will continue to be strongly committed to communicating with the public about all phases of its wildlife program and providing wildlife-related recreation. Communication is two-way, with DEC doing its share of listening.

From 1996 through 2001 DEC's BOW set about conducting a comprehensive wildlife management program that provides the people of New York the opportunity to enjoy all the benefits of the wildlife of the State. They accomplished this task through scientifically sound management that incorporated the desires of the public and the biological needs of wildlife with the goal of maintaining sustainable wildlife populations now and in the future.

Goal

Achieve the size for all wildlife populations in New York appropriate for the

demands placed on them, including the demand for their continued existence.

Accomplishments

In attempting to accomplish this goal, BOW began restoration of species that formerly existed in the State but were extirpated, or assisted with the range expansion of species within the State to areas where they historically existed. In 1996 and 1997, BOW continued the restoration of trumpeter swans to New York. In 1996, trumpeter swans were confirmed breeding in New York for the first time. There is some evidence that trumpeter swans nested in New York in pre-colonial times. Also in 1996, DEC formed a partnership with the River Otter Project, Inc. to restore otter to central and western New York. DEC provided technical expertise, staff time, a small amount of federal funding, and permits for moving otter. The goal was to move about 270 river otter to central and western New York by the year 2005. In both 1995 and 1996, river otter were trapped from northern, eastern and southeastern New York and moved to central and western New York. In 1997, it was planned to release up to 60 additional otters. As of 2001, BOW restored the river otter to central and western New York in partnership with the River Otter Project, Inc. by releasing 279 otters over a six-year period. Work on the project continues, with survey work and monitoring in central and western New York and extended surveys to Long Island, where there have been sightings in or near several state parklands.

In 1996, BOW reviewed and amended the NYS list of rare species based on new scientific information gathered and changes in the status of species. The Return a Gift to Wildlife Program, where New York taxpayers may contribute on their State personal income tax form, generated approximately $770,000 annually for work on endangered and threatened species, habitat inventories, and species surveys. Some of the projects funded include Project Wild, NYS Natural Heritage Program and the Marine Mammal and Sea Turtle Stranding Program.

Efforts by BOW allowed for the establishment of over 40 breeding eagle pairs throughout the State by 1999-2000. Although bald eagles have been nesting along the Hudson River since 1992, the first documented successful hatch of an eaglet in over 100 years on the river did not occur until 1998. By 1999-2000 the number of young fledged climbed to 64 in a single year. In 2004, there were 66 successful nests and 111 young fledged; and in 2005, there were 92 pairs that fledged 112 young (Nye, 2006). A 2008 mid-winter survey yielded a preliminary total of 199 adult and immature eagles in the state (Nye, 2008).

Another raptor success story is that of peregrine falcons and ospreys. The population of the endangered peregrine falcon continues to do well and expand. In 1998, two new sites produced peregrine falcons: one on Long Island and one in the Adirondacks. Osprey, a species of special concern in New York, continues to show improving productivity.

In 1997, legislation was enacted to create the New York State Bird Conservation Area Program and the Bird Conservation Area Program Advisory Committee. This program provides a comprehensive, ecosystem approach to conserving birds and their habitats on State land and waters, by integrating bird conservation interests in agency planning, management, and research projects, within the context of agency missions.

DEC continues to participate in Partners in Flight (PIF), an international effort to conserve neotropical migratory birds by coordinating actions of different countries, federal and state governments, nongovernmental organizations and industry.

In an effort to catalog the biota of the Wildlife Management Areas (WMAs) of the State, the results from the 7-year Biodiversity Inventory of DEC's Wildlife Management Areas Project were completed. WMAs represent an important outlet for both consumptive and non-consumptive natural resource users, thus it is crucial that DEC closely monitor the presence and status of both common and rare wildlife species using these valuable habitats.

Work began on the NYS Breeding Bird Atlas 2000. It had been nearly 20 years since work began on New York's first breeding bird atlas. NY State Federation of Bird Clubs (Federation) and DEC took the lead for this monumental effort to update the data. This work was completed in 2007 and the data is now available at: www.dec.ny.gov/animals/7312.html.

Some of the more inconspicuous, yet invaluable wildlife in New York have also been a part of BOW's management priorities. Species researched, surveyed, and monitored include Karner blue butterfly, Chittenango ovate amber snail, and select reptile and amphibian species. BOW personnel have designed and implemented efforts to fill data gaps on rare species through projects such as the NYS Reptile and Amphibian Atlas, surveys of rare invertebrate species (e.g., dragonflies, butterflies, mollusks), and completing recovery plans for selected species (e.g., Chittenango ovate amber snail).

Actions

- Conduct surveys to determine distribution of and trends in wildlife population.
- Investigate the status of species of concern and identify the causes of any declines.
- Identify protection activities, such as land acquisition, land use regulation, restrictions on toxic

substances and pollutants, public information, cooperative agreements, control of taking and review of projects with the potential to harm wildlife and its habitat.

- Encourage management and enhancement activities, such as species reintroduction and improving critical habitat.
- Increase the public awareness of species through information dissemination.
- Improve habitat to enhance wildlife populations.
- Protect and enhance wildlife populations.
- Provide habitat management and protection, especially of wetlands.
- Control taking, hunting, trapping, and scientific and commercial collection, as needed.
- Assess the decline of neotropical migrant birds and grassland nesting birds.
- Continue to participate in the Atlantic Flyway Council, the North American Waterfowl Management Plan and other interstate efforts to maintain and restore numbers of waterfowl and other species and maximize recreational opportunity within necessary constraints. Particular emphasis is placed on wetland protection and enhancement to meet both hunting and wildlife observation needs as well as species perpetuation needs.
- Continue interagency efforts to protect wetlands. Continue the acquisition of lands and development of cooperative agreements to protect the Northern Montezuma wetlands. DEC and USFWS are continuing their project to protect the Northern Montezuma Wetlands. The project will encompass the premier wetland wildlife complex in New York. It incorporates existing federal and state wildlife lands and contemplates land purchase or cooperative agreements with land owners on an additional 36,000 acres, with provision for habitat restoration and enhancement and for public use and education. The project will provide a number of major benefits, including important benefits for wildlife observation, wildlife study, hunting, trapping and wildlife-related education.
- Continue objective-setting task forces for deer management.

Goal

Meet the public desire for information about wildlife and its conservation, use and enjoyment, and meet the desire to understand the relationships among wildlife, humans and the environment. Clearly listen to what the public says.

Accomplishments

Bureau of Wildlife surveys indicate that the public has a desire to learn about wildlife in general, as well as expectations of having a voice in decisions related to the management of the resource. It is imperative that BOW understand exactly what the public desires from the wildlife resource and the professionals who manage it, so that appropriate program adjustments can be made.

The Federal Aid in Wildlife Restoration Act (a.k.a., Pittman-Robertson Act), a federal program that funds state wildlife conservation efforts, is an ideal vehicle to help meet these needs. Many federal aid activities are of great interest to the Bureau's stakeholders, and it is in both parties best interests to explain the importance of the Pittman-Robertson Act in the State's wildlife management efforts. BOW has accomplished this by providing educational displays and literature which explain bureau programs, Federal Aid-funded wildlife management activities and accomplishments, and projects of interest to the public at sportsman's shows, state and county fairs, earth day, and other environmental events and local community events.

BOW also responded to information requests from the public regarding wildlife and its conservation, use, and enjoyment for programs that were not federally funded. The agency provided telephone coverage by wildlife staff and answering systems to respond to telephone requests, provided literature to the public to address their topic of interest, and provided information through electronic media to interested publics by publishing general information on the Internet and disseminating information from the geographic information system (GIS) to consultants, educators and others.

In an attempt to clearly listen to the public and discern what people want from wildlife, BOW developed a close relationship with the Human Dimensions Research Unit (HDRU) in the Department of Natural Resources at Cornell University. The HDRU conducted many research projects, often surveying various user groups such as hunters and trappers, and published the results and conclusions of these studies in both scientific journals and publications for a general audience. BOW has held several meetings to get a better handle on public opinion of various topics. This included programs such as Deer Task Force meetings, Nuisance Wildlife Control Licensees meetings, and Waterfowl Season Task Force meetings. It is crucial to the success of wildlife management programs, as well as being required by law, that the agency provides opportunity for public involvement when there is a potentially controversial wildlife matter. The agency involved local publics in resource management planning and implementation for issues throughout the State such as Tivoli Bays Wildlife Management Area, Motor Island-Strawberry Island Complex, Islip Deer Initiative, Irondequoit Deer Initiative, and development of a draft Environmental Impact Statement (EIS) for cormorants on Lake Ontario.

Actions

- Continue discussions and dialogues with the public to provide a better

understanding of needs and attitudes that will enable the State to be responsive to their needs.

- Conduct hearings and meetings on key issues.
- Contract, conduct and use the results from numerous surveys to determine public preferences, needs, activities and attitudes.
- Increase the extension agent/conservation educator role of DEC staff.
- Provide audiovisual products (posters, videos brochures, etc.).
- Inform people how to solve/avoid wildlife nuisance problems.
- Provide magazine and news articles to better inform the public of wildlife issues.
- Educate people to the benefits of effective management practices for public lands.
- Develop a network of wildlife education centers near major metropolitan areas that will introduce people to different ways to enjoy wildlife and that will expand their understanding of wildlife management.

Goal

Meet the public's desire to use New York's wildlife.

Accomplishments

New York has a diverse array of wildlife and habitats, a diverse range of geographical regions, and, perhaps most importantly, a diverse array of natural resource users, ranging from hunters and anglers to wildlife observers and hikers. To satisfy these diverse publics' desire to use the wildlife resource, BOW conducted various management activities.

Deer management has a special significance because it directly or indirectly affects many residents. Deer can be a nuisance with economic consequences, such as causing crop damage and vehicle collisions. Deer can also be appreciated for their ecological and recreational values. Deer hunters spend in excess of $200 million each hunting season. Regulated hunting has been proven to be an effective deer population management tool and is the primary means used within the State to control deer populations. The record deer take in the State for the 2000 hunting season was approximately 295,000 deer. This included 154,000 antlerless deer to help control the growing population and bring numbers down to desirable levels. The 2006 harvest of almost 96,000 bucks was an increase over the 89,200 taken in 2005. The goal of DEC's management program is to maintain deer numbers at levels that meet local interests and habitat conditions, while also providing quality hunting opportunities. In July of 2003, regulations took effect restricting the feeding of deer, in response to the threat of Chronic Wasting Disease (DEC, 2008).

Bear hunting, also a popular recreational activity, saw increases in harvest during the past 5 years. There was a record bear harvest in the State for 2003 of 1,864 bears. In, 2006 that number had dropped to 796. DEC estimates there are between 6,000 and 7,000 bears in the state (DEC, 2008).

The State continued its pheasant production with great success. In 2006, DEC distributed over 73,000 pheasants for release (DEC, 2008). DEC operates the Reynolds Game Farm to improve efficiency and production of ring-necked pheasants for various stocking and rearing programs. A "Ten Year management Plan for Ring-Necked Pheasants in New York" (DEC, 1999) guides pheasant management (DEC, 2008)

There have been several expansions in hunting opportunities in the State. BOW provided for longer muzzleload hunting seasons for deer in the North Country to increase hunting opportunities and reduce deer damage to private property. In 1998, waterfowl hunters were provided the longest duck seasons (60 days) in more than 25 years, thanks to record waterfowl populations in central North America and very abundant mallard and wood duck populations in the Northeast. In 2007-08, the season was 29 days in western New York. Canada goose seasons were expanded in 1997 based on efforts by BOW to collect and analyze neck band observation and leg band recovery data. The special late goose season was expanded westward across the southern tier of the State. Special goose hunting seasons for resident Canada geese allowed for an increase in waterfowl hunting opportunities in the State and alleviated property damage caused by overabundant goose populations. In 2007, a September goose season was provided and the regular 2007-08 season will provide over 100 days of goose hunting in the South Goose Hunting Area (DEC, 2008). Finally, youth hunts for pheasant and waterfowl were held, and land was acquired for hunting and other recreation.

The Deer Management Assistance Program (DMAP), begun in 1999, provides landowners with a tool to meet deer management objectives on their properties, which, in turn, increased antlerless deer hunting opportunities on private lands and helped reduce deer damage to crops or forest resources.

Several steps were taken to simplify the method by which hunters and trappers can obtain permits and licenses. DEC modernized and simplified hunting and trapping regulations to encourage increased participation, especially by our youth. They completed the development and implementation of a computerized point of sale licensing system that delivers greater convenience and service to license buyers.

The agency has enhanced opportunities for both consumptive and nonconsumptive natural resource users by acquiring land throughout the State. Over 50,000 acres of wildlife habitat were acquired or created for public wildlife recreation benefits. Thirteen new facilities were developed and

42 new land parcels were opened for public use of wildlife through partnerships. Seven new cooperative agreements were negotiated for the Fish and Wildlife Management Act (FWMA) Program statewide, opening an additional 1,178 acres for public hunting. Wildlife observation improvements were made on seven WMAs and all WMAs were maintained to provide access to the land by the public. DEC and New York City's Department of Environmental Protection partnered to open several thousand acres of New York City watershed lands to new hunting and hiking opportunities. DEC spent $200 million to acquire 260,000 acres of open space for spectacular properties such as Sterling Forest®, the Champion Lands, Whitney Park, the Lundy Estate, Northern Montezuma Wetlands, the Long Island Pine Barrens and Motor Island (Buffalo, New York). Finally, the agency opened more than 225,000 acres of formerly private lands to public access for hunting, fishing and trapping.

DEC continued its partnership and involvement with the International Association of Fish and Wildlife Agencies in trap testing and the development of "Best Management Practices" to improve traps and trapping methods to maintain and improve welfare among captured animals. Also, to insure that regulated trapping continues to occur as a legitimate outdoor activity and critically important wildlife management tool. Finally, more than 1,500 pages of content have been developed for DEC's website providing continuous access to information on fish and wildlife programs, licenses, permits, regulations, facilities and other material to meet the needs of fish and wildlife enthusiasts.

Actions

- Design recreation facilities so as not to diminish wildlife values.
- Attract wildlife to places where people are most likely to enjoy them.
- Disseminate information in the form of brochures or signs that may be useful to recreationists. Information might be provided at trail heads for hikers or cross country skiers or at access points for boaters and canoeists, on the wildlife that may be observed.
- Educate the public on how to identify wildlife observation opportunities.
- Develop a program for providing information and education to the public about wildlife observation and study, including such activities as:
    - Provide viewing guide books and maps.
    - Enhance viewing opportunities by increasing/enhancing access sites and parking lots, trails, blinds and observation towers.
    - Provide information about practical actions for backyard wildlife, including vegetation management.
    - Develop recreational products, guides, cards, games, etc.
- Develop such observation and interpretive facilities as parking lots, trails, boardwalks, observation towers and blinds.
- Develop opportunities for wildlife observation and information about observation opportunities in and near population centers.
- Continue to provide State forests, multiple use areas, the Catskill and Adirondack Forest Preserves as well as wildlife management areas to help meet the need for public access to wildlife resources.
- Maintain and develop new cooperative agreements with landowners under the Fish and Wildlife Management Act, to provide public access to private lands for recreation purposes.
- Provide educational and training opportunities for hunters, trappers and wildlife recreationists.
- Improve trap design and participation in international efforts to establish humane trap standards.
- Continue the wildlife observation program.
- Conduct a comprehensive survey of wildlife users.
- Enlist people in wildlife conservation activities, from participating in surveys of wildlife to constructing nest boxes.
- Respond to legal and public challenges to hunting, trapping and other forms of wildlife-related recreation.

Goal

Meet the public's desire for various indirect benefits from wildlife.

Accomplishments

BOW maintains ethical and responsible opportunities for the public to participate in direct and indirect use of the wildlife resource through development of a strong land ethic. DEC encourages ethics and establishes regulations to introduce new responsible use opportunities or to prohibit certain uses of wildlife/practices, and to accommodate new technologies and changing societal attitudes. The agency also promotes ethical and responsible use opportunities based upon factors such as potential to directly harm targeted or other wildlife populations, commonly accepted "fair chase" behavior, enforceability of rules governing allowed uses, public safety and public health. DEC reports to the public and the public record on a regular basis not only to ensure a well-informed citizenry but to actively promote ethical and responsible use of wildlife. For example, improving the communications network to increase the scale of home rule as it applies to developing a working "ethical and responsible" use of wildlife (e.g., Hunter Safety Report).

One method by which BOW attempts to achieve this goal is through the Becoming an Outdoors-Woman Program. The program received the New York State Conservation Council's award in 1998 for New York State Outdoor

Education Program of the Year. This and Beyond Becoming and Outdoors-Woman provide women with information, encouragement and hands-on instruction in outdoor skills (DEC, 2008).

Actions

- Take into account the multiple benefits and harms of wildlife and wildlife-related recreation on local and statewide economies.

Goal

Minimize human suffering caused by wildlife or users of wildlife.

Accomplishments

In some cases, wildlife populations are inadequate to meet human demands (e.g., restoration of species). In other cases, however, wildlife populations need active management to control their populations. Wildlife populations may increase in such a way that they become a nuisance, or even to the point where they compromise public safety (e.g., deer-auto collisions, crop damage, and disease). To address this problem BOW has developed a statewide database on nuisance wildlife trends (beaver, deer, geese, bear, and waterfowl). BOW offices receive an estimated 20,000 calls annually from the public reporting nuisance wildlife problems and conflicts with wildlife. The aggressive monitoring of the species most commonly involved in wildlife damage incidents (i.e., Canada geese, white-tailed deer, beaver, black bear, and double-crested cormorants) required the issuance of special permits to control the population directly causing the damage. In the case of Canada geese and cormorants, federal permits are also required. An indirect way in which the agency deals with nuisance wildlife is through education of the public.

Wildlife may pose a threat to the public when their populations increase beyond a tolerable level, but wildlife users may also negatively impact the public. BOW invests time and effort in minimizing the detrimental impacts of natural resource user groups on the public through education, dissemination of information, and regulation and rule setting. Evidence of their success can be seen in the decline of hunting related accidents; injuries are extremely rare and have been declining for decades. The 2003 season was the safest hunting year recorded, with only 32 hunting related injuries. The 2006 season had 35 shooting incidents, the fourth lowest since records have been kept. The rate of accidents has declined from 19 per 100,000 hunters to 6.3 per 100,000 hunters (DEC, 2008).

Actions

- Minimize human suffering caused by recreation users of wildlife, including; vandalism, littering, trespassing, disease, and danger.

Fisheries

The State's freshwater resources provide recreational fishing benefits to nearly one million licensed anglers that enjoy over 20 million fishing trips each year. Additionally, hundreds of thousands of young people, under age 16 are introduced to the State's outdoor-recreational opportunities through fishing activities without any licensing requirements. The State's 4 million acres of lakes and ponds and 70,000 miles of rivers and streams support abundant and diverse fish populations that offer a great range of recreational options. Trophy-size salmon, muskellunge and striped bass are available in Lake Ontario, the St. Lawrence River and the Hudson River respectively. Many waters across the State provide trout, walleye, bass and northern pike fishing of a quality that is notable nationwide, while excellent panfish stocks provide both sport and table fare to all levels of angling expertise. The State also offers quality experiences for all types of angling techniques and preferences. These include boat trolling for salmon, isolated pond fishing for native brook trout, wading for trout in 15,000 miles of stream and float or shore fishing for smallmouth bass in over 50,000 miles of warm-water streams and rivers. In addition, the State has thousands of lakes and ponds that offer many species of game and panfish via ice fishing, shore fishing, rowboat, bass-boat and cabin cruiser access.

DEC's overall fisheries program mission is to maintain the quantity and quality of the State's fisheries resources and recreational benefits for future generations. The following goals and action statements are essential in order to accomplish this mission.

Goal

To protect existing fish habitats

Actions

- Review permit applications, environmental impact statements and industrial licensing proposals received by DEC.
- Provide technical consultation to other DEC, State, and Federal agencies.

Goal

To maintain an accurate fisheries resource inventory.

Description

Lakes and streams are sampled to assess the nature and status of fish populations which, in turn, aid in the protection of habitats and in determining harvesting regulations and stocking needs. Many large and prominent recreational waters require frequent or annual fisheries monitoring so that management can be optimized and potential resource problems can be avoided.

Actions

- Continue monitoring and developing management actions related to the ecological and fishery dynamics

of the Great Lakes, Finger Lakes, Hudson River, Oneida Lake, Lake Champlain, Chautauqua Lake and other major resource components.

- Complete the trout fishery and aquatic habitat assessments within the Beaverkill/ Willowemoc Creek watershed. Develop and implement long-term watershed management practices to enhance the wild trout component and overall quality of this fishery.
- Complete survey and reassessment of statewide trout stream stocking needs.
- Accelerate the Endangered Fisheries Project to monitor the status and the continued occurrence of 19 rare fish species identified in the State. Foster recovery and restoration efforts for lake sturgeon, round whitefish, and paddlefish.

Goal

To enhance or restore wild fish populations or directly create and maintain sportfishing through stocking and habitat management opportunities.

Description

The State's large and diverse sportfishing demand can only be supported by a substantial fish stocking program. Over 10 million trout and salmon fry, fingerlings or yearlings are stocked into the State's cold water streams and lakes every year. Warm water resources are augmented by 150 million walleye fry, 300,000 walleye fingerlings, 100,000 tiger muskellunge fingerlings and 40,000 pure muskellunge fingerlings. Fisheries management objectives depend greatly on continued maintenance of the State's 12 fish hatcheries.

Actions

- Implement improved trout stocking guidelines to enhance the efficient use of limited trout production capabilities.
- Accelerate implementation of a statewide plan to restore and expand self-sustaining walleye fisheries by bringing the new walleye fingerling hatchery up to full production and increasing production from hatchery walleye ponds.
- Initiate directed panfish management projects to maintain and enhance these increasingly targeted fisheries.
- Restore and perpetuate eleven identified heritage strain brook trout stocks.
- Implement plans which enhance stream trout fishery resources in the Delaware River System.

Goal

To optimize use of fisheries resources through public information and education programs.

Actions

- Expand efforts to provide aquatic resource/angling education for the State's youth and other non-anglers, focusing particularly in urban and suburban areas.
- Continue using "Free Fishing Days" and events and DEC's website (www.dec. ny.gov). Enhance the information available online and create a GIS-based recreational website indicating available fishing opportunities and the location, and characteristics of public access to these opportunities.

Goal

To establish and maintain facilities to provide optimal, safe and convenient public access to New York's waters.

Description

In order to realize the recreational benefits which can be derived from New York's vast and diverse aquatic resources, public access to these resources must be established and maintained. Since 1935, DEC has been acquiring Public Fishing Rights (PFR) Easements along the bed and banks of the State's major trout streams, to allow the public walking/wading access, for the purpose of fishing only. To date, DEC has acquired 1,300 miles of such easements along 400 trout streams across the State. Many waters currently have adequate public access sites and facilities, but this infrastructure needs to be maintained and enhanced for safety and to comply with requirements such as the Americans with Disabilities Act. Other waters which could provide public recreational benefits currently offer no (or very limited) opportunities for public enjoyment due to a lack of access to the waters.

Actions

- Acquire and develop public access sites throughout New York State as part of a network of safe and conveniently located access opportunities.
- Modernize the existing network of over 325 boat and fishing access sites across the State.
- Construct new boat launch sites on property already State-owned.
- Continue to expand the Public Fishing Rights Easement network, providing walking and wading access to stream beds and banks for the purpose of fishing only.
- Improve shoreline fishing opportunities by the addition of accessible fish piers and other shoreline improvements at existing state access facilities and through cooperative arrangements with municipalities and other public waterfront landowners.

Invasive Species

Chapter 324 of the Laws of New York of 2003 called for an Invasive Species Task Force (ISTF) to explore the invasive species issue and to provide recommendations to the Governor and the Legislature. The Final Report of the ISTF, completed in November 2005, included 12 Recommendations. The first recommendation was to create a permanent coordinating body. Chapter 674 of the Laws of New York of 2007, viz. ECL Article 9, Title 17 creates such a body – the New York State Invasive Species Council (ISC) – representing 9 State agencies and consulting with a multi-stakeholder Invasive Species Advisory Committee - representing a breadth of conservation, business, academia and landowner interests.

Among the other 11 recommendations of the ISTF, and the status of implementation, are the following:

- Prepare and implement a comprehensive invasive species management plan. The first phase of this comprehensive plan, to scope out the necessary elements for such a plan, will be undertaken in 2008.
- Allocate appropriate resources to invasive species efforts. This is being implemented through the establishment of the Office of Invasive Species (see below) and supporting the core functions of eight grass-roots Partnerships for Invasive Species Management (PRISMs) around the State to ensure prevention and rapid response to new invasives.
- Establish a comprehensive education and outreach effort. This is being implemented through Cornell Cooperative Extension.
- Integrate databases and information clearinghouses. This statewide database-clearinghouse is being established, through Sea Grant's existing aquatic nuisance species online information clearinghouse that will be expanded to terrestrial species, integrated with an expanded locational database under NY NHP's existing biodiversity database through NatureServe.
- Establish an independent Center for Invasive Species Research. An Institute for Invasive Species Research will be established at Cornell University which will support on-going biological control studies there.
- Begin funding efforts to clearly demonstrate the possibilities for successful invasive species management. Grants to municipalities and not-for-profit organizations to eradicate problem aquatic species were awarded in 2006 and 2007, and terrestrial grants were offered in 2007 to the same entities as well as state agencies. Another demonstration project being implemented is the development of "clean stock" at the New York State Agricultural Experiment Station to provide fruit growers with a virus-free source of planting stock.

The ISC will coordinate statewide efforts to control invasive species. The Council is co-chaired by DEC and the Department of Agriculture and Markets, and has seven other member agencies: DOT, OPRHP, Education, DOS, the Thruway Authority, the Canal Corporation and the Adirondack Park Agency.

The law also established an advisory council on invasive species, with members to include: the New York Farm Bureau, the NYS Nursery and Landscape Association, the Empire State Marine Trades Association, the NYS Federation of Lake Associations, The Nature Conservancy, the Biodiversity Research Institute, Cornell University, the Darrin Freshwater Institute, Sea Grant, the NYS Association of Conservation Districts, the NYNHP, SUNY College of Environmental Science and Forestry, NY City Department of Environmental Protection, and numerous other entities representing municipal government, industries affected by regulation, public interest groups and other governmental interests.

A new Office of Invasive Species will bring together biologists and foresters to develop ways to combat the problem, and work with universities, other state agencies and non-profit organizations to support research and raise public awareness. This office, housed in DEC, will help bring together all these efforts. The new office also will work with the federal government, will help the ISC create a plan by 2010 to control plants, animals and insects that come into New York, and will provide support for the ISC.

Eight PRISMs have been formed or are forming to help combat invasive species. These PRISMs are shown in Figure __. The partnerships will be modeled after Cooperative Weed Management Areas formed in several western states and target animal and pathogens in addition to invasive plants. DEC will award contracts to a fiscal/administrative sponsor, which may be a non-profit organization, a government entity, university or private business, for each PRISM. A diverse stakeholder base, including state agencies, resource managers, nongovernmental organizations, industry, resource users and others will comprise a PRISM. EPF grants will be provided to the PRISMs to support core functions. These functions include:

- Planning regional invasive species management
- Developing early detection and rapid response capacity
- Implementing eradication projects
- Educating - in cooperation with DEC-contracted Education and Outreach providers
- Coordinating PRISM partners
- Recruiting and training volunteers
- Supporting research through citizen science

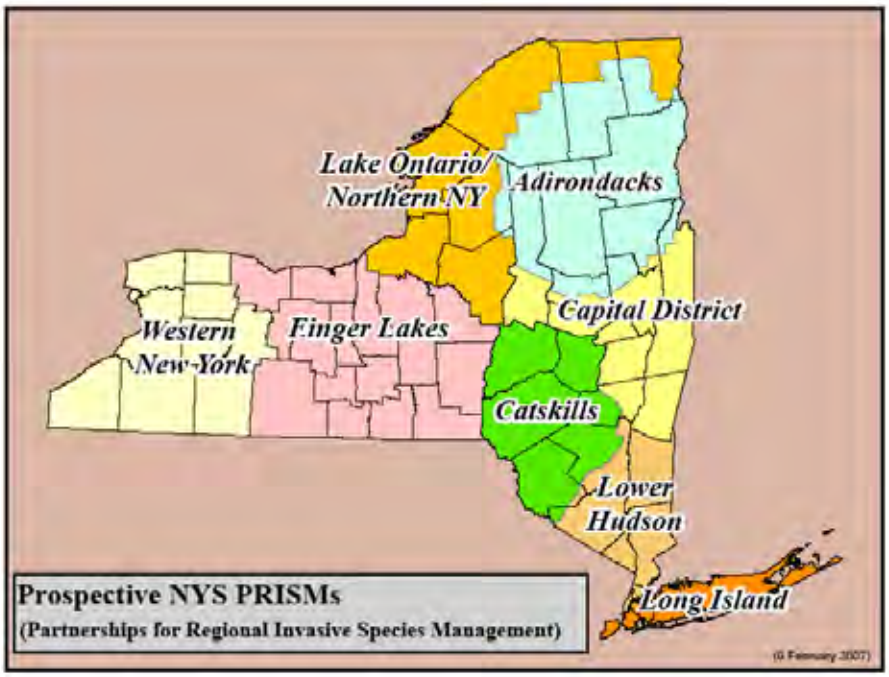


Figure 7.5 - Partnerships for Regional Invasive Species Management

Environmental Justice

Promoting outdoor recreational opportunities is essential to the quality of life, health and enjoyment of New York's diverse communities. Unfortunately, many communities, especially minority and low-income communities and subsistence fishing communities, have inadequate access to these opportunities. This section includes several recommendations to address this inequity.

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Environmental justice principles recognize that some communities, especially minority and low-income communities are disproportionately exposed to negative environmental impacts, have been historically absent from environmental decision-making affecting their community, and may not receive equitable benefits of environmental programs. Environmental justice efforts focus on improving the environment in these communities.

Equitable Distribution

Historically, outdoor recreational opportunities in minority and low-income communities have been limited for various reasons including limitations on available space, proximity to industrial uses that preclude or conflict with outdoor recreational uses, limitations on resources, etc. In order to improve the quality of life and promote the equitable distribution of outdoor recreational opportunities in minority and low-income communities, the following should be considered:

- Identify, acquire and maintain open space, including waterfront space in minority and low-income communities;
- Use demographic data relating to minority and low-income populations in base and overlay maps to propose open space acquisition projects and outdoor recreational opportunities in minority and low-income communities;
- Promote the acquisition and maintenance of open space and waterfront access in minority and low-income communities by municipal, public and private entities;
- Encourage the dedication of vacant private and publicly owned land in minority and low-income communities for outdoor recreational opportunities;
- Ensure that the needs of minority and low-income communities are consistently considered throughout activities related to preservation, planning and development.

Resources

Adequate resources, including staff, training, equipment and funding, are needed to create and maintain outdoor recreational opportunities in minority and low-income communities and subsistence fishing communities. The following should be considered:

- Collaborate with other federal, state and local government officials to make resources available to government and non-governmental organizations for outdoor recreational opportunities, preservation, enhancement and maintenance in minority and low-income communities;
- Allocate resources directly to nonprofit organizations capable of undertaking stewardship of parks, open space and outdoor recreational programs in minority and low-income communities;
- Continue to fund existing and new grant programs related to outdoor recreational opportunities, and enhance grant award criteria to ensure the equitable distribution of grant funds to minority and low-income communities. Ensure that grant eligibility criteria are sensitive to the needs of minority and low-income communities, for instance eliminate monetary match requirements when possible, simplify the grant application process,

provide adequate and timely notification of grant availability, etc.

Accessibility

Outdoor recreational opportunities must be accessible to minority and low-income communities. Special considerations for minority and low-income populations include: access to open space within close proximity of minority and low-income communities; availability of public transportation to existing open space; elimination of obstructions such as roadways, fences and environmental hazards that prohibit access to existing open space; and notification to minority and low-income communities of outdoor recreational opportunities. Waterfront access in minority or low-income communities is particularly critical as waterfronts in these communities are often industrialized, classified as a brownfield, or gated, prohibiting access to this natural resource.

- Ensure that open space is acquired within a half mile of minority and low-income communities and that recreational opportunities are promoted in the open space;
- Identify opportunities for waterfront access in minority and low-income communities, including linear waterfront access for esplanades, parks, trails and greenways; and single points of access, such as for fishing piers or boat launch sites.
- Promote transportation connecting communities to outdoor recreational opportunities including low cost and easily accessible public transportation.
- Ensure a pollution free environment in minority and low-income communities in order to encourage residents to participate in outdoor recreational opportunities.
- Ensure that residents in minority and low-income communities are aware of outdoor recreational opportunities by publicizing opportunities locally
- Educate children and adults in minority and low-income communities about various outdoor recreational opportunities and expose children to such opportunities in the school curriculum such that they become familiar with them, foster an appreciation and interest in them, and consider them an accessible form of recreation.

Community Input

Community input is essential to identify outdoor recreational needs and promote sustainable open spaces that benefit the community. Input from minority and low-income communities is especially important, as these populations have historically been absent from the decision-making affecting their environment. The following should be considered:

- Ensure minority and low-income community representation in the development of the SCORP and resulting activities related to preservation, planning and development;
- Establish partnerships with minority and low-income community organizations during the planning, decision-making and implementation of the SCORP, as these community organizations have first hand knowledge of community needs.

Partnership

Partnerships, including minority and low-income community members, governmental bodies and other organizations, foster respect and trust between different interests, encourage development of a shared vision, support collaborative decision-making and collate resources. Partnerships may also foster innovative approaches to outdoor recreational opportunities and stewardship. The following should be considered:

- Encourage partnerships that include minority and low-income community representatives during the planning, decision-making and implementation of the SCORP;
- Consider contracts or agreements with local nonprofit and community-based organizations to ensure the management and upkeep of neighborhood parks, bikeways, trails and other community open space.

Stewardship

Mobilizing minority and low-income residents as stewards to establish outdoor recreation programs, and care for local parks and open space promotes sustainability and empowers the community. Stewardship programs are especially important to minority and low-income communities because they promote increased community involvement, empowerment and environmental educational benefits. Community-based stewardship programs also serve as a powerful resource when municipalities lack staff or funding to operate and maintain existing parks and other open spaces. In order for such stewardship programs to succeed, support in the form of training, funding, staff and other resources are needed. The following should be considered:

- Promote community stewardship programs, including funding, training and resources, to help minority and low-income community residents manage local open space and establish outdoor recreational programs;
- Collaborate with other government and non government organizations to establish a state-managed network to exchange information, evaluate programs, and sustain stewardship programs.

Community Greening

Community greening efforts, such as tree planting and community gardens, are valuable to minority and low-income communities particularly in urban areas where green open space is scarce. Community greening offers a significant impact with smaller scale efforts. It can

help to revitalize and beautify neighborhoods, and at the same time - serve as carbon sinks to reduce local carbon dioxide levels; help alleviate urban heat center problems associated with concrete and stone structures, and serve as a filtration system for storm water. In addition to being beneficial to the environment, such activities foster good stewardship and community commitment from which recreational, cultural, and economic benefits will follow. Residential greening in minority and low-income communities is critical since often these neighborhoods have limited open space or limited access to existing open space, and may have limited free time in which to visit accessible open space. The following should be considered:

- Promote community greening efforts;
- Encourage the creation and preservation of community gardens.

Limited English Proficiency / English as a second language

New York State is rich in diversity and multi-cultural backgrounds. Accommodating people with limited English proficiency or people for whom English is a second language is an important consideration in addressing environmental justice issues, since some minority communities have Non-English speaking or limited English-speaking populations. The language barrier may prevent these residents from accessing open space or enjoying recreational opportunities. This potential barrier should be considered when addressing open space issues. The following should be considered:

- Make accommodations for users with limited English proficiency including translation of pertinent informational brochures and signs relating to outdoor recreational opportunities, where helpful.

Brownfields

The remediation of brownfields is essential to improve the environment in minority and low-income communities, particularly in urban areas where green open space is scarce. While brownfields require extensive remediation for human recreational use, the benefits of providing open space to minority and low-income communities will be significant, including improvement to quality of life. The surrounding community should be involved and well informed about the clean up efforts. The following should be considered:

- Promote brownfield remediation in minority and low-income communities with dedicated reuse for open space;
- Promote government initiatives such as the Environmental Restoration Program, and tax credit systems to support remediation efforts and transform brownfield areas into valuable community resources.

Subsistence Fishing

Subsistence fishing for personal consumption or traditional/ceremonial purposes should be considered in the preservation, planning and development of outdoor recreational opportunities. Although subsistence fishing may not generally be covered under recreational opportunities, it is important to consider the two simultaneously in minority and low-income communities, since these communities are more likely to fish for subsistence rather than sport alone. The following should be considered:

- Identify species preference and ensure availability of healthy fish for consumption.
- Consider species preference of anglers in minority and low-income communities and links to levels of potential toxins. Studies show that subsistence fishing is more common among racial/ethnic minorities and minorities are potentially more exposed to contaminants found in fish such as methylmercury
- Identify potential toxins and educate anglers in minority and low-income communities of the dangers of consuming certain fish.
- Rely upon environmental justice advocates and community groups as a resource to help influence the development of outreach tools and informational signs to educate minority and low-income community residents.

Department of State

Conserving and Managing New York's Coastal and Inland Waterway Resources

New York's coast, the third longest in the nation, draws people to its shores. Over 15 million people, 85% of the State's population, live and work along our coastal waters--an area that accounts for 12% of the state's land mass. By 2010, an additional 700,000 people will join them.

The natural areas along New York's coast provide great diversity of fish and wildlife habitats, estuaries and deep water trenches, bluffs, barrier islands, and other natural protective features. Enormous economic benefits are derived from the coast each year. New York's commercial fishing industry, ports and marinas, and coastal farming areas contribute billions annually to the state's economy. The competing demands on our coastal area resources continue to threaten the natural and economic viability of the coast. New York's coastal zone management program was established to conserve and properly use coastal resources by managing competing demands along the coast.

The Division of Coastal Resources in the Department of State (DOS) works in partnership with local governments, community-based organizations, and state and federal agencies to better manage coastal resources and advance revitalization of waterfront communities. Division programs address waterfront redevelopment; expansion of visual and physical public access to the water; coastal resource protection, including habitats, water quality, and historic and scenic resources; and provision for water dependent uses, including recreational boating, fishing, and swimming. State and federal agency permitting, funding, and direct actions must be consistent with these purposes.

Major elements of these programs include the following:

Local Waterfront Revitalization Program

Cities, towns, and villages along major coastal and inland waterways are encouraged to prepare a Local Waterfront Revitalization Program (LWRP) in cooperation with DOS. A LWRP is a locally prepared, comprehensive land and water use plan for a community's natural, public, working waterfront, and developed waterfront resources. It provides a comprehensive framework within which critical waterfront issues can be addressed. In partnership with the Division of Coastal Resources, a municipality develops community consensus regarding the future of its waterfront and refines state coastal policies to reflect local conditions and circumstances. As part of the preparation of a LWRP, a community identifies long term uses for its waterfront and an implementation strategy, including enacting or amending appropriate local development controls. Once approved by the New York Secretary of State and the federal Office of Coastal Resources Management, the LWRP serves to coordinate state and federal actions needed to achieve the community's goals for its waterfront.

A LWRP may contain a number of components addressing issues important to the community, including:

- waterfront redevelopment
- natural resource protection
- public access and recreation opportunities
- open space preservation
- erosion hazards management
- water quality protection
- habitat restoration

Harbor Management Plans (HMPs) are prepared as components of LWRPs to improve management of their harbors. HMPs take a hard look at the resources, conflicts, congestion and competition for space in New York's harbors and balance the interests of all uses of harbor resources. These plans consider local and regional needs and address issues related to commercial shipping and fishing, dredging, recreational boating and fishing, natural resource protection, and other matters affecting harbors.

HMPs provide the clear authority to rationally manage the wide range of harbor uses and activities. Through HMPs, the State and local governments cooperate to comprehensively plan for and manage harbor areas. The program expands municipal authority to regulate activities in, on, under or over the water by enabling certain municipalities to regulate structures and other uses in their harbor areas.

Goals

Promote resource and habitat protection, community revitalization, enhanced public access and open space protection through the Local Waterfront Revitalization Program.

Accomplishments

Currently, 225 waterfront communities throughout the State are preparing or have completed a LWRP. Since 2003, 12 LWRPs have been fully approved (for a total of 72) and 77 LWRPs are being

prepared. DOS has also completed two multi-media packages featuring a new web site - www.nyswaterfronts.com, guidebooks and video. One package examines "How to Make the Most of Your Waterfront" and the other is a guide to restoring abandoned buildings — "Opportunities Waiting to Happen."

Actions

- Advance priority projects identified in LWRPs through planning, design and construction.
- Encourage additional communities to prepare and implement LWRPs.

Environmental Protection Fund Local Waterfront Revitalization Grants

DOS provides grants to waterfront municipalities for a variety of planning, design and construction projects to protect and revitalize waterfront resources, including:

- Community Visioning and development of revitalization strategies;
- Completing or implementing a LWRP or HMP;
- Preparing or implementing a waterbody/watershed management plan;
- Urban waterfront redevelopment;
- Creating a Blueway Trail;
- NYS Coastal Resources Interpretive Program (NYSCRIP) signage programs.

The grants serve as a source of funding for communities to implement projects identified in a LWRP, as well as a means of enlisting new communities, to develop LWRPs.

Goals

Continue to provide Environmental Protection Fund Local Waterfront Revitalization Programs grants to communities on an annual basis.

Accomplishments

Since 2003, 439 grants totaling $88 million have been awarded to waterfront communities through the Environmental Protection Fund Local Waterfront Revitalization Program.

Actions

- Provide EPF LWRP funds to communities on an annual basis.
- Target EPF LWRP funds for priority resource protection and waterfront revitalization activities.
- Use EPF LWRP grants to advance priority projects identified in LWRPs through planning, design and construction.

Blueway Trail Plans

Blueway trails are small boat and paddling routes that combine recreation, tourism and environmental awareness and allow users to travel to and between designated stops along the way for rest, overnight stays and linkages to land-based attractions, including community centers, heritage trails and sites, greenways, historic resources, and scenic by-ways. The process for developing blueway trails relies on intermunicipal cooperation with a high degree of participation from the private sector. Blueway trails are marketed as a regional attraction.

Municipalities may apply for grant funding from the Environmental Protection Fund Local Waterfront Revitalization Program to undertake the planning and physical development of blueway trails, including:

- identification of local and regional assets and attractions;
- route identification and assessment of facilities and infrastructure;
- planning, design and/or construction of small craft launch sites and infrastructure along an identified blueway trail; and
- development or implementation of blueway trail marketing and promotion strategies.

Goals

Promote the development and implementation of blueway trail plans for coastal and inland waterways.

Accomplishments

Blueway trail plans have been completed or are under preparation for the following waterways: Black River; Mohawk River; Raquette River; and Seneca River.

Actions

- Provide technical assistance and funding through the EPF LWRP to promote new blueway trail plans and to advance implementation of existing blueway trail plans.

Regional Initiatives

The Department of State has initiated a number of regional initiatives to better manage coastal resources for enhanced access, recreation and tourism-based economic development, waterfront revitalization and habitat protection. These initiatives include:

Long Island South Shore Estuary Reserve

The Long Island South Shore Estuary Reserve Act established the reserve, called for its protection and prudent management, and created a council charged with preparation of a comprehensive management plan for the reserve. The reserve includes five of Long Island's south shore estuarine bays and the adjacent upland areas draining to them, and stretches from the western boundary of the Town of Hempstead to the middle of the Town of Southampton. The reserve is home to about 1.5 million people and is the anchor of the region's tourism, seafood, and recreation industries.

The reserve's comprehensive management plan calls for a series of implementation actions to address key issues identified in the plan, including: reducing non-point and point sources of pollution; increasing harvest levels of hard clams; protecting and restoring coastal habitats; preserving open space; improving understanding of the ecosystem; increasing public use and tourism; sustaining water-dependent businesses and maritime centers; and heightening public awareness of the estuary.

Goals

Continue implementation of priority actions called for in the 2001 Long Island South Shore Estuary Reserve Comprehensive Management Plan.

Accomplishments

Since 2003, more than 80 state-assisted projects have been initiated or completed to improve the health of Long Island's South Shore estuaries. Nearly $9 million in State funds have leveraged a comparable amount of local match.

Actions

- Develop watershed management plans for priority tributaries and their watersheds.
- Expand hard clam hatcheries and grow-out facilities, and identify additional shellfish spawner sanctuaries based on feasibility assessments.
- Broaden efforts to identify potential sites for wetland restoration and invasive species removal.
- Develop a Reserve-wide strategy for open space protection.

Long Island Sound Coastal Management Program

The Long Island Sound Coastal Management Program (CMP) was approved for New York State in January 1999. The program encompasses 304 miles of shoreline in Westchester County, the Bronx, Queens, and Nassau and Suffolk counties, and nearly 1.5 million people. Regionally specific coastal policies were developed which reflect the unique environmental, economic, and social characteristics of the Sound shoreline.

The policies focus on protecting and expanding public access and visual access opportunities along the Sound shore, which are currently limited; encouraging revitalization of developed centers; protecting and restoring natural resources and open spaces, particularly those areas of regional importance; and encouraging water-dependent uses in centers of maritime activity. The Long Island Sound Coastal Advisory Commission was created by the Legislature to recommend ways to implement the Long Island Sound Coastal Management Program.

Goals

A Long Island Sound coastal area enriched by enhancing community character, reclaiming the quality of natural resources, reinvigorating the working waterfront, and connecting people to the Sound.

Accomplishments

Since 2003, more than 50 state-assisted projects have been initiated in Long Island Sound communities for waterfront revitalization, public access improvements, and natural resource protection. This represents a State and local investment in the Long Island Sound of over $18 million.

Actions

- Develop partnerships between local communities and land owners to protect and enhance important natural areas on the Long Island Sound.
- Document unprotected, undeveloped open space along Long Island's north shore, and identify significant natural features.

Scenic Resources

New York State has long recognized the importance of scenic resources. The interaction of man with the landscape has made New York's coast a visually exciting and valued place. Designation of Scenic Areas of Statewide Significance by DOS provides additional protection for coastal landscapes that are recognized for their importance in the natural, cultural and historic significance to the State.

Six Scenic Areas of Statewide Significance have been designated along the Hudson River, covering more than 50% of its shoreline. Each scenic area encompasses unique, highly scenic landscapes which are accessible to the public and recognized for their scenic quality. The scenic areas include a fiord in the Hudson Highlands, an impressive collection of great estates along the Hudson River's midsection, the landscape where Hudson River School painters Thomas Cole and Frederic Church made their homes, and the pastoral landscape south of the Capital region.

Designation provides special protection to the landscapes. Narratives for each scenic area describe which landscape elements should be protected and the types of actions that could impair them. Federal and state agencies must avoid permitting, funding, or undertaking actions that would impair the landscape's scenic quality. In addition, municipalities can use their local land use authority to protect scenic resources, such as through a LWRP.

Goals

Protect scenic resources in coastal and inland waterway areas.

Accomplishments

The East Hampton Scenic Area of Statewide Significance is being developed in partnership with the Town of East Hampton. The final approval of the SASS is expected to occur during the summer of 2007.

Protection of scenic resources in the Catskill-Olana SASS and the Columbia-Greene North SASS were a major factor in the Division's Objection to Consistency Certification for a major cement manufacturing facility in 2005. The application for the facility was subsequently withdrawn.

Actions

- Ensure that the scenic landscape elements in designated SASSs are protected from potential impairments.
- Promote scenic resource protection at the local level by providing technical assistance and funding through the EPF LWRP for scenic resource inventories, assessments, local laws and other techniques.

Coastal Habitats

Many habitats that are vital to the survival of New York's coastal fish and wildlife resources exist along New York's 3,200 mile shoreline. To protect these important natural areas, DOS, in cooperation with DEC, has designated 245 Significant Coastal Fish and Wildlife Habitats (SCFWHs) across the State. The designations are designed to protect and offer guidance on management activities within the habitats with important natural resource values, including recreational fishing and other passive natural resource-related activities.

DOS works with other state and federal agencies, local governments, and concerned citizens to restore and maintain significant coastal fish and wildlife habitats, primarily through projects funded through EPF LWRP grants.

Goals:

Protect, preserve and where practical restore the viability of state designated Significant Coastal Fish and Wildlife Habitats.

Accomplishments:

Updates of the North and South Shore of Long Island Significant Coastal Fish and Wildlife Habitats narratives and maps were completed, which will result in improved management decisions.

Numerous Bond Act and EPF contracts involving water quality improvements and aquatic habitat restoration including tidal wetlands, beach and dune habitats, and riparian corridors were administered.

Natural resource management projects that enhance open space attributes and improve fish and wildlife resources were administered.

Partnerships with the U.S. Army Corps of Engineers, the Long Island Wetland Restoration Initiative, and the Long Island Sound CMP Interagency Habitat Restoration Workgroup on environmental restoration issues were maintained.

Actions:

- Continue to update the Significant Coastal Fish and Wildlife Habitat narratives and maps for the Hudson River and the Great Lakes.
- Provide technical assistance and other information on designated SCFWHs and on habitat restoration and planning to municipalities, state and federal agencies, and others.
- Continue participate in the regional planning and implementation activities of the Sea Grant Program Advisory Council, the Lake Ontario Coastal Initiative, Jamaica Bay Wetland Restoration workgroup, Lake Ontario Lakewide Management Plan committee, and the Great Lakes Research Consortium.
- Continue participation in regional restoration efforts, such as the Suffolk County Vector Control Steering and Technical Advisory Committees.

Brownfield Opportunity Areas

The Brownfield Opportunity Areas (BOA) Program provides communities with significant land use and redevelopment planning tools to revitalize areas affected by brownfields, abandoned or vacant properties. A "brownfield" or "brownfield site" is defined as any real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant. The end product is a community driven revitalization plan and implementation strategy to return unproductive land back to use while simultaneously improving environmental quality and revitalizing the affected area. An objective is to enable communities to plan for the reuse and redevelopment of brownfields on an area-wide basis, as opposed to dealing with brownfields and other unproductive parcels on a site by site basis.

The Brownfield Opportunity Areas Program is being administered by the Departments of State and Environmental Conservation. This program blends the Department of State's expertise in working in partnership with communities across New York State on a variety of community based planning projects with the Department of Environmental Conservation's expertise in investigating and cleaning up sites.

The BOA program enables communities to:

- Establish a revitalization plan and implementation strategy to foster desirable development with an em-

phasis on strategic brownfield sites that are catalysts for revitalization.
- Foster the clean-up and reuse of brownfield sites through planning and site assessments at strategic brownfield sites.
- More quickly fulfill community development needs for new uses and businesses.
- Increase predictability for investors regarding the timing and costs for development projects.
- Identify opportunities to improve environmental quality through a variety of implementation projects.
- Enlist state agencies as partners to address a variety of issues related to economic development, improving environmental quality, and community revitalization.

Goals:

Complete revitalization plans to improve and revitalize areas affected by brownfields and other underutilized sites by stimulating public sector and private sector investment.

Accomplishments:

- In March 2005, funding was announced for 53 projects, totaling $7.6 million. Many of these projects are progressing or nearing completion of Pre-Nomination or Nomination reports. In March 2008, funding was announced for an additional 50 projects, totaling $7.2 million. Many grantees are starting their projects.
- Starting in October 2008, the Department of State now accepts applications through an open enrollment process. This enables applicants to submit applications for new, or to advance existing, projects at anytime during the year. With open enrollment, applicants are encouraged to contact the Department of State for pre-application meetings.
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- The Department of State, in partnership with the Department of Environmental Conservation and State University of New York, launched the Community Seminar Series. This series provides training to grantees to enhance: understanding of brownfield redevelopment and community revitalization; local capacity to administer and manage grants; and timely completion of planning and site assessment report products. Since the series started in 2006, 28 modules covering 10 topics were conducted. Additional training modules, focusing primarily on plan implementation, will be offered in 2009.
- As a result of the brownfield reform law of 2008, cleanup and redevelopment projects in BOA study areas that are undertaken through the Brownfield Cleanup Program will now receive an additional boost of two percent in tangible property tax credits, provided the redevelopment is consistent with the goals and priorities of the designated BOA.

Actions:

- Assist program grantees by providing timely technical assistance to guide the preparation and completion of their BOA Program funded plans.
- Enlist local, state, and federal agencies and private-sector interests in the planning process so they have a clear understanding of the challenges, opportunities, and implementation needs associated with revitalizing affected areas.

Oceans and Great Lakes

The New York Ocean and Great Lakes Ecosystem Conservation Act (Article 14 of the NYS ECL) was enacted in 2006 to establish policy and principles to guide management of the State's ocean and coastal ecosystems. The Act creates a New York Ocean and Great Lakes Ecosystem Conservation Council made up of the nine agencies responsible for managing human activities. The Council is responsible for developing recommendations on how to integrate ecosystem-based management with the programs, institutions and activities which affect our ocean and coastal ecosystems. DEC is chair and DOS is staff to the Council, which also has the following member agencies: OPRHP, Department of Agriculture and Markets, Department of Economic Development, OGS, DOT, NYSERDA, and SUNY.

As described in Chapter 4, ecosystem-based management is an adaptive approach to managing human activities to ensure the coexistence of healthy, fully functioning ecosystems and human communities. The Ocean and Great Lakes Ecosystem Conservation Act calls for the integration and coordination of EBM with existing laws and programs and to develop guidelines for Agency programs and activities that advance ecosystem- based management. Coastal ecosystems are critical to NYS environmental and economic security, and are integral to the states high quality of life, culture and recreation. Coastal ecosystems are necessary to support the state's human and wildlife populations.

As outlined in the Act, governance of New York's ecosystems shall be guided by the following principles: 1) ensure that activities in and uses of coastal resources are sustainable so that ecological health and integrity is maintained, 2) increase understanding of coastal systems, 3) inform decisions based on good science that recognizes ecosystems and the interconnections among land, air and water, 4) ensure that caution is applied when risks are uncertain, and 5) involve broad public participation in planning and decision making. Ecosystem-based management can ensure healthy, productive and resilient ecosystems which deliver the resources people want and need.

The following six components are being used to apply EBM in NYS: 1) place based focus; 2) scientific foundation for decision making; 3) measurable

objectives to direct and evaluate performance; 4) adaptive management to respond to new knowledge; 5) recognition of interconnections within and amongst ecosystems; and; 6) involvement of stakeholders to advance EBM.

Under the Act, every Council member agency is required to provide an implementation report on its EBM related activities and to report on current and recommended programmatic contributions to EBM in NYS.

Goals:

Integrate ecosystem-based management with the programs, institutions and activities which affect coastal ecosystems and their watersheds.

Accomplishments:

Completed draft framework and recommendations to advance ecosystem-based management.

Completing plans and implementation projects for the Long Island's Great South Bay and Eastern Lake Ontario EBM demonstration areas.

Completed five public dialogues around the State to introduce ecosystem-based management concepts and distributed an outreach summary report.

Completed a catalogue of more than 800 existing digital data sets and identified data gaps that must be filled to support ecosystem-based management processes.

Created a web-based interactive mapping tool and data portal, the New York Oceans and Great Lakes Atlas, for use by state and local government, partners and the public.

Completed development of a statewide research agenda as called for in the Act.

Actions:

The Act requires the Council to take the following Actions:

- Prepare a report to the Governor and Legislature by November 2008 which includes the following:
  - Demonstrate improvements that can be accomplished in eastern Lake Ontario and Long Island Great South Bay through ecosystem-based management;
  - Define executive and legislative actions necessary to integrate ecosystem-based management with existing programs needed to advance the coastal ecosystem principles;
  - Include a plan, schedule, and funding opportunities for implementation of executive actions necessary to advance the policy and principles of ecosystem-based management;
  - Create an ocean and coastal resources atlas to make information available to the public and decision makers;
  - Establish a research agenda that identifies priority issues in need of further research to enhance ecosystem-based management;
  - Recommend actions to preserve, restore and protect submerged aquatic vegetation populations and meadows; and
  - Identify opportunities for regional ecosystem-based management with neighboring states and the federal government.

Coastal and Inland Consistency

Following passage of the Coastal Zone Management Act (CZMA), New York State developed a Coastal Management Program (CMP) and enacted implementing legislation (Waterfront Revitalization and Coastal Resources Act) in 1981. The CZMA requires that each Federal agency activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved State management programs.

Consistency review is the decision-making process through which proposed actions and activities are determined to be consistent or inconsistent with the coastal policies of the New York State Coastal Management Program or approved LWRPs. This process includes and affects federal agencies, the Department of State and its Division of Coastal Resources as the State's designated coastal management agency, other State agencies, and municipalities with approved LWRPs.

Unlike traditional permit or certification programs, the Division does not issue or deny a permit or certification. The Division instead reviews activities being considered by agencies in the coastal area, and determines whether the activity is consistent or inconsistent with the coastal policies of the State. If an activity is determined to be consistent with State coastal policies, the federal agency involved can proceed to authorize or undertake the action guided by DOS's decision. If an activity is determined to be inconsistent with State coastal policies, the federal agency is not allowed to proceed to authorize or undertake the action.

State agencies are also required to follow certain consistency review procedures for direct or funding actions and for any action, including permits, for which they are an involved or lead agency pursuant to the State Environmental Quality Review Act and for which an Environmental Impact Statement may be necessary. This requirement applies in the State's coastal zone and in any inland communities with an approved LWRP.

Goals:

Ensure that all actions by state and federal agencies are consistent with State coastal policies.

Accomplishments:

Between 2004 and 2006 the Division of Coastal Resources reviewed over 3000 applications for federal agency authorizations, direct federal agency activities, and proposed federal funding. Of these activities, nearly 500 were modified, withdrawn or rejected based on the review of their consistency with the State's coastal policies.

Actions:

- Continue to review all actions subject to federal consistency provisions.
- Improve state agency utilization of state coastal policies in evaluating potential impacts of their activities on coastal resources and uses.

Watershed Management Plans

New York's Coastal Nonpoint Pollution Control Program was jointly prepared by the Departments of State and Environmental Conservation and approved by NOAA and EPA in December 2006 pursuant to the Coastal Zone Management Reauthorization Amendments (CZARA, Section 6217). The Coastal Nonpoint Program implements a set of management measures to protect and restore coastal water quality. New York's Coastal Nonpoint Pollution Control Program boundary includes all lands draining to the State's coastal waters and encompasses over 60 percent of the State.

Watershed management plans are an important means of implementing the State's Coastal Nonpoint Program. A watershed management plan is a comprehensive plan to protect and restore specific waterbodies and their watersheds by identifying and prioritizing land uses and capital projects to reduce point and non-point source pollution, and protect or restore water quality, tributary corridors and aquatic habitats. Because watersheds generally include land within more than one municipal jurisdiction, watershed protection requires the preparation of cooperative, intermunicipal plans.

Watershed management plans include: a characterization of the watershed; identification of pollution sources, sources of water quality impairment, and potential threats to water quality; and identification of management strategies and techniques for the protection and restoration of water quality. Watershed management plans also include community education and outreach on water quality and watershed protection issues.

Watershed management is a key strategy in protecting and restoring New York's coastal waters and in revitalizing the communities within each watershed. Watershed management offers opportunities to improve stewardship of water related resources, such as by concentrating development where intensity is most appropriate, avoiding more sensitive areas, and instituting practices which reduce the impacts of existing pollution.

Goals:

Promote the development of watershed management plans for coastal and inland waterways.

Accomplishments:

Across New York State there are 240 communities, covering 5,000 square miles of watershed, that have prepared or are working on intermunicipal watershed plans, including: Lake George; Hempstead Harbor; Manhasset Bay; Conesus Lake; Cayuga Lake; Canandaigua Lake; Brown's River and Green's Creek; Wappinger Creek; Chautauqua Lake; Lake Montauk; Bronx River; Black Creek; Oatka Creek; Ausable River; and Honeyoe Lake. Since 1994, $26 million has been invested in these areas from the EPF LWRP, the Clean Water/Clean Air Bond Act, and the Great Lakes Coastal Watershed Restoration Program funding managed by the Division.

In cooperation with DEC - Division of Water, the Division of Coastal Resources prepared a multi-media informational package to help communities prepare watershed management plans. The package, entitled "Watershed Plans: Protecting and Restoring Water Quality," includes a video, guidebook and website content.

Actions:

- Provide technical assistance and funding through the EPF LWRP to promote new watershed plans and to advance implementation of existing watershed plans.

NYS Department of State Division of Coastal Resources - Regional Initiatives

Great Lakes

The Division of Coastal Resources is working in the Great Lakes region to revitalize communities with post-industrial legacies – by strengthening existing community centers, reclaiming brownfields, and expanding public access. The Division is working with 31 communities within the region through the LWRP process; 27 of those communities have an approved LWRP. Communities in the region continue to revitalize their waterfronts by implementing public access improvements - as described in their LWRPs - providing new public access points, trails, and visitor-interpretation centers.

Lake Champlain

DOS works with Lake Champlain communities to improve public access to the waterfront in order to enhance water-based recreation and tourism. An important component of waterfront revitalization efforts involves linking enhanced waterfront facilities to downtowns and Main Streets in order to strengthen the local economy.

DOS's Lake Champlain initiatives have also promoted regional cooperation among the waterfront communities. The Department sponsored the development of a regional waterfront revitalization program for the Lake Champlain shoreline of communities within Essex and Clinton counties. The program identified priority projects and actions needed to foster hamlet revitalization, improve waterfront access opportunities, and strengthen the region's resource-based tourism economy. The regional plan led to the implementation of many waterfront revitalization projects including: access improvements and downtown linkages in Port Henry; construction of a scenic pier and walkway in Rouses Point; and redevelopment of the former Canadian Pacific rail yard in Plattsburgh into a mixed-use development and waterfront park.

Hudson River Estuary

Through its Local Waterfront Revitalization Program and Environmental Protection Fund grant program, the DOS works in collaboration with local governments, regional organizations, businesses, community organizations, and citizens to improve their waterfronts - while advancing economic development opportunities and protecting natural coastal resources.

DOS is working with 38 communities in the Hudson River Estuary to prepare and implement LWRPs and other planning initiatives that guide the beneficial use, revitalization, and protection of their waterfront resources. As part of this effort, DOS has assisted 10 communities to advance redevelopment plans in urban areas with vacant and abandoned waterfronts.

Upper Hudson River

In addition to work in the Hudson River Estuary, the DOS works with waterfront communities in the non-tidal portion of the Hudson River through the Inland Waterways program. DOS projects in the Upper Hudson River focus on enhancing waterfront access for recreation and creating sustainable, tourism-based economic and community development opportunities for the region.

An important regional effort in the Upper Hudson River is the First Wilderness Heritage Corridor, an intermunicipal effort for revitalizing the northern Hudson River corridor and the adjacent former Adirondack Branch of the D&H Railroad within the towns of Corinth, Hadley, Lake Luzerne, Stony Creek, Thurman, Warrensburg, Chester, and Johnsburg in Saratoga and Warren counties. The strategy recommends identified locations which provide access points to the Hudson River, linkages from the rail line to the Hudson River shoreline, and promotion of a unifying tourism and economic revitalization approach along the entire corridor.

Adirondack and Catskill Parks

The Division of Coastal Resources works with communities in the Adirondack and Catskill Parks through the Inland Waterways Program and grants from the Environmental Protection Fund Local Waterfront Revitalization Program to promote community revitalization and resource protection. The Division helps communities prepare community-based plans and projects that enhance public access opportunities, promote water-based recreation, create a sustainable tourism-based economy, protecting and improving water quality, and guide growth to traditional community centers.

Division of Coastal Resources projects in the Adirondack and Catskill regions include: and intermunicipal effort by the towns of Clifton and Fine, in cooperation with the Wildlife Conservation Society's Adirondack Communities and Conservation Program, to undertake a community visioning process and develop a strategy for the protection and revitalization of the Oswegatchie River and Cranberry Lake; and an intermunicipal revitalization strategy for the Route 28 corridor along the Black River, Fulton Chain of Lakes, and Moose River waterfronts in the towns of Forestport, Webb and Inlet.

New York State Canal System

The DOS's Division of Coastal Resources has enjoyed an excellent partnership with local governments along the New York State Canal System for nearly twenty years through the Local Waterfront Revitalization Program and the Canal Recreationway Committee. Along the 524-mile canal system, currently over 90 municipalities have completed, or are preparing, LWRPs with many being multi-jurisdictional efforts.

In addition to working in partnership with municipalities to prepare LWRPs, substantial resources have also been committed for implementation. Grants from the Environmental Protection Fund Local Waterfront Revitalization Program have been awarded to NYS Canal System communities for a variety of projects to implement the Canal Revitalization Program by increasing local capacity through the establishment

of a clear vision, as well as constructing boater and public access facilities.

Lake George

In 2001, the DOS's Division of Coastal Resources created the Lake George Watershed Conference to prepare a long term plan to protect the lake water quality. The Secretary of State chairs the Conference and its activities are largely financed through Environmental Protection Fund grants, funds appropriated annually by each watershed municipality, and in-kind/ volunteer services and materials from member organizations. The Conference includes all nine municipalities and three counties around the lake, five state agencies, and nine nonprofit organizations involved in protecting the lake. A project manager coordinates Conference activities. The Conference is a positive organization for assuring that local governments, non-governmental organizations, and state agencies work in partnership to address complex lake issues in a coordinated manner.

The Conference water quality plan, "Lake George - Planning for the Future," established a consensus on priority projects and actions needed to protect and improve the lake's water quality. Following completion of the plan in 2001, a Memorandum of Agreement was drafted by the Division and signed by all Conference members to continue this successful collaborative effort and to focus on its implementation. Over the past year, the Watershed Conference completed the "Implementation Status and Future Priorities Report," which describes progress made by Conference members to implement the recommendation set forth in the plan, and identifies specific priority actions to guide the Conference over the next three years.

Long Island Marine District

Long Island's marine district is one of New York's great treasures. The public's use and enjoyment of the marine district depends upon its ability to access Long Island's bays and harbors, its tributaries and shore lands, and the quality of the natural and cultural resources it finds there.

The supply of formal, dedicated shoreline public access and recreation sites throughout the marine district is finite, and opportunities to add to this supply become fewer as private shoreline development grows. Safety concerns, parking deficiencies, fiscal constraints and residency requirements limit the potential use of many access and recreation facilities. Informal access opportunities are often lost when non-water-dependent uses displace water-dependent uses. All this occurs as populations grows, and demand for public access and recreation in the marine district increases.

New York State and its federal, regional and local partners continue to move forward to improve public access and recreation in Long Island's marine district through coordinated implementation of regional plans and programs. On Long Island's south shore, South Shore Estuary Reserve Council members continue their efforts to promote and expand public use and understanding of the many south shore estuarine bays by creating new public access and recreation opportunities and expanding facilities at existing sites. A new regional initiative - the Long Island South Shore Bayway - is providing a framework for the interpretation and promotion of the unique natural and cultural resources that define the region's rich maritime heritage.

Through the Long Island Coastal Management Program and the Long Island Sound Study, creative partnerships between the state, federal and local governments, and land conservation groups are addressing land acquisition, habitat protection and expanded public access in selected shoreline areas through the Long Island Sound Stewardship Initiative. On Long Island's East End, as part of the Peconic Estuary Program, these same partners are moving aggressively to acquire remaining open space for its many values to the public: opportunities for public access and recreation, aesthetic qualities that benefit tourism and quality of life; and the preservation and buffering of environmentally sensitive lands with high natural resource values.

New York City

With its 578 miles of waterfront, New York City has about 17% of the state's total coastline, and 38% of the total coastal population. New York City has long been a partner with the Division of Coastal Resources - the original New York City LWRP was approved with the State's Coastal Management Program in September, 1982, and was updated in the early 90's by completion of a Comprehensive Waterfront Plan (1992) and companion Borough Waterfront Plans (1993-1994). The comprehensive plan was incorporated into city policy through new waterfront zoning text and in revisions to the original LWRP.

Approved in 2002, the New Waterfront Revitalization Program (WRP) is now the city's principal coastal zone management tool. The intensity of development in New York City, and the limited land area available made it critical to identify appropriate areas for water-dependent activities as well as natural areas needing protection. Towards this end, the New WRP identifies both Significant Maritime and Industrial Areas (SMIA) and Sensitive Natural Waterfront Areas (SNWA).

The SMIAs include: South Bronx, Newtown Creek, Brooklyn Navy Yard, Red Hook, Sunset Park, and the north

shore of Staten Island. Waterfront activity which furthers the industrial or maritime character of these areas would be consistent with the WRP policies. The SMIAs were determined by identifying concentrations of existing water-dependent uses and areas where the physical capacity of the lands, water, and infrastructure, and zoning accommodated these uses. A key Division priority is to maintain and improve the capabilities of the SMIAs, thereby supporting and preserving New York's historic and lucrative port economy. The Division recently provided financial support to the New York City Economic Development Corporation to update and expand the scope of the Maritime Support Services Study; upon which key land use and redevelopment decisions are being made.

The SWNAs are: East River-Long Island Sound, Jamaica Bay, and Northwest Staten Island-Harbor Herons. In these areas, resource protection policies are of heightened importance, and management plans prepared for these areas must highlight resource restoration and enhancement opportunities. A key area of focus for the Division has been assessing and planning for resource protection and appropriate development in Northwest Staten Island, where the concentration of creek, wetland and woodland resources, including many rare plants and natural communities, is continually encroached. The Division has provided technical assistance and more than $1.5 million in grant support towards planning and design of an innovative redevelopment of the former Fresh Kills landfill. This landscape-scale project balances public access and education, economic development, and natural resource restoration.

The Division is also active in promoting public access and use of New York City's waterfronts and waterways. As the City's waterfronts transition from manufacturing and industrial space to residential, commercial and public areas, communities have an opportunity to develop a vision for their neighborhood waterfront. The Division provides funding for a wide variety of neighborhood visioning and planning processes, ranging from West Harlem/ Riverside Park North, the Harlem River and Highbridge Parks, Astoria and Long Island City, and the Borough wide Brooklyn Waterfront Greenway.

Department of Transportation

Bike and Pedestrian Program

The New York State Bicycle and Pedestrian program was established in 1991, with the passage by Congress of the Intermodal Surface Transportation Efficiency Act (ISTEA), which recognized the increasingly important role of bicycling and walking in creating a balanced, intermodal transportation system. Subsequent federal transportation bills including the 2001 Transportation Equity Act for the 21st Century (TEA-21), and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFTEA-LU) have all reaffirmed the importance of promoting and facilitating the increased use of non-motorized transportation modes to the nation's and New York's overall health, economy and transportation choices.

It is the goal of the NYS DOT to continue to encourage bicycling and walking as safe, healthy, efficient and cost effective modes of transportation. Towards this goal, the Department will continue to promote a seamless intermodal transportation network that will include expanded bicycle and pedestrian facilities which target both the transportation and recreational needs of the residents of New York State. This will be achieved through the routine inclusion of sidewalks, crossings, bicycle lanes and wide shoulder in most highway construction projects, and through such popular Federal programs as the Transportation Enhancements, Scenic Byways and the new Safe Routes to School which encourage residents of all ages and abilities to walk and bicycle and to be active and healthy.

Accomplishments

Between 2003 and 2007, the Bicycle and Pedestrian Program has successfully implemented several major program initiatives. These accomplishments included:

- *Signing of five new on-road bicycle routes across the State*: (Figure 7.6):
  - The NYS DOT, in partnership with local and county governments has signed an additional 670 miles of new state bicycle routes. State Bicycle Route 11 will extend 320 miles between Binghamton and Rouses Point connecting with Pennsylvania's state bicycle route "L", and Velo Quebec bicycle network in the Province of Quebec. State Bicycle Route 14, extending 95 miles from Pennsylvania state bicycle route "G" northward to the Seaway Trail in Sodus NY. State Bicycle Route 19 which extends 100 miles from the Village of Wellsville (State Bicycle Route 17) northward to the Seaway Trail at Hamlin Beach State Park. State Bicycle Route 20, which extends 80 miles from Pennsylvania's state bicycle route "Z" near Erie PA. northward to Lockport NY (State Bicycle Route 5). State Bicycle Route 25 which extends 75 miles between Nassau County, and Orient Point.

These new bicycle routes will further supplement and enhance New York's current network of bicycle routes 5, 9 & 17 by creating a grid of state bicycle routes, thereby making it easier for cyclists to travel east – west or north – south around New York State. These new bicycle routes will also provide a direct connection to Pennsylvania's and Quebec's network of signed on-road bicycle routes.

New York State by virtue of its key geographical position, serves as a gateway for thousands of cyclists traveling between New England and eastern Canada to points west, and vice versa. Recent bicycle tourism surveys have found New York to be a popular destination for cycle tourism based on its varied terrain, mild climate, rich history and extensive highway system.

Figure 7.6 - State Bicycle Routes

Economic studies conducted by several other states have demonstrated that the economic impact of bicycle tourists is significant. A conservative estimate of the annual economic impact of bicycle tourism to New York State is $300 M per year in direct purchases made at restaurants, bed and breakfasts, bicycle shop and other retail businesses located along Main Street. It is estimated there are another $700 M per year in indirect benefits to the State's environment, transportation network, and improved health and fitness of its residents. The signing of these additional bicycle routes only furthers enhances New York's reputation as a bicycle tourism destination, and promotes a greater acceptance of bicycling as a permitted user of the state's highway network.

- *Mapping Initiative for State Bicycle Routes 11, 14, 19, 20 & 25:* With the recent signing of these new state bicycle routes the New York State Department of Transportation will be developed new bicycle routes maps to for the benefit and convenience of cyclists, both bicycling within, or passing through New York State. The maps will contain information on points of interest, elevation profile, and insets to help cyclists navigate through urban centers. It is anticipated the maps should be available to the public by Fall 2008. The NYS DOT has also updated its Hudson Valley Bikeway and Trailway map, and will publish its new Guide to Long Island Bikeways maps in Summer 2008.

  Other bicycle maps which are periodically updated include: The Capital District Regional Bike – Hike Map, Herkimer and Oneida Counties 2007 Bicycling Atlas, Syracuse Metropolitan Transportation Committee (SMTC) Bicycle Map, Greater Buffalo Niagara Regional Transportation Committee (GBNRTC) Bicycle Map, Binghamton Metropolitan Transportation Study (BMTS) Bicycle Map, the Adirondack Glens Falls Transportation Committee (AGFTC) Bicycle Map and Parks and Trails New York's "Cycling the Erie Canal Guidebook" in hard copy and online at www.ptny.org/bikecanal/index.shtml.

- *Safe Routes to School:* With the signing of the SAFETEA-LU legislation in August 2005, a total of $612 M was authorized by Congress for the creation of a national Safe Routes to School (SRTS) program. New York's share of this new program was $32 Million based on the pro rata share of children K-8 in New York State versus the entire nation. The purpose for which the SRTS Program was created:
  - To enable and encourage children, including those with disabilities, to walk and bicycle to school;
  - To make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and
  - To facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools.

  Studies have show that only 30 years ago the majority of children K-8 walked or bicycled to school on a daily basis. Since then, this number has continued to decline, with today an estimated 85% of all trips to school being made by bus or personal automobile. The result is children K-8 have become increasingly sedentary, with approximately 20% of all children being listed as obese – up from only 5% 30 years ago. In addition, many communities have undergone a dramatic transformation as rapid growth and urban sprawl has caused new schools to be constructed in former rural sites, replacing the traditional neighborhood school to which almost everyone walked. These new sites often lack the most basic pedestrian infrastructure connecting them to their adjoining communities.

  The Safe Routes to School program through improvements to the infrastructure surrounding school and safety education campaigns will once again make it possible for children to get back on their feet, and walk or bicycle to school. By bringing together such non-traditional partners as parents, teachers, neighborhood groups, law enforcement, and traffic engineers it creates the nexus to make streets safer for children of all ages. Communities which promote safer more pedestrian friendly streets have marked reductions in traffic congestion, collisions and a higher overall quality of life for all its residents. The ability to walk benefits people of all ages and abilities, as it promotes healthier living, greater independence and a much stronger sense of community.

- *Pedestrian Facility Design Training.* The NYS DOT's Bicycle and Pedestrian Program in partnership with New York State Metropolitan Planning Organizations (MPOs) and Federal Highway Administration (FHWA) are providing Pedestrian Facility Design Training, and Pedestrian Road Safety Audits to communities based upon need. This training will initially be offered to transportation engineers, and then to local communities, upon request. This training is aimed at enhancing the awareness and dialog among elected officials, advocates and private citizens of the physical and psychological barriers which prevent pedestrians from walking

and exercising daily. The objective of the program is to demonstrate to communities that they do have a role in making their communities safer more pedestrian friendly. Also discussed will be the importance of every community's need to complying with Americans with Disabilities Act Accessibility Guidelines (ADAAG) and the importance of an ADA Transition Plan.

- *Complete Streets Movement:* The complete streets movement seeks to redesign our urban highways to accommodate all potential users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities must all be able to safely move along and across an urban street. A recent national survey found 52 percent of Americans want to bicycle more and 55 percent would prefer to drive less and walk more. However, many streets where people bicycle or walk are incomplete, meaning they lack even the most basic infrastructure necessary to encourage bicycling and walking. Federal guidance requires each state or local municipality receiving federal funds that "bicycling and walking facilities will be incorporated into all transportation projects unless exceptional circumstances exist." The complete streets movement requests all transportation agencies to institute a new policy that ensures all users are routinely considered whenever a roadway is improved. By redesigning our streets for all users, it reduces crashes through safety improvements, while promoting the number and portion of people bicycling and walking. Complete streets can also help ease transportation congestion by providing alternative travel choices which improves the overall capacity of the transportation network.

Some on-going initiatives which the NYS DOT Bicycle and Pedestrian program has continued to promote are:

- *The Walk Our Children to School (WOCS) event*. Since 1998, the DOT's Bicycle and Pedestrian program has been actively involved in promoting child safety through the annual WOCS event. This event principally targets elementary school aged children; those most at risk for injury walking to and from their homes to neighborhood schools and transit stops. The goals of the program are to reduce the number of pedestrian injuries among school children by teaching them safe walking skills and how to identify safe routes to school, awareness of how walkable their community is and where improvements can be made, and the health benefits of physical activity through walking. This program helps to build the foundation of knowledge and skills which every child needs to be a safe pedestrian throughout their lives. DOT's Bicycle and Pedestrian Program is partnering with the New York State Department of Health Governor's Traffic Safety Committee, and numerous county traffic safety boards, and health departments to continually expand this program. Since 1998, the WOCS program has been held in over 900 schools statewide and reached over 200,000 students K – 6.
- *Traffic Calming:* Traffic calming has long been recognized by the transportation profession as a proven engineering countermeasure for reducing pedestrian and motor vehicle crashes and injuries, vehicle speeds, and traffic volumes, while improving the overall walkable environment of a community. The term "traffic calming" is broadly defined throughout the United States and the world. The Institute of Transportation Engineers, an international educational and scientific association of transportation professionals, defines traffic calming as follows:

> ***"the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users."***

While the concept of traffic calming is not new, there is new interest by communities statewide in applying these techniques in combination, and improving the compatibility among all highway users. Combining techniques is especially effective in neighborhood traffic calming, which applies to residential neighborhoods, and on shopping or entertainment oriented streets, and in some cases main streets of our villages, and hamlets, and school zones. Examples of objectives that may be achieved by traffic calming measures include:

- Improved safety and convenience for road users, including residents, motorists, bicyclists, pedestrians, transit riders, and people with disabilities.
- Reduce number and /or severity of accidents.
- Reduce noise and air pollution.
- Enhance street appearance.
- Reduce the speeds of motor vehicles.
- Reduce the need for police enforcement.
- Achieve an overall improvement of the community's quality of life.

DOT, through its Bicycle and Pedestrian Program, has developed a 2-day training course on the proper design and application of traffic calming measures. Communities interested in a Traffic Calming course should contact the NYS DOT Bicycle and Pedestrian Program at (518) 457-8307.

- *Maps for New York State Bicycle Routes 5, 9, & 17:* The DOT, through its Bicycle and Pedestrian Program, has developed bicycle maps for its State Bicycle Routes (SBR) 5, 9 & 17.

The Program also maintains an inventory of bicycle maps from other regions of the state including: Binghamton, Buffalo, Capital District, Finger Lakes, Glens Falls, Hudson Valley, Long Island, New York City, Rochester, Syracuse, and Utica.

For additional information about or obtaining these maps, please contact the NYS DOT Bicycle and Pedestrian Program at: https://www.nysdot.gov/portal/page/portal/divisions/operating/opdm/local-programs-bureau/biking or by telephone at (518) 457-8307.

- *Stand-alone bicycle and pedestrian projects:* Between 2000 – 2007, the NYS DOT has completed 24 stand-alone projects pertaining to improved bicycle and pedestrian safety, access and mobility, as well as promoting improved accesses for individuals with physical disabilities (Table 7.3).

Table 7.3 - NYS DOT Stand-Alone Bicycle and Pedestrian Projects 2000-2007

Description	Number of Projects	Total Cost
American with Disabilities Act (ADA) Curb Contracts	5	$1.03 M
New Shared – Use Pathways or Improvements	6	$26.1 M
New Sidewalk Construction or Improvements	12	$11.70 M
Traffic Calming Project	1	$2.68 M
Total	24	$41.51 M

Transportation Enhancement Program

The Transportation Enhancement Program (TEP) was created in the Intermodal Surface Transportation Act of 1991 (ISTEA), and continued in the Transportation Equity Act for the 21st Century (TEA-21) and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

Through the Transportation Enhancement Program, Congress provided innovative opportunities to improve the transportation system through the implementation of a specific list of activities intended to benefit the traveling public, increase transportation choices and access, enhance the built and natural environment, and provide a sense of place. Transportation enhancement activities offer communities funding opportunities to help expand transportation choices such as bicycle and pedestrian facilities, scenic routes, beautification and other investments that increase recreation, accessibility, and safety for everyone beyond traditional highway programs.

Since the start of the program in 1994, the New York State Department of Transportation through its Transportation Enhancement Program has made funds available to communities in New York (Table 7.4).

For additional information about this program, to request an application or receive a guidebook, please contact your NYSDOT regional office, your local Metropolitan Planning Organization (MPO), or visit us on the web at: https://www.nysdot.gov/portal/page/portal/programs/tep

Table 7.4 - Transportation Enhancement Program 1994 to Present Project Categories #1 and #8

Category	# of Projects	Total Federal Projects Costs	Total Local Share Cost	Total Project Cost
Category #1 Provisions of Facilities for Pedestrians and Bicyclists	243	$161,848,663	$73,856,681	$235,705,344
Category #8 Preservation of Abandon Railroad Corridors	62	$32,262,710	$13,734,763	$45,997,473
Category #1 and Others	3	$2,020,782	$550,196	$2,570,978
Grand Total	308	$196,132,155	$88,141,640	$284,273,795

Parkways and Bikeways

DOT maintains the 20 parkways administered by OPRHP. This includes the parkways on Long Island and paralleling the Niagara River and Lake Ontario. Some of the parkway segments were never completed and now significant linear open spaces exist within urban and suburban areas. The parkways provide the opportunity to develop

hiking, biking and equestrian trails such as along the Niagara, Wantagh and Bethpage Parkways. Bikeways are being planned for the Palisades, Bethpage, Ocean and Lake Ontario Parkways.

Scenic Byways Program

Since 1992, the New York State Scenic Byways Program, managed by the Department's Environmental Analysis Bureau has revitalized individual and community interest in the State's scenic, natural, recreational, cultural and historic resources. Since its inception, the Scenic Byways Program has facilitated partnerships among State agencies and local and county organizations, private citizens, business owners, and not-for-profit organizations. The Program fosters extensive public involvement and encourages local communities to manage these resources and to enhance tourism and recreation.

The following vision has been developed and reaffirmed by the New York State Scenic Byways Advisory Board:

> New York State is recognized nationally and internationally for its outstanding network of designated scenic byways that provide intermodal access to unique and significant scenic, natural, recreational, cultural, historical and archaeological resources. Local and statewide scenic byways management efforts promote tourism, stimulate economic development and conserve resources to sustain the quality of the communities and associated resources.

Following the recommendations of the New York State Scenic Byways Advisory Board, the Department has successfully competed for annual National Scenic Byway Program discretionary funds with total project values over $20 million since the inception of the program fifteen years ago.

Scenic Byway Funding: Just in the past five years, NYSDOT's Scenic Byways Program has successfully funded 67 Scenic Byway projects valued in excess of $7.5 million. The primary purpose of each of these projects is either to provide for safety improvements; byway facilities such as visitor centers and comfort stations; improved or new access to recreation; intrinsic resource (scenic, recreation, natural, cultural, and historical) protection; interpretive information and signage; or visitor and tourism marketing.

Scenic Byway Projects: Specific funded project examples include: the Route 90 Scenic Byway Information and Interpretation Center; "Old Saratoga" Network of Interpretive Parks; Seaway Trail Bicycle Map; North Fork Trail Byway Resource Protection; Hudson Crossing Interpretive Park and Environmental Education Center; Route 73 Vegetation Conservation and Rehabilitation Program; Restoration and Improvements to the Lake Champlain Visitors Center (Bridge Toll Collector's Residence) at the Champlain Bridge; French and Indian War 250th Commemoration Interpretation; Elizabethtown Waypoint Visitor Center; multiple Invasive Plant Projects and Community Outreach in the Adirondack North Country; Chesterfield Tourist Interpretive Center, Champlain Pedestrian and Bike Trail; Southern Adirondack Trail Greenway Reconnaissance; Slate Valley Waypoint Interpretive Center; multiple Birding Maps and Interpretive Signage Projects; Pedestrian and Bicycle Trail Linking Waterford Harbor to Lock 2; Great Lakes Maritime Heritage Map, Mohawk Towpath Information Kiosk, and the Shawangunk Mountains Regional Open Space Preservation Plan.

These funds, passed on to communities and other organizations across the State to carry out locally initiated projects that interpret and manage the intrinsic qualities of the State's many Scenic Byways; promote tourism, recreation and economic development; and provide physical improvements to existing State Scenic Byways.

Scenic Byway Designations: Several new State scenic byways have been designated by the New York Scenic Byways Advisory Board in the past five years. These include: The North Fork Trail on Long Island, the Cayuga Lake Scenic Byway in Central New York, the Southern Adirondack Trail, the Mohawk Towpath Byway in the Capital District, U.S. Route 20 from Duanesburg to Lafayette, and the Shawangunk Mountains Scenic Byway in the Hudson River Valley Region. In addition, New York State received its third National Scenic Byway designation with the designation of the Mohawk Towpath at the national level in 2005. The Mohawk Towpath joins the Great Lakes Seaway Trail and Lakes to Locks Passage as New York's premiere byways.

Scenic Byway Corridor Management Plans: An approved community progressed Corridor Management Plan (CMP) is required for the nomination and designation of New York State Scenic Byways. CMPs provide for the conservation and enhancement of the byway's intrinsic resources as well as promote recreation, tourism and economic development. In addition to CMPs prepared for the most recently designated byways, CMPs have been initiated, progressed, or completed for the following legislated State Scenic Byways: multiple byways in the

Adirondack North Country including the Adirondack Trail, Olympic Byway, Central Adirondack Trail, Revolutionary Trail, Black River Trail, and the Military Trail; and the Historic Parkways of Long Island.

Canal Corporation

The NYS Canal Corporation, a subsidiary corporation of the New York State Thruway Authority, is responsible for the operation, maintenance and promotion of four historic operating canals that span 524 miles across NYS.

The four canals that make up the NYS Canal System are:

- the Erie Canal
- the Oswego Canal
- the Champlain Canal and
- the Cayuga-Seneca Canal

The Canal System links the Hudson River, Lake Champlain, Lake Ontario, the Finger Lakes, and the Niagara River with communities rich in history and culture.

Community Assistance

Canal communities form the backbone of Upstate New York. The Canal Revitalization program, administered by the Canal Corporation, has provided dozens of communities with increased public access to the Canal, new and improved trail linkages and enhanced economic opportunities.

The four major elements of the Canal Revitalization program are:

- Canal harbors
- Canal service ports
- The Canalway Trail and
- Canal System marketing plan

This program has afforded quality-of-life benefits to both Canal community residents and visitors alike.

Under the Revitalization program, the Canal Corporation invested $13 million to develop seven Canal harbors and $20 million in Canalway Trail projects, including 170 miles of new construction. Additionally, in partnership with other State agencies, the Canal Corporation has helped implement more than $200 million in local Canal service port projects across the State. The overall goals of the Revitalization program have been to preserve the past, enhance recreational opportunities and promote community development.

The Erie Canal Greenway Grant Program, administered by the Canal Corporation, was created in 2006 to help spur community revitalization and preservations efforts. As part of a $10 million appropriation from the State Legislature, the Corporation solicited grant applications from municipalities and non-profits for capital projects along the Canal System to preserve and rehabilitate canal infrastructure; enhance recreational opportunities for water and land-based users; and promote tourism, historic interpretation and community revitalization. To date, over $8.9 million in grant funding has been awarded to municipalities and non-profits through this program.

Department of Education/NYS Museum

Biodiversity Research Institute

The importance of biodiversity was discussed in Chapter 4 under Stewardship. By funding promising research projects, sponsoring conferences and seminar series, and undertaking and directing other initiatives, the New York State Biodiversity Research Institute (BRI) advances information and research for the conservation of New York State's biodiversity. By improving understanding of our state's natural resources and the challenges to their existence, BRI seeks to collaborate with all residents of New York State in preserving this rich biodiversity for future generations.

A program of the New York State Museum within the State Education Department and funded by the Environmental Protection Fund, BRI is a partnership among conservation and environmental groups and leaders from throughout the state. Its partners include the State Education Department; New York State Department of Environmental Conservation; New York State Office of Parks, Recreation, and Historic Preservation; State University of New York; American Museum of Natural History; Audubon New York; New York Natural Heritage Program; and The Nature Conservancy. An executive committee—appointed by the New York State Legislature and Governor—sets the direction of the organization with the advice of a team of expert scientists from across the state.

The New York State Legislature founded BRI in 1993 to help meet the challenges of preserving the state's biodiversity. Since that time, BRI has served as a comprehensive source of information about the ecosystems, habitats, and all living organisms in New York State.

Goals

In March 2006, the New York State Biodiversity Institute approved a strategic plan outlining the organization's top five goals in its effort to advance information and research for the conservation of New York's biodiversity:

- **Address the biodiversity information needs of government and provide related conservation recommendations.** BRI will provide the best-available objective and scientifically rigorous information and recommendations for biodiversity and conservation management to the governor, state legislature, and public agencies in support of informed, effective policy making. To ensure the availability of accurate information about the biodiversity resources on state lands, BRI will promote existing information and fund new projects relevant to land-use decisions.
- **Address the biodiversity information needs of the public and provide related conservation recommendations.** BRI will provide the general public with the best-available information and access to expert guidance, and fund and support information projects that are accessible to the public. Specifically, BRI will provide information and training to private and nonprofit land owners and natural resource professionals to enhance the stewardship of biodiversity on private lands.
- **Encourage, support, and develop networks of collaborating scientists.** By maintaining a directory of biodiversity research and conservation management scientists, BRI will provide a resource for people looking for expert guidance. BRI will also identify and develop ways to foster collaboration among scientists, such as giving grants to annual research proposals that involve collaboration. Through regional and statewide symposia—including the Northeast Natural History Conference—BRI will facilitate networking and encourage collaboration.
- **Support biodiversity research programs.** After prioritizing needs for biodiversity information and conservation management, BRI will solicit, evaluate, and fund project proposals that address the identified needs. BRI will review and evaluate all funded projects to track their results and impact, and encourage collaboration among existing programs to maximize the impact of completed work. BRI will also fund projects specifically designed to gather information or develop expertise that will help BRI better achieve its strategic goals.
- **Support biodiversity education.** BRI will solicit, evaluate, and fund proposals for projects that address biodiversity education needs; work with the State Education Department and Board of Regents to incorporate biodiversity education into the curricula of New York State schools; and connect BRI-supported research and initiatives with environmental education and nature centers in New York State.

Activities and Accomplishments

- The New York State Biodiversity Project

  BRI collaborates with the American Museum of Natural History, New York State Department of Environmental Conservation, New York Natural Heritage Program, and The Nature Conservancy on the New York State Biodiversity

Project. The project was launched in 1999 to improve understanding of the state's diverse ecosystems, habitats, and all living organisms and to identify challenges and recommendations for protecting this biodiversity. In 2006, the joint effort resulted in the publication of Legacy: Conserving New York State's Biodiversity.

Written for the general public and concerned audiences and featuring more than 200 color photographs, the 100-page book aims to increase awareness and help ensure the preservation of New York's biodiversity. The book is available free of charge from BRI, which partially funds the New York State Biodiversity Project.

- Publication and Distribution of Biological Diversity: The Oldest Human Heritage

  Based on a manuscript written by Edward O. Wilson of Harvard University, the BRI has published a book that describes the importance of preserving biodiversity, along with state-specific examples of threatened species and habitats. This book is being distributed free of charge to high school level students throughout the state.

- The Northeast Natural History Conference

  The Northeast Natural History Conference offers scientists, educators, and students an opportunity to present current information on the varied aspects of natural history research from the Northeastern United States and adjacent Canada. In addition to updating colleagues on current research, the conference serves as a forum to identify research needs, foster collaboration, and rekindle interest in natural history by bringing people with diverse backgrounds together. BRI has been organizing and hosting the conference since 1998. Abstracts of presentations from previous conferences are available at http://www.nysm.nysed.gov/nhc/.

- Lectures on Biology and Conservation

  Since spring 2005, BRI has organized and sponsored two lecture series each year. Speakers from around the state have presented on a variety of conservation topics, and attendance for this seminar series has blossomed. The series attracts a varied audience, including New York State agency staff, private consultants, museum scientists, conservation practitioners, educators, and the interested public—both from the Capital District and beyond (including across state borders). The noontime lectures, held at the New York State Museum on Wednesdays in April and October, are free and open to the public.

- Biodiversity Needs Assessment

  BRI is conducting the first-ever comprehensive biodiversity needs assessment for New York State. This assessment will focus on identifying, evaluating, and prioritizing biodiversity research needs in New York State.

  To compile the report, BRI will gather input from and work with a variety of scientists [e.g., university, state agency, private institution, non-governmental organization (NGO), and private] and other experts on the state's biodiversity. The report will review what is known and not known about various taxa, communities, and regions in the state; identify gaps in basic knowledge; identify the scope of biodiversity research needs; and prioritize biodiversity research needs to provide the foundation for sound stewardship in the state.

  As a final step, BRI will use information from this assessment to help guide the work of BRI and its programs, including the awarding of grants. This needs assessment can also be extended to help guide others interested in biodiversity across the state.

- Alien Invaders Exhibition

  BRI is partnering with the State Museum, New York State Department of Environmental Conservation, and New York State Department of Agriculture and Markets to produce an exhibition on invasive species in New York State. This exhibition, planned for 2008, will introduce the public to non-native invasive species and demonstrate why it is such an important topic in New York State and worldwide. It aims to connect Museum visitors to this issue and inspire a sense of responsibility that they can take actions toward its resolution.

  The exhibition incorporates several major themes, including the pervasiveness of invasive species and their ability to out-compete native species; the responsibility of humans in introducing some of these species to the state; and invasive species as a form of biological pollution and as a threat to agriculture, forestry, parks, and other natural resources. The exhibition will explore invasive species as a threat to tourism and industry, as well as tell how invasive species affect the daily lives of all New York State residents.

  The exhibit focuses on species that are not native to the ecosystem they occur in and how they can cause harm to the environment or to human health. Examples include: purple loosestrife, water chestnut, hemlock woolly adelgid, zebra mussel, the fungus causing Dutch elm disease, and snakehead.

  The exhibit will display up-to-date information on the status of

invasive species in the state, relate how historical actions by humans and land-use patterns have enabled these invasions to occur, and what steps can be taken in the future to address some of these problems.

- Enhancements to BRI's Online Resources

  To improve users' ability to access information on BRI and biodiversity, BRI is redesigning the BRI Program Website (www.nysm.nysed.gov/bri/index.html) and the New York State Biodiversity Clearinghouse Website (www.nybiodiversity.org).

  The renovated BRI site now includes updated information on the activities of the BRI Program office and the list of fiscal year 2006–2007 grants with fiscal information and project abstracts. The next step in the redesign is the development of a database for awarded grants so that users can search for information by using specific keywords, such as species names, geographic locations, or research institutions.

  The New York State Biodiversity Clearinghouse Website, developed by the New York State Biodiversity Project and maintained by BRI, provides New York residents with up-to-date information. It was created in response to recommendations from a user's needs assessment conducted by the Environmental Law Institute for the project.

  When visiting the site, users most frequently access pages with summaries of selected groups of organisms such as slime molds, crabs, shrimps, crayfishes, fishes, and birds. These summaries describe the distribution of these species in New York State and highlight some of the conservation issues related to the species. Each taxonomic summary also contains a list of species that has been documented in the state.

  In conjunction with the redesign of the BRI Program Website, BRI plans to redesign the Clearinghouse Website. In addition to posting additional taxonomic summaries, the restructured site will feature a database that enables users to more easily access information contained in the taxonomic summaries. Other enhancements include integration of some features of the Clearinghouse Website with the BRI Program Website.

- Biodiversity Grants Program

  Through an annual competitive Biodiversity Grants Program, BRI provides funds to state agencies, academic institutions, private research consultants, and non-profit conservation organizations working to understand and conserve New York's native biodiversity (e.g., insects, plants, wildlife, and ecosystems). These grants support research projects that improve our basic understanding of a variety of New York State taxa, from fungi and insects to turtles and bats, as well as those that enhance the value of existing natural history collections.

  These projects also increase our knowledge of how species as varied as algae, fungi, clams, frogs, birds, and plants interact in their natural systems and identify how they react to potential threats, such as non-native invasive species. This, in turn, leads to better-focused conservation practices supported by scientific evidence. Some of these projects offer opportunities for the public to join in data collection and to become actively engaged in scientific research and contribute to the conservation of New York State biodiversity.

  Grants are awarded based on recommendations of leading researchers in the fields of environmental science and education. Successful applicants clearly demonstrate the importance of their project to the conservation of New York State's biodiversity. Specifically, they identify how the proposed project will contribute to our understanding of biodiversity within the state or threats to its existence, and how the project will contribute to the development and implementation of conservation initiatives to ensure its persistence. Educational initiatives that enhance public awareness of the value of biodiversity and projects that promote accessibility of information on New York's biodiversity are also supported.

  BRI funds research and education projects in the following categories:

  - Bioinventory, Taxonomy, and Systematics
    - Inventories of flora, fauna, or other living organisms (rare or common)
    - Research that uses or enhances existing biological collections
    - Basic research on taxonomy and systematics
  - Ecological Research
    - Ecology of species (rare or common) or assemblages in understudied taxa or regions
    - Model the effects of range expansions or population losses on ecosystems
    - Assessments of the effects of the introduction of invasive or exotic species on native biota
  - Land-Use Change and Conservation Initiatives
    - Inventory or mapping of ecological communities
    - Identification of priority areas and mechanisms for conservation
    - Assessments of the effects of land use on native biota

    - Investigation of techniques to protect, conserve, or manage biodiversity
- Education Initiatives
    - Educational efforts that increase public awareness of the value of biodiversity
    - Projects that promote accessibility of information on biodiversity and its conservation among a variety of users (e.g., general public, state agencies, planners, researchers)
- Information Transfer
    - Initiatives that foster access, compatibility, interchange, and synthesis of data among biological information systems maintained by public entities, academic and research institutions, and private organizations
    - Preparation and publication of interpretative works that draw upon biological collection resources

For a complete list of previously funded projects visit the BRI website at http://www.nysm.nysed.gov/bri.

Olympic Regional Development Authority

The Olympic Training Center

Lake Placid was the home of the 1932 and 1980 Winter Olympics that left behind valuable winter sports facilities including ski jumps, skating ovals, alpine trails, bobsled and luge runs. When the Olympic Regional Development Authority (ORDA) became the administrator of these facilities in 1982, the U.S. Olympic Committee (USOC) signed a contract with ORDA to establish the second Olympic Training Center.

The Training Center, which offers 96 hotel-style rooms, a gymnasium, sports medicine, weight training and dining facilities, was constructed in 1990 to house athletes in training. From the training center, athletes have access to the Olympic Speed Skating Oval, the Olympic Jumping Complex, the Freestyle Aerial Complex, Whiteface Mountain's Olympic Downhill Ski trails, the Olympic Sports Complex at Mt. Van Hoevenberg, and the Olympic Ice Complex.

Since ORDA assumed authority of these facilities, Lake Placid has hosted more than 225 national and international competitions including 8 World Championships and 41 World Cups. It has also been the annual host to the Empire State Winter Games for nearly three decades. ORDA also maintains and makes periodic improvements to these facilities to keep America's only world class set of Winter Olympic facilities fully operational. ORDA has a full range of departments to adequately run these facilities and to meet their legislative mandate which is:

"To institute a comprehensive, coordinated program of activities utilizing the Olympic facilities in and around Lake Placid, New York in order to insure optimum year-round use and enjoyment of these facilities to the economic and social benefit of the Olympic region…"

In addition to the Olympic Complex in Lake Placid, ORDA also administers the ski area on Gore Mt. and Whiteface Mt. and the Mt. Van Hovenberg bobsled/luge run. ORDA took over this facility in 1984.

Goal

Continue to conduct statewide athletic competitions for all segments of the population.

Actions

- Continue to conduct the Empire State Summer and Winter Games, Empire State Senior Games and Empire State Games for the Physically Challenged.
- Rotate host locations for the Empire State Summer Games events throughout the State.

Goal

Encourage greater participation of all segments of the population in athletic activities.

Actions

- Encourage broad participation in athletic events at the local and regional levels.
- Encourage volunteer participation in groups that organize athletic leagues.
- Encourage both competitive and noncompetitive athletic programs that will provide opportunities for all the citizens regardless of their athletic abilities.

Goal

Expand the acquisition and development of open space areas within easy access to communities that can provide opportunities for field and court activities.

Actions

- Encourage the acquisition and development of open space areas in underserved communities.
- Encourage the shared use of outdoor recreation facilities, such as school fields, for community organized athletic activities.
- Provide the appropriate level of maintenance to prevent the deterioration of field areas due to overuse.

Department of Health

Health

Recreation resources provide an important opportunity for people to be physically active, which can lead to significant improvements in health. Being physically active on a regular basis can contribute to a decrease in the risk of numerous debilitating diseases and conditions, including heart disease, diabetes, hypertension, some forms of cancer, osteoporosis, obesity, depression, arthritis, and possibly Alzheimer's disease. In fact, being physically inactive (combined with poor eating habits) is the second underlying cause of death in this country (next to tobacco use), accounting for 14% of all deaths annually.

Obesity is one of the conditions most closely related to physical inactivity. In recent years, obesity rates have increased dramatically. In New York, at least 60% of adults have weights that put them at higher risk for health problems. The prevalence of overweight and obesity is highest among African Americans, those with the lowest household incomes, and those with lower educational attainments. National data (based on actual height and weight measurements) reveal that 17% of children (2-19 years of age) are overweight. Over a mere five year period (1999 to 2004), the rate of overweight among young girls increased from 14% to 16% and among boys from 14% to 18% Physical inactivity and/or excessive caloric intake are the prime causes of obesity in all age groups.

In order to improve health, health authorities recommend that people get at least 30 minutes of moderate activity, such as walking, at least 5 times a week (or 20 minutes of vigorous activity such as jogging at least 3 times a week). This level of physical activity is likely to have broad health benefits, regardless of weight status. More physical activity and/or more vigorous activity levels may be necessary to reduce weight or maintain weight loss. Elementary school-aged children should get at least 60 minutes of activity most days of the week.

The most recent self-reported data on physical activity rates in New York, show that only 48% of adults in New York meet these minimum recommendations, and 27% of adults had no leisure time physical activity in the previous month. On a national level, people in rural areas are less likely to meet physical activity recommendations than are people in large metropolitan areas. In 2000, adults in New York were asked to name the two leisure time physical activities that they have engaged in over the past month. Based on this survey, the top five leisure time physical activities among adults in New York are: walking (engaged in by 64% of adults), weight lifting (18%), running (11%), aerobics classes (11%) and basketball (10%).

Most people know that they need to be more physically active. However, many people find it difficult to incorporate physical activity into their daily lives. Over the past several decades, we have created a physical and social environment that discourages physical activity. Even short trips are made by car (rather than by walking) and children often have no safe place to play outside near their homes and schools. Recent research has shown that adults with access to neighborhood parks were nearly twice as likely to be physically active as those without access to parks. Studies of community trail users have repeatedly found that the creation of the trail has allowed them to increase their physical activity levels. Unfortunately, those at highest risk of being inactive and suffering the health consequences often don't have easy access to parks and trails. Studies have shown that there are fewer parks, green spaces and trails in communities with higher levels of poverty.

New York's efforts to increase and improve access to parks, trails and recreational facilities will significantly help address the obesity epidemic. Of particular importance are facilities that are in close proximity to where people live and work so that they can be used several times a week, for transportation (to/from school, work, errands) as well as for leisure as the "Cardiovascular Health in NYS Plan for 2004 - 2010" recognizes in its community sector objectives. This plan also recommends promoting the use of NYS Parks as a means of increasing physical activity for individuals and families (DOH, 2004). Additionally, priority should be given to developing neighborhood parks, trails, and other recreation facilities that serve low-income and rural populations.

Goal

Expand trail systems that link communities with recreation areas and places of work.

Actions

- Encourage the development of greenways and trails.
- Develop and designate bike lanes on or parallel to road systems.
- Provide proper maintenance and security on trails to provide a safe and enjoyable experience.

Goal

Acquire, develop and maintain parks and open spaces within populated communities, especially underserved communities.

Actions

- Recognize the importance of parks and open spaces in state and local land acquisition and recreation grant programs.

Statewide Programs

- Encourage the development of local recreation and open space plans.
- Encourage the participation of the local community in providing and maintaining recreation facilities.

Goal

Expand the level of participation of citizens in passive and active forms of recreation.

Actions

- Encourage local events that focus on physical activity.
- Expand noncompetitive and competitive activities.
- Organize activities that appeal to all populations and age groups.
- Support efforts to increase the public's awareness of the health benefits of physical activity at recreational facilities such as parks.

Water Quality and Safety

As discussed in Chapter 3, New York State has over 3,000 bathing facilities including: bathing beaches on lakes, ponds, rivers and the ocean; swimming pools (including kiddy pools, diving pools, wave pools and others); and spray grounds. The New York State Department of Health is responsible for assuring that all public swimming facilities in the state are operated in a safe manner and that these facilities meet State and Federal standards for safe recreational use. All public bathing facilities in the state must be supervised by qualified lifeguards and meet state water quality and safety standards. Regulations for safe swimming pools, bathing beaches, and aquatic spray grounds are within Subparts 6-1, 6-2 and 6-3, respectively, of the State Sanitary Code.

Office for the Aging

The New York State Office for the Aging (OFA), through its network of 59 Area Agencies on Aging, has initiated and continue to manage a number of health promotion, disease prevention, and recreation programs and services for active, healthy living for older adults across New York State that fit in with the SCORP.

Preventive Screening

Senior Health Check is a new initiative that is designed to encourage older New Yorkers, covered by Medicare, to make greater use of preventive screening benefits under the insurance coverage. In addition, the OFA is encouraging Area Agencies on Aging to develop and implement evidenced-based prevention and chronic disease self-management programs to improve health status and quality of life.

Nutrition Program

Area Agencies on Aging use congregate meal sites, home delivered meals programs, multipurpose senior centers, and other appropriate sites to delivery health promotion and disease prevention services, thereby allowing them to integrate such services with the nutrition program. Priority is given to areas which are medically underserved and where there are a large number of older individuals in greatest economic and social need. Broad services include health risk assessments; routine health screening (hypertension, glaucoma, cholesterol, cancer, vision, hearing, diabetes, bone density and nutrition screening); nutritional counseling and educational services; evidence-based health promotion programs, including programs related to the prevention and mitigation of the effects of chronic disease, alcohol and substance abuse reduction, smoking cessation, weight loss and control stress management, falls prevention, physical activity and improved nutrition; physical fitness programs; home injury control services; mental health screening services; information and education about Medicare preventive care benefits including influenza and pneumonia vaccinations. All Area Agencies on Aging provide medications management screening and education.

Senior Center

The term "Senior Center" refers to a community facility through which a broad range of programs and services are provided to older adults. Included among these programs and services are recreation and education activities, and health promotion activities.

Senior Center Recreation and Education

Activities also are organized and scheduled through the Area Agency on Aging or its sub contractors which involve older persons in courses, workshops and other learning activities and satisfying use of free time.

Senior Center Health Promotion

Services and activities that foster good health, increase awareness and understanding of healthy lifestyles and promote physical and mental health. These include but are not limited to:

- Exercise classes
- Walking groups
- Stress education workshops
- Administration of influenza and other vaccines
- Promotion of early detection of various health problems through education and/or testing
- Activities to promote successful management of medications, such as group workshops or one-on-one consultations with a health professional.

U.S. Army Corps of Engineers

Harbors of Refuge

A number of harbors of refuge along the shores of Lake Erie and Lake Ontario were identified by the U. S. Army Corps of Engineers (COE). These lakes are often subject to sudden squalls and high winds creating waves and wakes in excess of 10 feet. Harbor of refuge is a term that refers to a harbor that provides services specifically to accommodate transit craft rather than as a home port for local craft (OPRHP, 1980). Initially, the COE recommended that harbors of refuge occur every 30 miles. It was determined, however, for smaller craft navigating the Great Lakes that shorter intervals were more appropriate. Harbors of refuge have been established at Barcelona, Dunkirk, Cattaraugus Creek, Sturgeon Point and Buffalo Harbors on Lake Erie and Wilson-Tuscarora State Park, Olcott Harbor, Golden Hill State Park, Oak Orchard Marine Park, Braddock Bay, Irondequoit Bay State Park, Port Bay, Little Sodus Bay, Mexico Point State Park, Port Ontario, Henderson Harbor and Sackets Harbor on Lake Ontario.

In 1982, OPRHP and DEC prepared a "Strategic Plan for Economic Development through Expansion of Waterway Access to the Great Lakes Report". The report identified the scope of work, expenditures and benefits that would be involved with the expanded access opportunities on the Great Lakes. Many of the projects have been implemented but there are more opportunities to be considered as recognized in the New York State 25-Year Plan for the Great Lakes. This is supported by the results of the "1990 Statewide Survey of Boating Use at Public Waterway Access Sites in New York State" that identified Lake Erie and Lake Ontario within the top five water bodies in the State in which boaters identified as needing to expand public access.

Federal Energy Regulatory Commission/NY Power Authority

Hydroelectric Power Projects

Throughout the State, many rivers are being used by various power generating companies to produce hydroelectric power. These facilities are regulated and must obtain an operating license issued by the Federal Energy Regulatory Commission (FERC). Many of the facilities within the State are undergoing a re-licensing process to ensure power generating companies continue operating. One aspect of this process is to provide recreation facilities and access, to and in the vicinity of the power facility. Public access to the waters and portage around the structures is an important element of the project. Other recreational facilities that may be considered are picnic areas, campgrounds, and scenic overlooks. Some facilities may even provide an interpretive visitor center explaining their generating plant to the general public.

For example, the St. Lawrence-Franklin D. Roosevelt Power Project is located in a 37 mile corridor along the St. Lawrence River in the towns of Lisbon, Waddington, Louisville and Massena. This represents approximately one-third of the St. Lawrence River corridor. Since 1953, this facility has been operating under a license issued to the New York Power Authority (NYPA) by the Federal Energy Regulatory Commission (FERC). A new 50-year license was issued for the St. Lawrence – FDR Project in October, 2003. This license will expire in the year 2053. This project incorporates within its boundaries two State parks, wildlife management areas, various local parks, and numerous boat launching sites. Similarly, a new 50 license, effective August 31, 2007, has been issued for the Niagara Power Project and will expire in 2057. The settlement package for the Niagara Project provides significant funding for the Niagara River Greenway.

It is important to insure that these power facilities include recreation facilities within their boundaries. Power companies may create new facilities on their property or enter into agreements with the state or local governments to create new or improve existing facilities.

U.S. Environmental Protection Agency

Lake Champlain Basin Program

The Lake Champlain Basin stretches from the peaks of the Adirondacks in New York to the Green Mountains of Vermont and north into Quebec, Canada. The Basin is a unique and historically significant natural resource that attracts thousands of residents and visitors each year to participate in diverse recreational opportunities. Increased use, competing and conflicting uses, and development continues to pressure the Lake's natural and recreational resource. The Lake Champlain Basin Program (LCBP), established in 1990, was charged with developing a long-term, cooperative management plan and program to protect and enhance the lake and its drainage basin for future generations to enjoy. The program is a partnership with among the states of New York and Vermont, the Province of Quebec, the US Environmental Protection Agency (EPA), other federal and local government agencies and many local groups both public and private. (LCBP, 2003)

The management plan, "Opportunities for Action" was first produced in 1996 and was revised in 2003. Although Lake Champlain is a vital lake with many assets, there are several serious environmental problems that demand action. Issues addressed in the 2003 Plan include:

- High phosphorus levels and algal blooms in parts of the Lake
- Toxic substances, such as PCB's and mercury, which have resulted in fish consumption advisories for some fish
- Impacts to fish and wildlife from nuisance nonnative aquatic species
- Wetland loss
- Habitat fragmentation
- Public access issues
- Recreational use conflicts
- Loss of cultural and archeological resources (LCBP, 2007)

The revision identified four specific goals as high priority and a set of recommended actions for each goal that are designed to protect and restore the ecological and cultural resources of the Basin, while maintaining a vital regional economy. (LCBP, 2003)

Goal:

Reduce phosphorus inputs to Lake Champlain to promote a healthy and diverse ecosystem and provide for sustainable human use and enjoyment of the Lake.

Phosphorus and other nutrients are needed for plant growth; however, human activities can upset the balance of aquatic nutrients leading to accelerated eutrophication (the natural aging process of lakes) and threaten water quality and human use and enjoyment of the lake. When the lake becomes over fertilized, by Phosphorus in particular, excessive amounts of algae and other aquatic plants become prolific and can impair water quality, aquatic habitats for fish and wildlife, reduce recreational appeal and impair water supplies. (LCBP, 2003) The bays and segments of the Lake are monitored to see if they meet the water quality targets agreed upon by New York, Vermont and Quebec in 1993.

Accomplishments:

- A Total Maximum Daily Load (TMDL) for phosphorus was developed for Vermont and New York.
- The total point source wastewater phosphorus discharge from plants in Vermont and New York is below the lake-wide limit set in the 2002 TMDL.
- 2006 funding from the International Joint Commission (IJC) will be used to help small farms in the Missisquoi watershed create new nutrient management plans.
- In 2005, the City of South Burlington created the Basin's first storm water utility to manage runoff. (LCBP, 2006)

Actions:

- Determine the additional actions necessary to achieve the load reductions on an expedited schedule by 2009, the 400th anniversary of Samuel de Champlain's arrival on the Lake, instead of 2006
- Provide funding for point source phosphorus reductions
- Estimate the non-point source phosphorus load that is being generated by developed land uses (urban and suburban land, roads, etc.) in the basin and work aggressively to reduce this load.
- Expand and accelerate implementation of existing federal, state and provincial agricultural non-point source pollution programs.
- Expand programs for stream bank restoration and the installation of vegetated buffer areas along eroding streams and rivers. (LCBP, 2003)

Goal:

Reduce toxic contamination to protect public health and the Lake Champlain ecosystem.

Toxic substances are elements, chemicals, or chemical compounds that can poison plants and animals, including humans. Some toxic substances come from natural sources; however, the increasing use and release of chemicals

in our daily lives may threaten the high quality of our Lake environment. Health advisories have been issued in both New York and Vermont regarding the consumption of fish species with elevated levels of mercury and polychlorinated biphenyls (PCBs). The presence of toxic substances raises concern about their impacts on the Lake ecosystem, its uses as a drinking water supply and other uses. (LCBP, 2003)

Accomplishments:

- NYS DEC completed dredging projects to remove PCBs from Cumberland Bay in 2001. Recent data has shown a decrease in the PCB levels in the sediment.
- Pollution prevention measures are underway in Outer Malletts Bay and Burlington Harbor.
- The "Clean Sweep" program has been implemented and works with businesses and farmers to safely dispose of pesticides.
- Mercury thermometer and manometer exchanges for new electronic devices and outreach to dentists about safely disposing of mercury have helped to keep mercury out of the Lake.
- In 2005, LCBP initiated a collaboration of scientists to investigate "new generation" toxins in the Lake such as pharmaceuticals, personal care products and fire retardants. (LCBP, 2006)

Actions:

- Continue to develop and implement a comprehensive toxic substance management strategy emphasizing pollution prevention while continuing to mitigate pollution problems throughout the Lake.
- Continue monitoring and restoration efforts in sites of concern.
- Facilitate the redevelopment of contaminated sites (brownfields) in the Lake Champlain Basin.
- Further characterize and manage toxic substances in urban storm water.
- Support and continue programs to encourage homeowners, industries, businesses and public institutions to implement pollution prevention and recycling measures. (LCBP, 2003)

Goal:

Control the introduction, spread and impact of nonnative aquatic nuisance species in order to preserve the integrity of the Lake Champlain ecosystem.

Fish and wildlife provide social, economic and environmental benefits. Abundant fish and wildlife attract recreational hunters, bird watchers and anglers, resulting in a significant economic benefit to local communities. At least 22 nonnative aquatic nuisance species are known to have been introduced and dispersed into the waters of the Basin. Established populations Aquatic Nuisance Species (ANS) can have substantial ecological and economic impacts.(LCBP, 2003) Currently, alewife, zebra mussel, purple loosestrife, Eurasian watermilfoil, Japanese knotweed and water chestnut are found in or on the shores of Lake Champlain. (LCBP, 2006)

Accomplishments:

- The Lake Champlain Basin Aquatic Nuisance Species Management Plan was revised in 2005, making the Basin eligible for funding from the US Fish and Wildlife Service for control programs.
- The LCBP has funded water chestnut control since its creation and the acreage of the Lake that needs consistent mechanical harvesting has been greatly reduced.
- LCBP invited representatives from other alewife-infested waters to discuss the possible impacts to Lake Champlain. (LCBP, 2006)

Actions:

- Prevent the spread and control the population of water chestnut within the Lake and throughout the Basin.
- Support implementation of a long-term sea lamprey control program.
- Prevent the spread of alewives within and beyond the Basin.
- Prevent the spread of zebra mussels to other Basin lakes. (LCBP, 2003)

Goal:

Manage Lake Champlain, its shorelines and its tributaries for a diversity of recreational uses while protecting its natural and cultural resources.

Lake Champlain is a popular recreation resource for Basin residents and visitors. Both water depended and water enhanced recreation activities such as swimming, fishing scuba diving, boating, biking, hiking, sightseeing and bird watching are popular within the Basin. Lake recreationists affect and are affected by the state of the natural, cultural and historic resources of the region. Protection and enhancement of these resources is important. More opportunities to access and enjoy the Lake will foster a sense of stewardship among the many recreation user groups thus increasing the overall quality of the Lake. (LCBP, 2003)

Accomplishments:

- In 2006, a complete renovation of the Ticonderoga Boat Launch was completed, creating a state of the art, fully accessible boat launching facility.

Actions:

- Encourage new opportunities for ecologically sustainable recreation in the Basin.
- Determine, monitor and mitigate the impact of increased recreational use in ecologically sensitive areas.
- Develop new public access opportunities.
- Pursue funding alternatives for public access site enhancement

Beaches Environmental Assessment and Coastal Health Act (BEACH Act)

To improve water quality testing at the beach and help beach managers better inform the public when there are water quality problems, Congress passed the Beaches Environmental Assessment and Coastal Health Act (BEACH Act) in October 2000. This Act authorizes EPA to award grants to eligible state, tribes and territories to develop and implement beach water quality monitoring and notification programs at coastal and Great Lakes beaches. The New York State Department of Health has received grants (of up to $347,000) each year from EPA to administer this program. The BEACH grant money is provided to County Health Departments and NYS Office of Parks, Recreation and Historic Preservation to implement monitoring and public notification programs for beaches along the Atlantic Coast, Long Island Sound and Lakes Erie and Ontario.

American Heritage River Initiative

Created in 1997, the American Heritage Rivers Initiative (AHRI) has three major objectives: natural resource and environmental protection, economic revitalization, and historic and cultural preservation. The program is designed to make federal funding and technical expertise available to the State and local governments to reclaim the health, heritage and economic viability of river communities (U.S. EPA, 2006).

Each designated river received a "River Navigator," a federal or federally funded professional who identifies complementary programs and resources to carry out the community's vision for its river and surrounding community (ies). Federal funding for the Hudson River Navigator position was discontinued in September of 2007. Efforts to continue the position and the Navigator's work are on-going.

The Hudson River was nominated in 1998, as an American Heritage River. The 315 miles of river, from its source in Lake Tear of the Clouds to the Verrazano Narrows, and the 19 counties surrounding its shores are included in the Heritage River Area.

Accomplishments made through this program include:

- a donation from Camp Dresser and McKee engineering to the City of Hudson to renovate their Hudson River Park
- the development of a partnership between AHRI and the Hudson-Mohawk Resources Conservation and Development Area to conserve and protect the seven remaining Hudson River lighthouses
- in 2003, a Hudson River Navigator was hired after a one year vacancy
- DEC acquired property at Turkey Point, which was an AHRI keystone project
- completion of the "Hudson River Lighthouse Tour"
- a Navigator's Conference held a workshop highlighting the needs for shallow water dredging in the Hudson River to maintain shores and basins for use by recreational boaters, and to discuss protecting the river from invasive species
- the creation of the "Fresh Off the Barge" farmers market in the Lower-Hudson area
- the annual Hudson River Navigator's Conference was held in March, 2006 at Pace University in White Plains, NY and focused on promoting clean air and exploring alternative bio-fuels
- the Hudson River Navigator secured a $250,000 contribution for an endowment for the Hudson River Valley Institute at Marist College
- a partnership with the AHRI, US Military Academy at West Point, the US Department of Defence, Coastal America and the Village of Croton was developed a project to remove railroad ties from shallow Hudson River waters. When completed this project will provide improved habitat for fish, wildlife and plant communities, enhance small boat access and improve recreational opportunities in the Croton Bay
- the AHRI, the Hudson River Navigator, the Hudson River Valley Institute and the Hudson River Valley National Heritage Area have partnered with the New York State Hudson-Fulton-Champlain Quadricentennial Commission to promote the celebration of Henry Hudson's historic voyage

National Park Service

National Heritage Areas and Corridors

National heritage areas and corridors represent a relatively new, but growing, approach to conserving America's rich culture and history. The first national heritage corridor was designated by Congress in 1984. Today there are thirty-seven heritage areas or corridors around the country. Three of the most recently designated areas are located within New York State — the Hudson River Valley National Heritage Area (designated in 1996), the Erie Canalway National Heritage Corridor (designated in 2000) and the Champlain Valley National Heritage Partnership (designated in 2006).

All national heritage areas and corridors must complete a management plan that sets forth its goals, objectives, programs and management entity. This plan is approved by the Secretary of the Interior, and requires local input, review and approvals prior to completion. The role of the National Park Service, depending on the enabling legislation, may include providing technical, planning, and staff assistance, funding, and review and approval of the management plan.

Hudson River Valley National Heritage Area

Congress designated the Hudson River Valley National Heritage Area in Section 907 of Title IX of Public Law 104-333 (1996). The purpose of the act is to:

- Recognize the importance of the history and the resources of the Hudson River Valley to the nation.
- Assist the State and the communities of the Hudson River Valley in preserving, protection and interpreting these resources for the benefit of the nation
- Authorize federal financial and technical assistance to serve these purposes.

Extending across 4 million acres in 10 counties (Albany, Rensselaer, Greene, Columbia, Ulster, Dutchess, Orange, Putnam, Rockland and Westchester) and the Town of Waterford in Saratoga County, the Hudson River Valley is home to 2.5 million residents. While surrounded by one of the most concentrated human populations in the country, the Hudson River estuary incorporates over 2,000 acres of tidal freshwater wetlands and many more acres of brackish tidal wetlands.

A draft Management Plan for the National Heritage Area was released for public comment in November 2000. Following the public comment period, the plan was approved by the Hudson River Valley Greenway Boards of Directors and submitted to the National Park Service for review and delivery to the Secretary of the Interior for approval. The management plan was approved by the Secretary in 2002.

Erie Canalway National Heritage Corridor

The Erie Canalway National Heritage Corridor Act (PL 106-554, Title VIII) was signed into law on December 21, 2000. The purpose of the act is to:

- Provide for and assist in the identification, preservation, promotion, maintenance and interpretation of the historical, natural, cultural, scenic, and recreational resources of the Erie Canalway in ways that reflect its national significance.
- Promote and provide access to the Erie Canalway's historical, natural, cultural, scenic and recreational resources.
- Provide a framework to assist the State of New York and its communities within the Erie Canalway in the development of integrated cultural, historical, recreational, economic, and community development programs in order to enhance and interpret the unique and nationally significant resources of the Erie Canalway.

The Act creates a 27 member federal commission appointed by the Secretary of the Interior, based primarily upon recommendations of the Governor and Congressional and Senate delegation. Appointments to the Commission were made in April 2002.

Not later than three years after the Commission receives Federal funding for this purpose, The Commission prepared a comprehensive preservation and management Canalway Plan which incorporated and integrated existing federal, state and local plans. The plan was submitted to the Secretary and the Governor for review and received approvals in 2006. The Commission will undertake actions to implement the plan and support public and private efforts in conservation and preservation of the Canalway's cultural and natural resources and economic revitalization.

The Erie Canalway runs through 23 counties and incorporates over 230 municipalities within its boundary. The Erie Canalway National Heritage Corridor includes the navigable New York State Canal System, the remaining elements of the earlier phases of the Erie, Champlain, Oswego and Cayuga-Seneca canals, and those municipalities that lie immediately adjacent to the navigable waterway and earlier remnants. The New York State Canal System shall continue to be owned, operated and

maintained by the New York State Canal Corporation.

Champlain Valley National Heritage Partnership

The Champlain Valley National Heritage Partnership Act created the National Heritage Area in 2006. The purpose of this act is:

- To establish the Champlain Valley National Heritage Partnership in the States of Vermont and New York to recognize the importance of the historical, cultural, and recreational resources of the Champlain Valley region of the United States;
- To assist the States of Vermont and New York, including units of local government and nongovernmental organizations in the States, in preserving, protecting, and interpreting those resources for the benefit of the people of the United States;
- To use those resources and the theme "the making of nations and corridors of commerce" to
  - Revitalize the economy of communities in the Champlain Valley; and
  - Generate and sustain increased levels of tourism in the Champlain Valley;
- To encourage
  - Partnerships among State and local governments and nongovernmental organizations in the United States; and
  - Collaboration with Canada and the Province of Quebec to
    - Interpret and promote the history of the waterways of the Champlain Valley region;
    - Form stronger bonds between the United States and Canada; and
    - Promote the international aspects of the Champlain Valley region; and
- To provide financial and technical assistance for the purposes described above.

The region within the Heritage Area includes:

- The linked navigable waterways of:
  - Lake Champlain
  - Lake George
  - The Champlain Canal
  - The portion of the Upper Hudson River extending south to Saratoga;
- Portions of Grand Isle, Franklin, Chittenden, Addison, Rutland, and Bennington Counties in the State of Vermont;
- Portions of Clinton, Essex, Warren, Saratoga and Washington Counties in the State of New York.

The Lake Champlain Basin Program is the management entity for the development of the management plan that is due in 2009.

National Oceanic and Atmospheric Administration

National Estuarine Research Reserve (NERR) System

The National Estuarine Research Reserve System is a network of protected areas established for long-term research, education and stewardship. This partnership program between NOAA and the coastal states protects more than one million acres of estuarine land and water, which provides essential habitat for wildlife; offers educational opportunities for students, teachers and the public; and serves as living laboratories for scientists (NOAA, 2006). The National Estuarine Research Reserve System includes 27 reserves in 22 states and Puerto Rico (NYS DEC, 2008).

There is one reserve in New York State located along the Hudson River Estuary. Four distinct tidal wetland sites encompassing nearly 5,000 acres along 100 miles of the Hudson River Estuary were designated the Hudson River National Estuarine Research Reserve in 1982, as field laboratories for estuarine research, stewardship and education (NOAA, 2007; DEC, 2008). The four sites that make up the Reserve include: Stockport Flats in Columbia County, Tivoli Bays in Dutchess County, and Piermont Marsh and Iona Island in Rockland County (DEC, 2008). NYS DEC is the primary partner in coordinating and conducting programs within the reserve. OPRHP owns property within the Stockport Flats and the Iona Island components of the Reserve.

Norrie Point Environmental Center

The reserve's headquarters at Norrie Point Environmental Center within Mills-Norrie State Park in Staatsburg, Dutchess County, is located directly on the Hudson River and includes conference and classroom space, interpretive exhibits, and a weather station. Construction on a research lab began in 2007 and is expected to be completed in 2008.

Additional reserve facilities include a research base and weather station at Bard College Field Station on Tivoli South Bay; a major interpretive exhibit at the Tivoli Bays Visitor Center in Tivoli, Dutchess County; and on-site interpretive panels at Piermont Marsh, Tivoli Bays and Stockport Flats (DEC, 2008).

Reserve staff and partners conduct estuarine research studies of physical, biological and chemical characterizations; ecosystem processes; and exchanges between wetlands and the Hudson's main stem. Research provides a solid foundation for all reserve programs in education, outreach, training, stewardship and restoration (DEC, 2008).

The Reserve holds many public events and workshops. Education and outreach include guided canoe programs, lectures, interpretive exhibits and community events for the general public; information and training sessions for coastal decision makers; workshops for teachers; and field-based programs for middle school, high school, and post-secondary students (DEC, 2008).

Stockport Flats

Stockport Flats is the northernmost site in the Hudson River Reserve. It is located on the east shore in Columbia County, a few miles north of the city of Hudson, in the towns of Stockport and Stuyvesant (DEC, 2008).

The Stockport Flats site is a five-mile, narrow mosaic of landforms, including from north to south Nutten Hook, a bedrock outcropping; Gay's Point and Stockport Middle Ground Island, dredge features that are both part of the Hudson River Islands State Park; the mouth of Stockport Creek, a large tributary stream; a portion of the upland bluff south of Stockport Creek; the dredge spoils and tidal wetlands between Stockport Creek and Priming Hook; and the northern end of Priming Hook. The Hudson is entirely tidal freshwater at this site (DEC, 2008).

Stockport Flats is dominated by freshwater tidal wetlands, including subtidal shallows, intertidal mudflats, intertidal shores, tidal marshes and floodplain swamps. Stockport Creek drains a watershed of about 500 square miles (DEC, 2008).

Nutten Hook at Stockport features the remains of the largest icehouse on the Hudson, which is listed on the National and New York State Registers of Historic Places. Interpretive panels relate the history of the ice harvesting industry. There is a hand boat launch on Ferry Road in Nutten Hook and at Stockport Creek. A loop hiking trail from Ferry Road goes to the Ice House (DEC, 2008).

Tivoli Bay

The Tivoli Bay component extends for two miles along the east shore of the Hudson River between the villages of Tivoli and Barrytown, in the Dutchess County town of Red Hook. The Tivoli

Bay's site includes two large coves on the east shore of the Hudson River including Tivoli North Bay, a large intertidal marsh and Tivoli South Bay, a large, shallow cove with mudflats exposed at low tide. The site also includes an extensive upland buffer area bordering North Tivoli Bay; sections of upland shoreline along Tivoli South Bay; Cruger Island and Magdalene Island, two bedrock islands, extensive subtidal shallows; and the mouths of two tributary streams, the Stony Creek and the Saw Kill (DEC, 2008).

Tivoli Bay habitats include freshwater intertidal marsh, open waters, riparian areas, subtidal shallows, mudflats, tidal swamp and mixed forest uplands. The Stony Creek has a watershed area of 22.2 square miles draining into Tivoli North Bay, and the Saw Kill has a watershed of 22.0 square miles draining into Tivoli South Bay. There are extensive hiking trails at Tivoli Bays and a canoe launch in North Bay, off Kidd Lane off Route 9W in the Town of Red Hook. Contact the Reserve headquarters for maps (DEC, 2008).

Tivoli Bays Visitor Center: Doorway to the Bays

Tivoli Bays Visitor Center has hands-on exhibits about the Tivoli Bays and is the starting point for a trail that leads to North Bay. It is Located at the Watts dePeyster Fireman's Hall, 1 Tivoli Commons, Village of Tivoli. The Tivoli Bays Visitor Center is home to the Hudson River Collection, an extension of the Tivoli Free Library (DEC, 2008).

Iona Island

Iona Island is located in Bear Mountain State Park on the east side of Route 9W in the Town of Stony Point in Rockland County, six miles south of West Point. Iona Island is a bedrock island in the midst of the Hudson Highlands, bordered to the west and the southwest by Salisbury and Ring Meadows, two large tidal marshes, the mouth of Doddletown Bight, an expanse of shallows and mudflats. A separate Island, Round Island, was attached to the South end of Iona Island with fill in the early 20th century. The marshes and shallows occupy one mile between Iona Island and the west shore. In addition to being part of the Hudson River National Estuarine Research Reserve, Iona Island and its associated tidal wetlands have been designated a National Natural Landmark by the National Park Service (DEC, 2008).

The area of Iona Island is comprised of brackish intertidal mudflats, brackish tidal marsh, freshwater tidal marsh and deciduous forested uplands. Doodletown Brook is the principal tributary to the site, draining approximately 2.9 square miles. The Iona Island Component encompasses 556 acres. The marsh at Iona Island can be viewed along the causeway (off Route 9W), accessible by car or on foot. Visitors can not cross the railroad tracks (DEC, 2008).

Piermont Marsh

Piermont Marsh encompasses 1,017 acres and lies at the southern edge of the village of Piermont, four miles south of Nyack in Rockland County. The Piermont Marsh is on the western shore of the Tappan Zee. The site occupies two miles of shoreline south of the mile-long Erie Pier and includes the mouth of Sparkill Creek and extensive tidal shallows. Piermont marsh habitats include brackish tidal marsh, shallows and intertidal flats. The Sparkill Creek drains 11.1 square miles of watershed. There is a picnic area on Paradise Avenue in Piermont. Nearby, Tallman Mountain State Park offers many recreational opportunities (DEC, 2008).

Sea Grant

Sea Grant is a nationwide network (administered through NOAA), of 30 university-based programs that work with coastal communities. The National Sea Grant College Program engages this network of the nation's top universities in conducting scientific research, education, training, and extension projects designed to foster science-based decisions about the use and conservation of our aquatic resources (Sea Grant National, 2008). Sea Grant operates the National Aquatic Nuisance Species Clearinghouse, an international library of research, public policy, and outreach education publications pertaining to invasive marine and fresh-water aquatic nuisance species in North America (Sea Grant, 2008).

New York Sea Grant Extension is a State and federally-funded program providing science-based information to people making and influencing decisions for the wise development, management and use of our coastal resources - now and in the future.

Extension specialists work with a variety of audiences throughout Long Island, Manhattan, and New York's Hudson Valley, and along the shores of Lake Ontario, Lake Erie, Lake Champlain, the St. Lawrence River and the Niagara River on these issues:

- Fostering coastal businesses
- Improving the quality of seafood
- Maintaining recreational and marine fisheries
- Preparing for and responding to coastal hazards and water level changes
- Responding to the spread and impacts of aquatic nuisance species
- Providing K-12 educators with Sea Grant resources
- Protecting, enhancing and restoring coastal habitats

Sea Grant Extension provides educational materials such as fact sheets,

periodicals, books, and videos; conducts seminars, training programs and demonstration projects; and engages and informs the general public, government officials, coastal managers, scientists, industry, the media and schools regarding coastal resources (Sea Grant, 2008).

U.S. Geological Survey

The Nonindigenous Aquatic Species (NAS) information resource for the U.S. Geological Survey (USGS) was established as a central repository for accurate and spatially referenced biogeographic accounts of nonindigenous aquatic species. The program provides scientific reports, online/real-time queries, spatial data sets, regional contact lists, and general information. The data is made available for use by biologists, interagency groups, and the general public. The geographical coverage is the United States. The database was originally started with the passage of the Nonindigenous Aquatic Nuisance Species Control and Prevention Act of 1990 (P.L. 101-646). The Act created the Aquatic Nuisance Species Task Force. In turn the Task Force created the NAS repository (USGS, 2007).

U.S. Department of Agriculture

Animal and Plant Health Inspection Service (APHIS)

The USDA/APHIS Cooperative Agricultural Pest Survey (CAPS) works to ensure the early detection of harmful or economically significant plant pests and weeds in a nationally directed survey program through the CAPS network. The program works with State and university cooperators through national, regional, and State level committees to prioritize survey projects and provides funds for State cooperators to conduct the agreed-upon surveys. The program also trains and equips State cooperators to conduct national surveys. The New York State Department of Agriculture and Markets is the State's coordinator of the CAPS program. Additional information is available at http://www.agmkt.state.ny.us/PI/PIHome.html.

Statewide Programs

Accessibility

The Americans with Disabilities Act (ADA), along with the Architectural Barriers Act of 1968 (ABA) and the Rehabilitation Act of 1973; Title V, Section 504, have had a profound effect on the manner by which people with disabilities are afforded equality in their recreational pursuits. The ADA is a comprehensive law prohibiting discrimination against people with disabilities in employment practices, use of public transportation, use of telecommunication facilities and use of public accommodations. Title II of the ADA applies to public entities and requires, in part, that reasonable modifications must be made to its services and programs, so that when those services and programs are viewed in their entirety, they are readily accessible to and usable by people with disabilities. This must be done unless such modification would result in a fundamental alteration in the nature of the service, program or activity or an undue financial or administrative burden. Since recreation is an acknowledged public accommodation program of several of the State's agencies, and there are services and activities associated with that program, these agencies have the mandated obligation to comply with the ADA, Title II and ADA Accessibility Guidelines (ADAAG), as well as Section 504 of the Rehabilitation Act.

The ADA requires a public entity to thoroughly examine each of its programs and services to determine the level of accessibility provided. The examination involves the identification of all existing programs and services and a formal assessment to determine the degree of accessibility provided to each. The assessment includes the use of the standards established by the Federal Department of Justice Rule as delineated by the Americans with Disabilities Act Accessibility Guidelines (ADAAG, either adopted or proposed) and/or the New York State Uniform Fire Prevention and Building Codes, as appropriate. An assessment of current facilities will also establish the need for new ones or to upgrade the existing facilities. However, no public entity is required to make each existing facility and asset accessible.

The Americans with Disabilities Act Accessibility Guidelines

The Americans with Disabilities Act (ADA) requires public agencies to employ specific guidelines which ensure that buildings, facilities, programs and vehicles as addressed by the ADA are accessible in terms of architecture and design, transportation and communication to individuals with disabilities. A federal agency known as the Access Board has issued the ADAAG for this purpose. The Department of Justice Rule provides authority to these guidelines.

The Access Board has proposed guidelines to expand ADAAG to cover outdoor developed facilities managed by the federal government including: trails, campgrounds, picnic areas and beaches. The proposed ADAAG are available through the access board website at www.access-board.gov.

ADAAG apply to newly constructed structures and facilities and alterations to existing structures and facilities. Further, it applies to fixed structures or facilities, i.e., those that are attached to the earth or another structure that is attached to the earth. Therefore, when a public entity is planning the construction of new recreational facilities, or assets that support recreational facilities, or is considering an alteration of existing recreational facilities or the assets supporting them, it must also consider providing access to the facilities or elements for people with disabilities. The standards which exist in ADAAG or are contained in the proposed ADAAG also provide guidance for modifications to trails, picnic areas, campgrounds (or sites) and beaches in order to obtain programmatic compliance with the ADA. In order to achieve programmatic compliance, ADAAG is a suggested reference, since no standards exist in the ADA. Further, proposed ADAAG do require all trail construction and alteration to comply unless one or more of the general conditions for exception exist or individual standards can be excepted or exempted. The other outdoor components in the proposed ADAAG (campgrounds, beaches and picnic areas) do not require all elements to be accessible; a percentage of the total available must be compliant.

ADAAG Application

Current and proposed ADAAG can also be used in assessing existing facilities or assets to determine compliance to accessibility standards. ADAAG are not intended or designed for this purpose, but using them to establish accessibility levels lend credibility to the assessment result. Management recommendations by a public entity for recreational facilities will be served well if developed in accordance with the ADAAG for the built environment, the proposed ADAAG for outdoor developed areas, the New York State Uniform Fire Prevention and Building Codes and other appropriate guidance documents. Until such time as the proposed ADAAG becomes an adopted rule of the Department of Justice, public entities are required to use the best information available to comply with the ADA; this direction does include the proposed guidelines.

Goal

Improve the level of access to parks, historic sites and open space areas to persons with disabilities.

Actions

- Survey existing facilities to determine if they are accessible.
- Identify actions that will be required to make facilities accessible.

- Utilize the proposed ADAAG to make recreation facilities accessible.
- Incorporate accessibility standards in all new construction and major modifications of existing facilities.

Goal

Improve recreation providers' understanding of the needs of persons with disabilities.

Actions

- Encourage training programs to improve the means of communicating with people with disabilities.

Universal Access Program

Public recreation agencies should consider developing a Universal Access Program. DEC for example has made significant strides in developing such a program.

Since 2001, the DEC has coordinated efforts to provide access to programs through the efforts of Access Coordinators in each regional office and a Statewide Coordinator for Access Issues located in the Department's central office. Their role is to assess the level of accessibility to programs and services, identify barriers, develop solutions to improve access, provide technical assistance and in-service training and provide outreach and education to promote our accessible areas.

The goal of the UAP is to develop a comprehensive approach to maximize accessibility to programs and services while ensuring consistency with the other legal mandates of conservation and protection of the resources we manage.

Looking beyond the legal minimum requirements for providing access for persons with disabilities, the UAP has promoted the employment of Universal Design principles for new construction. Universal Design enables use by everyone rather than a portion of the population. This inclusive approach makes sense from a planning perspective as it includes not only people with disabilities, but families, seniors, people with temporary or invisible disabilities and the people that they recreate with.

Access Pass

An Access Pass program provides free use of parks, historic sites, and recreational facilities operated by the New York State Office of Parks, Recreation and Historic Preservation and the New York State Department of Environmental Conservation. Qualified persons with permanent disabilities can obtain a pass for free use of facilities operated by these offices, for which there is normally a charge such as for parking, camping, green fees and swimming. The pass, however, is not valid at any facility within a park operated by a private concern under contract to the State, or for a waiver of fees such as those for seasonal marina dockage, for a group camp, for reservations of a picnic shelter, for performing arts programs, for campsite/cabin amenities, for consumables, or for fees related to campsite/cabin reservations and registrations.

Golden Park Program

A Golden Park Program provides free vehicle access to state parks and arboretums, fee reduction to state historic sites and fee reduction for state-operated swimming, golf, tennis and boat rental for resident 62 years of age or older on any weekday (except holidays).

Empire Passport

The Empire Passport provides unlimited day use vehicle entry to most of New York's State parks and recreational facilities for a one time purchase price. The Passport can be used from April 1 to March 31 of the following year and provides access to most of the 178 state parks, 55 Department of Environmental Conservation (DEC) forest preserve areas, as well as to boat launch sites, arboretums and park preserves. A second passport for the same household can be purchased at a reduced rate, which may be used on a second vehicle, boat or motorcycle.

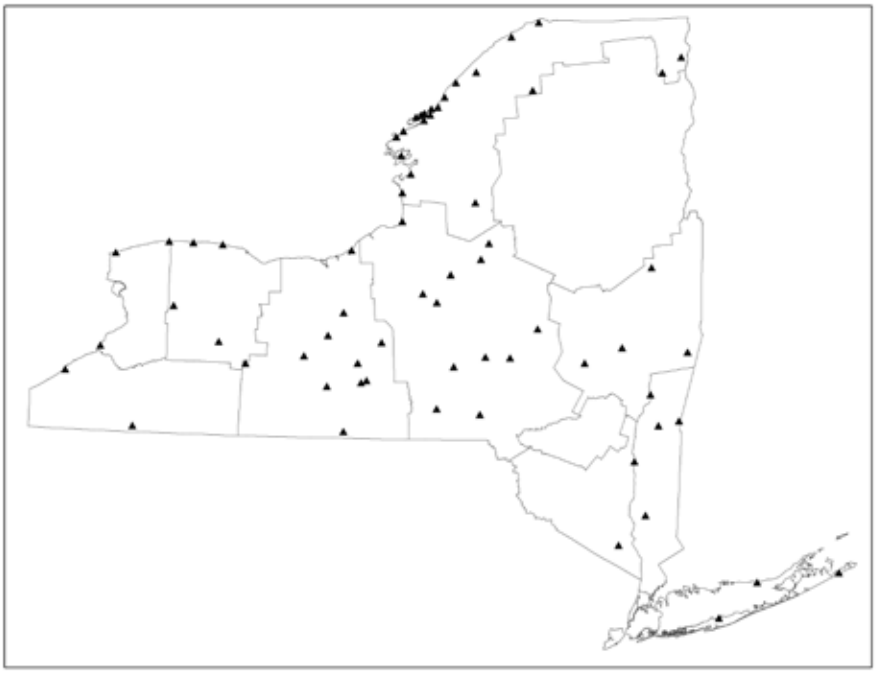


Figure 7.7 - OPRHP Camping Facilities

Chapter 8 - The State Outdoor Recreation System

Evolution of New York State Parks, Conservation, and Recreation

In the mid-nineteenth century, most New Yorkers lived in rural areas and nature was seen as a struggle, not as a place to relax and enjoy. The only state agency managing natural resources was the New York State Land Commission, which was established to dispose of excess property. In the 1870s, old-growth timber lands owned by New York State were being sold to loggers and the state paid a bounty to hunters of wolves and mountain lions. But old attitudes gradually began to change and people thought about how they could nurture and preserve nature instead of conquer it. Industrial expansion altered the living patterns of the people as well as the face of the land. As preservationists began to organize, so did social reformers. Their common goal was healthy people prospering among natural beauty. The result was a conservation and recreation ethic.

Throughout the nineteenth century, artists and tourists had sought inspiration from the grandeur of Niagara Falls and were distressed by the commercialism growing around the falls. Efforts to preserve the scenery culminated in the creation of the State Reservation at Niagara by the New York State Legislature in 1883. Following the success at Niagara was the establishment by the State Legislature, in 1885, of the Forest Preserve in the Adirondack and Catskill Mountain regions due to uncontrolled timbering and mining, a decline in public open space, and the growing need for fresh water. The legislation stated that the Preserve "shall be forever kept as wild forest lands". Within a couple years, New York had become the first State to not just preserve the environment but also to begin to restore it.

The Adirondack Park was created in 1892, identified by a blue line on a map within which State acquisition of private in-holdings was to be concentrated. At the 1894 Constitutional Convention, a new amendment to achieve meaningful protection of the Forest Preserve was included, stating "The lands of the State, now owned or hereafter acquired, constituting the Forest Preserve as now fixed by law, shall be forever kept as wild forest lands. They shall not be leased, sold, or exchanged, or be taken by any corporation, public or private, nor shall the timber thereon be sold, removed, or destroyed." The State constitution now prohibited logging on the Forest Preserve lands. A number of amendments have been added to Article 14 since its adoption in 1894; however, none of them changed or diminished the original wording that was approved by the citizens of the State in 1894. The Catskill Park was created in 1904 in the same manner as the Adirondack Park.

Across New York, wealthy and influential residents had been observing the effects of industrialization with concern and moved to secure some of the state's most scenic areas. For example, from 1859 to 1906 William Pryor Letchworth acquired about 1,000 acres in the area of the Genesee River gorge and decided to give his land to the State for a public park. As was customary at the time, Letchworth gave control of the park to the American Scenic and Historic Preservation Society, which was originally incorporated by act of the State legislature as the "Trustees of Scenic and Historic Places and Objects" in 1895. The purpose of the Society was to acquire, preserve, and improve places of natural beauty or historical significance for public use and benefit, demonstrating the alliance between the movements for both natural and cultural preservation in turn-of-the-century America.

The residents of Manhattan were accustomed to the sight of the majestic columns of rock, known as the Palisades, along the west bank of the Hudson River. As concern for the destruction of the cliffs from quarrying grew toward the end of the nineteenth century, plans were advanced to protect the Palisades from further defacement. The result was the appointment in 1900 of the Commissioners of the Palisades Interstate Park by New York Governor Theodore Roosevelt and New Jersey Governor Foster Voorhees. The Commissioners had jurisdiction in both states with power to acquire whatever territory was deemed necessary along the Palisades for preservation, education, and recreation, authorization later being extended to the north and west. Subsequently, the Palisades Interstate Park Commission (PIPC) was federally chartered by Congress in 1937. PIPC, comprised of five commissioners each from New York and New Jersey appointed by their respective state's governor, now has jurisdiction over 24 state parks and 8 historic sites of more than 100,000 acres.

By the 1920's, New York State had more than 40 areas of scenic, recreational, and historical interest, but there

was no coordination and no single body responsible for directing park, conservation, or recreation policies statewide. A similar lack of direction was evident in state government as a whole with 187 separate agencies. Reorganization of state government in the 1920's resulted in the first unified state park system in the country with the creation of the State Council of Parks in 1924.

The State Council of Parks had under its jurisdiction state parks and historic sites outside of the Forest Preserve and was charged with establishing uniform park policy, developing its parks, and acting as a clearinghouse and advisory body. It charted a course of carrying out a comprehensive outdoor recreation program, including providing recreational motor routes, or parkways, to reach parks by increasing numbers of automobile tourists, especially in the years following World War II. After being the major architect of the formation of the State Council of Parks, Robert Moses served as its first Chairman, a position he kept for nearly 40 years.

The Conservation Department was established in 1927. The Conservation Department was a consolidation of several commissions, some of which had previously been consolidated into a Conservation Commission in 1911. The State Council of Parks continued, but was placed under the jurisdiction of the Conservation Commissioner and jurisdiction of all the parks, reservations and historic sites was given to the Conservation Department's Division of Parks.

Reforestation of New York State has occurred as a result of abandonment of farmland through much of the 20th century, as well as conscious efforts to return once-cleared land to forest. The State Reforestation Law of 1929 and the Hewitt Amendment of 1931 authorized the Conservation Department to acquire land for reforestation areas, consisting of not less than 500 acres of contiguous land, to be forever devoted to "reforestation and the establishment and maintenance thereon of forests for watershed protection, the production of timber, and for recreation and kindred purposes". These Reforestation Areas became the nucleus of our present day State Forests. Reforestation in the state has resulted in a profound increase from 20- 25% forest cover in 1890 to about 62% today.

During the 1960's, changing public attitudes and the availability of environmental science led to the realization that government had a strong role to play in preserving resources and keeping the environment healthy. In 1970, this expanded sense of awareness and responsibility led to the creation of the NYS Department of Environmental Conservation (DEC), signed into being on the first Earth Day by Governor Nelson Rockefeller. The DEC was formed from the Conservation Department with additional responsibility for several environmental programs and commissions formerly within other agencies, as well as entirely new disciplines created within the agency. At the same time, the Division of Parks and Outdoor Recreation was removed from the Conservation Department and elevated to full agency status as the new Office of Parks and Recreation (OPR).

Primary responsibility for the state parks remained with the State Council of Parks, which was under the chairmanship of Laurance Rockefeller since the departure of Robert Moses in 1963, until 1972 when responsibility shifted to the Commissioner of OPR. The Council of Parks and Recreation evolved as an advisory body representing the interest of citizens and making recommendations to the Commissioner on various aspects of parks and recreation. The New York State Historic Trust was created in 1966 to take responsibility for historic preservation, which had been under the Education Department since 1944. Those responsibilities also shifted to the Commissioner of OPR, and the Trust was replaced with a State Board for Historic Preservation to advise the Commissioner.

The Office of Parks and Recreation was assigned the responsibility for maintaining state parks and historic sites, as well as providing recreational opportunities for the people of the State and being steward of the State's archeological and historical resources. Eleven State Park Regions were assigned to the OPR while the twelfth region, consisting of the Adirondack and Catskill Parks, was retained by the DEC. The official title of the OPR was changed to the Office of Parks, Recreation and Historic Preservation (OPRHP) in 1981.

The State of the State Outdoor Recreation System

The "heart and soul" of the State's outdoor recreation system is not the facilities or activities but its natural and cultural resources. Care and stewardship of these resources must be maintained and fostered. If these resources are lost so is the quality of the recreational experience which is the system's primary attribute. The public will not come to swim at our lakes and ocean, or hike the trails if the environmental quality of the resources is impaired.

The Office of Parks, Recreation and Historic Preservation and the Department of Environmental Conservation are the two primary state agencies that manage land resources and provide recreational opportunities. The Canal Corporation, Department of Transportation and Office of General Services are also land managers.

The mission of the Office of Parks, Recreation and Historic Preservation (OPRHP) is to provide safe and enjoyable recreational and interpretive opportunities for all New York State residents and visitors and to be responsible stewards of our valuable natural, historic and cultural resources. Within this capacity OPRHP manages the State Park System that includes state parks and historic sites. The Parks, Recreation and Historic Preservation Law also provides for a State Council of Parks and Recreation as an advisory body and the creation of the State Board for Historic Preservation. The board provides advisory services and acts as the federally mandated review body in the nomination of sites for listing on federal and state registers of historic places. In addition, the law divides New York State into 12 park regions, 11 under the jurisdiction of OPRHP and 1 administered by DEC. The 11 OPRHP park regions are located outside the Adirondack and Catskill Forest Preserves.

The mission of the Department of Environmental Conservation is to protect the quality of New York State's land, water and air, the character of its scenery, and the health and diversity of its fish and wildlife populations and habitats. Within this capacity DEC has dual focus of land management and environmental regulation. As a land manager DEC manages the Forest Preserve in the Adirondacks and Catskills, State Forests, Wildlife Management Areas, State Nature and Historical Preserve areas and facilities and land areas that support fish and wildlife programs.

State Park System

OPRHP administers about 330,000 acres of land, 178 state parks, 35 historic sites, 67 marine facilities and boat launch sites, 20 parkways, over 5,000 structures, 77 developed beaches, 53 swimming pools, 29 golf courses, over 800 cabins, cottages and rental houses, 8,566 campsites, and over 1,350 miles of trail, as well as several outdoor education centers, museums, and nature centers and the Empire State Games. Nearly 80% of the park system is in natural areas with a wide range of geological features, ecological habitats and species of plants and animals. This includes the water fall at Niagara Falls, the Genesee River gorge called the "Grand Canyon of the East" at Letchworth, extensive forested areas of Allegany and Sterling Forest State Parks, the gorges of the Finger Lakes parks, islands in the St. Lawrence and Hudson Rivers, cliffs at Minnewaska, and the beaches of Long Island.

The Department of Environmental Conservation (DEC) manages 53 day use and campsite facilities within the Adirondack and Catskill Forest Preserves. Unlike a state park, these facilities are within a larger unit management area.

Figure 8.1 - New York State Parks and Historic Sties

State Lands and Forests

DEC manages over 4 million acres. This includes 3 million acres in the Adirondack and Catskill Forest Preserve, 776,000 acres of reforestation and multiple use areas, 190,000 areas in wildlife management areas and 662,000 acres in conservation easements.

Forest Preserve

The statute creating the Forest Preserve incorporated all state-owned lands within three Catskill counties (later amended to incorporate four Catskill counties) and all state-owned lands within 11 Adirondack counties (later amended to 12) into the Forest Preserve. One of the things that make the Forest Preserve unique among public land holdings, in addition to its size of nearly 3 million acres, is the fact that the people of the State have chosen to make decisions regarding changes that would diminish the preserve through a public referendum following approval of two sessions of the State Legislature. These areas provide extensive camping, trail, hunting, fishing and other passive recreational opportunities.

The Adirondack Park, established by statute in 1892, is unique among parks within the nation in that it encompasses both state and private lands. Originally established at 2,800,000 acres the park is now just under 6 million acres. Approximately 2.7 million acres are in state ownership most all of which is classified as Forest Preserve.

Unique to the Adirondack Park is the Adirondack Park Agency that controls land use on state and private lands. The Adirondack Park Agency (APA) is an independent, bipartisan state agency responsible for developing long-range park policy in a forum that balances statewide concerns and the interests of local governments in the Adirondack Park. It was created by New York State law in 1971. The legislation defined the makeup and functions of the APA and authorized the Agency to develop two plans for lands within the Adirondack Park. The Adirondack Park Land Use and Development Plan regulates land use and development activities on the approximately 3.2 million acres of privately owned lands in the Park. The Adirondack Park State Land Master Plan (APSLMP) sets forth guidelines and criteria for the DEC's management of the remaining 2.8 million acres of public lands.

The policy framework provided by the APSLMP is resource-capacity driven, rather than user-demand driven, with protection of the Park's outstanding natural resources the underlying mandate governing New York State's provision of recreational opportunities on the State-owned lands and waters in the Adirondacks. This is reflective not only of the statewide importance of these resources, but also of their national and international significance.

For the previous five years, APA has worked with DEC in a concerted effort to undertake planning critical to improving recreational opportunities throughout the Park. Numerous, first-ever unit management plans (UMPs) have been drafted and approved for specific areas that span the range of diversity from popular public campgrounds to the region's more remote, less-used wilderness areas. In the upcoming five years as this inter-Agency planning process continues, a primary objective of APA is to work with DEC to facilitate implementation of workable, state-of-the art practices such as a "Limits of Acceptable Change" management approach to protecting natural resources, and a "Recreational Opportunity Spectrum" method of inventorying the Park's available recreational resources.

APA also administers the State's Wild, Scenic and Recreational Rivers System Act for private lands adjacent to designated rivers in the Park, and the State's Freshwater Wetlands Act within the Park.

APA operates two Visitor Interpretive Centers (VICs) at Paul Smiths, Franklin County and at Newcomb, Essex County. These Centers are the Agency's environmental education and traveler orientation centers.

The Catskill Park was similarly established, by statute in 1904 with 576,126 acres. Like the Adirondack Park, it includes both public and private lands. The size of this park has been enlarged to 705,500 acres. Approximately 300,000 acres is in state ownership and is classified as Forest Preserve.

State Nature and Historical Preserve

Like the Forest Preserve the State Nature and Historical Preserve also has constitutional protection that is authorized by Section 4 of Article 14 of the State constitution. It provides for the designation of state lands, outside the Forest Preserve counties, that have exceptional beauty, wilderness character, or geological, ecological or historical significance to the State Nature and Historical Preserve. At the present, Article 45 of the Environmental Conservation Law (ECL), which is the implementing legislation, currently has 11 properties dedicated to the State Nature and Historical Preserve. These properties are listed in Appendix G.

Wildlife Management Areas

The primary purpose of Wildlife Management Areas (WMAs) is for the production and use of wildlife. DEC manages more than 85 WMAs containing more than 190,000 acres - including 124,000 acres of upland and 53,000 acres of wetland. (DEC, 2007)

The WMA program is part of a long term effort to establish permanent access to lands in New York State for the protection and promotion of its fish and wildlife resources. Beginning in the early 1900s with the acquisition of abandoned farm lands and fields, DEC and its predecessor (NYS Conservation Department) worked with the federal government, state government and sportsmen and women to secure these land parcels for public use.

Money used to acquire lands included in the WMA system has been a combination of state and federal funding. The Conservation Fund (begun in 1925) was the first dependable source followed by two federal programs in the 1930s: 1) the Federal Resettlement Administration bought marginal and worn-out farmland and later donated it to the state for wildlife management purposes, and 2) the Pittman-Robertson Act, still in effect today, places an excise tax on guns and ammunition to fund restoration and management efforts for wildlife, including purchase of habitat. In addition, several New York State Bond Acts (1960, 1972 and 1986) also helped expand the WMA system.

WMAs provide unique areas for the public to interact with a wide variety of wildlife species. Since sportsmen and women have funded the acquisition of a large portion of the WMAs through their license fees and the federal tax on guns and ammunition, the emphasis is on game species.

However, while fishing, hunting and trapping are the most widely practiced activities on many WMAs, they are not limited to these activities. Most WMAs also provide good opportunities for hiking, cross-country skiing, bird watching, or just enjoying nature.

WMAs also provide areas for research on various wildlife species. A grouse study conducted on Connecticut Hill WMA is considered the standard reference on ruffed grouse in the Northeast. In addition, habitat management methods and techniques such as mowing, use of controlled burns, and planting of wildlife shrubs and food plots have been established and refined on WMAs.

For most areas, statewide hunting and fishing regulations as well as statewide WMA regulations are applicable. In general, prohibited activities include any use of motorized vehicles including motorcycles, all-terrain vehicles and snowmobiles (except on town, county or state highway rights-of-way), overnight mooring or boat storage. No fires are permitted except for cooking, warmth or smudge. Activities prohibited, with exceptions under certain conditions, include camping, swimming, skiing (other than cross-country), picnicking and mechanized boating. In certain cases, however, additional special regulations are also in force. These special regulations are usually reductions in hunting hours, restrictions on the number of people using the area and increased requirements for sportsmen and women to report on the results of their activities. (DEC, 2007)

State Forests

State Forest is a generic term used to describe the nearly 776,000 acres of DEC administered land located outside the Forest Preserve and under the direction of the Division of Lands and Forests in DEC. "State Forests" generally include lands classified as Reforestation Areas, Unique Areas and Multiple Use Areas. There are approximately 480 State Forest areas, ranging in size from less than 100 acres to over 9,000 acres. The State Reforestation Law of 1929 and the Hewitt Amendment of 1931 set forth legislation authorizing DEC to acquire land for Reforestation Areas, which make up approximately 85% of lands classified as State Forests. These lands are to be forever devoted to "reforestation and the establishment and maintenance thereon of forests for watershed protection, the production of timber, and for recreation and kindred purposes." State Forests are "working forests" and are managed by employing multiple use principles to provide a wide variety of resources, products and opportunities to meet the varied demands of today's society. The demand for recreational use of State Forests has greatly increased in recent years. Recreational activities are now a major component of State Forest Unit Management Plans and include diverse pursuits such as snowmobiling, horse back riding, hunting, fishing, hang gliding, picnicking, cross-country skiing, bird watching and hiking. The archer, the dog sledder, the rock climber and the orienteering enthusiast also claim the need for a place to enjoy their sport. More than 2,000,000 person-days of hunting take place on State Forests annually, and approximately 570,000 person-days of freshwater fishing are estimated for the lakes, ponds and streams located on State Forests.

State Forests often contain features of unique interest. Cultural resource sites such as old homesteads, cemeteries, Native American sites, and historical sites can provide notable opportunities and experiences for inquisitive visitors. State Forests can also harbor rare and endangered plant communities and ecosystems. These special habitats add emphasis to the stewardship responsibilities of State Forest management. Some of these communities, such as the pine barrens of Long Island and the oak savanna in Monroe County, provide the land manager with the challenge for their restoration and perpetuation and the recreational naturalist with the opportunity to observe the components of the communities.

Canal Corporation

Canal Recreationway and Canalway Trail System

Significant progress has been made over the last decade to develop the New York State Canal Recreationway, which spans the 524-mile New York State Canal System, consisting of the legendary Erie, Champlain, Oswego and Cayuga-Seneca Canals. The New York State Canal Corporation, a subsidiary of the New York State Thruway Authority, operates, maintains and promotes the system and has spear-headed the canal revitalization effort throughout New York State.

The Canal Recreationway Plan and subsequent Canal Revitalization Program, adopted in 1996, laid the foundation for Canal System redevelopment efforts with the objective of transforming the canals into a world class recreation resource. Significant public outreach went into the documents through regional canal plans, focus groups and other meetings held to encourage public participation. The fundamental goals of these documents are to:

- preserve the best of the past;
- enhance recreational opportunities; and,
- foster appropriate and sustainable economic development.

The major element of the Canal Recreationway Plan is the development of a network of Canal Harbors and Ports aimed at improving the linkages between the waterway and canal communities.

Canal Harbors were developed at seven canal gateways and other strategic locations. Six of the seven harbors were completed in 2000. The seventh Canal Harbor was completed in 2003.

In addition, nearly 100 Canal Ports have been constructed or are currently under improvement at Canal Locks and waterfronts along the system. There were 96 port and lock improvement projects proposed for the Canal System under the Canal Recreationway Plan. Improved visitor services and amenities are now available at 60 locations with plans underway locally to complete the remaining 36 sites.

In 2006, the Greenway Grant Program awarded over $8.9 million in grant funding to local communities and non-profit organizations for Canal-side improvement projects. The approved projects are designed to enhance tourism and economic development along the Canal System and further capitalize on this historic national resource for the benefit of local communities.

Completion of the end-to-end Canalway Trail is another major element of the Canal Revitalization effort. The Canalway Trail, which parallels the entire New York State Canal System, will be the longest multiple use trail in the United States. More than 170 miles of trail have been completed since the Canal Corporation began the program in 1995. A total of 280 miles of trail now exist, primarily along the Erie Canal corridor. The Canalway Trail parallels the Erie, Champlain, Oswego and Cayuga-Seneca canals, creating the spine of a statewide network of trails. Major existing segments are located in the Capital District from Albany to Rotterdam Junction, between Amsterdam and Little Falls, between Rome and Syracuse in the Old Erie Canal State Park and between Newark and Lockport. Other shorter segments exist along the Erie, Champlain and Oswego Canals.

The Canalway Trail will link to other important state greenway and trail systems, including the Hudson River Valley Greenway Trail System and the Genesee Valley Greenway Trail, helping to create a network of trails spanning the State. The primary funding source for Canalway Trail development has been the Federal Transportation Enhancements program through ISTEA, TEA 21 and SAFETEA-LU with matching funds provided by the Canal Corporation.

The Canal Corporation has also begun research and planning for the development of the New York State Canalway Water Trail, a coordinated water-based "trail" with boat launches and landing sites, along with campsites located on the shores of the Canal System. The Canal Corporation has developed an informational brochure and has begun an inventory of existing and potential sites for future improvement and enhancement.

The Canal Corporation has recently begun the transfer of hundreds of acres of surplus Canal-owned lands to OPRHP and DEC for recreation and preservation purposes. Pending transfers to OPRHP include Old Erie Canal land (Rome), Moss Island (Little Falls), Old Champlain Canal land (Saratoga), open space in the Village of Fayetteville, Delta Lake (City of Rome, towns of Western and Lee) and lands adjacent to Lock E-7 (Niskayuna). Recently Completed transfers to DEC include Chub Pond and Twin Lakes Reservoir (Ohio).

As a result of these investments and initiatives, the Canal Recreationway has been recognized for its recreational and cultural potential for boating, biking, hiking, snowmobiling and other water and trailway pursuits.

Office of General Services (OGS)

OGS operates under the Public Lands Law to administer state-owned land, including uplands and all ungranted lands under or formerly under the waters of New York State. The Agency issues licenses, permits, leases, easements and occasionally grants to underwater lands; disposes of uplands determined to be surplus to the needs of the State; and, provides transfers of jurisdiction for state agencies and local agencies for certain specific purposes (including recreational uses) subject to special acts of the State legislature. The latter provision is related to Article 3, Section 34 of the Public Lands Law whereby OGS facilitates the transfer of jurisdiction of state lands to county or local governments for listed purposes such as park, recreation and playground areas. These transfers are subject to reversion to the State should these uses no longer be pursued.

OGS's participation in various programs such as the Hudson River Valley Greenway, and the Heritage Rivers Program, provides the agency with the opportunity to further recreational objectives. One way OGS participates in recreational programs is by providing local communities with rights to lands underwater or filled (previously underwater), for connection and access areas.

OGS is also a member of the ad hoc Interagency Committee for Submerged Cultural Resources. The Committee has participants from OPRHP, DEC, the Department of Education (State Museum), DOS's Coastal Management Program, the Attorney General's Office and the Canal Corporation. This Committee reviews proposals and issues affecting submerged historic, archeological, and cultural resources, predominantly shipwrecks. The Committee established the first dive preserves, including the radeaux Land Tortoise in Lake George, a floating gun platform of the French & Indian War, reputed to be North America's oldest intact warship.

Olympic Regional Development Authority (ORDA)

The facilities and venues that ORDA manages and maintains are not just for elite winter athletes. They're also a winter vacationer's paradise. ORDA manages and operates the ski centers at Gore Mountain in North Creek, NY and Whiteface Mountain in Wilmington, NY. These facilities are open to the public and operate from mid-November to mid-April.

The public also has the opportunity to experience the bobsled track and luge run at the Olympic Sports Complex in Lake Placid, NY. Also at the Sports Complex, the 31 miles of cross-country ski trails that were used during the 1980 Olympics are available to the public for skiing or snowshoeing. Lastly, ORDA offers public skating from December through March on the Speed Skating Oval used in the 1980 Olympics.

Others

There are various other state agencies that manage open space and/or provide recreation programs. The Health Department encourages recreation activities to improve the health of the citizens of New York. The New York State Museum provides interpretive facilities, programs and kiosks. The Office for the Aging and Office of Children and Family Services also provide programs.

Enhancing and Revitalizing the State Outdoor Recreation System

New York has one of the nation's oldest and largest outdoor recreation system but also one that has been expanding. Within the last fifteen years more than one million acres has been acquired. This has resulted an increase in stewardship responsibilities to manage these new natural, recreational and cultural resources. The basic infrastructure for many of the facilities has exceeded its life expectancy and needs to be rehabilitated, upgraded or in some cases adaptively reused. Of equal or greater concern is the stewardship of the natural resources and their role in protecting habitats, reducing the impacts of climate change and improving the quality of life.

State Parks

The State Parks System is comprised of 178 Parks and 35 Historic Sites, marine facilities, trails and parkways. The system serves more than 55 million visitors annually. Niagara Falls State Park's annual attendance of 7.8 million visitors is greater than that of the Grand Canyon and Yosemite National Parks combined. More than six million people visit Jones Beach State Park which is twice the number that visits Yellowstone. The system is also the oldest state system in the nation with Niagara Falls established in 1885 and Washington's Headquarters in 1850. The system continues to grow. Over the past 15 years, the size of the Park System expanded from184 sites in 1992 to 213, an increase of 29 new facilities. The land resource under the stewardship of the agency has grown from 257,000 acres in 1992 to 326,000 acres, an increase of 27%.

The guidance provided in the mission of OPRHP to provide safe and enjoyable recreational and interpretive opportunities and be responsible stewards of the natural, historic and cultural resources, provides the basis for the assessment of the condition of the Park System. As such, the assessment is defined within four categories:

Health and Safety

There are number of health and safety issues facing the State Park System. Drinking water systems need to be upgraded or replaced, aging sewage treatment systems have exceeded their useful life, various dams on the state's high hazard list do not meet modern dam safety standards, and bridges have been flagged as potential hazards. In addition, outdated electrical systems and underground petroleum storage tanks need to be removed and landfills that, although inactive for many years, were never closed to DEC standards need to be addressed.

Rehabilitation of Existing Facilities

This category is by far the largest, comprising approximately 65% of OPRHP's total identified capital needs. It encompasses capital rehabilitation of existing infrastructure in the Parks and Historic Sites including: replacing facilities that have long exceeded their practical and operational effectiveness and are in various stages of disrepair. This includes roofs, heating and plumbing systems, contact stations, campgrounds, boat launches, picnic shelters, recreation fields, pools, swimming areas, visitor centers, bathrooms, roads, parking areas, hiking trails, and maintenance centers. There is also a significant backlog of repair and maintenance needs for historic buildings and structures at the Historic Sites, as well as energy efficiency investments in aging buildings.

New Facilities Development

As identified above, the park system has increased by 29 facilities over the past 15 years. Many of these new parks consist of a sign, a car pull-off and a minimum level of recreational opportunities. Investments are needed to create entrance areas, parking areas, restrooms, trail systems, and picnic areas and other compatible recreation facilities, to make these new acquisitions available to the public. However, the need to expand recreation opportunities is not just restricted these parks but also includes existing facilities. Many of the existing parks either have outdated or no master plans. Through the planning process, new recreation and interpretive opportunities may be proposed that require support facilities.

Natural Resource Stewardship

The State Park 's natural resources – plant, wildlife, and ecosystems – face varied treats, such as pollution of lakes and rivers, impaired wetlands, invasive species, soil erosion, global warming, and sea level rise. There is a need to restore habitats and ecosystems to assure that natural resources in the State Parks remain "unimpaired for future generations".

Capital Needs

To address the health and safety, rehabilitation, new development and natural resource needs will require a significant capital investment. The capital expenditures for State Parks in 1992 were $60 million. The capital expenditures in 2007 from all sources

were $40 million. Adjusted for inflation, the existing capital budget is in essence 50% less than in 1992.

The backlog of urgent capital needs is estimated to be $650 million. The $40 million available only scratches the surface. A comprehensive plan to revitalize New York's State Parks and Historic Sites is needed. This comprehensive plan includes the following components:

- A multi-year plan is being developed that addresses the several decades of backlogged capital projects facing the State Parks system. It will require a sustained effort to solve, with a multi-year, dependable commitment of funds.
- The federal government must be partner in this effort. Federal funding for State Park projects has all but disappeared. The current allocation from the State's primary source of parks funding, the Land and Water Conservation Fund, is only $2 million. Federal support for LWCF and other federal programs needs to increase.
- Although New York State will be the primary source of capital funds, increased efforts are needed to raise private contributions from private individuals, foundations, Friends Groups, and the corporate sector.
- Approval of the $100 million for the rehabilitation and revitalization of the State Park System recommended in the Governor's proposed 2008-2009 budget.

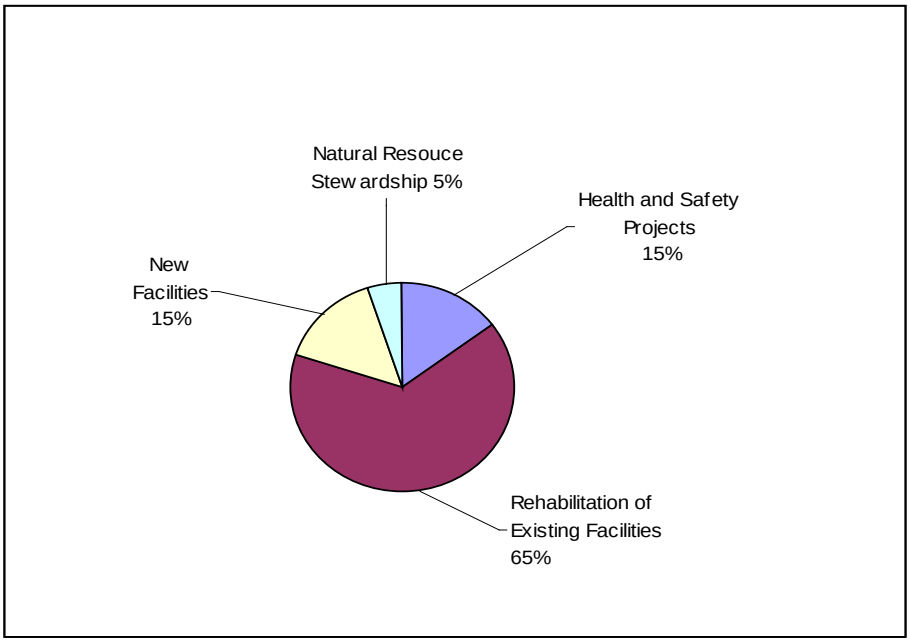
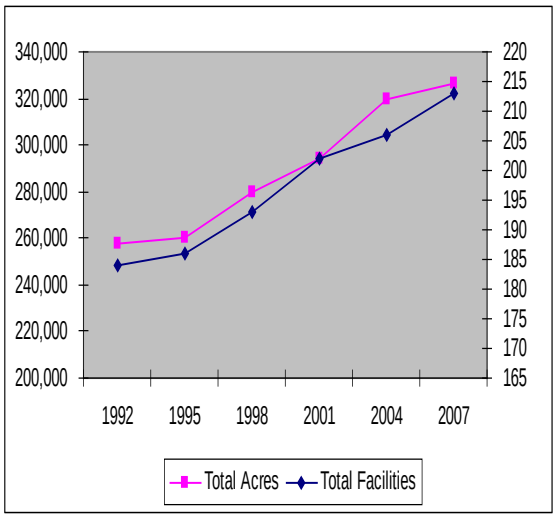


Figure 8.2 - Breakdown of $650 million- State Parks and Historic Sites Capital Needs

OPRHP State Park System



OPRHP Capital Budget

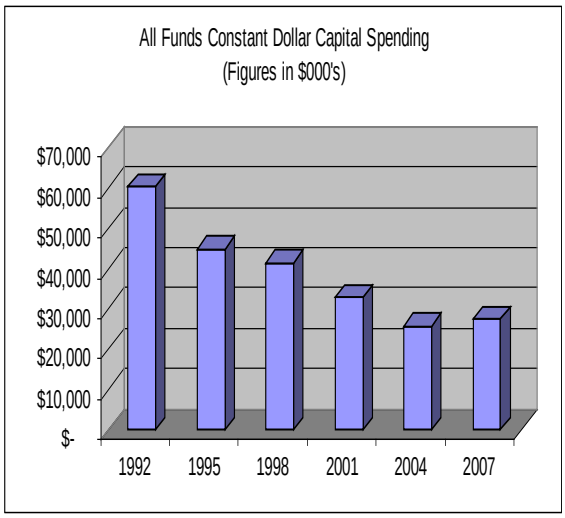


Figure 8.3 - Park System Expansion vs. Capital Budget

DEC Lands and Forests

DEC manages nearly 4 million acres of Forest Preserve, State Forests, Wildlife Management Areas and other lands throughout the state. Within these lands, DEC maintains roads, campgrounds, day use areas, environmental education centers, fish hatcheries, ski resorts and other support facilities.

Public Forest Access Roads

There are over 600 miles of all-weather roads maintained on State Forests. These roads, along with other seasonal-use-only roads, provide the primary access system to the lands for recreationists. The roads are constructed to standards that will provide reasonably safe travel and to keep maintenance costs to a minimum. Turnoff, parking areas and cul-de-sacs provide space for the recreationists to leave their vehicles while enjoying the forests. Parking areas for horse riding enthusiasts include a stabling area, track area and even primitive camping sites for their use. These areas are reached from the public forest access road system.

The smaller seasonal-use-only roads are often developed as a result of a timber sale. While the sale is in progress, these "haul" roads provide the timber harvester with the means to enter and extract forest products from the sale area. Once the sale is completed, the roads are usually removed from motorized use and become available for hiking, mountain biking, skiing and snowmobiling.

Trailways

A survey conducted in 1991 identified 2,081 miles of single and multipurpose trails. These trails range in use from hiking, cross-country skiing and horseback riding to mountain biking, running, snowshoeing, snowmobiling and nature walks.

Hiking is permitted on most of the trailways. These may range from a hiking experience of a mile or less on a nature/interpretive trail to the extended Finger Lakes Trail and the Long Path systems.

Equestrian trails are located in many of DEC's regions. The large system at Brookfield, Madison County has its counterpart at the Otter Creek system in Lewis County. These two and others are also used for snowmobiling during the winter months and receive intensive use for both pursuits. While 370 miles of trail are specifically signed for snowmobiling, this activity is not currently restricted on State Forests to trails and consequently uses more State land than is commonly recognized. Snowshoeing and cross-county skiing are other winter sports that make use of State Forest trail systems. Over four hundred miles of trail are designated for these uses and have become very popular with enthusiasts of these sports.

Currently, ATV use is not permitted. Future development of dedicated off-road ATV trails on State Forests is expected to be unlikely due to environmental and public safety concerns, limited enforcement capabilities, and lack of legislative funding.

Belleayre Ski Center

DEC administers the Belleayre Mountain Ski Center located in Highmount, New York in the Catskill Forest Preserve. Since 1949 this modern ski area has offered full service downhill and cross-country skiing. The center serves an average of 103,000 skiers per year. The facilities, which include 33 downhill slopes and trails, 4 cross-country trails and 8 passenger lifts and tows, generate about $2 million in revenue annually.

Belleayre Mountain Day-Use Area, located in the vicinity of the Belleayre Mountain Ski Center, was opened to the public in July of 1993.

Campgrounds and Day Use Areas

Many programs and services are offered to the public at DEC administered recreation facilities. These facilities are located in the Forest Preserve, either in the Adirondack or Catskill Parks.

Campgrounds and day use areas afford the public opportunities for day

Figure 8.4 - DEC Campgrounds

and resident camping and for other activities within the Forest Preserve setting. There are a total of 52 campgrounds (Figure 8.4) within the Adirondack and Catskill Parks and 8 campgrounds offer structured interpretive/activity programs.

Interpretive and Activity programs have been offered within the Forest Preserve, on and off, since 1935. In 1996, the current program was revamped and a set of goals were established for the program. They are:

- To provide educational and recreational opportunities, for the enjoyment of campers, that are compatible with the Forest Preserve.
- To heighten awareness, appreciation and understanding of the environment.
- To foster proper recreational use of the Forest Preserve and its facilities.
- To promote understanding of the Department and its programs (DEC 2007).

Beginning in 1997, the new program was launched at 7 DEC campgrounds. The Junior Naturalist Program and Adventure Discovery packs were incorporated into the regular interpreter Activity Program. In addition the Interpreter Activity Program staff began visiting other area campgrounds to conduct activities. The Junior Naturalist Program, in particular, is very successful and other state agencies, such as OPRHP, have adapted the program to suit their facilities.

Since the initiation of the new program, the program has served 23,156 participants in 1997, 32,228 in 1998, and 26,519 in 1999. High visitor satisfaction and demand prompted the expansion of the program to an eighth campground in the year 2000. Participation for 2000 was 31,130 attendees.

Over the past four years, improvements and changes have been made regularly. The program will continue to expand through its outreach efforts and upgrade its presentations to use the most current technology. The balance of recreation and interpretation in DEC's camper programs gives the public an increased sense of the natural world while fostering an appreciation for the resources of the Forest Preserve (DEC, 2007).

Capital Needs

For the period 2007-2012 DEC's capital plan proposes a total of $86 million to be invested in recreation facilities administered by DEC within the Forest Preserve and other State lands. Resource projects planned for the next five years include: $18 million in rehabilitation and replacement of fish hatcheries and hatchery equipment; $14 million in infrastructure renovation, modernization of computerized fishing licensing systems, and fisheries research vessels; and $4.4 million habitat restoration. Recreation related capital projects planned for other State lands during 2007-2012 include: $11 million in expansion of Belleayre Ski Center Base Lodge; $2.5 million in development of Phase 2 Schroon Manor Campground; $5 million in construction of fishing pier and access at Wildwood State Park; and $9.4 million in rehabilitation and modernization of boat launches, fishing piers, and access points across the state.

Table 8.1 - Detail of DEC's 5-Year Recreation Capital Investment Plan

Expenditure Description	Total Expenditures FY 2007 - 2012
Fish, Wildlife and Marine Resources	
Hatcheries – Rehabilitation of Infrastructure and Replacement of Hatchery Equipment	$18,000,000
Fishing Access - Develop New Boat Launches, Fishing Piers and Angler Parking	$8,700,000 [$5,000,000 for Fishing Pier at Wildwood State Park]
Fishing Access - Rehabilitate and Modernize Boat Launches, Fishing Piers and Fishing Access Points	$9,400,000
Habitat Restoration	$4,400,000
Infrastructure Renovation or Replacement of Facilities, Computerized Licensing Systems and Fisheries Research Vessels	$14,000,000
Federal Clean Vessel Act - Boat Sanitary Waste Pump-out Grants	$2,500,000
Rehab & Infrastructure in State Forest and Forest Preserve	
Major Department Facilities Reconstruction	$7,500,000
Total	$64,500,000
Recreation and Ski Center	
Recreation	
Schroon Manor Campground Development – Phase 2	$2,500,000
Campground Road Rehabilitation	$1,500,000
Modernization of Existing Facilities	$1,000,000
Shower Buildings	$2,000,000
Water/Sewer	$1,000,000
Belleayre Ski Center	
New Maintenance Center	$2,500,000
Base Lodge Expansion	$11,000,000
Total Recreation and Ski Center	$21,500,000

Canal Corporation

5-Year Capital Plan

The NYS Canal Corporation is playing a leading role in the development of the end-to-end Canalway Trail along the four branches of the New York State Canal System. Over 170 miles of trail have been constructed since the Canal Corporation began the program in 1995, resulting in 2860 miles of completed trail. The Canalway Trail parallels the Erie, Champlain, Oswego and Cayuga-Seneca canals, creating the spine of a statewide network of trails.

Erie Canalway Trail

The recent emphasis of the Canalway Trail Program has been to complete the 371-mile Erie Canalway Trail from Buffalo to Albany. Nearly three-quarters of the Erie Canalway Trail is complete. Federal TEP funds have been allocated to two Erie Canalway Trail projects but matching funds are needed to progress the projects. New York State Transportation Bond Act funding is in place to develop 16 miles of new and rehabilitated trail over the next five years.

Table 8.2 - Erie Canalway Trail 5-year Plan

Segment	Letting year	Length	Cost	Source
Little Falls to Ilion	TBD	8 miles	$6.3 M	TEP
Canastota to Rome	TBD	20 miles	$2.2 M	TEP/CC
Pittsford to Fairport	2010	10 miles	$3.0 M	Bond Act
City of Rome	2010	6 miles	$2.5 M	Bond Act

Bid documents are being developed for the following Erie Canalway Trail projects, but funding for actual construction has not been identified:

Table 8.3 - Erie Canalway Trail Projects

Segment	Length	Estimated Cost
Newark to Clyde	15 miles	$3.5 M
Utica to Schuyler	6 miles	$4.5 M
Schenectady	2 miles	$1.5 M
Lockport to Amherst	6 miles	$4.4 M

Champlain Canalway Trail

Currently, 7 miles of trail are complete along the proposed Champlain Canalway Trail. Upon completion from Albany to Whitehall, it is expected that this trail will total 58 miles. Funding is in place to complete a portion of the remaining trail, as follows:

Table 8.4 - Champlain Canalway Trail Projects

Segment	Letting Year	Length	Estimated Cost	Source
Fort Edward to Fort Ann	2011	12 miles	$5.0 M	2005 Rebuild and Renew Transportation Bond Act

Several locally generated projects will add approximately three additional miles of Champlain Canalway Trail over the next two years.

Cayuga-Seneca Canalway Trail

The Cayuga-Seneca Canalway Trail is proposed from Geneva to Montezuma and is expected to total approximately 18 miles. Seneca County and the Cayuga-Seneca Regional Canalway Trail group are working to complete an 8-mile segment between Geneva and Seneca Falls. Negotiations are taking place with New York State Electric & Gas for use of an abandoned rail line adjacent to the Canal that will accommodate the trail. An EPF grant is being used for survey and preliminary design and additional grants are being sought.

A plan exists to complete the remaining 10 miles of the Cayuga-Seneca Canalway Trail from Seneca Falls to Montezuma but no funding has been identified for design and construction.

Oswego Canalway Trail

The Oswego Canalway Trail is proposed to extend from Syracuse to Oswego for 38 miles along the Oswego Canal. Approximately two miles of trail have been completed in the City of Oswego.

Resource Planning for the State Outdoor Recreation System

In response to the stewardship needs for state lands and the condition of the existing facilities, there is a need to provide sound planning. Plans establish an overarching vision for each park, site and management area, clarify appropriate public use and recreation activities, define capital facility development and investment needs, and identify natural and historic resource stewardship and interpretation opportunities.

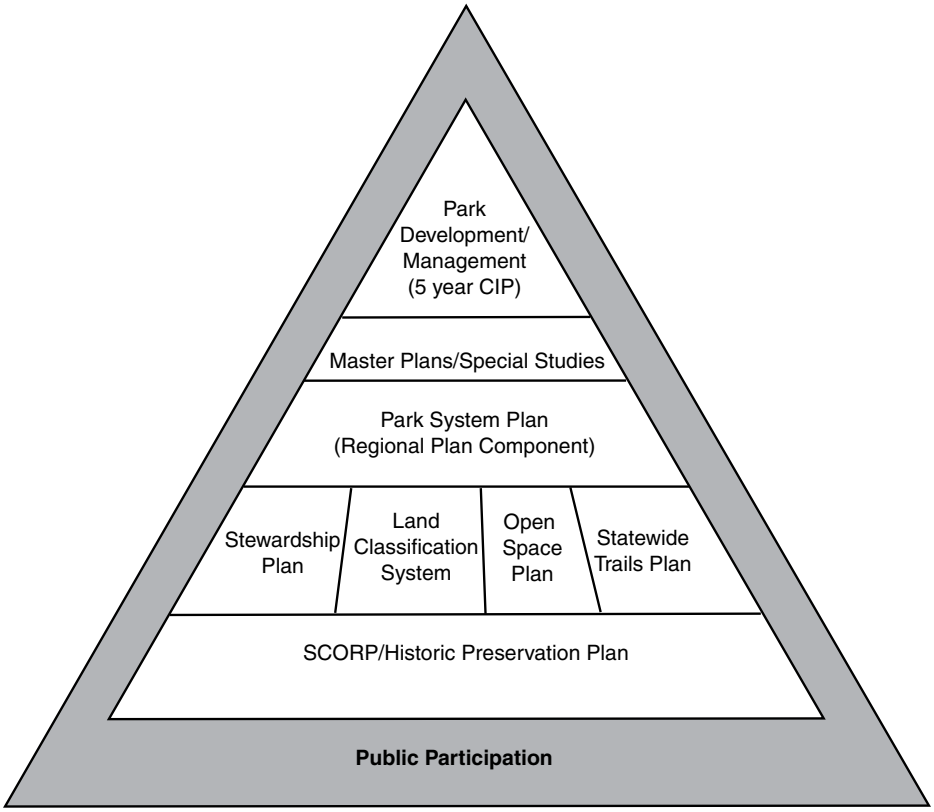


Figure 8.5 - Planning Hierarchy for OPRHP

Planning Process

Over the years, the planning processes have evolved that are utilized by OPRHP and DEC to protect and manage the natural, cultural and recreation resources and recreational demands. The planning framework is identified by Figures 8.5 and 8.6. At the base of the pyramid is the Statewide Comprehensive Outdoor Recreation Plan (SCORP). The SCORP is a broad policy and assessment document that provides a vision for recreation in New York State. SCORP encompasses both the public and private recreation systems for the entire state.

The next level includes statewide plans that focus on a particular aspect of natural, cultural and recreational resource management and provide more specific guidance for OPRHP and DEC. Included within this level are New York State's Open Space Conservation Plan, and the Statewide Trails Plan. The Open Space Conservation Plan defines the needs and outlines some strategies for

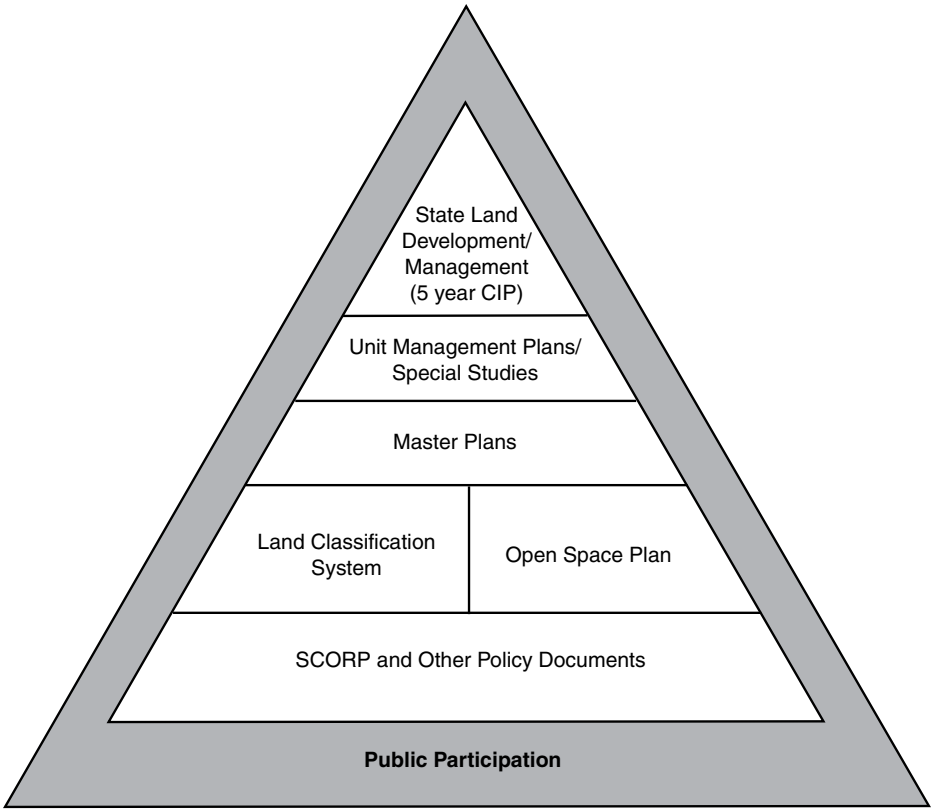


Figure 8.6 - Planning Hierarchy for DEC

conserving open space lands. The plan provides a "unified system" for both agencies to use when evaluating open space projects.

All of these statewide planning initiatives are used as a basis for developing more specific system and site plans. In addition, regional and local plans such as the Long Island South Shore Estuary Reserve Comprehensive Management Plan, the Long Island Sound Coastal Management Plan and Local Waterfront Revitalization Programs are considered in the development of OPRHP and DEC plans.

OPRHP's Management and Master Plans and DEC's Unit Management Plans are site specific. Within the plans specific policies are identified; use, and natural, cultural and recreation resources are analyzed; alternative management strategies are evaluated; and a preferred alternative is selected. The Capital Investment Plan (CIP) outlines projects (i.e. new development and rehabilitation projects, management actions) that are scheduled to be undertaken within five years. The CIP is updated annually. Ultimately, the public experiences the results of this planning process in their enjoyment of the natural, cultural and recreational resources.

An important component of the planning process within OPRHP is environmental review. For all projects, the agency must make a determination of whether the project may or will not have significant environmental impacts. If significant adverse impacts may be associated with a proposal, an Environmental Impact Statement (EIS) is prepared. If it is determined that there will not be any impacts, then a formal determination of no impact is issued. For State Park master plans, the agency has combined the plan and environmental review into a single document generically entitled "Draft Master Plan and Draft Environmental Impact Statement". Many of the requirements under the State Environmental Quality Review (SEQR) Act for an EIS are consistent with the components of a good planning document. Thus, merging the two concepts within a single document reduces duplication of effort and provides appropriate consideration to the environmental effects of plans. Also, the public participation elements of both the planning and the environmental review processes are combined in order to further streamline the process. Individual projects within the State Parks Capital Plan may also be subject to environmental review and are addressed on a project-by-project basis.

Therefore, the resource planning process is a progression from statewide policies and goals, to system management directions, to park and site plans, to the implementation of capital projects and resource management actions.

Land Classification System

The land classification system has been a component of OPRHP's planning process and SCORP since its development in 1974 and is constantly being updated as new information is developed. The current system utilizes natural and cultural resources characteristics, land uses, levels of improvements, physical capacity and other management related data to identify appropriate activities and classifications for lands administered by OPRHP and DEC.

The system provides six major classification categories. These are: Park and Land Resources, Water Access, Historic Resources, Linear Systems, Underwater Sites, and Environmental Education Facilities. Within these categories, there are 23 subcategories by which the parks and sites are classified (Figure 8.7 and Table8.5). Each classification is defined by resource characteristics, level of use, land use, activities, and facility improvements. In addition, criteria and inventory data for the natural resources, such as ecological communities and significant fish and wildlife habitats, are being developed, and will be incorporated within the revised system over the next five years. The classifications reflect the current characteristics of the park and sites. As more information on natural, cultural and recreation resources becomes available, the classification of a park or site can be reevaluated and changed, if appropriate.

LEVELS OF PHYSICAL IMPROVEMENT	Parks and Land Resources	Water Access	Historic Resources	Linear Systems	Underwater Sites	Environmental Education
High Level of Improvement may have Natural Areas	Metro Park Recreation Park / State Campground	Marine Park	Historic Site / Heritage Area and Heritage Corridor	Parkway / Linear Park	N/A	N/A
Moderate Level of Improvement in Natural Areas	Scenic Park	Boat Launching Site	Historic Park	Canal Park / Recreation-way	Historic Park / Park	Fish Propagation Facilities Interpretive Environmental Education Centers
Little or No Improvement within Primarily Natural Areas	Management Areas / Forest Preserve Park Preserve	Cartop Boat & Fishing Access (includes stream easements)	Historic Preserve	Primitive Trailway	Underwater Historic Preserve / Underwater Reserve	Environmental Education Summer Camps

Figure 8.7 - Land Classification Framework

Table 8.5 - Land Use Criteria

	Use Characteristics				
		Designated Use Areas			
Planning Category	Resource Characteristics	Designed Level of Use	% Developed Areas	% Managed Areas	% Natural Areas
Metro Park P-1	Located in urban, industrial or suburban surroundings with man-made architectural treatment of the environment	High	0 to 75	0 to 100	0 to 7
Recreation Park P-2	Natural surroundings in suburban or rural areas. A mix of natural and developed areas significant natural areas are not essential	High	0 to 15	0 to 100	0 to 100
State Campground P-3	Primarily in a rural setting. A mix of natural and developed areas, significant natural areas are not essential.	Moderate	0 to 10	0 to 80	20 to 100
Scenic Park P-4	Natural setting, limited development, scenic attractions within urban, suburban or rural areas. A mix of natural and developed areas with significant scenic features	High	0 to 5	0 to 50	50 to 100
Management Area P-5	Primarily wooded or wetland areas; rural natural setting; limited or no development; offers significant recreation and wildlife observation opportunities.	Low	0 to 15	0 to 5	85 to 100
Forest Preserve P-6	Natural forested areas; low to moderate development of facilities usually related to compatible activities; recreation opportunities range from low-impact, wilderness activities to limited motorized activities.	Low	0 to 5	0 to 5	95 to 100
Park Preserve P-7	Natural areas, few developed facilities within urban, suburban or rural areas. Could have salt marshes, wetlands, bogs, dunes, unusually steep topography, flood prone areas, or other significant environmental resources.	Low	0 to 5	0 to 15	85 to 100

Table 8.5 - Land Use Criteria (Continued)

	Use Characteristics				
		Designated Use Areas			
Planning Category	Resource Characteristics	Designed Level of Use	% Developed Areas	% Managed Areas	% Natural Areas
Marine Park B-1	Variety of marina services, urban to rural areas, predominately man-made, may have significant environmental areas.	High	0 to 90	0 to 100	Balance
Boat Launch Site B-2	Launching, limited services, urban to rural areas, predominately man-made, may have significant environmental areas	High	0 to 90	0 to 100	Balance
Cartop and Fisherman Access B-3	Provides shoreline access. Primarily in a rural setting. A mix of natural and developed areas significant areas not essential.	Low	0 to 90	0 to 100	Balance

	Use Characteristics				
		Designated Use Areas			
Planning Category	Resource Characteristics	Designed Level of Use	% Developed Areas	% Managed Areas	% Natural Areas
Parkway R-1	Designated scenic highway corridors, limited access, linked to parklands, corridors landscaped. Urban to rural areas.	Moderate	0 to 25	0 to 100	Balance
Linear Park R-2	Parkland associated with natural or man-made features (i.e. waterways) generally long and narrow in configuration; may be part of a recreationway; accommodates a variety of activities. Urban to rural areas.	High	0 to 25	0 to 100	Balance
Recreationway R-3	System of linear parks, canal parks and associated linkages.	Moderate	0 to 25	0 to 100	Balance
Primitive Trailway - Wild and Scenic Rivers R-4	Natural Scenic features, may provide for aquifer recharge floodplain, protection, weather buffers, wildlife habitat protection.	Low	0 to 2	0 to 5	95 to 100

Table 8.5 - Land Use Criteria (Continued)

	Use Characteristics				
		Designated Use Areas			
Planning Category	Resource Characteristics	Designed Level of Use	% Developed Areas	% Managed Areas	% Natural Areas
Historic Site H-1	Contributing landscape, structures, and/or archeological areas of historical significance surrounded by limited open areas, urban to rural areas	High	0 to 100	0 to 100	Balance
Historic Park H-2	Contributing landscape, structures, and/or archeological areas of historical significance situated on substantial areas of land, urban to rural	Moderate	0 to 15	0 to 75	25 to 100
Historic Preserve H-3	Historic significance to the area with limited contributing structures on substantial areas of land, may have significant environmental areas. Urban to rural use.	Low	0 to 50	0 to 50	50 to 100
Heritage Area/ Heritage Corridor H-6	Preservation, interpretation, development and use of cultural, historical, natural and architectural resources within urban areas.	High	0 to 100	0 to 100	Balance

	Use Characteristics				
		Designated Use Areas			
Planning Category	Resource Characteristics	Designed Level of use	% Developed Areas	% Managed Areas	% Natural Areas
Interpretive/ Environmental Education Center E-1	Developments in a natural area located in urban, suburban or rural settings which provide cultural, environmental and/or historical information about a geographic area. These may have significant natural elements.	High	2 to 20	16 to 53	18 to 100
Conservation Education Summer Camp E-2	Natural areas primarily in rural settings with a mix of natural and developed areas, for the purpose of learning about the environment.	Seasonal	2 to 16	22 to 42	58 to 100
Fish Propagation Facility E-3	Suburban or rural settings with man-made or significant natural elements.	High	1 to 20	2 to 25	70 to 100

Table 8.5 - Land Use Criteria (Continued)

	Use Characteristics				
		Designated Use Areas			
Planning Category	Resource Characteristics	Designed Level of Use	% Developed Areas	% Managed Areas	% Natural Areas
Underwater Park U-1	Natural aquatic areas or areas with geological formations, good water quality and clarity, few man-made features or historically significant structures.	Low	N/A	N/A	N/A
Underwater Historic Site U-2	Contains historically significant archaeological sites, good water quality and clarity	Low	N/A	N/A	N/A
Underwater Historic Preserve U-3	Contains significant archaeological sites, good water quality and clarity	Low	N/A	N/A	N/A
Underwater Reserve U-4	Contains significant natural aquatic communities.	Low	N/A	N/A	N/A

Master Plans/UMPs

Master Plans, Unit Management Plans (UMPs) and Recreation Management Plans (RMPs), Interim Management Guides (IMGs), and Trail Plans represent the next level of recreation and resource planning. These plans focus on specific Parks, Forest Preserve Units, State Forest Units, and Conservation Easements. Both OPRHP and DEC have evolved planning processes tailored to the types of land each agency manages.

OPRHP Master Plans

The master planning process establishes specific long-term direction and implementation strategies for individual parks and historic sites and groups of parks. Many facilities do not have master plans, or existing plans were prepared several decades ago prior to the current requirements for public participation, environmental review and stewardship awareness. The need for master plans has been identified in past SCORPs, and the Open Space Conservation Plan. Increasing the pace of master planning efforts has also been a long-recognized need.

The current concept of master planning reaches beyond the physical development of facilities to include: an overarching vision, land use, resource management and interpretation, boundary protection, operations, and program services requiring a much broader direction for the development and management of natural, cultural, and recreational resources. There is a need to consider systems of parks, resources, programs, and markets, with full interaction with other recreation and park providers. There is also a need to consider impacts of park development on natural systems both within and outside park boundaries.

A completed set of master plans will provide a firm basis for natural and cultural resource management, capital, equipment, program and staffing decisions. Master plans should be reviewed on a regular basis to assure that they continue to reflect broad policy directions, resource conditions and recreation needs. Coordination with the general public and special interest groups should continue to occur through scoping meetings, workshops, public hearings, task force studies and advisory committees.

OPRHP Interim Management Guides

The need and importance to have a master plan for each park and historic site is recognized. In order to accomplish this, considerable staff, financial resources and time are required. Due to funding limitations, many parks and historic sites continue to function with an outdated plan or without a master plan. Therefore, in many instances, management guides, which are less costly and time-consuming, are utilized. These guides provide policy and stewardship direction, a preliminary assessment of the natural, cultural and recreational resources and an identification of issues and concerns.

An Interim Management Guide (IMG) provides written direction for managers and staff for the day to day protection, maintenance and improvement of a New York State Park, Historic Site, or other OPRHP facility ("park"). The IMG also provides direction for

the preparation of subsequent plans, reports and environmental assessments required for future decisions on new park management initiatives or objectives.

The purpose of the IMG is to provide clear and concise directions for daily management decisions in order to ensure the appropriate use and stewardship of the park's resources and the safety of patrons and staff, and to consider management strategies within the context of the longer term vision of the park. Current natural, cultural, and recreational resources are coupled with management practices in order to direct decision making at park, regional, and statewide levels. The guide should be considered a living document, updated as changes occur over time; it does not replace the need for master planning. However, it does provide an initial database for the preparation of a master plan. The guide is intended to provide park information in a concise, usable manner that will allow park managers and their staff, as well as regional and Albany office staff, to make informed decisions. The process for development of management strategies is designed to be accomplished within a short period of time.

OPRHP Trail and Natural Resource Management Plans

In addition to the comprehensive Statewide Trails Plan, individual trail plans are developed for a specific park or sites, geographic area or system of trails. Such plans focus on trail locations, development, operations, maintenance, roles and responsibilities and partnerships with trail organizations and other interested parties.

Resource Management Plans are developed in response to specific natural resource issues. These may range from the control of invasive species and nuisance wildlife to the protection and management of threatened or endangered species.

DEC Unit Management Plans

The key element to future recreational activity and for all management policies and procedures DEC land units is the Unit Management Plan (UMP). The 472 State Forests have been grouped, where feasible, into 165 State Land units based on proximity to one another, similarity in treatment or management needs, and shared characteristics. Similarly, the Forest Preserve Lands in the Adirondack and Catskill Parks have been organized into 51 Adirondack planning units and 21 Catskill planning units. Where possible and practical, units also encompass other land-use classifications such as Wildlife Management Areas and Conservation Easements. Using these criteria, the planning units have been classified and more than 40 UMPs have been completed. Approximately 35 unit management plans are in various stages of development.

The regional forestry staff is responsible for the development of UMPs. The plans include an assessment of existing recreational values, describe the needs for future development, and provide a schedule for the improvement and expansion of the current facilities as well as the development of new ones. Allocation of funding for proposed recreational facilities is based, to a large part, on whether or not the project is included in a UMP. Through the planning process, the public is strongly encouraged to provide input through public meetings, email and letters for consideration in final plans. Each plan has profited from this public participation not only by producing a stronger plan, but also by lending credibility to it and the proposed prescribed management activities.

UMPs developed for State Forest Lands outside the Forest Preserve boundary are developed for a ten-year period with revisions required every five years. The UMP process is constantly refined through technological advances and additional public participation. UMPs developed for lands within the Forest Preserve boundary are required to be up-dated every five years.

Long range planning for the Adirondack Forest Preserve lands, and subsequently the Catskill Forest Preserve lands, received its initial impetus from the Adirondack Park State Land Master Plan (APSLMP) published by the Adirondack Park Agency (APA) and approved by Governor Rockefeller in 1972. This plan directs DEC to implement legislative requirements for the development, in consultation with the APA, of Unit Management Plans (UMPs) for each unit of land as classified by the APA in the APSLMP. UMPs must provide the guidance for the development and management of State lands in conformance with the criteria as outlined in the APSLMP. Both the APSLMP and each completed UMP are reviewed periodically and amended as required to provide the management direction needed for the next five-year period.

The Catskill Park State Land Master Plan (CPSLMP) was developed by DEC and approved in 1985. This plan closely follows the format of the APSLMP and also mandates the development of UMPs. This plan relates to the management of state land only. Unlike the Adirondacks there is no state plan controlling development of private lands within the Catskill Park.

The importance of UMPs to the State's management of open space should not be minimized. The total acreage of New York State is 31,726,640 acres. Of this total, UMPs provide management direction for nearly 3 million acres of Preserve or 9.4% of the State's total area.

The master plans for both the Adirondacks and Catskills established a

land classification system based on land unit characteristics and their capacity to withstand use. The APSLMP contains nine basic categories as a result of this classification system: Wilderness, Primitive, Canoe, Wild Forest, Intensive Use, Historic, State Administered, Wild, Scenic and Recreational Rivers and Travel Corridors. The CPSLMP established only four categories: Wilderness, Wild Forest, Intensive Use and Administrative Areas.

The paramount responsibility of DEC regarding the management of Forest Preserve lands is the protection and preservation of the natural resources. Public use and enjoyment of these lands is permitted and encouraged to the extent that the natural resources are not physically or biologically degraded. Use must also be kept at a level so as not to unnecessarily detract from the experiential expectations of the users.

Both the APSLMP and CPSLMP set forth lists of conforming and nonconforming uses. Nonconforming uses are to be removed within specific time periods. Conforming structures and improvements may receive normal maintenance and rehabilitation without being addressed in a UMP. The construction of new conforming structures cannot be accomplished without being addressed in an approved unit management plan. Within the Adirondack and Catskill Parks 185 individual land units have been identified as follows: 21 Wilderness Areas; 36 Wild Forest Areas; 32 Primitive Areas; 1 Canoe Area; 59 Campgrounds and Day Use Areas; 30 boat launching sites; 4 winter recreation sites (3 administered by ORDA); and 2 scenic highways (1 administered by ORDA).

In order for UMPs to be responsive to the needs of the public, the plans must be subject to public review and input. In some instances this input is obtained through the use of Citizen Advisory Committees which work with DEC staff from the inception of a specific plan. Public hearings and informational meetings are frequently used to obtain public review of proposed management plans and actions.

DEC State Forest/ Wildlife Management Area Unit Management Planning

DEC revised its long-range management procedures through the development of the State Forests Master Plan in 1988 and the State Forest Unit Management Handbook in 1989. These documents set guidelines and policies for the management of DEC lands outside the Forest Preserve. The Division of Lands and Forests has identified 165 separate management units, totaling 892,297 acres. This list includes State Forests, Wildlife Management Areas, Unique Areas, Multiple Use Areas, some detached parcels of Forest Preserve and other land classifications. Plans are to be developed for ten-year time periods with a five-year interval for review and possible update. Public involvement in the development and review of these plans is an integral part of the process.

The primary goal of DEC is to manage these Units for multiple uses to serve the needs of the people of the State. These uses for State Forests are directed by the Environmental Conservation Law 9-0501 which authorizes DEC to acquire lands outside of the Catskill and Adirondack Parks "… which are adapted for reforestation and the establishment and maintenance thereon of forests for watershed protection, the production of timber and other forest products, and for recreation and kindred purposes… which shall be forever devoted to the planting, growth and harvesting of such trees…" The management goals for Wildlife Management Areas are directed towards wildlife habit improvement while the goals for Unique Areas are to protect the unique resources present that caused DEC to acquire these lands.

The ECL 11-2103 authorizes DEC to acquire lands and waters as "public hunting, trapping and fishing grounds," and under the ECL 11-213 it is authorized to set aside land or water owned by the State "as a refuge for the protection of fish, wildlife, trees and plants." These lands are generally known as Wildlife Management Areas (WMAs). The management goals for these areas are directed towards wildlife habitat improvement and protection, and providing recreational opportunity. Each area is managed differently for different purposes; whatever the area is best suited for. Typically, each area will have at least some facilities to serve public recreation; facilities management comprises a substantial part of the management of each area. Habitat management and protection may be directed at improving public recreation opportunity or it may be for purposes of restoring and enhancing populations of wildlife associated with the habitat types found in the area.

As the Division of Lands and Forests is moving into a more complete statewide landscape-ecosystem planning perspective, consideration is being given to developing region-wide plans versus separate plans for each forest unit. These larger scale plans will be supplemented with a shorter more site-specific state forest unit plan that addresses that unit's unique natural resources, recreation opportunities and timber management activities. UMPs will continue to be the guiding documents for future use management and funding for capital improvements of trail systems and facilities on lands administered by DEC outside of the Forest Preserve.

DEC Resource Management Planning

Since 1995, the State has acquired over a half of million acres in conservation easements that will be managed by DEC. As recreational rights were purchased on many of these easements, DEC is required to write plans that will

address development and management of facilities to support the recreational opportunities. Similar to Unit Management Plans (UMPs) for State Forest lands, Recreation Management Plans (RMPs) for conservation easements will need to be developed through a public process, in addition to being reviewed and approved by the private landowner.

As with State Forest UMPs, Regional forestry staff is responsible for the development of RMPs, which will be developed through a newly established RMP planning process. These particular plans will address the assessment of existing recreational resources, describe the needs for future recreational development, and provide a schedule for development, improvement and expansion of recreational facilities. RMPs will vary from UMPs, as any proposed recreational activities and development must be taken into consideration with the private landowner's timber management activities and will require review and approval by the landowner. As with the UMP process, the public will be strongly encouraged to provide input through public meetings, email and letters for consideration in any final RMP.

Part of the State's acquisition of conservation easements on private lands, requires DEC is to develop a Recreation Management Plan (RMP) that is subject to the terms and conditions of each individual conservation easement. All RMPs are developed pursuant to, and are consistent with, relevant provisions of the New York State Constitution, the Environmental Conservation Law (ECL), the Executive Law, the Adirondack Park State Land Master Plan, New York State Department of Environmental Conservation ("DEC") rules and regulations, DEC policies and procedures and the State Environmental Quality and Review Act, as well as the conditions of the conservation easement, which cover the lands included in its corresponding RMP.

Unlike UMPs, which address the management of lands where the State owns full fee title, RMPs address the management of lands that remain in private ownership. RMPs must therefore provide a detailed description of how public access and recreation on the private lands will be managed, who will have responsibility for such management, and how public access will interact with the private landowner and land management activities. As the State often purchases certain public recreation rights from a landowner, DEC is given the primary responsibility for managing the allowed public access and recreation.

Almost all conservation easements purchased by the State, require that necessary facilities, such as signs, gates, parking, and trails, be designated and developed prior to public access being allowed. As these lands are under private ownership, clear public-use designations and notification of allowed recreation activities needs to be established. With most conservation easements purchased on working forest lands, the landowner retains the right, in accordance with the provisions of each individual conservation easement, to temporarily exclude the public from areas where active forestry operations are underway.

RMPs are public documents. As with UMPs, RMPs introduce the public, local governments, and other interested parties to DEC's planning process and provides opportunities for all stakeholders to voice their opinions, learn, evaluate, and influence decisions about how the lands should be managed. As RMPs are subject to a specific conservation easement's terms and conditions with a private landowner, most easements are requiring annual RMP review, with updates as needed.

Planning Strategy

OPRHP

Goals and Actions

Given that planning is a critical prerequisite to sound public use, infrastructure development, and natural resource stewardship decision-making, OPRHP has made planning a priority for the next five years.

Goal

OPRHP is committed to meeting this goal of completing 25 master plans and 25 other plans within 5 years.

Action

- Conduct resource inventories and develop GIS data basis.
- Complete 5 master plans annually.
- Complete 5 additional management plans annually that, while less than full master plans, focus on a specific management issues at individual parks (e.g. interim management guides, recreation trail plans, and natural resource stewardship plans).
- Expand staffing resources that will be dedicated to the planning initiative.

DEC

Goals and Actions

DEC is receiving increased pressure to provide more recreational opportunities in more varieties than ever before. Recreation technology has responded to the increased level of leisure time that many New Yorkers enjoy by creating new and improved ways to spend that time. Adding this demand to the already large demand evident in the more traditional activities (such as hiking, camping and snowmobiling) results in tremendous pressure on State Forest lands. The impact of more intensive

use of trails and recreational facilities is manifested in their present condition. DEC is committed to preserving these areas for the public's use and enjoyment.

Goal

To restore the trails on State Forest lands, where appropriate, to usable and safe conditions.

Actions

- Improve present trail systems.
- Construct additional miles of single and multipurpose trails.
- Rehabilitate and construct additional miles of public forest access roads.

Goal

To responsibly expand the recreational opportunity that the State Forest resources represent.

Actions

- Expand, improve or construct recreational facilities such as lean-tos, horse-stabling areas for the public and for people with disabilities.

Goal

To begin development of recreational facilities on certain International Paper/ Lyme Timber Conservation Easements that offer significant public recreational opportunities.

Actions

- Develop RMPs for International Paper/Lyme Timber conservation easements utilizing the public recreation management planning process.
- Identify and allocate funding for the development of recreational facilities on easements with approved final RMPs.
- Begin development of recreational facilities.

Chapter 9 - Implementation

State and Federal Funding

The provision of recreation facilities and the protection of open space requires looking at the big picture of the State facilities and balancing the past, present and future of development throughout the Parks System. Looking at the past shows the many facilities and open spaces which were acquired years ago that are now worn out, not designed to meet today's needs or have met and exceeded their life expectancy. In the present there is work to be done to manage the maintenance of existing facilities and resources. To prepare for the future, it is important to predict the need to: develop new facilities; protect and maintain natural, cultural and open space resources; and, meet present and future generations' needs for natural, cultural and open space resources. To achieve this balance of management a partnership of all segments of the population is required — individuals, interest groups, private industry, and all levels of government.

The federal and state governments are the primary sources for funding of open space and recreation projects. In most cases, the State functions as the administering agent for federal funds. As might be expected, the need for funding generally exceeds the funds available. As the demand for open space and recreation resources increases, the resource base available to provide new opportunities is decreasing which is why it is imperative to search out funding opportunities for specific projects.

SCORP provides a statewide policy framework that serves as the basis of the State's action program and the Open Project Selection Process (OPSP) that supports the Land and Water Conservation Fund. These and programs described in the Plan are the key elements of the State's implementation strategy. The action program consists of actions from previous chapters being proposed and implemented under specific action strategies and ultimately under the ten major policy directions. The OPSP directly translates the statewide policies and action strategies into a quantitative project review formula for the allocating of funds and thus provides a direct link to the assessment and policy process. Similar to the OPSP for LWCF, SCORP incorporated within the evaluation system for the Recreational Trail Program, Environmental Protection Fund and Open Space Plan.

The following is a list of available funding programs for projects that help to implement the goals of SCORP.

Table 9.1 - State and Federal Funding Programs

			Eligibility					Action					Project Elements					
	Funding Programs	Agency	State	Municipalities/ Local	Tribal	Non-Profit	Individual	Acquisition	Planning/Design	Construction	Maintenance	Historic Preservation	Trail	Marine	Wildlife/ Open Space Protection	Recreational Facilities	Historic Sites/ Cultural	Interpretive/ Education/Research
Federal	Land and Water Conservation Fund	NPS	x	x	x			x	x	x			x	x	x	x		
	SAFETEA-LU	FHWA																
	Recreation Trails Program	FHWA	x	x	x	x		x	x	x	x		x					
	Transportation Enhancements	FHWA	x	x					x	x			x					x
	Sport Fish Restoration	FWS	x						x	x	x			x				
	Boating Infrastructure Grant Program	FHWA	x						x	x	x			x				x
	Congestion Mitigation and Air Quality	FHWA	x	x					x	x	x		x					x
	Highway Safety	NHTSA	x	x		x			x				x					x
	Safe Routes to School	FHWA	x						x	x			x					x
	Alternative Transportation in Parks and Public Lands	FHWA	x						x	x			x					
	Farm Bill 2002	NRCS	x	x	x	x	x	x							x			
	Forest Legacy Program	NRCS	x					x							x			
	Wetland and Conservation Reserve Programs	NRCS					x	x	x						x			
	Conservation of Private Grazing Lands Programs	NRCS					x								x			x
	Environmental Quality Incentives Program	NRCS					x								x			
	Farmland Protection Program	NRCS	x	x	x			x							x			
	Pittman-Robertson	FWS	x												x			x
	Recreational Boating Safety	USCG	x					x		x	x			x				
	Steps to a Healthier US Grants	CDC	x	x	x				x									x
	Special Recreation Program	DOE	x	x		x			x	x	x		x			x	x	x
	North American Wetlands Conservation Act Grants	FWS		x		x	x	x							x			
	State Wildlife Grant Program	DEC	x												x			
	Coastal and Estuarine Land Conservation Program	NOAA	x					x	x	x				x	x			
	Certified Local Government Grants Program	OPRHP		x					x		x	x					x	x
	Save America's Treasures Program	NPS	x	x	x	x						x					x	
	Forest Stewardship Program	USDA	x				x				x				x			

Table 9.1 - State and Federal Funding Programs (*Continued*)

			Eligibility					Action					Project Elements					
	Funding Programs	Agency	State	Municipalities/ Local	Tribal	Non-Profit	Individual	Acquisition	Planning/Design	Construction	Maintenance	Historic Preservation	Trail	Marine	Wildlife/ Open Space Protection	Recreational Facilities	Historic Sites/ Cultural	Interpretive/ Education/Research
State	Environmental Protection Fund	Various	x	x				x	x	x	x	x	x	x	x	x	x	x
	Parks Program	OPRHP	x	x	x	x		x	x	x		x	x	x	x	x	x	x
	Historic Preservation Program	OPRHP	x	x	x	x		x	x	x		x			x	x	x	x
	Heritage Areas Program	OPRHP	x	x	x	x		x	x	x		x	x		x	x	x	x
	Acquisition	OPRHP	x	x	x	x		x	x	x		x	x	x	x	x	x	x
	Zoos, Botanical Gardens, Aquariums	OPRHP	x	x		x									x			x
	Snowmobile Trail Grant Program	OPRHP		x					x	x	x							
	Local Waterfront Revitalization Program	DOS		x					x	x			x	x	x			
	Hudson River Estuary Grant Program	DEC		x		x			x				x	x	x			x
	Invasive Species Eradication Grant Program	DEC	x	x		x			x	x				x	x			
	Brownfield Opportunity Area	DOS/ DEC		x	x	x			x									
	Biodiversity Research and Stewardship	BRI	x			x	x											x
	NYS Great Lakes Protection Fund	DEC		x			x		x	x				x	x			
	Habitat/Access Funding Grants	DEC		x		x	x		x	x	x				x			
Other	Hudson River Valley Greenway	HRVG		x		x			x	x			x			x		x
	Architecture, Planning and Design	NYSCA		x		x			x			x					x	
	Capital Projects	NYSCA		x		x					x	x					x	
	Preserve New York Grant Program	PLNY		x		x			x								x	
	Lake Champlain Basin Program	LCBP	x	x		x			x	x				x	x		x	x
	National Trails Fund	AHS				x					x		x					
	Capacity Building Grants	PTNY				x			x									

USCG= United States Coast Guard
FHWA= Federal Highway Administration
DOE= Department of Education
AHS= American Hiking Society
HRVG= Hudson River Valley Greenway
NPS= National Park Service
FWS= US Fish and Wildlife Services
DOS= Department of State
PTNY= Parks & Trails New York

NRCS=Natural Resources Conservation Services
OPRHP= Office of Parks, Recreation and Historic Preservation
NYSCA= New York State Council on the Arts
PLNY= Preservation League of New York
NOAA= National Oceanic and Atmospheric Administration
LCBP= Lake Champlain Basin Program
USDA= US Department of Agriculture
DEC= NYS Department of Environmental Conservation
BRI = Biodiversity Research Institute

Federal

Land and Water Conservation Fund

The Land and Water Conservation Fund (LWCF) was enacted by Congress in 1964 as a dedicated fund to provide grants to the states for outdoor recreational facilities and to provide funds for federal land management agencies to acquire additional holdings for their systems.

Funding for the program was authorized at $900 million a year through revenues from offshore oil and gas leases. The funds are split between the stateside grant-in-aid program and the federal agencies. The grant-in-aid program requires at least 50% of total project cost as a local match with LWCF.

Between 1965 and 2006, $3.6 billion has been provided for the LWCF, which has helped support 40,000 local park projects, including the protection of 2.6 million acres of open space.

At its high point in 1979, the State received about $24 million, which was used to provide grants to municipalities and to undertake State Park development and land acquisition projects. Since 1965, the LWCF has partially funded 1,250 projects within the State. Virtually every community in the State has acquired and/or developed outdoor recreational facilities with the help of the LWCF.

When funds are apportioned, it is the State's responsibility to solicit applications, evaluate projects and recommend grants to the National Park Service for approval. The State may allocate funds among both local and state projects; all awards must be matched with 50 percent of the total project cost.

Eligible projects include parkland acquisition, the development of new parks, and the rehabilitation of existing recreational facilities. All project areas are "mapped" and cannot be converted to any use other than public outdoor recreation without the approval of the Secretary of the Interior.

From 1989 through 1995, federal funding was extremely limited. From Federal Fiscal Year (FFY) 1996 to FFY 1999, there was no stateside appropriation. This "0" appropriation trend was finally broken in FFY 2000, when $40 million was appropriated nationally resulting in nearly $1.9 million for the State.

Table 9.2 - New York State LWCF Appropriations

1989 - $ 758,549
1990 - 957,052
1991 - 1,632,851
1992 - 1,090,278
1993 - 1,365,492
1994 - 1,323,714
1995 - 1,313,382
1996 - 0
1997 - 0
1998 - 0
1999 - 0
2000 - 1,881,460
2001 - 4,518,431
2002 - 7,085,103
2003 – 4,823,954
2004 – 4,543,804
2005 – 4,462,762
2006 – 1,382,142

In addition to stateside funding, Congress authorized and appropriated a total of $17.5 million from the federal LWCF for the acquisition of Sterling Forest.

Annually, enhanced federal funds to the states for LWCF initiatives will provide an assurance that federal commitments for important initiatives are kept, as well as assuring that the states are able to plan for future acquisitions and the development of outdoor recreation facilities most effectively. These federal funds, as they have been used in the past, provide recreational opportunities for the public in close proximity to where they live. Every federal dollar spent on stateside LWCF is matched by the local sponsor and results in no less than two dollars spent on local recreation facilities. In fact, for the State, the $224 million provided between 1965 and 2006, resulted in $500 million being invested in park and recreational facilities.

Efforts have been underway nationally since 1997 to restore stateside funding from the LWCF, led by the efforts of many states in partnership with various organizations including the National Association of State Outdoor Recreation Liaison Officers (NASORLO), National Association of State Park Directors (NASPD), and the Americans for Our Heritage and Recreation Campaign (AHR).

SAFETEA-LU

On August 10, 2005 the President signed the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) into law. This act was a reauthorization of the 1998 Transportation Equity Act for the 21st Century (TEA-21) which replaced the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA). ISTEA was the beginning of a change in the focus of transportation funding away from exclusively being for roadways. With the passage of this act there were changes in the types of infrastructure improvements which were able to receive financing from government; there were a number of programs initiated by ISTEA which have been reauthorized by the passing of SAFETEA-LU. These programs have been beneficial for the increased provision of bike and pedestrian infrastructure throughout the country and the NYS Park System.

SAFETEA-LU is working to manage the different challenges which are facing the nation's transportation systems. Some of the problems addressed in the SAFETEA-LU Act include efforts to improve safety, reduce traffic congestion, increase intermodal connectivity and protect the environment. The Act has been financed with $244.1 billion over 5 years (2005-2009) making it the largest surface transportation investment in our Nation's history. Listed below are the SAFETEA-LU programs that apply to parks, recreation and open space protection for the implementation of SCORP (US DOT, 2007).

Recreation Trails Program

With the passage of SAFETEA-LU, the Recreation Trails Program (RTP) was reauthorized. The U.S. Department of Transportation, Federal Highway Administration administers the RTP in consultation with the Department of Interior (National Park Service and Bureau of Land Management) and the Department of Agriculture (U.S. Forest Service). The RTP is a state-administered, federal assistance program to acquire, develop and maintain recreational trails for both motorized and non-motorized trail use; the funds come from the Federal Highway Trust Fund as well as an excise tax on recreationally used motor fuel. OPRHP administers the program for the State.

Funds are available to state, municipalities, tribal governments and private organizations. Since 1993, $11.5 million have funded 226 projects nationally (US DOT, 2007).

Transportation Enhancements

Transportation Enhancements (TE) is a federally subsidized program for community-based projects that expand travel choices; it was first created by ISTEA and subsequently reauthorized by TEA-21 and SAFETEA-LU. The funding comes from the Highway Trust Fund and can go to projects which will increase the number and safety of bicycle and pedestrian facilities; the federal government will typically pay for 80% of the cost of a Transportation Enhancement project.

State, county, city and municipalities are eligible to receive TE funding. Other organizations, like non-profits, can partner with local governments to pursue a project that can be funded through the TE program. To receive funding the project must be related to surface transportation and be one of 12 eligible TE activities to receive funding. NYSDOT has a TE representative who is able to answer questions about the program and who is also in charge of choosing which projects will receive the available funding (National Transportation Enhancements Clearinghouse, 2007).

Boating Infrastructure Grant Program

The Boating Infrastructure Grant (BIG) Program was created under TEA-21 and reauthorized by SAFETEA-LU in 2006 $12.8 million has been allocated for Fiscal Year 2008 for states to renovate or maintain transient tie-up facilities for recreational boats 26 feet or more in length. In 2006, NYS received $345,741 in Boating Infrastructure Grants. (US Fish and Wildlife Service, 2007)

The distribution of funds is divided into two tiers:

- Tier I grants award a maximum of $100,000 to each state for any one eligible proposal.
- Tier II funds are awarded on a nationally competitive basis. Each individual project is scored by the U.S. Fish and Wildlife Service of the Department of the Interior (DOI) according to a determined point schedule. This schedule was established to encourage public and private partnerships. Projects are ranked according to their location, surrounding sites and availability of transient facilities (those that accommodate vessels for not more than 10 days). The DOI will pay up to 75% of the cost for an approved project, leaving the applicant to match the remaining 25%.

Eligible projects may include:

- Construction, renovation, and maintenance of either publicly or privately owned boating infrastructure tie-up facilities;
- Performing onetime dredging, to provide transient vessels safe channel depths between tie-up facilities and maintained channels or open water;
- Installation of navigational aids, limited to giving transient vessels safe passage between tie-up facilities and maintained channels or open water;
- Grant administration costs for approved projects;
- Funding preliminary costs including conducting appraisals and preparing cost estimates; and
- Producing information and education materials such as charts, cruising guides, and brochures.

To date the State has received five grants totaling $645,741 which will fund transient dock improvements at Beaver Island Marina, the installation of transient docks, the replacement of bulkheads and installation of electricity at Wellesley Island, the dredging and installation of transient docks at Treman and Sampson State Parks, the reconstruction of docking areas in Coxsackie and transient slips and support facilities at Eagle Creek.

Congestion Mitigation and Air Quality Improvement Program

Reauthorized by SAFETEA-LU in 2006, CMAQ is designed to fund transportation projects that help to attain

and/or maintain the national ambient air quality standards for ozone, carbon monoxide and particulate matter. Since this program is part of the transportation act, transportation projects which will reduce congestion and improve air quality in areas which are not in compliance with the Clean Air Act are given priority. The program will provide for bike and pedestrian projects that are not exclusively for recreation, but which will also reduce vehicle trips, therefore reducing congestion and benefiting air quality. (FHWA, 2007) CMAQ is administered by the US DOT and national funding equals $8.6 billion between 2005 and 2009 (US DOT, 2006).

Safe Routes to School

Created in 2006 as part of SAFTEA-LU, Safe Routes to School (SRTS) is a program to increase the number of students who walk or bike to school. The program has been funded nationally for $612 million through 2011, and each State will get at least $1 million a year. This money can be used for infrastructure-based projects or awareness campaigns, education and other non-traditional expenses. This program is geared towards routes to school, so eligible projects must be located along school routes and be accessible to students. (National Recreation and Park Association, 2007) A major goal of the program is to increase bicycle, pedestrian, and traffic safety. Local and regional governments, schools and community non-profit organizations are eligible to apply (DOT, 2007).

The Safe Routes to School Program is a federal reimbursement program, not a grant program. Applicants are not required to share in the cost of their project. All SRTS projects must have a minimum cost of at least $25,000. Maximum project cost for non-infrastructure projects is $150,000 and for infrastructure projects $400,000. Maximum combined project cost is $550,000.

Highway Safety

The National Highway Traffic Safety Administration (NHTSA) administers this program which was created with the Highway Safety Act of 1966 and reauthorized under SAFETEA-LU. The Program, referred to as State and Community Highway Safety Programs, provides funding for the implementation of programs that address a wide range of highway safety problems that are related to human factors and the roadway environment with the goal of reducing crashes, fatalities and injuries resulting thereof.

The Governor's Traffic Safety Committee coordinates traffic safety activities in the New York State and administers and distributes these federal highway safety funds through a grant program. State agencies, Local governments and Non-Profit agencies are eligible to receive grant funding. Examples of eligible funding include pedestrian safety projects, bicycle safety programs, occupant protection and child safety seat education, and traffic enforcement. Information on the program is available at www.safeny.com.

Alternative Transportation in Parks and Public Lands

Also known as Transit in the Parks, this program is authorized under SAFETEA-LU in support of transportation projects in and surrounding parks and public lands. The program is administered by the Department of Transportation and provides grants for planning or capital projects in or near federally owned or managed park, refuge or recreation areas that are open to the public. The goal is to reduce automobile traffic near the federal lands to reduce congestion and improve air quality.

Between 2006 and 2009, there will be $98 million allocated nationally towards this program (FTA, 2007). Following the reauthorization in 2006, bicycle, pedestrian and non-motorized projects have been included in the definition of alternative transportation. There are a number of federal lands throughout New York State, so this program provides an opportunity to build or improve alternative transportation and connectivity of the State and Federal park system (US DOT, 2007).

Sport Fish Restoration Program

The federal Sport Fish and Restoration Act, commonly known as the Dingell-Johnson Program, was amended by the Wallop-Breaux in 1984 and most recently reauthorized by SAFETEA-LU. This program is funded by the collection of excise taxes on fishing tackle, imported yachts and motor boat fuels. Funds are returned to the states by the U.S. Fish and Wildlife Service for use in fisheries management and research programs. As part of this act, a program called the National Outreach and Communications Program was authorized to increase citizen participation in angling and boating and also reminds boaters of the importance of clean aquatic habitats.

The State receives about $4.9 million annually which currently is committed to the following projects: development and management of the State's freshwater and marine fisheries resources, habitat protection, boating access, and Lake Champlain. The money generally supports staff, non-personal service costs and design and maintenance for boating access facilities (US Fish and Wildlife Service, 2007).

The Farm Security and Rural Investment Act of 2002

The Farm Security and Rural Investment Act of 2002, also known as the Federal Farm Bill, was reauthorized

and focuses on conservation and environmental issues, as well as protection of open spaces and environmental quality. The Act authorizes a number of programs which include funding that will be beneficial to the State's Open Space Program, these are listed below. The Federal Farm Bill is currently under revision.

Forest Legacy Program

The Forest Legacy Program was established as federal law in the forestry title of the 1990 Farm Bill. It is designed to identify and protect environmentally sensitive forests which are threatened by conversion to non-forest uses. The law authorizes the U.S. Forest Service, through the Secretary of Agriculture, to acquire land and conservation easements from willing sellers, in cooperation with participating states.

Under the state grant option, the State is using Forest Legacy funds to enhance the State's Working Forest program. Projects that have been undertaken using Legacy funds include the Taconic Ridge, Sterling Forest and the New York City Watershed in the Catskills. There is strong emphasis in the program on purchase of conservation easements from landowners who volunteer it for the program. To the extent feasible, the federal share does not exceed 75%, and states and other participating entities provide the remaining 25%, according to Forest Service guidelines.

Eligible forestlands include those with one or more resource values, such as scenic, recreational, cultural and ecological values, as well as riparian areas, fish and wildlife habitats and threatened and endangered species. Potentially eligible lands also should provide opportunities for traditional forest uses, such as timber management and forest-based recreation. The existence of an imminent threat of conversion would be a primary consideration for eligibility and the land should possess strong environmental values.

All such easements acquired must meet the conservation objectives and goals contained in the Open Space Plan; these easements will limit subdivision of the land and provide for permanent forest cover subject to commercial harvesting of timber and timber products while remaining in compliance with State laws and regulations. All residential uses will be prohibited as well as all significant surface disturbing mining and drilling and any commercial and industrial uses. Silvicultural activities and associated natural resource management activities will be permitted.

National attention in this program has grown in the past four years due to the addition of the New York City Watershed as a Legacy area of concern.

The need for Legacy funding is increasing. A substantial amount of productive forestland is for sale in the State; purchase of easements over this land is desirable to retain it in forest use. To accomplish this goal an annual national appropriation of at least $60 million is needed to make the Forest Legacy Program effective. The State would qualify for a share of this and proceed according to the guidelines and needs identified in this Plan and the Conserving Open Space Plan. As of 2006, 44,669 acres have been protected and $10 million secured for various forest land conservation projects in New York State (USDA, 2007)

Reserve Programs

The federal Conservation Reserve Program (CRP) was established in the 1985 Food, Agriculture and Conservation and Trade Act and continues under the 2002 Farm Bill. This program is administered by the U.S. Department of Agriculture. Under CRP, landowners who enter contracts to set aside highly erodible, environmentally sensitive cropland, as well as implement a conservation plan for the land, receive annual payments for 10 to 15 years. Even after the contract expires, farmers must comply with the conservation plan provisions.

The Wetland Reserve Program (WRP) was added to the Farm Bill in 1990 and reauthorized under the 2002 Farm Bill. The WRP provides financial incentives for restoration and protection of up to one million acres of wetlands. Technical assistance is also provided to help develop restoration and management plans. There are three contract options available to landowners: permanent easement, 30-year easement, or restoration agreement. For permanent easements, 100% of all eligible costs and the appraised agricultural value of the land are paid. For 30-year easements, 50-75% of eligible costs and the appraised land value are paid. On restoration agreement, no easement is purchased, but 75% of restoration costs are paid by the Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) and the landowner agrees to maintain compatible practices for 15 years. Almost $6 million has been allocated for technical and financial assistance to New York State for fiscal year 2007 through the WRP (USDA NRCS, 2007).

The 2002 Federal Farm Bill amended the Food Security Act of 1985 to authorize the Grasslands Reserve Program (GRP). The GRP helps landowners restore and protect grassland, pastureland, shrub land and certain other lands and provides assistance for rehabilitating grasslands, including management of invasive species. (USDA, 2006)

Conservation of Private Grazing Lands Programs

Congress enacted the Conservation of Private Grazing Lands Program

(CPGLP) provision to provide technical, educational, and related assistance to landowners and operators on the nation's 642 million acres of private grazing lands. Funding was authorized by the Department of Agriculture at $20 million in 1996, increasing to $60 million by the third year. Currently no money has been appropriated for CPGLP for this year. To help reserve the deteriorating trends on roughly 60% of U.S. rangeland and about 46% of permanent pasture, conservation districts recommend maintaining the funding authorization for CPGLP at $60 million annually (USDA NRCS, 2007).

Environmental Quality Incentives Program

The EQIP was reauthorized as part of the 2002 Farm Bill to provide financial and technical assistance to farmers and ranchers who are working to promote agricultural production and environmental quality. One of the main priorities of the program is the protection, restoration, development or enhancement of at-risk species' habitats (USDA NRCS, 2007).

Farmland Protection Program

The passage of Farm Bill 2002 reestablished the Farmland Protection Program (FPP). The Commodity Credit Corporation (CCC) administers the program under the NRCS. The program provides cost-share assistance to states, tribes, and units of local government for the acquisition of conservation easements or other interests in prime, unique, or other productive soil for the purpose of limiting nonagricultural uses on that land. For fiscal year 2007, $48 million had been allocated nationally to purchase conservation easements (USDA NRCS, 2007).

Other U.S. Department of Agriculture Funding Programs – Stewardship/Invasive Species

A number of other funding mechanisms for stewardship of land, including invasive species control, are provided through USDA programs, some of which are in cooperation with other agencies and organizations. The Cooperative Forest Health Management Program provides assistance to Cooperative Weed Management Areas, States and non-profit organizations for management of invasive plants/weeds, plant pathogens/diseases and insects on State and private forested lands. The Wildlife Habitat Incentives Program (WHIP) provides both technical assistance and up to 75 percent cost-share assistance to establish and improve fish and wildlife habitat. A voluntary program for people who want to develop and improve wildlife habitat primarily on private land, it includes funding to control invasive species. The Conservation Technical Assistance (CTA) program provides services to eligible entities including State and local government. This assistance is for planning and implementing conservation practices that address natural resource issues. It helps people voluntarily conserve, improve and sustain natural resources. Technical assistance is for planning and implementing natural resource solutions to reduce erosion, improve soil health, improve water quantity and quality, improve and conserve wetlands, enhance fish and wildlife habitat, improve air quality, improve pasture and range health, reduce upstream flooding, improve woodlands, and address other natural resource issues. (USDA, 2006)

Pittman-Robertson Program

The federal Aid in Wildlife Restoration Act, commonly known as the Pittman-Robertson program, was signed into law in 1937 and is administered by the Department of the Interior. It is funded by an 11 percent excise tax on rifles, shotguns and archery equipment and a 10 percent tax on handguns. This money is apportioned to the states and is earmarked for wildlife conservation and hunter education. The State's share of about $5 million annually is currently committed to: habitat protection, sportsmen education and wildlife management (NYS DEC and OPRHP, 2006).

Recreational Boating Safety

Administered by the United States Coast Guard, the Recreation Boating Safety (RBS) grant program was established in 1971 and is funded by a motorboat fuel tax. It was originally established to create more uniformity throughout the boating community on safety guidelines and facilities. This fund can be used for a number of different things including providing facilities, equipment and supplies for safety education. It can also be used for providing public information on boating safety, maintaining waterway markers, and acquiring, constructing or repairing public access sites used by recreational boaters.

The State can receive up to 50% of the funds for their recreational boating safety program from the Coast Guard grant program. The rest of the money must come from other sources; for example general state revenue, undocumented vessel numbering and license fee or state marine fuel tax (US Coast Guard, 2007).

Steps to a Healthier US Grants

Started in 2003, the Steps to a Healthier US Grant program has provided funding to over 40 communities nationwide with $103 million. This grant program is administered by the US Department of Health and Human Services to provide funding to communities for chronic disease prevention

and health promotion in an effort to address obesity, diabetes and asthma. Four communities in NY have received funding from the program, including Binghamton, Jamestown, Fort Drum and Ramapo (US Department of Health and Human Services, 2007).

Special Recreation Program

Administered by the Office of Special Education and Rehabilitative Services, this program is available to states, public agencies and non profit private organizations. Projects that will provide individuals with disabilities with recreational activities as well as experiences to aid in their future employment, mobility, socialization, independence and community integration are eligible for funding from the Special Recreation Program. The program has over $1 million to fund different projects for three years, at which time the receiving organization needs to prove that they will be able to follow through with the program without assistance (US Department of Education, 2007).

North American Wetlands Conservation Act Grants

This program was created in 1989 to promote the conservation of wetlands as well as to benefit the associated migratory birds and other wildlife in the United States, Canada and Mexico. The program is administered by the US Fish and Wildlife Service and there are different levels of funding available. All of the grants are matching and are provided to organizations and individuals who have created partnerships based on the conservation of these wetlands with the goal of protecting the wildlife that migrate throughout the year. The diverse wildlife that migrates to these different wetlands throughout the continent is important to the State park system because of the many recreational activities that they create, including bird watching (US Fish and Wildlife, 2007).

State Wildlife Grant Program

In fall 2001, federal legislation established a new State Wildlife Grants (SWG) program that provided funds from offshore oil and gas leasing to state wildlife agencies for conservation of fish and wildlife species in greatest need of conservation and their associated habitats. This funding was a direct result of 'Teaming with Wildlife' efforts sustained for more than a decade by fish and wildlife conservation interests across the country. This program is unique in that it provides funds for species not traditionally hunted or fished. The United States Fish and Wildlife Service appropriates the funds to the states via a formula based on land area and population size.

The first year of the program (SWG '02) provided $3.7 million for projects in New York State, the second year provided $2.8 million (SWG '03), and the third year provided $2.9 million (SWG '04). The apportionment for New York for the fourth year (SWG '05) is also $2.9 million. Twenty-eight projects were approved for funding in the first year (SWG '02) and in the second year (SWG '03), 18 projects received funding by the U.S. Fish and Wildlife Service. The proposed projects are diverse, covering all animal groups, all areas of the state, and ranging in scale from ecosystems to subspecies. The projects vary in length from one to five years, and include baseline surveys, research, conservation planning, and habitat protection.

The New York Comprehensive Wildlife Conservation Strategy (CWCS) was accepted by the US Fish and Wildlife Service in May of 2006. New York's Strategy addresses species of greatest conservation need, critical habitats, stressors/impacts to natural resources, research, survey, and restoration needs, and priority conservation actions. As such, the strategy is the primary vehicle for biodiversity conservation in New York for years to come, and will determine projects to be funded under the SWG program (NYS DEC and OPRHP, 2006).

The Coastal and Estuarine Land Conservation Program (CELCP)

With completion of the expanded Open Space Conservation Plan which includes the State's CELCP plan, New York is eligible to compete for National Oceanic and Atmospheric Administration funds for the acquisition of coastal and estuarine lands. Federal grants awarded under this program must be matched with non-federal funds on a 1:1 basis. Non-federal match may be state, local, non-governmental or private sources of cash, the value of in-kind services, the value of donated lands or interests therein, services such as on-site remediation or restoration, or donated labor or supplies, provided that contributions are necessary and reasonable. Lands acquired through CELCP funds must be purchased within eighteen months of the grant start date. Costs for services must be incurred within the grant period.

Through 2008, New York State has received nearly $11.8 million in federal CELCP funds for land acquisition (DOS, 2008).

Certified Local Government Grant Program

The Certified Local Government Grant program is a matching grant program for the expansion and maintenance of the National Register of Historic Places and support of historic preservation activities. Eligible activities include survey, inventory, training for municipal officials, public education programs and others. The funding comes from the National Park

Service, administered by OPRHP and only Certified Local Governments are eligible. Past grant awards have ranged from $1,200 to $29,000, with most in the $5,000 to $15,000 range. The total amount of available funding varies each year with the federal allocation (OPRHP, 2007).

Save Americas Treasure's Program

Administered by the National Park Service, this program allocates funding for the preservation and/or conservation work on nationally significant intellectual and cultural artifacts and historic structures and sites. The sites and collections must already be designated as having national significance before the application process begins. To find out if your site is designated, use the National Park Service website (www.nps.gov).

This is a 1 to 1 matching grant program for federal, state, tribal and non-profit organizations. In 2006, four projects in New York State were funded through this program totaling over $485,000. These projects included the preservation of artifacts that are part of the World Trade Center/ September 11, 2001 Collection located at the NYS Museum, and the conservation of the nations oldest collection of drawings and watercolors at the NYS Historical Society (US Department of Interior, 2007).

Forest Stewardship Program

Administered by the U.S.D.A., the Forest Stewardship Program (FSP) helps nearly 500,000 nonindustrial private forestland (NIFP) owners - who own 85% of New York's forestland - better manage and use their forest resources. Under FSP, every state has developed and is implementing a comprehensive management program to ensure that private forestlands are managed under stewardship plans. A companion program, the Forest Land Enhancement Program, authorized by the 2002 federal Farm Bill will provide an opportunity for owners to obtain financial and technical assistance to implement projects recommended in Stewardship plans (NYS DEC and OPRHP, 2006).

Other Federal Funding Mechanisms

The National Fish and Wildlife Foundation (NFWF) is a private, non-profit, tax-exempt organization chartered by Congress in 1984 to sustain, restore and enhance the Nation's fish, wildlife, plants, and habitats. Through leadership conservation investments with public and private partners, NFWF is dedicated to achieving maximum conservation impact by developing and applying best practices and innovative methods for measurable outcomes. Since its establishment, NFWF has awarded nearly 9,500 grants to over 3,000 organizations in the United States and abroad and leveraged – with its partners – more than $400 million in federal funds into over $1.3 billion for conservation. (NFWF, 2008)

The Native Plant Conservation Initiative is administered by the National Fish and Wildlife Foundation. It supports on-the-ground conservation projects that protect, enhance, and/or restore native plant communities on public and private lands. Grants of federal dollars are provided to non-profit organizations and agencies at all levels of government. Projects typically fall involve: protection and restoration; information and education; and/or inventory and assessment. (NFWF 2008)

The Pulling Together Initiative is administered by the National Fish and Wildlife Foundation in partnership with the USFWS, Bureau of Land Management, the USDA Forest Service, the USDA Animal and Plant Health Inspection Service (APHIS), and the NRCS. Proposals are solicited from non-profit organizations and government agencies interested in managing invasive and noxious plant species. It provides a means for Federal agencies to be full partners with State and local agencies, private landowners, and other interested parties in developing long-term weed management projects within the scope of an integrated pest management strategy. (NFWF, 2008)

State

Environmental Protection Fund

In 1993, the Legislature enacted the Environmental Protection Act. The Act created, for the first time in the State's history, a permanently dedicated Environmental Protection Fund (EPF) to meet many of the State's pressing environmental needs. Some of these needs include: the acquisition of priority projects identified in the Conserving Open Space Plan; work on the identification, research and conservation of the State's biological diversity administered by the BRI; the municipal parks and historic preservation grant programs administered by OPRHP; local farmland protection projects administered by the Department of Agriculture and Markets; local waterfront projects administered by the Department of State (DOS), and more recently, stewardship funding for DEC's and OPRHP's land and facility holdings and implementation of the Hudson River Estuary Action Plan.

The acquisition of open space conservation projects is provided for in Title 3 of Article 54 of the Environmental Conservation Law. Title 9 of Article 54 authorizes OPRHP to administer a matching grants program for municipal parks, recreation and historic preservation projects. Revenues to support the EPF include proceeds resulting from a portion of the existing real estate transfer tax, refinancing of state and public authority obligations, sale of surplus State lands, sale or lease of

State-owned underwater lands and revenues from a conservation license plate program dedicated to open space conservation land projects.

The proposed "Bigger Better Bottle Bill" would create a larger revenue source for the Environmental Protection Fund through two main amendments. First, noncarbonated beverage containers would become eligible for bottle return deposits and secondly the creation of a system for beverage companies to return any unclaimed bottle deposits to the fund. The increase in available funding through the EPF will have many benefits for the implementation of SCORP goals.

Listed below are the main grant programs which are funded through the Environmental Protection Fund. The Parks, Historic Preservation, Heritage Areas, Acquisition, Zoos, Botanical Gardens and Aquariums and Snowmobile Trail Grant programs are all administered by the Office of Parks, Recreation and Historic Preservation. More information can be found at the agencies website (www.nysparks.state.ny.us). The other programs are administered as indicated.

Parks Program

A matching grant program for the acquisition or development of parks and recreational facilities for projects to preserve, rehabilitate or restore lands, waters or structures for park, recreation or conservation purposes. Funds may be awarded to municipalities or not-for-profits with an ownership interest, for indoor or outdoor projects and must reflect the priorities established in SCORP.

Between the years of 2001 and 2006, this program received over 1,400 applications from across the state. With $46,552,137, OPRHP and the Environmental Protection Fund were able to finance 298 projects.

Historic Preservation Program

A matching grant program to improve, protect, preserve, rehabilitate or restore properties listed on the National or State Registers of Historic Places. Funds are available to municipalities or not-for-profits with an ownership interest.

This program has been able to help fund 249 projects since 2001, costing over $41 million.

Heritage Areas Program

The Heritage Area Program is a matching grant program for projects that are working to preserve, rehabilitate or restore lands, waters or structures, identified in a management plan approved by the Commissioner. Projects must fall within a New York State Designated Heritage Area.

Between 2001 and 2006, over $6 million in financial assistance has been awarded to 41 projects.

Acquisition

A matching grant program for the acquisition of a permanent easement or fee title to lands, waters or structures for use by all segments of the population for park, recreation, conservation or preservation purposes. This program should be used for all three program areas where acquisition is of more importance than development.

Zoos, Botanical Gardens and Aquariums

The Zoo, Botanical Gardens and Aquariums is a program for the funding of collections care or special projects at municipal or not-for-profit institutions. Eligible institutions house, care for and interpret for the public, systematically organized collections of living things.

Snowmobile Trail Grant Program

Administered by OPRHP, this program is designed to allocate money to local government sponsors that develop and maintain snowmobile trails throughout New York State's Snowmobile Trail System. The fund provides 70% in the beginning as a grant-in-aid program and will reimburse the grantee the rest after the project has been completed. Application must be received by September 1st to be eligible.

Local Waterfront Revitalization Program

Environmental Protection Fund Local Waterfront Revitalization Program Grants are available through the Department of State to communities for the preparation and implementation of Local Waterfront Revitalization Program (LWRP). DOS provides grants to waterfront municipalities for a variety of planning, design and construction projects to protect revitalize waterfront resources, including:

- Community visioning and development of revitalization strategies;
- Completing or implementing LWRP or HMP;
- Preparing or implementing a waterbody /watershed management plan;
- Urban waterfront redevelopment;
- Creating a blueway trail;
- NYSCRIP signage programs.

Since 2003, 439 grants totaling $88 million have been awarded to waterfront communities through the Environmental Protection Fund Local Waterfront Revitalization Program.

Hudson River Estuary Grants Program

Administered by the Department of Environmental Conservation and funded by the Environmental Protection Fund, the Hudson River Estuary Grants provide financial assistance to municipalities

and non-profits within the Estuary Watershed Boundaries. The financial assistance can help communities fulfill the goals set forth by the Hudson River Estuary Action Agenda within five categories. The actions that can be funded include: Community Interpretive Centers and Education, Open Space: Natural Areas and Scenic Resources, Community-based Habitat Conservation and Stewardship, Watershed Planning and Implementation and Hudson River Access: fishing, boating, swimming, hunting, hiking, or river watching. Since 1999 when the funding began, almost $10 million has been allocated to 301 applicants within the watershed boundaries (DEC, 2007).

Invasive Species Eradication Grant Program

Administered by the Department of Environmental Conservation, this program is providing grants to eradicate invasive species. The two parts of this program include terrestrial and aquatic species eradication. Invasive species were defined within Chapter 7 under DEC, "Invasive Species".

The funding is allocated to projects which are proposing removal of plants or animals that meet the definition of an invasive or nuisance species from a waterbody or wetland of New York State. This matching grant program is funded by the Environmental Protection Fund to municipalities and non-profits, and the 2006/2007 budget cycle included $1,000,000 for these types of projects statewide (DEC, 2007).

Brownfield Opportunity Area

Funded through the Environmental Protection Fund and administered by a partnership between Department of State and the Department of Environmental Conservation, this program is focused on providing funds for the study and planning of areas for the redevelopment of brownfield sites. A brownfield is a parcel of land where redevelopment is complicated by the presence or potential presence of environmental contamination. Brownfield sites have been redeveloped into recreation sites all around the country and they can provide much needed open space to often underserved areas.

The funds will cover 90% of the costs for pre-nomination studies, nomination studies and implementation strategies. The rest of the cost of the studies and plans must be provided by the local share. Financial assistance is available to municipalities and community based organizations as long as they were not responsible for the environmental conditions at the site (DOS, 2007).

New York State Great Lakes Protection Fund

In 1989 the multistate Great Lakes Protect Fund was created through the contribution of 7 of the 8 Great Lake States to be used as a source of funds for research and projects that would protect and conserve the Great Lakes ecosystem. The statewide program called NYS Great Lakes Protection Fund was created in 1990 and allows NY access to a portion of the interest that is earned from endowment. The fund is administered by DEC with input from the New York State Great Basin Advisory Council. This fund contributes to two programs, "small" and "large" grants.

The small grant program provides seed money to projects in the region that promote collaboration between government, academia, industry and environmental groups. The small grant program funds can be used for individual projects or to get started on a larger project that may require funding from other sources as well. The small grants award process is administered by the Great Lakes Research Consortium.

The large grant program is awarded approximately every three years and provides money to larger projects that are consistent with the Great Lakes Protection Fund Agreement. Eligible projects will create communications between all the different interested groups, result in action that will lead to improvement of environmental quality in the region, and promote approaches to understanding the ecosystem (DEC, 2007).

Habitat/Access Funding Grants

The Habitat/Access Funding Grant is a program, administered by DEC, to assist municipalities, non-profits and individuals in doing small scale projects that will benefit fish and wildlife resources. The fund has $100,000 to provide for the improvement of fish and wildlife habitat management and public access to sites for hunting, fishing, trapping and other fish and wildlife recreational activities statewide (DEC, 2007).

Sources of Funding for State Grant Programs

Habitat/Access Stamp

Legislation signed in 2002 created a new Habitat/Access Stamp that is available to people who want to support the Department of Environmental Conservation's efforts to conserve habitat and increase public access for fish and wildlife related recreation. The 2006-2007 stamp may be purchased for $5.00 donation at license issuing outlets and online beginning August 14, 2006 (DEC, 2007). By law, all monies raised through purchases of the Habitat/Access Stamp must be deposited in the State's Conservation Fund in the Habitat

Account. Habitat/ Access Grants are awarded annually to fund projects that improve fish and wildlife habitat and public access for hunting, fishing, trapping and other fish and wildlife related recreation (NYS DEC and OPRHP, 2006).

Tax Contributions

Since 1982 New Yorkers have been able to donate money through their state income taxes to the "Return a Gift to Wildlife Program."

The revenues are used for a variety of projects that benefit fish and wildlife. Annually the fund receives over $450,000 and this money is able to wholly or partially fund projects. The projects funded by RAGTWP have been able to benefit endangered species restoration, protection and habitat management, help implement comprehensive surveys and inventories of many species and their habitats and also provide wildlife education programs.

Legal/Enforcement Settlements and Natural Resource Damage Remediation

As a part of settlements the DEC reaches with various parties in enforcement contexts, funds may be provided for open space conservation. An example of funds being directed to the EPF include the Northville settlement funds which were dedicated for Long Island Pine Barrens purchases. Such funds can arise from settlements in any type of enforcement action, including natural resource damage remediation actions, as well as in other settlement contexts.

Conservation License Plate

The 1993 EPF legislation authorized the creation of a conservation license plate with $25 from each sale dedicated to the open space portion of the EPF. Roger Tory Peterson, the foremost naturalist of the 20th century, graciously donated a bluebird painting which was used as the basis of the State's beautiful bluebird license plate. More than 9,700 plates have been sold since the inception of the program in late 1995.

Conserve Habitat License Plate

Beginning in 2005, "Conserve Habitat" custom license plates became available for purchase, with $25 from each sale dedicated to improve habitat and to increase habitat access throughout the state. Revenues will be deposited in a special account within the Conservation Fund, and be overseen by DEC. The habitat account is used solely to protect, restore, and manage habitat, and to develop public access for fish- and wildlife-related recreation and study. A ruffed grouse in flight was selected to illustrate the "Conserve Habitat" plate (NYS DEC and OPRHP, 2006).

Gifts and Donations

Gifts and donations are a key way that individuals and businesses can contribute directly to the conservation of open space. Gifts and donations of land, in fee or easement, can be made to qualified not-for-profit organizations and local, state and federal governments. Gifts of funds for acquisition of lands can also be made, and can be targeted to specific acquisition proposals. Some private foundations have been particularly active and important in land conservation in the State. Foundation funding may continue to be an important source of conservation funds in the future.

The Natural Heritage Trust is a public benefit corporation of the State of New York that can accept private sector gifts and funds for the preservation, protection and enhancement of the natural and historic resources for parks, recreation and historic preservation purposes. This provides an opportunity for OPRHP and DEC to promote public/ private cooperation.

OPRHP's Bureau of Historic Sites, acting on behalf of the Commissioner accepts gifts of artifacts for the State Historic Sites. These gifts come from individuals and organizations (e.g. friends groups) and most often are from descendants of the original owners of State Historic Sites (e.g. Livingston furnishings that originated at Clermont). The Bureau of Historic Sites has a formal procedure for reviewing and accepting gift offers.

Other Grant Programs

Hudson River Valley Greenway

To provide technical and financial support to municipalities and not-for-profit corporations, the Hudson River Valley Greenway created a grant program in 1992. The municipalities and not-for-profits that are located in the geographic area of the Greenway (the surrounding counties) are eligible for the grant funding if their projects are working towards full implementation of the Draft Greenway Trail Plan. In 2008 there were 13 grants awarded totaling $59,000 through this grants program capital including improvements to provide access through a VA hospital to link trails in three towns in Dutchess County.

New York State Council on the Arts (NYSCA)

Funding is available from NYSCA for Architecture, Planning and Design program. Non-profit organizations and local governmental agencies in NYS are eligible to receive assistance in engaging the services of an architect or

planning, design or historic preservation professional. Over $1 million was allocated throughout the State for FY 2007 through the Architecture Planning and Design program.

There is also money available from NYSCA for Capital Projects; eligible projects include the improvement, expansion, or rehabilitation of existing buildings owned or leased by nonprofit cultural institutions receiving programmatic funding from the Council. For FY 2007, this program funded 23 projects with over $800,000 (NYSCA, 2007).

Preserve New York (PNY) Grant Program

Administered jointly by the NYSCA and the Preservation League of New York, the PNY program is eligible to municipalities and not-for-profit organizations with 501(c) (3) status. The three projects that are able to be funded through the PNY program are historic structure reports, historic landscape reports and cultural resource surveys. Awards for projects typically range between $3,000 and $10,000. For FY 2006, 11 projects were selected through 9 counties in New York State and they totaled over $80,000 (Preservation League, 2007).

Lake Champlain Basin Program

The Lake Champlain Basin Program (LCBP), created in 1990 and reauthorized in 2002, is a partnership that is working to implement the region's comprehensive plan, Opportunities for Action: An Evolving Plan for the Future of the Lake Champlain Basin. The execution of the plan will protect and improve the environmental quality and economic benefits of the Champlain Basin region. The Plan addresses a number of different regional issues including water quality, toxic substances, living natural resources, recreation and cultural heritage resources, economics, monitoring, data management, strong education and outreach programs and the active involvement of local communities. The LCBP provides funds and services to groups that are working towards these goals.

The partnership of the LCBP includes the State of New York, State of Vermont, Province of Quebec, US EPA, the New England Interstate Water Pollution Control Commission, other federal and local government agencies, and many local public and private groups. Since 1992, The LCBP has awarded $3.07 million to 608 projects in New York and Vermont. New York has received $ 1.18 million for 243 projects since 1992. Most of the funding for the grants comes from the US EPA.

There are two main grant types available:

1) Local Implementation Grants
   - Annual Priority Grant- funding in the range of $5,000 to $20,000 given to larger projects that focus on any of the priorities from Opportunities for Action
   - Partnership Program Grant- up to $5,000 for projects emphasizing community partnerships and collaborative efforts
   - Organizational Support Grant- provides grants up to $4,000 to help groups improve their organizational functions
   - Education Grant- up to $7,500 to groups to provide information to students and/or adults about the issues prioritized in the Lake Champlain Plan.
2) Technical Assistance Programs TAP provides assistance to groups working on Cultural Heritage Programs. The grants provide up to $1,000 to municipal and non-profit organizations performing: conditions, archaeological and engineering assessments; design assistance; museum mentoring; property interpretation; and state and national Register nominations (Lake Champlain Basin Program, 2007).

National Trails Fund

The National Trails Fund, administered by the American Hiking Society, is the only privately supported program that funds grassroots organizations exclusively. The fund was created in 1997 and has provided a total of $290,000 to 73 different trail projects nationwide since then. This fund provides money to secure access, get volunteers and purchase tools and materials for projects that will have hikers as the primary user group.

In 2006 the National Trails Fund provided for a project in Idlewild Park, which is a 224 acre wetland park that is not managed by NYC Department of Parks and Recreation but by the Eastern Queens Alliance. The fund went to build the first portion of the trail as well as purchasing and installing interpretive signs for self-guided tours (American Hiking Society, 2007).

Capacity Building Grants

Parks & Trails New York's Capacity Building Grants program for park and trail groups provides grants of up to $3,000 to strengthen not-for-profit organizations that are working to build and protect parks and trails in communities across the state.

Through this grant program Parks & Trails New York intends to help New York not-for-profits better fulfill their missions; improve their reach, effectiveness, and impact; leverage more resources, and increase community support for and involvement in park and trail planning, development, and stewardship. Funds can be used to assist with activities associated with organizational start-up and development; training; communications; and

volunteer recruitment and management (PTNY, 2008).

Funding through Health Programs

Several state and national organizations have funding that may be used to develop and promote recreational facilities. On a national level, the Robert Wood Johnson Foundation (www.rwjf.org) is beginning to provide support to communities for improving opportunities for physical activity. The Centers for Disease Control (www.cdc.gov) provides funding to state health departments for promoting physical activity and support for Active Community Environments. In New York State, the Healthy Heart Program provides grants to community groups for a variety of activities aimed at making it easier for people to be more physically active and improve their eating habits. Residents can contact the State's Department of Health (DOH) for more information on these programs.

Grant Allocation

SCORP provides the foundation for the allocation of state and federal funds for recreation and open space projects. The policies, needs assessment, programs and initiatives are translated into criteria for evaluating projects in an objective manner. The SCORP is utilized to develop the rating systems for the Open Project Selection Process (OPSP) for LWCF projects and the EPF grants for municipal and not-for-profit projects, RTP grants and various acquisition categories consistent with the Conserving Open Space Plan.

SCORP helps guide the allocation of municipal and not-for-profit organization funds to local areas in greatest need and for facility types which are most deficient. The State's park and recreation priority rating system helps rank projects on a statewide basis, translating measurements of need and statements of policy to the maximum fulfillment of recreation wants and protection of natural assets. The SCORP's forecasts of need for recreation facilities combined with natural resource and recreation service objectives are reflected in the criteria comprising these systems. Factors include physical, recreational, social, economic, and environmental. The numeric ratings of the priority systems provide the method for comparative analysis of the many diverse projects evaluated. OPRHP administers grant programs that provide matching funds to municipalities and state agencies for the creation, operation, expansion, and rehabilitation of parks, facilities and programs. The importance of these initiatives requires that the most objective measures possible be used in the distribution of these funds. Many steps are taken in the SCORP assessment and policy process to assure meaningful public participation and technical evaluation.

Considerable public input is utilized in the development and revision of the State's rating systems. The LWCF, OPSP and the SCORP program provide sound bases for the priority rating systems. A strong public participation process was utilized in developing a system for the EPF and RTP grants.

Outreach and implementation occurs principally at the regional level. Field representatives work with municipalities and not-for-profit organizations in developing applications and providing initial review. All applications receive statewide and compliance reviews. Joint meetings with regional field representatives and technical staff provide final review, ranking and approval, assuring full continuity from assessment and policy formulation to resource protection and program implementation. Appendix H is a copy of the OPSP rating form.

Partnerships

Partnerships among governmental agencies and with the private sector, not-for-profit organizations and volunteers are an important tool in the acquisition, development, operations and maintenance of recreation facilities. Significant strides have been made to foster new partnerships and to provide guidance to agencies considering partnerships. The primary intent of partnerships is to assist public agencies in meeting their missions of providing quality and safe recreation while protecting the natural and cultural resources as well as improving the delivery of services.

First and foremost, it is important to maintain the resource stewardship mandate for resource agencies. Partnerships must be compatible with this mandate to maintain the integrity of the recreational and cultural system. The administrating agency should not relinquish ownership, control or responsibility for the protection of the land and facilities under its stewardship. Partnerships should be designed to supplement not supplant resources provided to an agency through their normal budgetary process.

Types of Partnerships

There are various types and forms of partnerships. These need to be tailored to the needs for a park, historic site or other recreation/open space area. The following is a listing of some of the types of partnerships:

Acquisitions - A not-for-profit organization, in some cases, has the ability to advance acquisitions with a landowner quicker than a governmental entity. The not-for-profit organization then holds the property until the governmental body can

secure the funding and facilitate the acquisition process. In addition, a not-for-profit can function as a third party in the negotiations with a landowner.

Cooperative/Management Agreements – A public agency can enter into an agreement with not-for-profit groups where the group operates a property on the agency's behalf. The not-for-profit is then largely or solely responsible for all day-to-day operations and expenses for that facility. Agreements within OPRHP have terms of 5 to 20 years. Some agreements within OPRHP have been in place for more than 30 years.

Friends Groups - An agency can enter into an agreement with a not-for-profit organization to form Friends Groups to support a specific site.

Concession Agreements - These partnerships generally involve for-profit entities. An agency determines that there is a need for a service and solicits proposals from the private sector. An objective is to encourage competition for private sector investment and operation of public service facilities.

Gifts - These are gifts in terms of land or facilities from the private sector to a governmental body.

Sponsor - It is common to have events conducted at public facilities sponsored by various organizations. Some events advance the goals of the organization while providing additional activities for the public.

Volunteers - In addition to the more formal arrangement with the not-for-profits, there are numerous informal arrangements with volunteers on public lands. These may range from local service organizations to Camper Assistance Programs.

Adopt a Resource Program - These are programs directed at a specific resource such as a beach or trail. The supporting groups would be responsible for the stewardship of that resource.

Research - These are partnerships with individuals, not-for-profit organizations, and institutions to conduct inventories and research on public lands to improve their stewardship, protection and management. The information is also valuable in the development of environmental education and interpretive programs.

Multi-agency and organization partnerships can promote common goals such as invasive species management. Examples of such partnerships are provided in Chapter 4, Stewardship and Chapter 7, DEC "Invasive Species".

Guidelines

Guidelines for partnerships are important to ensure that the partnership is compatible with the mission of the agency and with the framework that governs the agency. OPRHP with the assistance of a working group comprised of representatives from various recreation, environmental and cultural organizations developed a set of public/private partnership guidelines. Although these are specific to OPRHP, they could apply to other public agencies. The guidelines flow from the Agency's mission statement to the goals and objectives identified in SCORP. The guidelines are:

- Partnership activities shall provide a public benefit consistent with the Agency's mission, goals and objectives.
- Partnership activities shall be compatible with the involved park and shall take into account the protection of the park's recreational, natural, historic and cultural resources.
- Partnership activities being considered for a specific park/historic site shall be evaluated within the context of ongoing management and planning for that property.
- Generally, partnership activities should be self-sufficient. Any increased maintenance and operational responsibility to the Agency shall be evaluated within the context of the Agency's budget and the enhanced delivery of services.
- Partnership activities shall be within the determined carrying capacity of parks/historic sites, their facilities and landscapes.
- Partnership activities shall provide reasonable public access, use and enjoyment.
- Partnership recognition shall be commensurate with the enhancement to the park and compatible with the park's resources.
- Partnership activities that increase scientific understanding of the ecological resources in State Parks for both stewardship and educational programs will be encouraged.

Goals

- Encourage the development of partnerships that are compatible with mission of the Agency and with the natural, recreational, cultural and historic resources of the site.
- Utilize the partnership guidelines to assist in the development and implementation of partnerships.
- Encourage partnerships at all levels of the park and historic site systems.
- Seek new and innovative partnerships.
- Review existing partnerships on a routine basis to assure they are meeting the Agency's goals and objectives and are serving the public in an appropriate manner.

Accomplishments

There are a number of partnerships that exist throughout the State.

Numerous examples can be given for each type of partnership mentioned above. Over the past five years, OPRHP has made considerable strides in advancing partnerships with the private sector, not-for-profit organizations and other governmental agencies. To provide overall guidance, the Agency invited a consortium of individuals and interest groups to assist in the development of public-private partnership guidelines. Within this framework, OPRHP entered various partnerships to conserve open space and expand park lands, to improve recreational opportunities, and others to protect and interpret natural and cultural resources.

In May of 2000, the Theodore Roosevelt Nature Center at Jones Beach State Park on Long Island was officially opened. This state-of-the-art environmental education center, located along the Atlantic Ocean only 30 minutes from New York City, was created through a public-private partnership, with $450,000 in state and federal funding, $350,000 in contributions from the Ford Motor Company and the donation of a geothermal system and photovoltaic roof system for heat, air conditioning and power from the Long Island Power Authority estimated at $300,000. This investment in energy efficient systems will save OPRHP more than $20,000 in annual energy costs while being environmentally friendly. The center offers diverse indoor and outdoor exhibits where visitors can learn about the Long Island coastal environment and its unique plants and wildlife. The center also provides classroom and laboratory space for school groups to have a true hands-on experience. The most critical element of this partnership was not only the chance to provide an environmental education center at almost no public or state cost, but that the facility was once a bathhouse that had been closed for over 10 years due to budget reductions. This adaptive reuse enabled infrastructure to be saved and dedicated to environmental education that is so critical to today's world.

At Niagara Reservation State Park, home of Niagara Falls, the observation tower, which provides public access to the mighty Niagara River gorge and "Maid of the Mist" boat ride, which takes visitors to the face of the falls, was outdated and no longer capable of accommodating the more than eight million international visitors. The modernization of this tower could not have been accomplished within OPRHP's existing budget yet is critical to accommodating ongoing and future tourism demand. The estimate to reduce the height of the tower to provide less visual intrusion in the natural surroundings, provide high-speed elevators, remove lead-based paint and reclad the structure is $23 million. Through partnerships OPRHP will be able to accomplish this goal and provide a facility the entire country will be proud to have international visitors experience. The concessionaire who provides the boat ride will contribute $5 million and receive additional operational benefits; the New York State Power Authority (NYPA) will contribute $5 million; grants have been awarded for $5 million; $3 million will come from the Bond Act, and $5 million will come from State Park revenues.

The United States Golf Association (USGA), has committed over $2.7 million towards renovating and restoring the Black Course at Bethpage State Park in preparation for the 2002 U.S. Open. This will be the first time ever that this historic sporting event will be played at a truly publicly owned golf course.

Open Space Institute (OSI), Scenic Hudson and the Trust for Public Land are some of OPRHP's many partners on land acquisitions. OSI assisted OPRHP in acquiring over 3,200 acres of shoreline and mountains along the Hudson River that expanded Moreau Lake State Park in the Capital District Region.

Former U.S. Senator Frank Lautenberg of New Jersey provided a generous gift of $1.75 million for the construction of a Visitor Center at Sterling Forest® State Park in the Palisades Region. This private donation highlights an unprecedented purchase of approximately 17,500 acres of important watershed and valuable wildlife habitat by the States of New York and New Jersey, the Federal government, the Palisades Interstate Park Commission and numerous private partners. The public, schools and the scientific community will use the Visitor Center at Sterling Forest® State Park as its laboratory to form an understanding of this expansive, critical wildlife habitat and unique natural resource. The Lila Acheson and Dewitt Wallace Fund for the Hudson Highlands and the Doris Duke Foundation each contributed $5 million, for a total of $10 million, towards the purchase of Sterling Forest® State Park.

Fred and Martha Schroeder of East Greenbush donated a major gift of $400,000 to help fund the construction of the Emma Treadwell Thacher Nature Center at Thompson Lake State Park, emphasizing children's activities, environmental education and protection and outdoor recreation, on land within the Helderberg Escarpment. The Schroeder's also established an endowment of $350,000 for operation and maintenance of the facility.

Betty and Wilbur Davis donated 190+/- acres of land near Cooperstown which is now known as Betty and Wilbur Davis State Park. The Davis' also donated over $600,000 to be used to develop the park, and establish and endowment to permanently support the park.

OPRHP has entered into a five-year agreement with the Natural Heritage Program that will result in the first comprehensive survey of the biological resources in the State Park System. This information will be critical to the evaluation of the environmental sensitivity of state park land and will be a valuable tool in determining the feasibility of and appropriateness of proposed projects.

Actions

- Over the next five years the use of partnerships should be encouraged.
- Existing partnerships that have proven successful should be continued, those with less favorable results should be eliminated, and new approaches should be tried.
- Each site has to consider its resources and needs and the types of partnerships that are appropriate.

Chapter 10 - Environmental Impacts

Environmental Review

New York's State Environmental Quality Review Act (SEQR) requires all state and local government agencies to consider environmental factors in agency decision-making processes along with social and economic factors. Agencies must assess the environmental impacts of actions which they propose, evaluate alternatives, develop methods for minimizing potential adverse impacts, and provide an opportunity for the public to participate in the planning process when proposals may have significant impacts. This means these agencies must assess the environmental significance of actions they have discretion to approve, fund or directly undertake. SEQR requires the agencies to balance the environmental impacts with social and economic factors when deciding to approve or undertake an "action". The action in this case is the development and update of SCORP.

When an action is determined to have potentially significant adverse environmental impacts, an Environmental Impact Statement (EIS) is required. The SEQR process uses an EIS to examine ways to avoid or reduce adverse environmental impacts related to a proposed action. This includes an analysis of all reasonable alternatives to the action. The SEQR decision-making process encourages communication among government agencies, project sponsors and the general public.

The updated SCORP will guide future recreational planning, activities, and development. Its adoption and implementation has the potential for significant effects, thus it was determined that an EIS should be prepared. Since SCORP is a broad-based plan, an EIS that evaluates site-specific impacts of projects is not possible; thus, a Generic EIS (GEIS) is being prepared. A generic EIS (GEIS) is an assessment of the potential impacts of broad based or related groups of actions. It is more conceptual in nature than a site specific EIS which addresses a particular proposed project. It may provide a general discussion of the rationale and impacts of the proposed action.

This chapter, together with the remaining chapters of SCORP, constitutes a draft GEIS for SCORP. Chapters 1 through 9 describe the proposed action as well as numerous ways in which the impacts of SCORP are mitigated. These other chapters provide the reviewer with detailed information on the recreation resources and needs, the natural, cultural, and historic resource settings, policies, actions, and an overall implementation scenario. They are thus integral components of the GEIS and should be referred to while reviewing this chapter.

This chapter discusses impacts and mitigation of impacts associated with adoption and implementation of the 2008 SCORP by OPRHP. This chapter also briefly identifies the Environmental Setting for SCORP, and alternatives to the SCORP as proposed. Other chapters of SCORP are discussed briefly within the context of the policies and strategies. Discussions of consistency of SCORP with coastal policies under the State's Coastal Management Program (CMP) are also included in the Policies and Strategies section of this chapter. Many of the issues identified in this GEIS have been previously addressed in earlier GEIS's for SCORP, particularly in the 2003 SCORP and Final GEIS. This GEIS also references the Open Space Conservation Plan and its GEIS (DEC et. al. 2006).

SCORP 2008 represents an extensive analysis of changing recreational needs, development of updated policies and objectives, and general projections for future recreation needs and activities. This chapter contains an analysis of the overall SCORP direction in the context of maximizing needed recreational opportunities while protecting the State's natural and cultural resources from significant adverse impacts. The environmental analysis of SCORP focuses on the adequacy, clarity, and appropriateness of the stated policies and action strategies that implement the vision of SCORP (Chapter 2). The GEIS is not intended to provide a comprehensive analysis of impacts of each program or project which may be undertaken pursuant to SCORP. It serves as a reference and sets forth the process for evaluation of future actions and related impacts, providing a sound environmental planning base. Existing evaluation and review processes are discussed in terms of assuring that resource protection is given appropriate consideration during planning and implementation of programs and activities under the SCORP "umbrella".

Specific recreational projects undertaken, funded or approved by state or local agencies pursuant to SCORP are subject to SEQR if the projects meet certain thresholds as defined by SEQR regulations. Evaluation of some of these specific proposals will result in determinations that they will not have significant adverse effects on the environment as a result of undertaking the actions. Other proposals, those that may have a significant adverse effect on the environment, will require the preparation of EISs. Under SEQR, the EIS process assures that an action to be undertaken will avoid or minimize adverse

environmental impacts to the maximum extent practicable. Through SEQR and other existing review mechanisms such as permit processes, consideration of environmental factors is a part of all plans or specific actions undertaken to implement SCORP.

The Draft SCORP/GEIS are being made available for public review and will be the subject of a public hearing in accordance with the public review process of the State Environmental Quality Review Act (SEQR). Comments on the Draft SCORP/GEIS are welcome and will be incorporated and addressed in the Final SCORP/GEIS as part of the SEQR record, prior to adoption of SCORP.

Environmental Setting

The environmental setting for SCORP consists of the people and the natural, recreational, scenic, historic and cultural resources of New York State, as well as social and economic characteristics. The resources potentially affected by SCORP include recreational areas, lakes, rivers, streams, wetlands, coastal and estuarine waters, significant habitats, fish and wildlife, rare species of plants and animals, forests, agricultural areas, parklands, historic sites, archeological areas, scenic areas, and communities. The setting also includes the general public, park and recreation service providers and both resident and nonresident users.

The other chapters in SCORP provide more information on: recreation resources and needs, including socioeconomic factors; recreational, natural and cultural resources; and the State Outdoor Recreation System.

Alternatives

At the plan level, non-preparation of a plan is not a viable option since the state is required to prepare SCORP, both pursuant to State law and to maintain eligibility of federal funds under the LWCF.

At the implementation level, it would mean that there would be no statewide guidance for the provision of recreation, or if the 2003 SCORP were continued, there would be no revisions that provide updates concerning recreation supply and demand, policies and strategies as well as the numerous programmatic changes and initiatives.

In addition, failure by the State to implement SCORP may result in the loss of needed opportunities for public access and outdoor recreation, without proper identification of those needs. Significant adverse impacts to the environment could occur without the guidance provided in the policies and strategies. Moreover, without the focus and priorities set by SCORP, the opportunity for creation and maintenance of statewide systems of natural, cultural and outdoor recreation facilities will be substantially hindered.

Another alternative to SCORP as proposed would be a much smaller scope, such as a focus on OPRHP actions only, or limited to those actions which may be funded under LWCF. Limiting SCORP in this manner would not capture the breadth of the outdoor recreational programs and opportunities within the state. Alternatively, attempting to address every outdoor recreational program and facility in the state is clearly beyond the realm of possibility. SCORP as proposed provides a balance, providing the best information available on state and regional programs, facilities and actions related to outdoor recreation and open space resources. SCORP also provides the statewide framework to guide the provision of outdoor recreation and open space opportunities at the local level.

Environmental Impacts and Mitigation

Within this section, each program and/or policy is briefly described and the implications as to the environmental impacts discussed. Where possible, general approaches that mitigate potential adverse impacts are also identified.

Planning Process

The planning principles described in Chapter 1 assure that recreation planning in the State considers natural as well as human resources. Through participation by all levels of government, the private sector, and citizens, coordination of recreation service delivery is achieved. Also, constantly reevaluating assumptions, methods and objectives in the planning process helps assure protection of natural resources by adjusting preservation measures when conditions change or new information is available.

The objectives of OPRHP's planning process continue to support SCORP goals and planning principles. These objectives further the protection of resources by guiding agencies in formulating priorities. Adequate information and analysis, coordination and citizens' participation are key to wise implementation of actions that protect resources.

The planning process described in Chapter 1 incorporates consideration of land and water resources and user impacts, and emphasizes the best use of available resources.

Participation by the public in the planning process provides a balance of interests in plan formulation. Protection of open space, natural and cultural resources, and interests and priorities of the public, are reflected in SCORP as

well as in specific programs and projects implemented pursuant to SCORP.

Policies and Strategies

Following is a discussion of the policy framework (refer to Chapter 2) in the context of the importance of balancing policies in project evaluation, the appropriateness of the policies and action strategies, and measures needed or in place which effectively implement the policies and actions to provide adequate resource protection. Discussions of consistency of policies and action strategies with coastal policies are included in this section.

In order to maximize the social and economic benefits associated with providing recreation while minimizing adverse impacts to the resource, it is critical that during planning for recreation programming and development of recreational facilities, consideration be given to the entire set of SCORP policy statements. Reliance on a portion of the policies or giving undue weight to certain of the strategies can result in substantial reduction in the quantity of potential recreation services (and the associated benefits) or in the quality of the State's natural and cultural resources. For example, the policies regarding resource protection may result in unnecessary restriction of recreational opportunities; while on the other hand, emphasis on water access has the potential for significant adverse impacts on the environment.

The SCORP policies and action strategies are comprehensive and are consistent with OPRHP's mission to provide safe and enjoyable recreational and interpretive opportunities for all state residents and visitors and to be responsible stewards of the valuable natural, cultural and historic resources under its care. The policies and action strategies also reflect the guiding principles of the mission which are commitments to people, preservation, service and leadership. The Parks, Recreation and Historic Preservation Law contains a provision to declare stewardship of resources as a responsibility of the State, and includes as a guiding principle that OPRHP conserve, protect and enhance the natural, ecological, historic, cultural and recreation resources and provide public access in a manner that will protect them for future generations.

Assurance that the entire set of SCORP policies and action strategies is applied to development of recreational programs and facilities is provided through use of grant allocation criteria (State and Federal Funding, Chapter 9), planning processes and public participation (Chapter 1), and environmental review procedures. Resource protection policies are continually balanced with other policies to achieve optimal levels of recreational facilities and programs in view of the capability of resources to support use. Each time that SCORP is updated, suggestions for policy and strategy additions or revisions are sought from OPRHP staff, State Council of Parks and regional councils, and cooperating agencies as well as the public through the public participation process. This process assures that the policies and strategies continue to be responsive to recreational needs and resource protection.

Since SCORP is essentially a broad framework within which more detailed planning will take place, it is not possible to definitively identify adverse effects. It is consequently infeasible to suggest specific mitigation measures. Consistent, however, with OPRHP's stewardship mission, the review processes assure that due consideration is given to protection of the State's natural and cultural heritage. These processes by which more detailed plans and projects are developed and evaluated should serve to minimize, if not eliminate, adverse effects possibly associated with development of recreational facilities.

As explained under Environmental Review in this chapter, this GEIS serves as a reference for evaluation of future actions. Site specific reviews will assure consistency with SCORP and projects which enhance or are compatible with natural and cultural resources.

In the remainder of this section, each of the major SCORP policies and their corresponding action strategies will be discussed in terms of potential impacts. Differences between the 2003 SCORP and the current proposed SCORP will also be analyzed. In a few instances, policies or action strategies have been revised slightly to broaden their applicability. Such changes are considered to be a more accurate representation of statewide policy and may not be discussed on an individual basis.

The 2008 policies have been grouped into four major initiative areas and are presented here within that initiative framework. These initiatives reflect major issues and provide a larger context to enhancing existing recreational programs and activities across New York State.

Revitalizing our Parks and Historic Sites

Policy: Improve recreation and historic site operation, maintenance and resource management practices.

This policy is the same as that in 2003 and overall adverse impacts are limited. The action strategy to rehabilitate and adaptively reuse existing facilities to satisfy recreation, interpretive and education needs, continues to be important in efficient delivery of recreation. Rehabilitation has significant beneficial impacts, and with the exception of major expansion or reconstruction, adverse environmental effects are minor. Rehabilitation is generally more cost effective than development of new facilities.

Environmental Impacts

Outmoded facilities can be phased out and adaptively reused where possible and feasible. Adaptive reuse enables the preservation of historic structures, furthering the objective to preserve cultural resources as covered under the previous policy. This action strategy also advances coastal policies with regard to historic and cultural resources, as well as restoring and redeveloping deteriorated and underutilized waterfront areas. The strategy includes consideration of feasibility. In carrying out the objective of rehabilitation and adaptive reuse, it is important to assess compatibility of existing or proposed new uses of facilities with the site's natural resources. In addition, modifications of historic structures to provide access for the disabled, as well as other needed modernizations, must be sensitive to the historic integrity of the buildings. Interpretation is also included in this strategy to reflect an emphasis on adapting existing structures or other facilities for interpretive purposes.

The encouragement of compatible multiple uses as well as extension of user seasons means more efficient use of existing recreational facilities, but an overall increase in the numbers of users at a specific site. Multiple use can result in more even distribution of users over the course of a day, and extension of user seasons has a similar effect over the course of a year. The quality of the recreationist's experience can thus be improved through potentially lower peak use periods. At the same time, an increase in the total number of users has the potential for adverse impacts on resources. Planning for each facility must be done with a careful evaluation of the capacity of resources to accommodate increased use and effects on the quality of recreation, with an emphasis on compatibility of the uses with the resources.

Health and safety concerns and accessibility for the handicapped have been and continue to be important. Health and safety concerns, however, must be reflected not only in rehabilitation and new construction, but in setting priorities for project funding.

Particularly relevant to impacts on natural resources, energy conservation is mandated for new construction or major reconstruction by the State Energy Code. Conservation of energy results in cost savings, and can offset increased energy use associated with extended user days and seasons. For instance, enclosing a swimming pool, while increasing swimming opportunity, requires increased energy consumption. Energy conservation in design and operation of these facilities is therefore extremely important. Energy conservation techniques involving modest investment such as improved insulation, storm-windows and heating systems are emphasized in rehabilitation of existing structures. A new policy area regarding sustainability is closely related to energy efficiency, but is much broader in scope. Sustainability policy is discussed later in this section.

Protection of natural and cultural resources is important in undertaking park and historic site operation and maintenance activities. This action reflects the awareness that operation and maintenance activities need to be improved to ensure resource protection.

Proper management of the resources requires the training of park, historic site and land managers. This should be done on a continuous basis to assure best management practices are being utilized in protection of environmentally sensitive areas. This strategy has been revised to include training for operation and maintenance of facilities to ensure public health and safety. For instance, operators of drinking water systems and sewage treatment plants need continued training to insure safe operation of these facilities and to protect the public and water resources.

There is also a need to improve access to trails, parks and other recreation opportunities within urban areas and other centers of human activity. This will encourage physical activity and provide more recreational opportunities for underserved communities. It will also encourage alternative transportation and energy savings in suburban areas.

Two new strategies have been included under this policy, reflecting major state initiatives: significantly increase the state's investment in management and operations of recreation and historic facilities, and develop a sustainability plan. The first reflects the immense park management needs of a greatly expanded recreational facility system. The second reflects the need for a comprehensive effort to minimize energy use and reduce our carbon footprint, as discussed in Chapter 6. Additional priorities concerning sustainability are discussed later in this section.

Overall, the policy to improve operation, maintenance and resource management practices is consistent with and may advance coastal policies under the Coastal Management Program (CMP). For instance, rehabilitation and adaptive reuse promotes the CMP's development policy to restore, revitalize and redevelop deteriorated and underutilized waterfront areas. Training of managers in best management practices can advance the fish and wildlife policy to protect, preserve and restore habitats; the recreation policy to protect, enhance and restore historic sites or areas; and, water resources policies related to the use of best management practices in control of storm-water runoff and non-point discharge of pollutants.

Policy: Improve and expand water-oriented recreation opportunities.

Additional public access to water resources and additional water recreation opportunities continue to be a concern. Major investments must be made on a priority basis to satisfy

existing and projected water access needs. Recreation providers particularly in the public sector should, however, be encouraged to provide simple cost effective means of providing access.

The expansion of water access opportunities has significant potential for adverse environmental impacts due to resource limitations such as the existence of significant habitats, wetlands, steep slopes and erosion hazards. In encouraging the acquisition and/or development of parks and recreation resources that are accessible to waterbodies, state and local agencies must assure that provisions for access are compatible with existing natural and cultural resources.

The policy recognizes the need to improve existing access sites. It is important to capitalize on existing sites to provide an optimum of water-oriented recreation opportunities. This should limit the need for new access sites and associated impacts. Caution must be exercised, however, to avoid development beyond the capacity of the resources.

Upgrading and protecting water quality is essential to maintain the habitats and species which rely on water bodies, as well as to provide a quality recreational experience. The Open Space Conservation Plan contains recommendations and has implemented numerous projects to promote clean water. Continuing strict enforcement of water pollution control laws helps implement this strategy. Numerous lake or watershed-specific plans have been implemented or are underway that provide a comprehensive approach to protection of water quality through wise management of waters and adjacent areas. OPRHP continues to enhance the monitoring and operation of drinking water treatment systems and bathing beaches under its jurisdiction. A water quality manual outlines concisely and in plain language the monitoring requirements under the regulations of the State's Department of Health (DOH). OPRHP also participates with DOH in a program administered by EPA that calls for the classification of ocean and freshwater bathing beaches according to water quality levels. It also fosters the preparation of monitoring protocols and public notification of beach water quality levels.

OPRHP also conducts periodic monitoring of lakes within the State Park System to determine long term trends in shifts in trophic status or the amount of nutrients indicated by the amount of production of organic matter. Continued monitoring and evaluation of data will assist OPRHP in identifying problem areas and whether there is a need to take corrective actions, such as controlling nutrient input.

EPF provides funds for such projects as non-point source pollution control and wastewater treatment improvement. Combined sewer overflows are also being abated under specific management programs. Water quality monitoring and research are extremely important to assure identification of water quality issues and to provide the basis for responding to such issues.

Preservation of shorelines, wetlands, and upland areas is integral to meeting water quality standards, as well as to enhancement of the recreational experience. Similarly, the proper management of coastal areas is critically important for protection of aesthetic and ecological resources that contribute to water-oriented recreation opportunities. The availability of matching funds under EPF to develop LWRPs along with funding for planning, design and construction costs of projects incorporated in approved plans has provided incentives for further shoreline protection efforts.

Measures to protect the quality of the State's water resources may be accompanied by increased costs. Maintaining water quality standards, however, increases the diversity of aquatic life including fish, and improves aesthetics. These benefits in turn increase the attractiveness of a water body for recreational uses. Increased water-related recreation has positive economic effects on localities through direct and indirect expenditures. It is critical from both environmental and economic perspectives that a portion of economic benefits be reinvested in resource protection to assure continued maintenance of water quality.

The action strategy to support management practices which reduce conflicts among water-related activities includes reduction of conflicts with significant natural water resource areas. Management practices would be supported which relate to recreational zoning of use areas, such as swimming, boating and shore fishing. This objective recognizes that while access for water-oriented activity is important, demand for various water activities generates potential conflicts among different user groups. The appropriateness and capacity of sites to accommodate a variety of water recreation opportunities must be evaluated, and where multiple uses are possible, site specific planning, design and management practices must be undertaken to provide proper demarcation of use areas. Other examples of management practices to decrease conflicts include boating speed limits, designation of areas where no boat wakes are allowed, designated water skiing areas, motor boat horsepower limitations, and even increased boating fees. Invention and proliferation of new forms of water recreation, such as parasailing and extreme sports, is a concern when there is potential for serious conflicts with conventional uses. Consideration may be given to banning these types of uses in certain water bodies which cannot accommodate a large variety of uses. Emphasis should be placed on designating specific areas where these uses can appropriately take place, particularly to reduce conflicts with swimmers. This approach is emphasized in the last action strategy under this policy regarding zoning of water-related activities.

Environmental Impacts

As demand for use increases, multiple use planning and management become essential to maximize use of an essentially fixed resource base, minimize user conflicts, ensure patron health and safety, and prevent damage to facilities and resources caused by inappropriate use. Inclusion in this action strategy of consideration of use conflicts with natural resource areas provides emphasis on the resource aspect of planning for water-related activities, and is thus consistent with the coastal policy to protect, preserve, and where practical, restore significant coastal fish and wildlife resources.

Underwater lands that have significant natural, cultural and recreational qualities are protected through OGS management and coordination with agencies and localities as described in Chapter 7. The strategy to encourage the interpretation and access to significant underwater natural and cultural resources is consistent with coastal policies, provided underwater archeological resources and aquatic resources are protected. The inventory and recognition of underwater natural and cultural resources has increased. This has resulted in a growing demand to make these resources available for interpretation and viewing by the public. There is recognition that there is a limited amount of waterfront available. Use of these areas should be for water dependent development and access, consistent with coastal policies.

Strategies related to increasing water access and protecting water resources are consistent with coastal policies dealing with public access, water dependent and water enhanced recreation, recreational use of fish and wildlife resources, and water resource quality. The strategy of encouraging waterfront development that is water-dependent and provides public access directly promotes coastal policies. Potential conflicts exist, however, with regard to impacts of developing access. For instance, dredging in coastal waters to improve or maintain boating access must not significantly interfere with natural coastal processes, must avoid causing increases in erosion, and must protect aquatic habitats. Natural protective features such as dunes and bluffs must be protected from development encroachments. Extensive planning is necessary where potential access sites would require erosion protective structures so as to minimize increases in erosion or flooding on site or elsewhere, and to determine whether public benefits of outweigh long-term monetary and other costs.

Policy: Apply research techniques and management practices to improve and expand parks and other open spaces.

Such activities as basic information gathering, research and planning must take place to support the achievement of other policies and objectives. This policy is no less important than protection and preservation of resources since only through an adequate information base and proper planning can such protection be assured.

In meeting long-term development strategies, it is important to identify and implement short-term action programs. For instance, there is a recognized need to develop master plans over the coming years for many more state parks, but an action plan will advance this effort over the next few years and identify specific parks and level of planning effort needed. Long term development can be accomplished within those parks for which appropriate planning and environmental review processes have been completed or are underway. The remainder of the long-term potentials can be progressed after completion of needed plans. Another tool for accomplishing needed planning, particularly with respect to new facilities, is Interim Management Guide. An IMG is intended to provide guidance regarding use and resource protection on a short-term basis until a master plan can be completed. Other types of plans, such as invasive species management plans, can also be progressed as needed. A more effective master planning process will thus be advanced.

The strategy to develop master and management plans for parks, recreation, natural, historic and cultural areas recognizes the potential for substantial adverse environmental effects due to the lack of proper planning. Deficiencies in resource inventories can result in damage to significant resources, and overuse due to unknown resource capacity. Without adequate knowledge of resources, facility design and park operations may be inadequate to assure resource protection. The absence of planning may result in otherwise unnecessary environmental reviews of individual projects. This can duplicate previous efforts resulting in delays of project implementation.

Continued emphasis will be placed on GIS and accompanying resource inventories necessary to supply an adequate database. Program areas of particular importance, such as information from the Natural Heritage Program on habitats in State Parks, have been incorporated into this system. Use of GIS is enabling agencies to make better decisions based on more comprehensive resource information.

Research and analysis of new forms of leisure activities is important to anticipate recreation trends, as well as potential impacts on resources. New activities often center around new or modified equipment such as personal watercraft. These activities may place additional pressure on public lands and waters, competing with other existing activities and often causing user conflicts. It is important to recognize that new or modified activities will continue to be developed, and to be aware of what is needed to accommodate such uses in an appropriate manner. There is a need for research regarding recreational demands and potential impacts,

and also planning to minimize user conflicts and adverse impacts to resources.

Public participation in planning activities is discussed under the "Improve cooperation and coordination…" policy. Surveys are essential tools to assure public participation in planning and research efforts. Public meetings can assist greatly in providing the public with information about such efforts, and gaining important feedback to improve planning and research.

Recreation research is needed to improve service delivery. Such issues as new forms of recreation or equipment, and implications for management and environmental impacts are important in identifying future needs.

By developing park management information systems, administration of park programs and projects will be more effective. These systems provide for continuous updating of information related to recreational needs and facilities, assessment of the effectiveness of programs and facilities, and the reevaluation of goals and policies. There is a focus on factors such as cost effectiveness, user satisfaction and preferences. Information gathered can also assist in evaluating the impacts of park, recreation and preservation programs on communities as well as in evaluating the effectiveness of programs to preserve threatened natural and cultural resources. Consideration of intrinsic values of resources in cost/benefit analyses is an important element of this strategy which recognizes values beyond direct economic implications.

Innovative management practices should be encouraged; particularly those which help preserve and protect natural and cultural resources. Recognizing technological advances will promote taking advantage of opportunities that the internet, GIS, and other electronic media have to offer in providing access by the public and professionals to information on facilities, activities and research at park, recreational and cultural resource areas. An example of GIS information used to provide information is a map program on OPRHP's web site that allows users to locate a park or site on a map and thereby plan their trips. Support should be provided to increase the availability of information available through agency web sites. The extension of electronic media in providing services, such as for interpretation, should also be encouraged.

Encouraging public/private partnerships that are compatible with the natural, cultural and recreational resources is a strategy that can be used effectively in meeting the goals of State Parks and Historic Sites. Partnerships are used in all aspects of facility and resource management and operation. Also refer to the discussion on private sector involvement under the cooperation and coordination policy. Increased use of partnerships for such purposes as data gathering and research will help promote other goals, such as to preserve and protect natural and cultural resources.

Developing technical documents on various recreational facilities fulfills a recognized need to provide more detailed guidance and standards to agencies and interest groups on development, management and operation of such facilities as camping and trails. These technical documents are a collaborative effort of key agencies and organizations to assemble relevant information and recreation research needs in these use areas. Methods are included within technical documents to avoid or mitigate environmental impacts of development and the use of the subject facilities.

There are four new action strategies under this policy in the 2008 SCORP reflecting newly established state programs regarding invasive species and ecosystem-based management. GIS database and clearinghouse and a research institute regarding invasive species will implement recommendations contained in the ISTF report, now being implemented through the ISC and the Office of Invasive Species in DEC. An ocean and coastal resources atlas which will make information available to the public and decision makers is part of the ecosystem-based management initiative under the New York Ocean and Great Lakes Ecosystem Conservation Council. Information sharing and a research agenda are also needed, not just for coastal resources, but on a statewide basis regarding recreational, natural and cultural resources to inform ecosystem-based management decisions and enhance ecosystem management capabilities.

The use of these applied research techniques and management programs are supportive of coastal policies. Proper inventory, research, analysis and planning are all necessary for effective programming in coastal areas that is compatible with resource values, and advance achievement of ecosystem-based coastal management.

Resource Stewardship and Interpretation

Policy: Preserve and protect natural and cultural resources.

This policy is imperative to carrying out the State's stewardship responsibilities. Protection of the State's resources is critical in providing opportunities to use those resources and maintain quality recreation.

The first strategy under this policy is to ensure that recreation development is compatible with environmental limitations and carrying capacities of resource areas. This is accomplished through the various review processes previously discussed. It is important to note, however, that better resource information is necessary to identify limitations and carrying capacities, as discussed under another action strategy.

Environmental Impacts

With regard to acquisition of open space resources, this action strategy is consistent with the Open Space Conservation Plan. The overall impact of supplying open space where it is most needed is beneficial; however, careful consideration, planning and public cooperation is necessary. Preservation of open space in metropolitan areas is important, since these are areas with high populations and limited open space opportunities. The strategy also responds to an environmental justice issue.

Another strategy is acquisition of in-holdings and important properties adjacent to existing public landholdings. Acquisition of such properties is normally cost effective, since operational mechanisms are already in existence. If additional land is acquired for the purpose of new recreational development, careful analysis is necessary to assure that the new facilities are needed and that development will be compatible with existing resources. The impacts of acquisition were addressed within the 2006 Open Space Conservation Plan.

Responsible stewardship of plants, animals and their habitats reflects the broad duties of protectors of open space to be caretakers of the biological resources under their jurisdiction. This strategy is accomplished through the various programs described in Chapters 4, 7 and 9. The strategy recognizes that species and their habitats need to be protected, which may not always require management.

The strategy for the use of non-fee acquisition techniques for scenic and historic property has proven to be a useful tool for resource protection as endorsed in the Open Space Conservation Plan. Such actions as transfer of development rights, acquisition of easements for protection of resources, tax incentives (e.g., for historic preservation efforts), and zoning and subdivision regulations on a local level can accomplish much to preserve open space and other resources while limiting investment which would be needed for fee acquisition. Implementation of open space programs certainly contributes to the overall policy of preserving and protecting natural and cultural resources.

Efforts of the Natural Heritage Program and the BRI and its funded research provide more informed bases for decisions regarding stewardship of biological resources. Informed management is not possible without adequate resource inventory and evaluation in order to properly identify important resources. Inventory and evaluation of natural and cultural resources has been supported but requires additional focus and resources. DEC has been a leader in inventory and identification of resources such as wetlands, significant habitat, and threatened and endangered species. Through the federal Historic Preservation Fund administered by NPS, Heritage Areas program funding and other historic preservation programs, the identification and evaluation of cultural resources throughout the State has been possible.

The protection and maintenance of biodiversity is also being advanced through the BRI as discussed in Chapter 7. Partnership efforts regarding invasive species policy and management and education efforts will also enhance awareness and sensitivity to the impact of invasive species and result in measures to reduce the effect of such species and enhance biodiversity.

The Natural Heritage Program inventory of state parks is the first comprehensive biological inventory of the entire State Park System. This inventory provides information critical to the protection of the many sensitive and rare environmental resources in state parks. It also allows for more sensitive siting and efficient design to locate projects away from sensitive resources. This inventory information also provides resource information that is incorporated into the environmental and interpretive programming within State Parks.

A new strategy in the 2008 SCORP, identifying and protecting biodiversity "hot spots" and expanding protection of habitat corridors and buffer areas were discussed in Chapter 5. These efforts will further biodiversity identification and protection in the state.

Compliance with state and federal environmental regulations and restoring environmentally sensitive areas adversely impacted by past practices reflect a commitment to carrying out the provisions of environmental audit legislation enacted in 1987 and strengthened since then to include compliance plans and incorporation into five-year capital plans. The Environmental Audit Law has directly contributed to addressing noncompliance with Environmental Conservation Law by state agencies due to failing or improperly designed facilities. Significant amounts of funds from the EPF have been allocated to address agency noncompliance.

The strategy regarding compliance includes historic preservation regulations and guidelines. The National and State Historic Preservation Acts require review of state and federal projects that may cause any change in the quality of historic and cultural properties listed on the National Register of Historic Places. In New York State, the Commissioner of OPRHP is responsible for conducting such reviews. The Commissioner also reviews state agency actions affecting properties eligible for the State Register. OPRHP review of federal and state actions includes evaluation of projects to assure that the projects meet the US Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitation of Historic Buildings, as well as guidelines for new construction compatible with historic properties.

In addition to allowing for more sensitive siting and efficient design to locate projects away from sensitive

resources, the management recommendations of the Natural Heritage reports identify areas that may have been impacted by past practices that could be restored. Related to past practices or impacts of land use is the proliferation of invasive species. A strategy has been added in 2008 to prepare a comprehensive invasive species management plan. This plan, to be developed under the guidance of the newly established ISC and Office of Invasive Species, will ensure that New York State is fully prepared to prevent and combat invasive species, which will further enhance biodiversity in the state.

Identifying threats to natural, cultural and recreational resources assists in preservation efforts by anticipating potential adverse impacts. Improved resource inventories and evaluation help identify those important resources that may be impacted by actions occurring outside or within recreation resource bounds.

SCORP objectives with regard to resource protection are consistent with, and promote, a number of coastal policies identified in the Waterfront Revitalization and Coastal Resources Act, the State's CMP. Open space programs promote coastal policies dealing with preservation, recreational use of fish and wildlife resources, public access and water recreation. Significant coastal fish and wildlife habitats can be identified through inventory and evaluation and protected through acquisition and compatible development. These habitats can be restored and preserved through improved stewardship of plant and animal species and their habitats, promotion of biodiversity, compliance with environmental regulations, and restoration of areas adversely impacted by past practices. Scenic resources in the coastal area are among the resources to be protected; in some cases these are natural (e.g., geological resources such as Niagara Falls), in others, man-made (e.g., Montauk Point lighthouse). The protection of coastal scenic areas can be enhanced through the designation of Scenic Areas of Statewide Significance under the State's CMP. Significant historic, archeological and cultural resources will continue to be protected, enhanced and restored through ongoing programs, such as the State Historic Sites System, funding of historic preservation and Heritage Area projects, as well as a commitment to improved inventory and evaluation of cultural resources. Ensuring facility development that is compatible with environmental limitations is consistent with flooding and erosion hazard policies which recognize coastal processes and the value of natural protective features including beaches, dunes, bluffs and barrier islands.

Policy: Support compatible recreation and interpretive programs.

Environmental interpretation is essential to instill an environmental ethic in our society. Preservation and protection of natural and cultural resources will be ineffective without an awareness of the value of, and proper techniques for, preserving and protecting these resources. Proper training in providing interpretation and education is important in furthering the first action strategy.

The action strategy regarding outreach and technical assistance is also necessary to deliver meaningful recreational and interpretive opportunities. State programs in these areas must be made available at the local level to be truly effective.

A new action strategy in the 2008 SCORP, preparing a state park facility environmental interpretation plan, is consistent with OPRHP's environmental education initiative. A broad plan is needed to include staffing, training, infrastructure and cooperation with partners. OPRHP has often partnered with other key education/interpretive agencies, such as DEC and the Adirondack Park Agency, and such partnerships will be further developed and expanded.

While youth camp experiences will be encouraged and supported, continued efforts will be made to make these facilities more cost effective. Financial and operational support of user groups is encouraged. It is also important that an environmental education component of youth camp programs be provided to promote an awareness of the value of natural, cultural and recreational resources and to minimize adverse effects on those resources by the users.

The strategy to encourage various forms of organized athletic competition recognizes the success and importance of such programs as the Empire State Games to many segments of the State's population. In addition, the Empire State Senior Games and Games for the Physically Challenged have widened participation in organized competitions which instill pride and a sense of accomplishment to those involved. Various other athletic competitions are held in State Parks or are cosponsored by OPRHP, such as marathons, golf tournaments and the New York State Special Olympics. The impacts of these special events are usually of a temporary nature, and sites chosen are particularly well suited for gathering of large groups of people (e.g., well developed, few resource limitations). Site selection must continue to be sensitive to limitations of park facilities and resources, and to potential impacts on neighboring communities in terms of traffic, security, noise and other considerations. Early communication and coordination with communities is an absolute necessity.

There are other important considerations in the provision of interpretive and recreational programs. These programs must be geared towards availability to all potential users: the disabled, underprivileged and other underserved populations. Without properly qualified and trained personnel, recreational and interpretive programs may

be inappropriate and ineffective. OPRHP must also take the lead in assisting other agencies to enhance recreational and interpretive programs. It must be noted that all of these actions necessitate a commitment of funds and personnel to interpretation and recreation.

OPRHP and DEC continue to provide important interpretive opportunities, and interpretation of significant natural and cultural resources will be encouraged at a statewide level. As indicated previously, opportunities for natural and cultural resource observation, interpretation, and education are essential to provide users with an awareness of the value of those resources. This, in turn, creates new generations with a greater appreciation of the need to preserve our resources.

Identifying and encouraging the creation and preservation of greenway systems connecting significant habitat areas also promotes uses compatible with those resources, provided that connectivity, as discussed in Chapter 5, is preserved in providing recreational uses of the greenway systems.

Interpretive programs, opportunities for observation, and educational uses are relatively passive uses and usually require limited capital construction, thereby further ensuring resource protection. In certain cases, investments in interpretive centers may be warranted. Where interpretive structures are needed, priority is given to sensitive adaptive reuse of existing structures, if available, to limit the need for new construction. Providing direct access for interpretive purposes may affect the very resources to be interpreted. Where access to resources such as wetlands is necessary, design of trails must be cognizant of environmental protection.

Another strategy new to the 2008 SCORP is to reconnect people with nature through education and interpretive programs, which will empower the public with a greater role in, and involvement in, environmental protection and sustainability. This is critical as discussed in the beginning of this policy discussion. Losing touch with nature around us makes us forget its value and dampens the desire to protect it. Connection to nature among the young, and new connections or reconnections among adults, will increase not only awareness but prompt action on the part of citizens to protect the environment and promote sustainable actions.

Also new to this SCORP is to establish a comprehensive education and outreach effort regarding invasive species. This comprehensive plan was recommended by the ISTF as a critical component of a strategy for controlling invasive species. This plan will be developed jointly by the Department of Agriculture and Markets and DEC, as cochairs of the ISC, and with full participation by all member agencies as well as the Invasive Species Advisory Committee to be formed by the ISC as described in Chapter 7.

The action strategy regarding the New York State Museum's system of interactive computer kiosks has been expanded to include other exhibits and to provide information on important natural and cultural resource issues. Since the Museum houses the BRI, the Museum is the perfect venue for promoting an understanding of biodiversity. As an example of an exhibit focusing on important resource issues, the Museum is developing a major invasive species exhibit for 2008-09 that will explain invasive species, their impacts on biodiversity, and provide real world examples that people can relate to.

Compatible recreation and interpretive programs generally do not adversely impact coastal areas and are thus consistent with coastal policies. Such actions as interpretive programs promote recreation policies and recreational use of fish and wildlife resources. Site specific review should be conducted as applicable to assure that the manner in which recreation and interpretive programs are provided will be consistent with coastal policies.

Creating Connections beyond the Parks

Policy: Develop comprehensive recreationway, greenway and heritage trail systems.

Greenways combine open space initiatives with recreationway and trails programs. These efforts are described in Chapter 5.

It is appropriate that emphasis be given to metropolitan areas and water and other corridors, since these are the areas of the greatest activity and interest. Trail and greenway systems can be expanded through conventional means like acquisition, but emphasis should also be given to managing existing corridors to take advantage of use potential, as well as encouraging involvement of municipal governments such as through grants programs.

An interconnecting system of trails, recreationways and greenways will increase trail opportunities and accessibility.

Developing and maintaining trails will require partnerships between federal, state and local governments, not-for-profit organizations, trail groups and private landowners. Various SCORP action strategies previously discussed, particularly with regard to implementation of the Open Space Conservation Plan and use of fee and non-fee acquisition techniques, as well as communication and coordination discussed later in this section, relate to the strategy to encourage partnerships in development and maintenance of trails. Such partnerships should include all potential trail users.

The Canal Recreationway System seeks to preserve a system of existing linear open space corridors, and

encourages passive uses, environmental education, and historic interpretation.

The use of transportation and utility corridors to extend trail systems can be beneficial to the multiple-use concept. Such corridors lend themselves naturally to the development of trails; they are nearly ready-made facilities with little need for additional development. Where these corridors are still in use for their primary purposes, recreational use must not conflict with those purposes. Examination of potential health and safety risks of high voltage lines must be included in evaluation of utility corridors for recreational purposes. DOT's programs to enhance transportation corridors with such facilities as trails and bikeways were described in Chapter 7, and are promoting energy efficiency and health in addition to recreational opportunities.

Chapter 5 described the importance of volunteers in the development and maintenance of trailways. Volunteer participation must continue to be encouraged to provide the greatest possible service with limited dollars.

As described in Chapter 5, state and federal agencies provide technical assistance in a variety of ways. Planning assistance is provided by various state agencies and programs such as the LWRP process. Coordination is provided through the New York State Trails Council which has been expanded.

Protection and maintenance of biodiversity was discussed elsewhere in this chapter. The resource base provided by trail corridors was discussed in Chapter 5. Greenway systems thus contribute to biodiversity, and their importance in connecting significant habitat areas should be taken into consideration in system plans.

As described in Chapter 7, the Wild, Scenic and Recreational Rivers System is designed to preserve rivers in free-flowing condition, and to protect their environs for future generations. The program recognizes the outstanding resource values, including natural, scenic and recreational, possessed by many river areas in the State. The regulations provide for the management, protection, enhancement and control of land use and development in designated river areas. The interests of landowners in the enjoyment and use of their properties is protected and enhanced to help insure that recreation and other uses are consistent with preservation of the designated rivers. Additional segments can be proposed for inclusion on the list.

Trails have the ability to promote the heritage of the State through interpretation. These Heritage Trails can be linked by motorized and non-motorized trails. In many cases, the story that needs to be told occurs over an extended area that can only be linked by a trail. Heritage Areas are implemented through management plans developed at the local level with technical assistance from the State. The SEQR process is one of the tools used in providing public input and agency coordination in planning and project implementation.

The policy to develop comprehensive trail systems is consistent with, and advances coastal policies. Such systems assist in protecting and increasing the levels and types of access to public water-related recreation resources and facilities. The greenway concept promotes water dependent and water enhanced recreation, as well as preservation of historic and cultural resources (through such programs as Heritage Trails). This is accomplished while providing primarily passive uses and minimizing effects related to intensive development. Recreationways along shorelines promote coastal policies with regard to development, scenic quality, public access, and recreation.

Policy: Protect natural connections between parks and open space areas

This is a new policy to the 2008 SCORP, and it reflects the importance of natural connections to the maintenance and enhancement of biodiversity. We must ensure that landscapes and buffer lands that surround our parks are protected from encroaching development and incompatible land uses. We should foster the development of "connections" of protected lands, greenways, and trails so that people and wildlife can move across New York's landscapes. In order to protect these natural connectors, it is important first to inventory and identify the ecosystems that should be connected, and then to encourage the protection and/or acquisition of critical connectors. One way in which this policy will be promoted is through a BRI grant to identify and prioritize land parcels adjacent to State Park land suitable for acquisition based upon their potential to protect and enhance biodiversity. Refer to "hot spots" discussion under "Preserve and protect natural and cultural resources."

This policy furthers coastal policies regarding protection of fish and wildlife resources. Also, through careful balancing of protection and use of these corridors as discussed in Chapter 5, recreation and public access policies can be advanced as well.

Policy: Improve cooperation and coordination between all levels of government and the private sector in providing recreational opportunities and in enhancing natural and cultural resource stewardship.

Since promoting the policy of cooperation and coordination is integral to the success of implementing other policies, implementation of this policy must take place in all SCORP programs.

Communication and coordination among recreation providers needs to be constantly improved in order to minimize duplication of effort. This in turn will maximize recreational facilities

and services provided, while lowering overall costs of providing recreation at various levels of government and by the private sector. OPRHP and other agencies include coordination with other recreation providers in planning for recreational facilities and programs at public recreation sites.

Facilitating citizen participation in planning and development activities is integral to such efforts as facility planning, which must involve contributions from the general public, interest groups and other agencies. This should include such strategies as public meetings, scoping and hearings as needed to provide input on issues that will affect the public. Technological advances such as teleconferencing and webcasts should be used whenever possible to increase the effectiveness of public involvement efforts. Regional Advisory Committees (RACs) established under the open space planning process provide an example of continuing public involvement in major issues. Such citizen participation efforts, and those relating to projects of a smaller scope, have resulted in better plans, programs and projects which are more easily implemented by virtue of more thorough, up-front planning and general consensus on what is to be carried out.

The policy of improving recreation for underserved populations is an important function of OPRHP as the agency primarily responsible for guiding the provision of recreation in the State. This also relates closely to the action strategy to improve communication and coordination among recreation providers.

The next strategy reflects opportunities to develop partnerships between recreational, historic and cultural facilities with colleges, universities and other educational institutions. These efforts can respond to the needs of each cooperator. Both the facility and the educational institution benefit through products developed under the partnerships.

There are many State Parks and Historic Sites that could be utilized more fully if information on them were more readily available. Many people do not realize that some of these facilities even exist. Likewise, support for dissemination of information on available programs is needed for this strategy to be effective.

Support of urban recreation initiatives is a SCORP strategy which responds to the needs of urban areas. In order to provide new opportunities in urban areas, creative use must be made of existing school, community, and park facilities. Outreach, encouragement of public transportation to distant parks, facilitation of pedestrian access and coordination with community groups are all necessities for successful urban recreation programs. Through environmental interpretation and other programs, better use can also be made of urban open space to create an awareness of important natural resources even within the confines of urban areas. Urban recreation programs such as concerts, sports clinics, etc. are generally cost effective, involving limited new facility needs, and promote energy conservation.

The idea of developing a public constituency for parks and recreation continues to grow. This constituency results in increased support for parks and recreation and improved relations with the public.

The State is committed to encouraging innovative partnerships in protection, stewardship, and provision of natural, cultural and recreational resources. Cooperative agreements provide an excellent mechanism for coordination of effort. Coordination among agencies on all governmental levels is necessary, as well as with private organizations involved in providing recreational and open space opportunities.

Effective zoning, such as waterfront zoning discussed under water-oriented recreation, and through such programs as LWRPs or historic districts, is a useful tool for resource protection and enhancement. Support for technical assistance is necessary to assure that such zoning is not only effective, but carried out so as to protect the rights of landowners.

Consistency among programs at various levels of government is important to assure protection of resources, and also relates to the first action strategy under this policy.

Encouragement of private sector involvement is important for continuance and enhancement of recreation and preservation which might not otherwise be possible. OPRHP guidelines for public/private partnerships are provided in Chapter 9. These guidelines were developed in the context of the Agency's mission and were thus designed for consistency with the stewardship aspect of the mission. As discussed in that section, the guidelines could be adapted by other agencies. Proper guidance can be given by working closely with private sector providers. Involvement of outside organizations can help agencies address conservation and habitat management issues, thus serving other action strategies.

Conservation and youth service corps such as the Student Conservation Association (SCA) program continue to enhance the preservation of recreational, natural and cultural areas. The SCA has partnered with DEC and OPRHP for a number of years to enhance open space and parklands, particularly within the Hudson River Estuary area, as well as to provide meaningful experiences for corps members.

Two strategies under this policy have been added to SCORP 2008. Facilitating regional coordination and cooperation to address complex resource issues which cross political and jurisdictional

boundaries will enhance ecosystem-based management and promote the ability of New York State to respond to regional or global issues such as climate change. Supporting the functions of grass-roots partnerships around the State to ensure prevention and rapid response to new invasive species is a specific example of a complex issue crossing jurisdictional boundaries. The PRISMs discussed in Chapter 7 bring together all the involved entities while pulling in volunteers and increasing understanding of invasive species.

The Natural Heritage Trust and legislative initiatives provide excellent mechanisms for local governments, not-for-profit organizations, as well as state agencies in providing preservation and recreation functions which also otherwise might not be possible.

Nontraditional providers of community recreation, such as schools and developers of residential or commercial facilities, can help fill local gaps in terms of recreational deficiencies. Cooperation and coordination with such potential providers is therefore of great importance in carrying out SCORP.

At all levels of government, volunteer organizations assist in maintenance of such recreational facilities as trails, group camps and athletic fields. Continued and increased assistance by volunteers should be encouraged to help maintain and expand recreation delivery where possible. Proper supervision and guidance of volunteers by regular park staff is absolutely necessary, however, to assure consistent maintenance standards and protection of natural and cultural resources.

All of the cooperation and coordination strategies are supportive of coastal policies. LWRPs and Historic Maritime are examples of the types of cooperative efforts undertaken in the coastal area. Other cooperative programs already discussed, such as trail efforts and PRISMs can also promote coastal policies.

Sustainability

Policy: Employ ecosystem-based management to ensure healthy, productive and resilient ecosystems which deliver the resources people want and need.

New to SCORP 2008, this policy responds to the initiative of the Ocean and Great Lakes Ecosystem Conservation Act, but also broadens it to apply statewide within the SCORP umbrella. This policy recognizes that ecosystems do not recognize man-made boundaries. Ecosystem-based management was explained in Chapter 4 under Stewardship and the governing principles of coastal ecosystems listed in Chapter 7 (DOS). Ecological health and integrity relates to sustainability, discussed under the next policy. It is imperative that decisions be informed by sound science that recognizes ecosystems and their interconnections between land, air and water. When risks to ecosystems are uncertain, caution is essential. Understanding of coastal systems as well as ecosystem-based management should be promoted. This links back to interpretive programs discussed earlier, and is needed for agencies and the public to be empowered to protect ecosystems.

This policy promotes coastal policies as well as the intent and requirements of the Ocean and Great Lakes Ecosystem Conservation Act. The policy is the first step in incorporating ecosystem-based management into programs and activities of not only OPRHP, but of recreation providers throughout the state.

Policy: Improve and expand the statewide commitment toward environmental sustainability in all parks, recreation and historic sites and support facilities.

Another new policy in 2008, this reflects a commitment for State Parks to be a leader in demonstrating "green technologies." An agency-wide sustainability initiative to adopt energy efficient technologies, green building design, fuel efficient vehicles, and green products procurement will provide a framework for similar efforts by other recreational providers. Seventeen action strategies to promote this policy have been identified. These strategies are relatively self-explanatory within the context of the concepts discussed in Chapter 6. While all of these strategies are important to promoting sustainability, the one that reaches beyond OPRHP is the strategy to incorporate criteria into recreational grant/project rating systems that provide additional credits/points for incorporating the use of sustainable design and green technologies.

Trends, Issues and Needs

The goal of measuring the supply of recreation in the State, estimating the needs of the citizenry and projecting this information in the future is met through the processes described in Chapter 3. The results provide an objective framework for the evaluation of future impacts upon the recreation system, as well as provide guidelines for the allocation of recreation resources. By continuing to improve communication and coordination among public and private recreation providers, an action strategy within this SCORP discussed earlier, the information network on recreation supply can continue to improve. Inventories and analyses will be furthered by ongoing uses of GIS and other technologies.

While information is generated on supply and demand, it can also be used in evaluating the impact of recreational use on the environment, particularly whether a facility is being used within its capacity or exceeding proper use levels.

Environmental Impacts

As described in Chapter 3, three primary surveys are used in estimating recreational demand which provide the means for input by the general public, park professionals and park visitors. In some cases, balance is needed between professional judgment of recreational needs and actual desires of the public for additional facilities. Park professionals may be biased by such aspects as maintenance concerns for swimming facilities, whereas park visitors and the general public may not recognize such maintenance costs or possibly environmental costs associated with new intensive recreational facilities.

As in the past, this SCORP recognizes that urban recreation needs are a major component of the State's total recreational need. While urban areas still have the greatest need for active recreation, there will be greater need in or near urban areas for more nature-based recreation such as camping, hiking and winter sports. Changing populations and ethnic diversity are also recognized. As indicated in Chapter 2 due to demographic changes, activities with high entry costs, such as golf and downhill skiing, will decrease in total participation. Such activities also have a greater tendency to cause adverse environmental impacts compared to other activities such as trail uses. There will also be an increase in trail uses such as biking, and for cultural activities such as historic sites and museums. There will be a need for non-fuel activities due to pressures on energy supplies. Generally, there will be a trend towards recreational uses that will have less intensive impacts. Providing recreational opportunities at the local level will be subject to local review processes, including SEQR if applicable.

Camping may include resource-intensive development, especially due to an increased demand for recreational vehicle (RV) camping facilities which usually require paving and higher capacity water and sewer (or pump-out) facilities. Even tent camping can result in impacts due to overuse and compaction of soil. There is a need for additional research on campground impacts and development of alternative development methodologies to minimize the adverse impacts of campground development.

Winter activities involve a range of impacts, from low-intensive snow shoeing to more intensive downhill skiing and snow boarding. The latter activities will continue to be provided primarily by the private sector, with a likely emphasis on expansion or redevelopment of existing facilities due to costs and approval processes. Provision for comfort stations and warm-up facilities for lower intensive outdoor activities such as skating is important; such facilities must be provided in an environmentally sensitive manner.

Trail activities include some winter sports such as cross-country skiing. An emphasis should be placed on small, localized facilities to minimize the extent of development required and to best meet the needs of users who are seeking areas close to home. Walking and hiking are also popular trail activities. These generally involve low intensity development, and are usually provided on public lands. Cross-country ski areas can be adapted for summer trail use, or vice versa. Registered snowmobiles have been on the decline. It is expected that energy pressures will continue to decrease the use of snowmobiles unless greater fuel is developed within the industry. ATVs and other off-road vehicles are used by a small percentage of the population and most trails are on private lands. Biking is a favorite of many, young and old, and is expected to increase. Bike trails can be provided in association with improvements in transportation corridors as well as with other trail facilities. Mountain biking can cause conflicts both with other users (such as horseback riders) and with resources when bikers ride off trails. Communication and cooperation among all types of trail users and providers is necessary, as well as research to enhance resource protection in providing and using trails. These are both identified as strategies in Chapter 2 and were discussed earlier in this section.

Land Conservation and Resource Stewardship

The Open Space Conservation Plan included a GEIS which assessed the impacts of recommendations of the plan. Recreation and open space provide numerous benefits to society, direct and indirect, short-term and long-term. There are both tangible and intrinsic values associated with recreation. These can be characterized as tourism and visitor expenditures, environmental protection, quality of life and reduction in public service requirements. Tourism and economic development programs must take into account the important contribution of natural and cultural resources to these programs.

Adverse impacts identified in the GEIS for the Open Space Conservation Plan were those primarily associated with the development and use of resources acquired for enhanced public access and/or use. Measures to minimize any adverse impacts were identified, such as appropriate design and construction techniques, preparation of master plans or unit management plans based on resource inventories, and a commitment to provide sufficient resources for adequate stewardship. Economic benefits include the anticipated increase in value of adjacent lands and in tourism. Cumulative benefits are associated with the implementation of a comprehensive, coordinated, system approach to the conservation of the State's resources.

The Open Space Conservation Plan included New York's Coastal and Estuarine Land Conservation Program (CELCP) which was established to protect important coastal and estuarine

areas, and discussion of consistency with coastal policies was also included in the plan.

Stewardship of the state's natural, cultural and recreational resources is essential to protect them. Through stewardship programs as described in Chapter 4 as well as in other chapters of SCORP, potential adverse impacts of recreational development and use are minimized and consistency with coastal policies is assured.

Creating Connections Beyond Parks and Open Spaces

Chapter 5 discussed the need to protect biodiversity connections between natural areas and ways in which to promote these connections. Programs to enhance biological connectivity will minimize adverse environmental impacts of development of connections. There is a need, as discussed, to balance resource protection and use through such strategies as environmental planning and education. The critical junction between human activity and natural environment includes our urban parks, greenways, and open spaces. It is in these natural settings that people, during their recreational pursuits, can fully experience – see, smell, touch, taste and hear – and learn about nature. And, it is from these personal and high quality recreational experiences that people will nurture a sense of reverence, connectedness, and stewardship for the natural environment – and thus develop their own environmental ethic.

The focus of the Trails section is to provide statewide direction in the State's network of trails. As discussed in Chapter 5, an update underway to update the Statewide Trails Plan will provide statewide framework for trails and greenways. Such issues as overuse, illegal use, and conflict among user groups and landowners will be considered in development of the plan and will and promote proper stewardship of trails and associated natural and cultural resources. The goals and actions identified encourage trails that are better designed, more compatible with the natural and cultural resources and more accessible to the public. The goals are considered in the evaluation process for trail grant programs. Site specific environmental reviews are conducted for projects and generic environmental reviews are conducted for statewide plans.

The Greenways section discussed specific greenway programs that are also subject to public review processes and are designed to both promote and protect greenway resources.

Many of the connections discussed in Chapter 5 are coastal resources and are fully integrated with or are part of the coastal program, thus promoting coastal policies related to public access, recreation, historic and scenic resources, as well as natural resources such as fish, wildlife and water.

Sustainability

Sustainability, as described in Chapter 6, strives to create a balance with nature and thus promoting sustainable practices and ecosystem-based management limits adverse impacts on the environment. By incorporating sustainability policies in SCORP, recreation can be provided in a manner that is in harmony with the environment, and coastal policies can be promoted, as previously discussed.

Statewide Programs

Chapter 7 describes numerous programs that provide recreation and protect natural and cultural resources within the state. These programs are subject to environmental review processes and balancing of policies as described earlier in this chapter. This GEIS is not designed to evaluate the impacts of each of these programs. Where adverse environmental impacts may be significant, the programs are subject to SEQR. Many of the programs described in Chapter 7 are themselves designed to protect resources, such as Heritage Programs, wetlands, fish and wildlife, biodiversity, and coastal programs. Following is a further discussion of the latter and its relationship to SCORP.

The State's Coastal Management and Inland Waterways programs, administered by the Department of State (DOS), are carried out in partnership with local governments and state and federal agencies. These programs are designed to better manage coastal resources and advance revitalization of waterfront communities.

New York State developed a Coastal Management Program (CMP) and enacted implementing legislation (Waterfront Revitalization and Coastal Resources Act) in 1981. The CMP is based on a set of 44 coastal policies that guide coastal management actions at all levels of government in the State and ensure the appropriate use and protection of coasts and waterways. The coastal policies are grouped into the following categories:

- Development Policies
- Fish and Wildlife Policies
- Flooding and Erosion Hazards Policies
- General Safeguards
- Public Access Policies
- Recreation Policies
- Historic and Scenic Resources Policies
- Agricultural Lands Policy
- Energy and Ice Management Policies
- Water and Air Resources Policies

The full text of the coastal policies can be found at: http://nyswaterfronts.com/consistency_coastalpolicies.asp

Decision-making standards and procedures known as "consistency provisions" ensure coordination of governmental decision-making that

affects the achievement of the State's coastal policies. Consistency review is the decision-making process through which proposed actions and activities are determined to be consistent or inconsistent with the coastal policies of the CMP or approved LWRPs. State agencies are also required to follow certain consistency review procedures for direct or funding actions and for any action, including permits, for which they are an involved or lead agency pursuant to the SEQR and for which an EIS may be necessary.

The CMP was developed in cooperation and with assistance from OPRHP and DEC, and promotes SCORP policies. Consistency of SCORP policies with the CMP is discussed in this chapter under the discussion of the Policy Framework.

State Outdoor Recreation System

As described in Chapter 8, some of the State's most significant natural and cultural assets are contained in State Parks, Forest Preserves, and other lands under OPRHP and DEC jurisdiction. Further, the State provides natural, cultural and recreational opportunities on lands administered by numerous other state agencies and provides environmental and recreation programs in areas beyond the boundaries of state lands. Clearly, stewardship of state lands and continued provision of services to the public are extremely important to the overall provision of open space and recreational opportunities to the public, as well as to the protection of natural and cultural resources in the State.

Nearly 80% of the State Park System is in natural areas with a wide range of geological features, ecological habitats and plant and animal species. The benefits of the system are not only derived by the park visitor but through intrinsic value, knowing the resources exist and are protected. As discussed earlier, there are multiple benefits for the citizens in protecting natural and cultural resources. Likewise, the resources themselves benefit through public ownership and protection.

Similar to State Parks, the Forest Preserve, State Nature and Historical Preserve and State Forests provide extensive recreational and open space benefits. The Unit Management Planning process addresses resource issues regarding DEC lands and provides specific guidance for wise management. Criteria are set forth whereby additional recreational access can be provided within the limitations of the resources to support such use.

OGS promotes preservation and use of State lands for recreational use by facilitating land transfers to municipalities for such purposes. The lands are perpetually protected by requiring reversion to the State if the specific purpose is no longer pursued. OGS also provides communities with access rights in lands underwater to promote coastal uses. Submerged cultural resource protection is also promoted by OGS in cooperation with other agencies.

Numerous other state agencies that enhance open space and recreation opportunities were also discussed in Chapter 7. Together, state agencies provide a wide range of such opportunities and resources open the public.

Resource Planning for the State Park System

SCORP provides the basis for recreation planning in the State; OPRHP and DEC use it in other planning efforts to provide a unified system. The planning processes of both OPRHP and DEC include land classification systems and facility planning. Successive levels of planning ensue, to specific facility plans and budget planning. These specific plans analyze natural, cultural and recreation resources and evaluate alternative management strategies. Environmental review, as described earlier in this Chapter, is an important component of the planning process. Individual project planning also incorporates environmental review requirements.

During the 1970s, OPRHP undertook studies and gathered data on a variety of environmental and management factors for each park. This information was the basis for development of a classification system for lands in the State Park System. The concept of this classification system was to identify the capability of parkland to support various park functions, and thus provide guidance for land use and management practices.

Under the New York State Park Land Classification System, (OPRHP, 1980), parks and other recreational facilities within the jurisdiction of OPRHP were grouped together into clusters giving a general indication of those facilities which shared certain types of characteristics. These clusters were then depicted along a scale showing intensive development at one end, and primitive development limits on the opposite end. Metropark, Marine Park, Historic Site, Parkway and Linear Park were all included at the highest development end of the scale. At the opposite end were Park Preserve, Cartop Boat and Fisherman Access, Historic Preserve and Primitive Trailway.

The classification system in the Plan has been updated to reflect changes in classification philosophy. The classification framework shown in Figure 4.8 is a refined matrix from that in the 1980 classification report, and includes DEC classifications to provide a more complete picture of major state recreational facilities. In addition, Environmental Education and Underwater Sites were added as categories. Consideration of the Underwater Historic Preserve category was to accommodate concerns with respect to preservation of shipwrecks and other underwater archeological sites. The addition of an Underwater Reserve category provides for creation of reserves for

significant natural aquatic communities. The components of the classification system (Figure 4.8 and Table 4.1) have been included in past SCORPs and are considered the adopted framework for evaluating the classifications of all State Park facilities contained in the 1980 report. The criteria established in SCORP are used in evaluating classifications for all State Park units.

As new information becomes available or through the master planning process a classification for a facility can also be reevaluated and changed on an individual basis, if appropriate.

The section on OPRHP master planning in Chapter 8 provides a discussion of the need for, and content of, master plans and resource or interim management guides. Adequate staff, time and financial resources are required for proper planning. Facility development decisions cannot be made without all the information needed to make wise decisions benefiting the public while preserving resources. Integral to the decision-making process is review under SEQR which provides a planning framework and mechanism for public input in planning.

The Adirondack and Catskill SLMPs for both the established land classification systems are based on land unit characteristics and their capacity to withstand use. These plans serve to protect and preserve resources by defining conforming and nonconforming uses and providing for removal of nonconforming uses. Similar planning processes for DEC lands outside the Forest Preserve are also subject to public review and involvement.

A Resource Management Group (RMG) in OPRHP, comprised of the technical bureau directors, provides a multidisciplinary and statewide approach to review of capital and other projects affecting agency facilities, programs and policies. RMG provides recommendations on significant proposals (such as the adoption of a State Park Master Plan) to Executive staff. The group meets every two weeks to coordinate and facilitate the review process.

Through the framework of SEQR, EMB provides guidance regarding mitigation measures in undertaking projects, such as providing erosion and sediment controls or protecting rare plants or animals nearby. Guidance is also provided regarding restoration of disturbed areas. Advice is given concerning the desirability of planting species indigenous to the area (refer also to discussion on invasive plants under Biodiversity in Chapter 4).

Implementation

To fully implement the policy and assessment process, specific and programmatic actions have been outlined in each chapter. The policies and action strategies in Chapter 2 represent one of the cornerstones of the implementation process, translating policies into the delivery of recreation services and protection of natural and cultural resources.

Implementation vehicles such as state and federal funding were listed and discussed in Chapter 9. These programs also help fund actions which implement SCORP policies. Chapter 9 also discusses the allocation of state and federal funds for recreation and open space projects. The policies, needs assessment and program initiatives are translated into criteria for evaluating projects in an objective manner. The system is utilized for various grant programs and other programs under the SCORP umbrella. SCORP guides allocation of funds to areas in greatest need, along with the extent to which they further SCORP policy directions. The rating system is revised on an annual basis to reflect changing priorities and initiatives within the context of the most recent SCORP policies and actions.

The SCORP priority system assures that consideration is given to an appropriate balance of SCORP policies when evaluating and ranking applications for federal and state assistance in acquiring or developing recreation or open space resources. Projects which directly relate or contribute to SCORP or other state programs receive a relatively high priority, and those identified in adopted regional or local plans also receive priority. Protection of ecological, historical and open space resources is another important factor. Negative impacts on these resources would result in a lower rating. Through continuous agency review and input from providers and the public, evaluation assures that a proper balance of policies and fair distribution of monies is achieved.

Chapter 9 also provides a discussion of the types of partnerships which can be utilized in implementation of SCORP policies. Such partnerships and programs play an increasingly important role in providing quality recreation and assuring resource protection. The partnership philosophy is supported throughout SCORP, particularly under the policy to improve cooperation and coordination in providing recreational opportunities and in enhancing natural and cultural resource stewardship between all levels of government and the private sector.

Environmental justice must be an overarching goal in providing recreational facilities and services. Environmental justice, described under DEC programs in Chapter 7, responds to the need to reach underserved communities.

Implementation strategies advance numerous coastal policies, including those related to development, public access and recreation.

Cumulative Impacts

The primary effect of the 2008 SCORP is to promote the policies identified in Chapter 2. These relate to such aspects as increasing coordination; preserving resources, expanding water recreation, recreationways and interpretive programs; and improving maintenance, operation, research and management.

Chapter 3 identifies major recreational needs in all counties of the State). As may be expected the greatest level of need exists within the metropolitan areas of the State, especially in the New York City metropolitan area. Activity maps in Chapter 3 provide an indication of where the highest levels of need exist within the State. Rehabilitation of existing facilities and the acquisition and development of new facilities is required to satisfy this demand. Regional and statewide approaches need to be considered, as well as innovative approaches to make the facilities more accessible. Accomplishing this will have cost and environmental implications. Some of the types of needed recreation facilities will have greater impacts on the environment than others. Trails and informal picnic areas will have less of an impact than swimming pools and ball fields. However, for some sites, such as brownfields, any recreation development will be an environmental improvement. Public health and safety considerations must be incorporated into planning for recreational opportunities.

The cumulative effects of applying the policies and objectives of the 2003 SCORP in a systematic manner will be substantially beneficial. Existing recreational services to the public will be maintained while at the same time protection of natural and cultural resources will be ensured.

Perhaps one of the most important cumulative effects of SCORP is also the least tangible. The implementation of recreational and resource protection programs through the SCORP policies substantially enhances the physical and psychological well being - the quality of life - of the residents of the State.

The furthering of the quality and quantity of recreational services and programs has substantial beneficial effects on economic activity, as well as preservation and recreation opportunities, within affected communities. Implementation of efficiently designed plans for recreational facilities often contributes to the attractiveness of a municipality for investment by businesses. Thus, the facilities and programs flowing from SCORP are an important adjunct to factors leading to economic recovery and development. Growth usually occurs in the State where there is already a sufficient base of tourism, transportation and support services. These existing and recognized centers generally stabilize existing investments and services. Identification of the need for recreational services and facilities is based primarily on existing population and on growth projections. While recreational development in the past occurred on a large scale, such efforts are unlikely to happen again in the foreseeable future. Where new parks are developed in otherwise relatively low developed areas, additional growth may be induced. Most projected recreational development will occur in response to growth.

Application of the goals and policies of SCORP to the development of recreation proposals requires commitment of planning resources. Resources are committed through programs or projects identified within state or federal legislative action or through gifts to the State. SCORP helps determine the priority for use of these committed resources. Implementation of the programs which are guided by SCORP will result in irreversible and irretrievable commitments of time, funds, and energy resources, but overall the benefits of preservation, stewardship and providing recreation outweigh these commitments.

The policies stated in SCORP will not result in any significant increase in energy consumption associated with recreation activities. On the contrary, several of the policies and action strategies (e.g., emphasis on open space near metropolitan areas and sustainability) will promote reduction in energy consumption by recreation providers and users. These policies should offset increased energy use which would be associated with extension of activity seasons through enclosure of outdoor recreational facilities.

Since SCORP is a general plan, identification of program-specific or site-specific adverse impacts, including those which are unavoidable, will be accomplished during future planning and environmental review of programs and projects. Although specific adverse impacts associated with the application of SCORP policies cannot be identified, adverse impacts may arise when one or a group of SCORP policies are given more emphasis over other policies. Also, while implementation of SCORP policies and objectives will generally promote coastal policies, overemphasis of particular SCORP policies can in turn create potential conflicts with coastal policies. Minimizing the chance of SCORP and other applicable policies conflicting with one another is accomplished through planning, environmental review, public participation and priority rating systems. Adequate resource inventories and master plans are needed, however, to be most effective in planning and environmental review of recreational programs and facilities.

New policies and initiatives within this SCORP, including additional planning, ecosystem-based management and sustainability, will facilitate proper balancing of the SCORP policies and advance environmentally sensitive recreational development and use.

Chapter 11 - Responses to Comments

This section contains the responses to the comments received by OPRHP on the 2009-2014 Draft Statewide Comprehensive Outdoor Recreation Plan (SCORP) and Generic Environmental Impact Statement (GEIS). The draft Plan/GEIS was issued October 22, 2008.

Two public hearings were held, one at 3:00 PM and one at 7:00 PM, November 5, 2008 in the Conference Room of the Resource Center at Peebles Island State Park, Waterford, NY. The two public hearings were conducted by OPRHP staff from the Planning and Environmental Management Bureaus. A total of 18 people attended the hearings. The hearing officer, Pam Otis of OPRHP, provided guidelines on the conduct of the hearing, an overview of the next steps in the environmental review process, and she entered documents into the record. Robert Reinhardt of OPRHP made a presentation giving an overview of the content and purpose of SCORP. The hearings were then opened to the floor to take oral statements. Nine persons provided oral statements and three letters were submitted as written statements for the record.

The public comment period was closed November 21, 2008. During the public comment period the Agency received eight letters and e-mails providing both editorial and substantive comments on the 2009-2014 Draft SCORP/GIES. A listing of persons and organizations that attended the hearings and/or provided written comment is included.

OPRHP appreciates the time and effort that persons interested in recreation within NYS have invested in their review and comment of the 2009-2014 Draft SCORP/GEIS and their participation in the public hearings.

This section is organized by category. Following each category heading there is a summary of the comments received. Following each summarized comment is the Agency's response.

Vision and Policies

Comment:

The Action Strategy, "Improve access to opportunities for regular physical activity with an emphasis on providing trails, parks and recreational facilities that are in close proximity to where people live, work and/or go to school, particularly facilities that can be reached by walking and bicycling.", is so central to a comprehensive outdoor recreation plan that it should be elevated to an overall policy.

Response:

This Action Strategy was promoted to a policy under the Creating Connections theme and action strategies to support the policy have been developed.

Comment:

Under the Policy, "Apply research techniques and management practices to improve and expand parks and other open spaces." add an additional action strategy, "Conduct studies of the impacts of parks and trails on the state and local economies."

Response:

This action strategy was added.

Comment:

Under the policy, "Develop comprehensive recreationway, greenway, blueway and heritage trail systems." add the following action strategy: "Ensure full completion of the 534-mile Canalway Trail System."

Response:

This action strategy was added.

Comment:

Page 15 - "Improve access opportunities…" This showcases a great need to develop an Off-highway vehicle trails system. Those of us from the capital district must travel at least an hour away from our homes and often to another state to enjoy the outdoors and our chosen hobby. Development of such a network could greatly benefit the state.

Response:

OHVs are not permitted or treated as a recreation program on state lands. The Recreation Trail Program provides grants to support motorized trail development on private lands that are open for public use.

Comment:

Page 16 - "Creating Connections beyond the parks - Policy" - Bullets 3-6. The listed objectives provide an avenue for opportunities for the state to work with responsible interested parties (like local and national OHV enthusiast organizations).

Response:

The State will continue to coordinate with various trail organizations including motorized trail user organizations.

Trends, Issues and Needs

Comment:

Observations and comments were made about the recreation demand for Off-highway vehicle facilities not being represented or absent from the SCORP. In addition, the recreation demand does not represent the number of NYS residents that travel to other states to recreate because appropriate facilities do not exist.

Response:

The discussion on ATV and OHV recreational needs and demands has been expanded in the text.

Comment:

The General Public Survey does not account for out-of-state residents that come to NY.

Response:

The General Public Survey is designed to gain information from New York State residents. Information about out – of – state residents is obtained through other survey methods on a park by park basis.

Comment:

Despite the fact the ATV and OHV use is growing in New York State, in Table 3.22 there is no Relative Index of Need for OHV, ATV or OHM. There needs to be.

Response:

Relative Index of Need figure could not be generated for ATV or OHV activities due to the limited number of respondents for these activities from the General Public Survey. If a need index is required for these activities one can be generated on a case by case basis using data from other sources.

Comment:

Comments were made regarding the use of the General Public Survey in determining demand for OHV, ATV or OHM uses across the state. Particularly the poor response rate to the survey and the fact there was no place on the survey form for users to indicate their participation levels in OHV activities. It is suggested that SCORP Planning involve regional plans to address the needs and resources of this group and that the OHV activity should be added to all surveys, to prevent under-representation of participation.

Response:

Alternative and better survey methods are being explored for future planning efforts. OPRHP will consider separating out the various types of motorized uses in future survey efforts.

Comment:

Table 3.16 shows revenue from ATVs is decreasing yet Table 3.17 shows that registrations are increasing. ATV revenues should be increasing and according to NYSORVA it is.

Response:

The revenue figures reported in SCORP were generated from ATV registration fees. During this time period an increase in the registration fee was instituted for the development of a trails system. Due to changes in legislation this fee increase was removed in subsequent years. As a result of over payment in registration fees, DMV provided refunds. Inconsistencies between Tables 3.16 and 3.17 are being researched further.

Comment:

In the previous SCORP ATV use was projected to increase. In this SCORP ATV use is projected to decrease. However, ATV use has been growing continually since 1986 with only 2 years of decline. On what criteria is OPRHP basing this predicted 4% decline?

Response:

As noted earlier, the discussion on ATV and ORV recreational needs and demands has been expanded in the text (Chapter 3 – Trends, Issues and Needs).

Comment:

Without a plan for access for off-road vehicles there are less and less places to ride and there are very few private properties available for riding forcing us to take other avenues. Some run illegally on to state lands. With something planned or state run you can stop the illegal use. Why can't NYS provide land for OHV users? We need places to enjoy our recreation just like the people you provide land for now. We should be allowed equal opportunities, but instead we are denied.

Response:

As stated earlier, OHVs are not permitted or treated as a recreational activity or program on state lands. The Recreation Trail Program provides grants to support motorized trail development on private lands that are open for public use.

Comment:

A comment was made that on RTP grant rating forms there is a project eligibility criteria that the proposed project must be identified in the SCORP. OHV use is not represented in the SCORP and there is no Relative Index of Need provided in Table 3.22.

Response:

Relative Index of Need figure could not be generated for ATV or OHV activities due to the limited number of respondents for these activities from the General Public Survey. If a need index is required for these activities one can be generated on a case by case basis using data from other sources.

Creating Connections

Comment:

OPRHP is encouraged to pursue making connections by improving road systems within the parks for transportation and bicycling.

Response:

OPRHP will continue to evaluate alternatives to improving multi-modal transportation within the state park system.

Comment:

Coordinate with DOT is using the road shoulders inventory to make the connections and complete the statewide trails system.

Response:

OPRHP will continue to coordinate with DOT to complete a statewide trail system.

Comment:

The recognition of universal accessibility and encouragement of trail use for persons with mobility impairments is supported. Add language that reflects that universally accessible trails not only provide opportunities for persons with disabilities– but for small children and seniors as well.

Response:

The language was added within the Trails section of the Chapter.

Comment:

Add an action: "Create and distribute educational materials for landowners concerned about liability and trespassing."

Response:

This action has been added to the implementation section under Trails.

Comment:

Add an action: "Create and distribute educational materials for landowners concerned about liability and trespassing."

Response:

This action has been added to the implementation section under Trails.

Comment:

Modify the action Update the Statewide Trails Plan – Strengthen this action by giving some time frame such as Update the Statewide Trails Plan every five years.

Response:

This action has been changed to reflect a plan update every five years.

Comment:

Add the action: "Create regional advisory groups representing the interests of local conservationists, outdoor and sports enthusiast groups, federal agencies involved with greenways and heritage corridors in New York State, metropolitan planning organizations and trail user groups that will convene to review trails planning and development activities and advise on revisions to the statewide trails plan."

Response:

A broader statement has been added regarding the development of regional trail committees to coordinate and promote the development of regional trail systems.

Comment:

Add the action: "Annually convene an interagency working group to provide input on trail planning for New York and coordinate trail development, operation, maintenance, and promotion across all applicable state and federal government entities."

Response:

This action has been added to the implementation section under Trails.

Comment:

Page 92 Table 5.1a Four-wheel Drive Class Requirements: Class 4 states 70" width, 105" max wheelbase. This needs to be updated based on current statistics. "70 inch width" should be updated to "80 inches or less." The width of many OHV's has changed considerably.

Response:

The Four-wheel Drive Class Requirements Table 5.1a has been changed as suggested.

Comment:

Add the following action: "Establish a grant program funded through the EPF and administered by Parks & Trails New York, to improve the capacity of park and trail not-for-profits, which often work in partnership with local governments, to create and steward the state's trails and parks."

Response:

This is a recommendation that requires a legislative change that would expand the EPF to not-for-profits in a year when EPF funding is not being expanded. The primary focus for any changes relative to EPF during this period will be for administrative considerations.

Comment:

Clarify the action: Revise the Parks and Recreation Law to further define OPRHP's responsibilities for trails. Further explanation is needed regarding what changes OPRHP wishes to propose.

Response:

This action has been deleted from the document. It was determined that further defining OPRHP's responsibilities for trails can be done through administrative actions.

Statewide Programs

Comment:

The plan needs to demonstrate better linking and coordination with the Department of Health's programs that promote physical activity to combat the population's top heath issues.

Response:

Information regarding the Department of Health's programs has been added to this chapter.

Comment:

Reference the Department of Health's plan, Cardiovascular Health (CVH) in New York State: A Plan for 2004 – 2010. Two community sector objectives from the CVH plan are relevant to and should be noted in this SCORP: 1)Increase the proportion of New Yorkers who report that it is safe, accessible and comfortable for them to walk or bike near their homes or worksites (#14); 2)Increase the percentage of New Yorkers who walk or bike regularly for leisure and for transportation (#15). One of the potential action steps for this second objective speaks directly to SCORP: "Promote the use of New York State parks as a means of increasing physical activity for individuals and families."

Response:

The text of this chapter has been updated to reflect this information and the reference has been added.

Comment:

The document should mention the statewide rail Plan DOT is drafting right now. The goals of SCORP should be reflected in and compatible with those of the rail plan. The Rail Plan and SCORP should recognize and promote the potential of existing rail corridors, active and inactive, to serve both rail and multi-use trail purposes and establish guidelines for better integration of rail corridors with the state's expanding network of multi-use trails, thus contributing to a more comprehensive alternative transportation system.

Response:

OPRHP will coordinate with DOT.

The State Outdoor Recreation System

Comment:

The section on DEC's Public Forest Access Roads says: "The smaller seasonal-use-only roads are often developed as a result of a timber sale. While the sale is in progress, these "haul" roads provide the timber harvester with the means to enter and extract forest products from the sale area. Once the sale is completed, the roads are usually removed from motorized use and become available for hiking, mountain biking, skiing and snowmobiling." A clause for four wheel drive truck and ATV use needs to be added. This theme is recurrent throughout the entire 2009-2014 SCORP.

Response:

Four wheel drive vehicles are allowed on Public Forest Access Roads on State Forest lands. DEC does not have an off-road vehicle recreation program on State Forest lands.

Comment:

DEC needs to have a means of classifying the multi-use long distance trails within their jurisdiction. Presently, these trails are often overlooked as DEC resources as they do not fit in any existing categories such as wildlife management areas, unique areas, state forests, or the forest preserve. Examples of such trails include the Genesee Valley Greenway, Lehigh Valley Trail by Naples, and the Groveland Secondary Trail.

Response:

DEC is in the initial stages of developing a Statewide State Forest Management Plan and will consider this as the document evolves.

Comment:

Where does the Statewide Trails Plan fit in the planning hierarchy figures in Chapter 8?

Response:

The Statewide Trails Plan is now shown in Figure 8.5 Planning Hierarch for OPRHP. It is included in the grouping of plans considered to provide statewide guidance.

Implementation

Comment:

Add: Parks & Trails New York Capacity Building Grants Program Administered by Parks & Trails New York, this program provides grants to help 501 (c)(3) park and trail not-for-profits better fulfill their missions; improve their reach, effectiveness, and impact; leverage more resources; and increase community support for and involvement in park and trail planning, development, and stewardship.

Response:

Information regarding this grant program has been added to this chapter.

General Comments on Recreation Activities

Comment:

Off-highway vehicles have co-existed with other trail user groups.

Response:

SCORP recognizes both shared use and single use trails.

Comment:

OHV users have the as much right as other users to enjoy the woods and trails.

We "tread lightly" and respect what we have and we work with others to maintain trails.

Response:

OPRHP and DEC recognize the desire of OHV users. However, there are other factors to be considered that determine the allowable uses on state lands.

Comment:

OHV users and their trails can provide access to remote areas in emergency or rescue situations.

Local OHV clubs have been contracted by local law enforcement to assist with emergency and rescue situations because the OHV users have better equipped vehicles and knowledge of the land.

Response:

The contribution OHV users provide in emergency situations is appreciated. This type of function is different than providing a recreation program.

Comment:

The local OHV clubs maintain passable trails by cutting back vegetation and repairing eroded areas on a volunteer basis so they can keep the trails.

Response:

The assistance of volunteers in maintaining trails is important for all trail user groups and should be commended for their efforts.

Comment:

OHV clubs give back to the community through special events and charitable activities.

Response:

This is a positive step in expanding trail opportunities within a community.

Comment:

NYS is not taking advantage of tourism dollars generated by OHV users because there is no statewide trail system.

Response:

Given the existing policies limiting OHV trails on State lands, local communities and private landowners should consider the economic benefits in providing trail opportunities.

Comment:

OHV users make a large contribution to the state's economy through purchases of OHVs and modifications to their vehicles

Response:

Noted.

Comment:

Very little money is needed to develop and plan and rehab some OHV trails.

Response:

Noted.

Comment:

Other states have managed to combine walking, OHV and ATV use all in one park just through the expansion of uses.

Response:

Under certain conditions, shared use trails can be successful while in other situations single use trials are more appropriate.

Comment:

Even though OHV clubs and users volunteer their time, equipment and materials to improve and maintain trails, opportunities get taken away in favor of other uses. Even in areas where OHVs and other uses have co-existed.

Response:

Noted, there may be other factors that facilitated the closure of trails for OHV use.

Comment:

There are very few clubs that are showing a decline in membership, in fact, membership is growing.

Response:

Trail organizations are important in advocating the interests of the trail users.

Comment:

I am continually looking for areas to use my vehicle in an off-road situation that is legal, accessible and challenging. It is getting increasingly more difficult to recreate in the manner I choose within New York State. Please consider full sized 4 wheel drive enthusiasts as you develop the new plan for New York.

Response:

Noted. The OHV discussion within the SCORP has been modified as a result of the public comments.

Comment:

Other states have facilities and opportunities for OHV users, why can't NYS provide something so we are not look at as rogue outcasts but as supporters of our local communities?

Response:

There are many factors that State agencies must consider in providing OHV trails on State lands. Currently recreation OHV trails are not allowed. There is funding support through the Recreational Trails Program that can assist with the development and maintenance of such trails on municipal and private lands.

Comment:

Developing ORV facilities and trails doesn't cost a lot of money. We prefer shorter trails that may take a day to drive one mile.

Response:

Noted.

Comment:

Please consider the growing number of Off-road Highway Vehicles that are increasingly looking to use our vehiles in "off-road" settings such as trails and OHV parks. The Creating Connections Chapter Table 5.1 shows trail types for 4-wheel drive vehicles I would welcome this type of recreation on NY state land.

Response:

Although OHV trails do not exist on state lands, OHV groups should continue to coordinate with State agencies.

Comment:

The term "Motorized Access" should not include snowmobiles. It is a misleading term that portrays an image that allowable uses include more than just snowmobiles.

Response:

Noted.

Other Comments

Comment:

The agency received a number of comments in support of the entire plan or for specific sections, policies or actions within the plan.

Response:

The agency thanks these persons and organizations for taking the time to review and comment on the plan.

Comment:

Many editorial comments were also received. These comments are comprised of providing updated or corrected information on specific text.

Response:

These edits have been made and are included in the final document.

Hearing Attendees and Commentors

Attendee/ Commentor	Organization
Mark Welner	
Ivan Vamos	NYS Bicycling Coalition
Brian Malloy	NYS Museum
Steve Alheim	East Coast 4-Wheel Drive Association
Fran Dougherty	
Fran Gotcsik	Parks and Trails New York
Stephen Sforza	Adirondack Jeeps
Gerard Cartaino	Adirondack Jeeps
Josh Kirschman	
Ken Jones	
John Schnieder	Adirondack Jeeps
Floyd Miller	Adirondack Jeeps
Derek Sanderson	Adirondack Jeeps
Bill Tarvin	Mohawk 4WD Club
William Hensel III	Mohawk 4WD Club / Schoharie County Jeep Club
William A. Hensel Jr.	Off Highway Vehicle Use
Scot Pignatelli	Adirondack Jeeps
Michelle Sforza	Adirondack Jeeps
Robin Dropkin	Parks and Trails New York
Bill Rudge	NYS Department of Environmental Conservation Region 3
Andy Miller	Hudson Valley 4 Wheelers
Laura Haight	NYPIRG
Scott Keller	Hudson River Valley Greenway
Sharon Leighton	NYS Canal Corporation
Andrew Labruzzo	NYS Department of State

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The 2008 New York Statewide Comprehensive Outdoor Recreation Plan is a product of the continuing planning process of the New York State Office of Parks, Recreation and Historic Preservation. The Bureau of Resource and Facility Planning has the primary responsibility for developing the plan. However, its development would not have been possible without the valuable contributions of other agency staff; other state agencies; park, recreation, and preservation organizations; and private citizens as identified in the "Acknowledgements" section.

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Appendix A -

Legal Authorization to Develop the New York Statewide Parkland Recreation Plan

Authority of the Office of Parks, Recreation and Historic Preservation to develop a statewide park and recreation plan is established in the PARKS, RECREATION AND HISTORIC PRESERVATION LAW (Chapter 36-B of the Consolidated laws, 1972, and as amended.) The Law further designates the Commissioner of the Office of Parks, Recreation and Historic Preservation as agent for the administration of the Land and Water Conservation fund and the National Historic Preservation Fund.

Sections of the Law applicable to the above functions, duties and responsibilities are presented below.

Title B - Organization and General Powers, Functions and Duties of Office of Parks, Recreation and Historic Preservation

Article 3 - (3.01 - 3.25) Office of Parks, Recreation and Historic Preservation; Commissioner

§ 3.09 General functions, powers and duties.

The office by and through the commissioner, shall:

3. Encourage, facilitate and coordinate the planning and implementation of parks, recreational and historic preservation activities and programs of state agencies.

4. Cooperate in the planning, organization, development and operation of municipal and private park, recreational and historic preservation projects and programs.

7. Undertake surveys or analyses deemed appropriate for the performance of the functions, powers and duties of the office through office personnel or consultants, or in cooperation with any public or private agencies.

    7-a. Promulgate a comprehensive plan for the establishment of a statewide trails system. For the purposes of this subdivision "trails" shall include footpaths, bike ways, snowmobile trails, horse trails, cross country ski trails, roads and other rights-of-way suitable for hiking, strolling, cycling, horseback riding, skiing and other means of motorized and non-motorized travel for recreational purposes and shall include combinations and systems of trails, including connecting and side trails, and trails leading to scenic and recreational areas. The commissioner, with the approval of the director of the budget, may, within the appropriations made available by the legislature, purchase such abandoned railroad rights-of-way as can be used in the comprehensive plan, and make improvements where necessary, in order to make them suitable and available for use as trails.

11. When designated by the governor, act as the state agent for the receipt and administration of any federal grant or advance of funds for the assistance of any project, program or activity related to the functions, powers and duties of the office, where the designation of a state agent is required under federal law or regulation, regardless of whether the project, program or activity is undertaken by the office or another person.

§ 3.15 Statewide park and recreation plan.

1. The office shall formulate, maintain and from time to time revise a statewide park and recreation plan.

2. The office shall submit such plan and periodic revisions of such plan to the department of state and to the governor. The department of state shall review such plan and such revisions and shall submit a report thereon, together with such recommendations as it may deem appropriate, to the governor. Such plan and revisions shall become effective upon approval by the governor and shall serve thereafter as a guide for the development, protection and management of parks and recreation facilities.

    2-a. Such plan and revision shall include the results of a survey of local park and recreation programs throughout the state that identify local park or recreation services which are unique, innovative or budget-effective and which may be readily adaptive to other localities. The findings from each such survey shall be maintained by the office until such subsequent revision and shall be readily available to local governments and their parks and recreation agencies.

    2-b. Such plan shall describe the existing natural, ecological, historic, cultural and recreational resources within the state park, recreation and historic site system. It shall also identify any threats to the quality of these resources and the types of actions that will be taken to eliminate or substantially reduce such threats.

3. In formulating such plan and any such revisions, the office may:

    (a) Conduct one or more public hearings;

    (b) Consult with and cooperate with

        (i) officials of departments and agencies of the state having duties and responsibilities concerning parks and recreation;

        (ii) officials and representatives of the federal government, of neighboring states and of interstate agencies having duties and responsibilities relating to parks and recreation in this state;

        (iii) officials and representatives of local government in the state;

        (iv) officials and representatives of science, industry, education

        (v) persons, organizations and groups, public, or private, utilizing, served by, interested in or concerned with parks and recreation of the state; and

    (c) Request and receive from any department, division, board bureau, commission or other agency of the state or any political subdivision thereof or any public authority such assistance and data as may be necessary to enable the office to carry out its responsibilities under this section.

Title C - Parks, Recreation and Historic Preservation

Article 13 - (13.01 - 13.30) General Provisions

§ 13.23 Land and water conservation fund; state agent.

1. Office designated as state agent. The office is hereby designated to represent and act for the state in dealing with the federal secretary of the interior and other appropriate federal officers, agencies and authorities in connection with the federal land and water conservation fund act of nineteen hundred sixty-five and acts amendatory or supplemental thereto.

2. Powers of the office as state agent. The office, as agent of the state as herein provided, is hereby authorized and empowered:

(a) On behalf of the state or any agency thereof, to apply to any appropriate agency or officer of the federal government for participation in or the receipt of federal aid pursuant to such federal act, and to make such agreements with the federal government or any appropriate agency or officer thereof, not inconsistent with law, as may be necessary as a condition precedent to receiving such federal aid for a project, provided that the office shall not make a commitment or enter into any agreement pursuant to this paragraph until the director of the budget certifies that sufficient funds are available for meeting the state share, if any, of the cost of the project.

(b) On behalf of any municipality eligible under federal law or regulation, to enter into and administer such agreements with the federal government or any appropriate agency or officer thereof as may be necessary as a condition precedent for receiving such federal aid for a project, provided that such municipality give necessary assurances to the office, in the form of a written agreement, that such municipality has available sufficient funds to meet its share of the cost of the project, and that the project will be operated and maintained at its expense for the required public use.

3. Custody and payment of funds.

(a) The department of taxation and finance is hereby designated as the custodian of all federal funds allotted to the state pursuant to such federal act, and such funds shall be payable only on the audit and warrant of the state comptroller on the certificate of the commissioner, or the commissioner of environmental conservation for projects undertaken by the department of environmental conservation, in accordance with a certificate of approval of availability issued by the director of the budget.

(b) An agreement with a municipality pursuant to paragraph (b) of subdivision two of this section may provide for an advance in the first instance, when funds are appropriated and available therefor, of an amount equal to the federal share of the cost of a local project subject to full reimbursement being made to the state by the federal government. Whenever the federal government shall subsequently disallow or disapprove any portion or all of the federal aid advanced by the state, such municipality shall reimburse the state in full for all expenditures advanced by the state which have not theretofore been reimbursed by the federal government. If such municipality shall fail to repay the state within one year after notice of such disapproval or disallowance, the state comptroller shall cause to be withheld from state assistance to which such municipality would otherwise be entitled, an amount sufficient to reimburse the state in full, and shall credit the same to the capital construction fund in repayment of such advance.

(c) In the event that any appropriations are made to the office or the department of environmental conservation from the capital construction fund for the payment in the first instance by the state of the federal share of the cost of a project, the state comptroller shall be authorized to receive from the federal government an amount of money equal to the amounts of money expended by the state from such appropriations made for such first instance payments and to deposit the same to the credit of the capital construction fund so that the state shall be reimbursed for the full amount of any and all such first instance payments from such appropriations.

4. Allocation of monies. The monies allocated to the state pursuant to such federal act, during each federal fiscal year, shall be apportioned by the commissioner of parks, recreation and historic preservation, with the approval of the director of the budget, between the state and its political subdivisions as the need may appear, provided that the projects of the political subdivisions qualify for federal assistance pursuant to such federal act and any rules and regulations which may be adopted by the commissioner.

Article 19 - (19.01 - 19.11) Historic Sites

§ 19.03 Powers, functions and duties; commissioner.

In addition to the powers, functions and duties provided for in section 3.09, the commissioner shall:

1. Act as the liaison officer on historic preservation matters pursuant to the provisions of any applicable federal law or regulation.

2. Develop and maintain a statewide comprehensive survey and plan for historic preservation.

3. Be authorized to establish and maintain a state register of historic sites and objects.

4. Cooperate with the department of education and the New York state freedom trail commission in the performance of their duties in connection with the freedom trail and underground railroad.

New York State Legislature, Laws of New York: http://leginfo.state.ny.us:82/INDEX1.html : Accessed for revisions and updates January 9, 2002.

Appendix B -

Sample Survey Forms

Figure B.1 - Sample Facility Inventory Form

NYS OUTDOOR RECREATION FACILITIES INVENTORY

SITE NAME: _____ OWNER NAME: _____
Address: _____ Address: _____
City / Town: _____ City / Town: _____
Zip: _____ Telephone: ( ) _____ Zip: _____ Telephone: ( ) _____

OPERATOR: State County City Village Town Federal School District
(Circle One) Non-Profit Private (closed to public) Commercial (open to public)

CAMPING
- Total Number of Tent / RV Sites: _____
- # of Electrified Sites: _____ Showers: Yes No
- Number of Cabins: _____
- Group Camping Available: Yes No

GOLFING
- Driving Range: Yes No
- Miniature Golf: Yes No
- Number of 18-Hole Courses: _____ Total Yards: _____
- Number of 9-Hole Courses: _____ Total Yards: _____

FISHING
- Fishing Available at Site: Yes No

PICNICKING
- Number of Tables: _____
- Number of Shelters: _____
- Playground: Yes No

COURT SPORTS
- Number of Tennis Courts: _____
- Number of Basketball Courts: _____
- Number of Handball Courts: _____
- Number of Other Courts: _____

FIELD SPORTS
- Baseball / Softball / Little League: Yes No
- Football / Soccer / Other: Yes No

ARCHERY / TARGET SHOOTING: Yes No

AMUSEMENT AREA: Yes No

HISTORIC SITE: Yes No

NATURAL / SCENIC ATTRACTION: Yes No

NATURE / VISITOR CENTER: Yes No

COMMUNITY GARDENS: _____ Sq. Ft.

TRAILS
- Total Miles of Trails: _____
- Bicycle: Yes No
- Hiking: Yes No
- ATV / Trail Bike: Yes No
- Snowmobile: Yes No
- Cross-country Skiing: Yes No

SWIMMING
- Linear Feet of Developed Beach: _____
- Number of Pools: _____
- Total Pool Area: _____ Sq. Ft.

MARINAS
- Number of Cartop Launches: _____
- Number of Dock Slips: _____
- Number of Moorings: _____
- # of Ramps: Paved _____ Unpaved _____
- # of Pumpouts: _____
- Transient Access: Yes No
- Boat Rental: Yes No

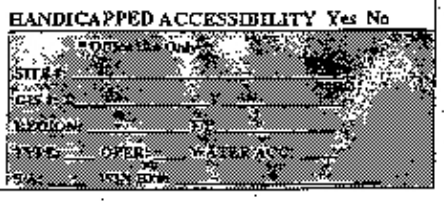
MAJOR WATER BODY
- Name: _____

SKIING
- Ski Area: Yes No
- Number of Slopes / Trails: _____
- Number of Lifts: _____
- Snowmaking: Yes No

ICE SKATING: Yes No

PARK AREA
- Total Acreage of Facility: _____
- Parking Capacity: _____

HANDICAPPED ACCESSIBILITY Yes No



See instructions on the reverse side of this form.

Figure B.2 - Park Professional Survey Form

George E. Pataki, Governor
Bernadette Castro, Commissioner

Park Professional Survey

Dear Park Professional:

The New York State Office of Parks, Recreation and Historic Preservation thanks you for your help in gathering information on recreation needs in your community. While we are interested in all aspects of recreation, this year we are placing a special emphasis on trail-based recreation.

Again, thank you for your help. If you have any questions, please call Wesley Bartlett at (518) 474-8410.

1) Please rate the need for the following in your community on a scale of 1 to 5, with 5 being most needed and 1 being not needed at all:

Most needed				Not Needed	
5	4	3	2	1	Trails
5	4	3	2	1	Picnicking / Day Use Areas
5	4	3	2	1	Swimming Pools
5	4	3	2	1	Beaches
5	4	3	2	1	Golf Courses
5	4	3	2	1	Tennis / Handball / Racquetball Courts
5	4	3	2	1	Basketball Courts
5	4	3	2	1	Sports Fields (Baseball, Soccer, etc.)
5	4	3	2	1	Hunting Areas
5	4	3	2	1	Campgrounds
5	4	3	2	1	Fishing Access / Piers
5	4	3	2	1	Boat Launches / Docks
5	4	3	2	1	Ice Skating Rinks
5	4	3	2	1	Downhill Ski Facilities
5	4	3	2	1	Nature Study Areas
5	4	3	2	1	Other (specify) _____

2) Does your community have a recreation or open space master plan? Yes___ No___

9a. **If yes**, is this plan more than 5 years old? Yes___ No___
When will your next revision of this plan be? _____ (Year)

9b. **If No**, do you intend to develop a plan? Yes___ No___
Why_____

3) Does your department/agency plan to develop a park or recreation facility within the next five years? Yes___ No___

4) Is the aging of the population considered in your recreation plan? Yes___ No___

5) Does your department/agency plan to acquire additional open space within the next five years? Yes___ No___

Continued on next page

Figure B.2 - Park Professional Survey Form (Continued)

6) What is the dollar value of needed facilities in your community?

Acquisition $ _____ New Development $ _____ Rehabilitation $ _____

7) Are you aware of the following grants programs that the New York State Office of Parks, Recreation and Historic Preservation administers?

Land & Water Conservation Fund Yes___ No___

Evironmental Protection Fund Yes___ No___

Recreational Trails Program Yes___ No___

8) Does your municipality support the continued funding of the Land and Water Conservation Fund (LWCF)? Yes___ No___

9) Please read each of the statements below very carefully and then indicate how you feel about them by circling a number to the left of the statement. If you feel very strongly circle –3 or +3. If you have no opinion, cannot decide or lack information necessary to give an opinion, circle 0. Circle –2, -1, +1 or +2 if you feel somewhat, but not very strongly negatively or positively.

Strongly Disagree						Strongly Agree	
-3	-2	-1	0	+1	+2	+3	More lands should be purchased by government to preserve more open space.
-3	-2	-1	0	+1	+2	+3	More lands should be purchased by government for recreation.
-3	-2	-1	0	+1	+2	+3	Easements should be considered whenever possible as an alternative to fee acquisition.
-3	-2	-1	0	+1	+2	+3	Government should purchase additional public access to water resources such as lakes, streams, beaches and oceanfronts.
-3	-2	-1	0	+1	+2	+3	Government should increase spending for outdoor recreation facilities, e.g. pools, marinas, trails, campgrounds, etc.
-3	-2	-1	0	+1	+2	+3	More money should be spent on public park maintenance and repair.
-3	-2	-1	0	+1	+2	+3	Federal financial assistance to support recreation development and land acquisition should be increased.
-3	-2	-1	0	+1	+2	+3	The quality and condition of programs and facilities are being adversely impacted by budget and staff reduction.
-3	-2	-1	0	+1	+2	+3	Public/private partnerships should be considered to expand and develop recreational facilities.

10) Is information about recreation facilities and trails in your community available on the Internet?
Yes___ No___
If yes, please indicate the web address: _____

11) Are actions being taken in the planning and design of recreation programs and facilties in your community to address increased obesity within the population? Yes___ No___

Figure B.2 - Park Professional Survey Form (Continued)

Trail Facilities and Issues

T1) Please rate the need for the various types of trails in your community on a scale of 1 to 5, with 5 being most needed and 1 being not needed at all:

Most needed				Not Needed	
5	4	3	2	1	Walking / Jogging / Hiking Paths
5	4	3	2	1	Recreational Bicycle Paths
5	4	3	2	1	Bicycle Commuter Routes
5	4	3	2	1	Mountain Biking Trails
5	4	3	2	1	In-line Skating/Roller Blading Paths
5	4	3	2	1	ATV Trails
5	4	3	2	1	Off Road Vehicles (4WD Trucks,) Trails
5	4	3	2	1	Equestrian Trails
5	4	3	2	1	Nature/Interpretive Trails
5	4	3	2	1	Canoeing/kayaking Routes
5	4	3	2	1	Water Trails
5	4	3	2	1	Snowmobile Trails
5	4	3	2	1	Cross Country Skiing Trails
5	4	3	2	1	Snowshoe Trails
5	4	3	2	1	Other _____

T2) Please rate the importance of the following trail issues in your community and check the box next to the three with the highest priorities:

Most important				Least Important	
5	4	3	2	1	❑ Providing access to trails
5	4	3	2	1	❑ Obtaining liability insurance
5	4	3	2	1	❑ Accessibility for persons with disabilities
5	4	3	2	1	❑ Safety / Law enforcement
5	4	3	2	1	❑ Acquiring new land for trails
5	4	3	2	1	❑ Developing new trails
5	4	3	2	1	❑ Maintenance
5	4	3	2	1	❑ Trail signage
5	4	3	2	1	❑ Concerns of landowners
5	4	3	2	1	❑ Sources of funding
5	4	3	2	1	❑ Other _____

T3) Approximately how many miles of federal, state and locally designated trails are within your community? _____ miles

T4) What is the major source of financing for trail maintenance in your community?
____ General Taxes ____ Donations _____ User Fees _____ Other: _____

T5) Approximately what percentage of trail maintenance in your community is done by volunteer groups? _____ %

Continued on next page

Figure B.2 - Park Professional Survey Form (Continued)

T6) Please rate the importance of the following trail needs in your community:

Most important				Least Important	
5	4	3	2	1	Trails linked to population centers
5	4	3	2	1	Trails linked to other trails
5	4	3	2	1	Trails in rural areas
5	4	3	2	1	Trails connecting residential areas to schools, parks and other community resources
5	4	3	2	1	Trails connecting residential areas to commercial areas

T7) For the trails in your community, please number each one of the following physical issues in order from most serious(1) to least serious(7), using each number 1,2,3,4,5,6 and 7 only once:

___ Invasive Species
___ Weather damage to trail structures
___ Undergrowth and weeds are uncontrolled
___ Treadway maintenance
___ Poor Design
___ Overuse
___ Other _____

T8) For the trails in your community, please number each one of the following social issues in order from most serious(1) to least serious(6), using each number 1,2,3,4,5 and 6 only once:

___ Conflicts between different types of users
___ Trail vandalism
___ Conflicts between users and landowners
___ Crowding / Overuse
___ Illegal use of trails
___ Other _____

T9) Are you a member of a trail club or organization? ___ Yes ___ No, If yes, identify type:

___ Hiking ___ Equestrian ___ ATV
___ Running ___ Biking ___ ORV
___ Canoe ___ Snowmobile ___ Cross Country Skiing

T10) Is obtaining liability insurance for trails within your community a concern for:

Your local government: ___ Yes ___ No
Local trail organizations: ___ Yes ___ No
If yes, the primary issue is:
___ Availability ___ Cost ___ Extent of Coverage
___ Other, please specify _____

T11) We welcome any comments you have on trails usage / issues / problems in your area:

Name: _____ Title: _____
Address: _____
City: _____ NY Zip: _____
Phone Number: (_____) _____ - _____ Email: _____

Figure B.3 - General Public Survey Form

New York State
Office of Parks, Recreation and Historic Preservation
2004 General Public
Recreation Survey

1. Please complete the activity lists below for you and any two other household members above age 12. Indicate the approximate number of days the activity was done during calendar year 2004 (January 1, 2004 to December 31, 2004), *regardless of where the activity took place, whether at a state park, local park, private facility or anywhere else*. If you and the two other household members did not participate in an activity at all you may leave the line blank.

Examples: Golf __7__ = [Played 7 days last year]
Basketball __100__ = [Played 100 days last year, about twice a week]

	"YOU" ___ age ___ sex	"OTHER HOUSEHOLD" MEMBER 1 ___ age ___ sex	"OTHER HOUSEHOLD" MEMBER 2 ___ age ___ sex
ACTIVITY LIST	days	days	days
Visiting Parks and Natural Areas			
Relaxing in the park	_____	_____	_____
Picnicking	_____	_____	_____
Playground use	_____	_____	_____
Bird Watching/Nature Photography	_____	_____	_____
Visiting Nature Preserves	_____	_____	_____
Court Games			
Tennis	_____	_____	_____
Handball/Racquetball	_____	_____	_____
Basketball	_____	_____	_____
Field Sports			
Baseball/Softball	_____	_____	_____
Soccer	_____	_____	_____
Volleyball	_____	_____	_____
Water Based Activities			
Swimming	_____	_____	_____
Boating (with a motor)	_____	_____	_____
Rowboating/Canoeing/Kayaking	_____	_____	_____
Sailing	_____	_____	_____
Salt Water Fishing	_____	_____	_____
Fresh Water Fishing	_____	_____	_____
Surfing	_____	_____	_____
Trail Activities (whether or not on a trail)			
Bicycling (On-Road)	_____	_____	_____
Bicycling (Off-Road/Mountain)	_____	_____	_____
Skateboarding/Rollerblading	_____	_____	_____
Walking for enjoyment or exercise	_____	_____	_____
Jogging/Running	_____	_____	_____
Hiking/Backpacking	_____	_____	_____
Horseback Riding	_____	_____	_____
ATV/Off Road Vehicle/4x4	_____	_____	_____
Camping			
Tent Camping	_____	_____	_____
RV Camping	_____	_____	_____
Primitive Camping/Backpacking	_____	_____	_____
Cabin/Cottage Camping	_____	_____	_____

- 2 -

Please proceed to page 3 ☞

Figure B.3 - General Public Survey Form (Continued)

ACTIVITY LIST	"YOU" ___ age ___ sex days	"OTHER HOUSEHOLD" MEMBER 1 ___ age ___ sex days	"OTHER HOUSEHOLD" MEMBER 2 ___ age ___ sex days
Other Outdoor Recreation			
Golfing	_____	_____	_____
Gardening	_____	_____	_____
Geocaching	_____	_____	_____
Hunting	_____	_____	_____
Rock Climbing	_____	_____	_____
Cultural Activities			
Visiting Formal Gardens	_____	_____	_____
Outdoor Theatre/Concerts	_____	_____	_____
Visiting Zoos	_____	_____	_____
Visiting Historic Sites	_____	_____	_____
Visiting Museums	_____	_____	_____
Winter Activities			
Ice Skating	_____	_____	_____
Cross Country Skiing	_____	_____	_____
Downhill Skiing	_____	_____	_____
Sledding	_____	_____	_____
Snow Boarding	_____	_____	_____
Snow Shoeing	_____	_____	_____
Snowmobiling	_____	_____	_____
Other (specify) _____	_____	_____	_____

2. What 2 activities would you most like to participate in, but can't for any reason?

_____ _____ _____

_____ _____ _____

3. Compared to 5 years ago, are you participating in more, less or about the same amount of physical activities? (Please circle)

M L S M L S M L S

4. What prevents you from participating in more outdoor recreation? (Please check as many as are applicable).

Work/Housework/School takes too much time	❑	❑	❑
Financial Limitations	❑	❑	❑
I prefer indoor activities	❑	❑	❑
Physical Limitations	❑	❑	❑
There are few facilities available in my area	❑	❑	❑
Nothing, I participate in as much outdoor recreation as I wish.	❑	❑	❑

Please proceed to page 4 ☞

Figure B.3 - General Public Survey Form (Continued)

The questions on page 4 refer only to facilities operated by the New York State Office of Parks, Recreation and Historic Preservation. Please limit your responses to your experience at these facilities.

The New York State Office of Parks, Recreation and Historic Preservation is responsible for the operation and maintenance of 169 State Parks and 35 Historic Sites. These sites are located throughout the state from Montauk Point to Niagara Falls and as far north as the Canadian border. We are looking for your input to help us make the decisions necessary to provide you, the public, with the best possible recreational experience when visiting one of our facilities. The next series of questions concern your experiences and your expectations when visiting a New York State Park or Historic Site. Thank you for your help.

5. When did you last visit a State Park in New York State? (please check one box only)
   - ❑ Last Year (2004); ❑ Prior Year (2003); ❑ In the previous 5 years (1998-2002);
   - ❑ More than 5 years ago (prior to 1998); ❑ I never visited a New York State Park or Historic Site.

   5a. If you last visited a State Park prior to 1998 or never visited a State Park, please indicate why:
   - ❑ I don't know where a State Park is. ❑ The State Parks in my area are over-crowded.
   - ❑ I recently moved to New York State. ❑ I am too busy.
   - ❑ State Parks are too far from my residence. ❑ Other, please specify: _____

6. What was the name of the New York State Park or Historic Site you visited most recently? _____
   How did you hear about this park?
   ❑ near home; ❑ friends; ❑ advertisements; ❑ website; ❑ Other, please specify: _____

7. What is the name of the New York State Park or Historic Site closest to your home? _____
   How often do you visit this park/site? _____ days per year;

8. Which of the following amenities have you used at a State Park in New York State in the past 5 years?
   - ❑ cabins ❑ tent site/RV camping ❑ picnic area/pavilion
   - ❑ golf courses ❑ marina/boat launch ❑ playfield/playground
   - ❑ trails ❑ swimming facilities ❑ guided tour of a state historic site
   - ❑ guided nature tour/recreation program
   - ❑ other, please specify _____

9. If you have visited a park operated by the New York State Office of Parks, Recreation and Historic Preservation in the past 5 years, What rating would you give the facility for providing recreation opportunities to children of all ages?
   ❑ Excellent ❑ Good ❑ Fair ❑ Poor

10. Have you ever accessed the New York State Park website (http://nysparks.state.ny.us/) for information related to parks?
    ❑ Yes; ❑ No; ❑ No Opinion

11. Which **three** of the following are most important to your decision to visit a State Park?
    - ❑ location ❑ safety ❑ cleanliness
    - ❑ admission fees ❑ hours of operation ❑ recreation programs (e.g. guided nature walk)
    - ❑ restrooms ❑ access to public transportation ❑ food concessions
    - ❑ facility availability (picnic tables, ball fields, etc) ❑ other, please specify: _____

12. Have you visited a State Park or State Historic Site in New York State **during the winter** within the past 5 years?
    ❑ no; ❑ yes; If yes, in which of the following acitivities did you participate?
    - ❑ snowmobiling ❑ cross country skiing ❑ downhill skiing
    - ❑ sledding ❑ ice skating ❑ snowshoeing
    - ❑ educational programs ❑ snow boarding
    - ❑ other, _____

13. Are you interested in using a full-service cabin, i.e. a cabin where linen service and kitchen utensils are provided?
    The extra services provided would increase the cost of the cabin ❑ Yes; ❑ No; ❑ No Opinion

- 4 -

Please proceed to page 5 ☞

Figure B.3- General Public Survey Form (Continued)

14. Do you feel that more recreation facilites are needed within 30 minutes of your home?
❑ Yes; ❑ No; ❑ No Opinion; If yes, which do you think are most needed?

❑ Playgrounds ❑ Golf Courses ❑ Swimming Pools/Beaches
❑ Tennis Courts ❑ Ball Fields ❑ Boating and other Water Access
❑ Trails ❑ Open Space ❑ Skateboard Parks
❑ Picnic Facilities
❑ Other, Please describe: _____

15. During 2004, approximately how many days did you visit the recreation facility types listed below? Do you plan on visiting these facilities more, less, or about the same number of times during 2005?

Days		More /	Less /	Same
_____	County, Town or City Parks	M	L	S
_____	State Parks or Campgrounds (NYS)	M	L	S
_____	State Historic Sites (NYS)	M	L	S
_____	National Parks	M	L	S
_____	Commercial recreation facilities	M	L	S

16. YOUR OPINION ON SEVERAL RECREATION ISSUES

Please read each of the statements below and then indicate how you feel about them by circling a number to the left of the statement. (If you feel very strongly circle -3 or +3. If you have no opinion, cannot decide or lack information necessary to give an opinion, circle 0. Circle -2,-1,+1 or +2 if you feel somewhat, but not very strongly negatively or positively.)

strongly disagree						strongly agree	
-3	-2	-1	0	+1	+2	+3	More lands should be purchased by government to preserve open space.
-3	-2	-1	0	+1	+2	+3	Government should preserve more open space by means other than acquisition, e.g. easements, zoning, etc.
-3	-2	-1	0	+1	+2	+3	More lands should be purchased by government for recreation.
-3	-2	-1	0	+1	+2	+3	Government should increase/create additional public access to water resources such as lakes, streams, beaches and oceanfronts.
-3	-2	-1	0	+1	+2	+3	Government should increase spending for development of recreation facilities, e.g. pools, marinas, trails, campgrounds, etc.
-3	-2	-1	0	+1	+2	+3	More money should be spent on public park maintenance and repair.
-3	-2	-1	0	+1	+2	+3	Federal financial assistance to support state and local recreation development and land acquisition should be increased.
-3	-2	-1	0	+1	+2	+3	Public/private partnerships should be considered to expand and develop recreational facilities.
-3	-2	-1	0	+1	+2	+3	Patrons should help support programs and services that have been provided through government subsidies in the past.

First, please answer the questions inside. - 5 - A few final questions on the last page

Figure B.3- General Public Survey Form (Continued)

The remaining questions are being collected for statistical purposes only.
Your responses will help us to better analyze your answers to the previous questions.

17. Please check the employment status for you and the other two household members in question 1:

	YOU	HOUSEHOLD MEMBER 1	HOUSEHOLD MEMBER 2
Working full-time	_____	_____	_____
Working part-time	_____	_____	_____
Self-employed	_____	_____	_____
Unemployed	_____	_____	_____
Retired	_____	_____	_____
Student	_____	_____	_____
Homemaker	_____	_____	_____
Disabled (check if disabled)	_____	_____	_____

18. In what town/village/or city do you live? _____ zip code: _____

19. Is your community ❑ rural ❑ suburban ❑ urban ❑ inner city?

20. What is your approximate total annual household income?
❑ Below $15,000 ❑ $50 - $74,999
❑ $15 - $29,999 ❑ $75 - $125,000
❑ $30 - $49,999 ❑ Over $125,000

21. Including yourself, how many members of your immediate household are in each category?

Children (under 12) _____ Teenagers (age 12 to 17) _____ Young Adults (age 18 to 25) _____

Adults (age 26 to 40) _____ Adults (age 41 to 65) _____ Senior Citizens (66 and older) _____

Thank you for helping New York State
improve recreation for you and your fellow citizens.

You may purchase an Empire Passport for only $59 per year
that gives you unlimited access to New York State Parks at
http://www.nysparks.state.ny.us/passport/
or by calling this telephone number:
(518) 474-0458

Figure B.4 – Trail Organization Survey

TRAIL ORGANIZATION SURVEY

The New York State Office of Parks, Recreation and Historic Preservation and Parks & Trails New York needs your help in gathering information on the trail facilities that your organization services. We are also interested in your opinion of trail issues. Thank you for your help. If you have any questions, please call Wesley Bartlett at (518) 474-8410.

George E. Pataki, Governor

Parks & Trails NEW YORK

Name(s) of the trail(s) or trail system that your organization serves: _____

T1) Please indicate the various types of activities that take place on your trails on a scale of 1 to 5, with 5 being very frequent and 1 being never at all:

Not permitted	Very frequent				Never	
❑	5	4	3	2	1	Walking / Jogging / Hiking
❑	5	4	3	2	1	Recreational Bicycling
❑	5	4	3	2	1	Commuting via Bicycle
❑	5	4	3	2	1	Mountain Biking
❑	5	4	3	2	1	In-line Skating/Roller Blading
❑	5	4	3	2	1	ATV Use
❑	5	4	3	2	1	Off Road Vehicle Use
❑	5	4	3	2	1	Equestrian User
❑	5	4	3	2	1	Nature Interpretation
❑	5	4	3	2	1	Canoeing/kayaking
❑	5	4	3	2	1	Other Water Uses
❑	5	4	3	2	1	Snowmobiling
❑	5	4	3	2	1	Cross Country Skiing
❑	5	4	3	2	1	Snowshoe-ing
❑	5	4	3	2	1	Other _____

T2) Please rate the importance of the following trail issues on your trail(s):

Most important				Least Important	
5	4	3	2	1	❑ Providing points of access to trails (parking areas, entry locations, etc.)
5	4	3	2	1	❑ Obtaining liability insurance
5	4	3	2	1	❑ Accessibility for persons with disabilities
5	4	3	2	1	❑ Safety
5	4	3	2	1	❑ Law enforcement
5	4	3	2	1	❑ Acquiring new land for trails
5	4	3	2	1	❑ Developing new trails
5	4	3	2	1	❑ Maintenance
5	4	3	2	1	❑ Poor or no trail signage at trail head or along trail
5	4	3	2	1	❑ Concerns of landowners
5	4	3	2	1	❑ Sources of funding
5	4	3	2	1	❑ Other _____

T2a) Please return to question T2 and check the box next to the three issues with the highest priorities.

T3) For your trails, please number five of the following physical issues in order from most serious(1) to least serious(5), using each number 1,2,3,4 and 5 only once:

___ Invasive Species
___ Control of undergrowth and weeds
___ Poor design
___ Safe design of trail
___ Lack of way-finding signs
___ Other _____
___ Weather damage to trail structures
___ Treadway maintenance
___ Overuse
___ Preservation of historic structures
___ Parking

Figure B.4 – Trail Organization Survey (Continued)

T4) For your trail(s), please number five of the following social issues in order from most serious(1) to least serious(5), using each number 1,2,3,4, and 5 only once:

___ Conflicts between different types of users ___ Trail vandalism

___ Conflicts between users and landowners ___ Crowding / Overuse

___ Illegal use of trails ___ Littering, dumping

___ Personal/user safety ___ Other _____

T5a) Approximately how many miles of federal, state and locally designated trails does your organization maintain? _____ miles

T5b) Maintenance by your organization consists of the following activities (Check all that apply):

❑ Cleaning Litter; ❑ Treadway Maintenance; ❑ Structure Maintenance; ❑ Pruning;

❑ Other _____

T6) What is the major source of financing for your organization?

____ Membership Dues ____ Donations _____ User Fees _____ Other: _____

T7) Approximately what percentage of maintenance on your trail(s) is done by volunteer groups? _____ % Volunteer work consists of _____ hours and $_____ in materials per year.

T8) Do you consider any of the following an important direction for the future of your trail(s):

Most important				Least Important	
5	4	3	2	1	Linking to population centers
5	4	3	2	1	Linking to other trails
5	4	3	2	1	Accessing rural areas
5	4	3	2	1	Connecting residential areas to schools, parks and other community resources
5	4	3	2	1	Connecting residential areas to commercial areas

T9) For maintenance purposes, does your organization coordinate with other clubs/organizations?

___ Yes ___ No

If yes, which club(s)/organization(s) _____

Does your organization coordinate with any of the following levels of government?

❑ Federal ❑ State ❑ Local ❑ No governmental coordination

T10) Is obtaining liability insurance for your trails a concern? ___ Yes ___ No

T11) We welcome any comments you have on trails usage / issues / problems in your area:

_____

Thank you for your interest in this important project. Please mail your completed form to:

New York State Office of Parks, Recreation and Historic Preservation
Agency Building #1 – 17th Floor
Empire State Plaza
Albany, New York 12238

Name of your organization: _____

Your Name: _____ Title: _____

Address: _____

City: _____ NY Zip: _____

Phone Number: (_____) _____ - _____ Email: _____

rev. 06/05/06

Appendix C -

Federal Recreation Sites in New York State

Site	Agency	County	Acreage (if avail.)
African Burial Grounds Allegany Reservoir	NPS COE	New York Cattaraugus	 1,100
Almond Lake	COE	Steuben	
Amagansett	USFWS	Suffolk	36
Appalachian National Scenic Trail	NPS	Orange, Rockland, Putnam, Dutchess	95 miles
Camp Drum	DOD	Jefferson, Lewis	
Castle Clinton National Monument	NPS	New York	1
Conscience Point	USFWS	Suffolk	
East Sidney Lake	COE	Onondaga	
Eleanor Roosevelt National Historic Site (Val Kill)	NPS	Dutchess	181
Ellis Island National Monument	NPS	New York	28
Federal Hall National Memorial	NPS	New York	1
Finger Lakes National Forest	USFS	Schuyler, Seneca	16,176
Fire Island National Seashore	NPS	Suffolk	19,500 (gross)
Watch Hill Campground	NPS	Suffolk	
Floyd Federal Refuge	USFWS	Suffolk	
Fort Stanwix National Monument	NPS	Oneida	16
Gateway National Recreation Area	NPS	Queens, Richmond, Kings	26,607 (gross)
Jamaica Bay Wildlife Refuge Staten Island Unit	NPS NPS	Queens Richmond	9,155
General Grant National Memorial	NPS	New York	1
Governors Island National Monument Gracie Fish Hatchery	NPS Cortland	New York Cortland	 100
Hamilton Grange National Memorial	NPS	New York	1
Hector Landuse Area	DOA	Seneca, Schuyler	
Home of Franklin D Roosevelt National Historic Site	NPS	Dutchess	800
Iroquois National Wildlife Refuge	USFWS	Orleans	10,818
Lower East Side Tenement Museum NHS	NPS	New York	1
Martin Van Buren National Historic Site	NPS	Columbia	40

Montezuma Wildlife Refuge	USFWS	Wayne, Cayuga	6,432
Morton Wildlife Refuge	USFWS	Suffolk	187
Mt. Morris Dam	COE	Livingston, Wyoming	3,825
North Country Scenic Trail	NPS	various	550 miles
Old Blenheim Covered Bridge	NPS	Schoharie	
Oyster Bay Wildlife Refuge	USFWS	Nassau	3,204
Sagamore Hill National Historic Site	NPS	Nassau	83
Saint Paul's Church National Historic Site	NPS	New York	6
Saratoga National Historical Park	NPS	Saratoga	3,392
Seatuck Wildlife Preservation	USFWS	Suffolk	183
Shawangunk Grasslands National Wildlife Refuge Statue of Liberty National Monument	USFWS NPS	Ulster New York	566 58
Target Rock	USFWS	Suffolk	80
Theodore Roosevelt Birthplace National Historic Site	NPS	New York	1
Theodore Roosevelt Inaugural National Historic Site	NPS	Erie	1
Thomas Cole National Historic Site	NPS/ Greene Co.	Greene	88
Tunnison Laboratory of Fish Nutrition	USFWS	Cortland	100
Upper Delaware Scenic & Recreational River	NPS	Delaware, Sullivan,	19 (fed NY&PA)
Upper Delaware Scenic & Recreational River	NPS	Orange	75,000 (gross)
US Military Academy at West Point	DOD	Orange	
Vanderbilt Mansion National Historic Site	NPS	Dutchess	212
Wertheim Federal Refuge	USFWS	Suffolk	2,362
Whitney Point Lake	COE	Broome	
Women's Rights National Historical Park	NPS	Seneca	7

COE - Corp of Engineers
DOA Department of Agriculture
DOD - Department of Defense
NPS - National Park Service, Dept. of the Interior
USFS - US Forest Service
USFWS - US Fish & Wildlife Service

Appendix D -

Trail Terms and Definitions

Bike Lane: A portion of a roadway that has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists.

Bike Path (Bike Trail, Multi-Use Path/ Trail): Any corridor that is physically separated from motorized vehicular traffic by an open space or barrier. It is either within the highway right-of-way or within an independent right-of-way. Due to a lack of pedestrian facilities, most bike paths/trails are commonly designed and referenced as multi-use paths and trails.

Bike Route: A roadway segment designated with appropriate "bike route" directional and informational markers.

Bikeways: Any road, path or way which in some manner is specifically designated for the exclusive use of bicycles or are to be shared with other transportation modes.

Bridleway (Bridle Path): Public way designed and maintained primarily for equestrian use. Other non-motorized uses may be permitted.

Canal: An artificial waterway for transportation or irrigation. Canal and irrigation ditch banks are often used as trails.

Corridor, Scenic: Land set aside on either side of a trail to act as a buffer zone protecting the trail against impacts such as logging or development, which would detract from the quality and experience of a trail.

Corridor, Trail: The full dimensions of a trail within a trail route, including the tread and a zone on either side (2 to 3 feet) and above the tread from which brush will be removed.

Designated Trail: A trail that is approved and maintained by an agency

Destination Trail: A trail that connects two distinct points (A to B) rather than returning the user to the original beginning point.

Extended Trail: Trails over 100 miles in length (as defined in the National Trails System Act).

Feeder Trail: A trail designed to connect local facilities, neighborhoods, campgrounds, etc. to a main trail.

Footpath: A path over which the public has a right-of-way on foot only. Wheelchairs are also permitted, although this may not be practical due to surface or slope.

Greenway: A linear open space established along a natural corridor, such as a river, stream, ridgeline, rail-trail, canal, or other route for conservation, recreation, or alternative transportation purposes. Greenway can connect parks, nature preserves, cultural facilities, and historic sites with business and residential areas.

Greenway, Community: Safe, off-road corridor of open space that connects neighborhoods, schools, parks, workplaces, and community centers via paths and trails.

Greenway, Conservation: Open space corridor that protects biodiversity and water resources by connecting natural features such as streams, wetlands, forests, and steep slopes.

Heritage Corridor: The term "heritage corridor" is used to describe a heritage area that is organized around and focused on one linear resource such as a river, canal or road. Examples: Mohawk Valley Heritage Corridor: Western Erie Canal Heritage Corridor: Illinois and Michigan Canal National Heritage Corridor; Erie Canalway National Heritage Corridor.

Heritage Trail: A heritage trail is an established path or route that most often focuses around one central theme that interprets an aspect of an area's history or culture. Heritage trails connect physical pathways to patterns and cultures of settlement. Trails may be recreational and/or scenic (Blue Ridge Parkway); they may be historically important travel corridor (Natchez Trace National Historic Trail; Route 66); or they may be sites linked by a thematic itinerary (Boston Freedom Trail).

Hiker-Biker Trail: An urban paved trail designed for use by pedestrians and bicyclists.

Hiking Trail: Moderate to long distance trail with the primary function of providing long-distance walking experiences (usually two miles or more).

Interpretive Trail: Short to moderate length trail (1/2 to 1 mile) with concentrated informational stops to explain associated views, natural flora or fauna, and other features.

Long Distance Trail: In general best characterized by length (more than 50 miles), linearity (follows a linear feature), and diversity (geographic and political).

Loop Trail: Trail systems designed so that the routes form loops, giving users the option of not traveling the same section of trail more than once on a trip.

Multiple-Use (Multi-Use) Trail: A trail that permits more than one user group at a time (equestrian, ORVer, hiker, mountain bicyclist, etc.).

National Historic Trail: Federally designated extended trails, which closely follow original routes of nationally significant travel (explorers, emigrants, traders, military, etc.). The Iditarod, the Lewis and Clark, the Mormom Pioneer, and the Oregon Trails were the first to be designated as National Historic Trails in 1978.

National Recreation Trail: Existing local trails (over 800) recognized by the federal government as contributing to the National Trails System.

National Scenic Trail: Federally designated trails, which provide for the maximum outdoor recreation potential and for the conservation and enjoyment of the significant qualities of the areas through which they pass. The Appalachian and the Pacific Crest trails were the first to be designated as National Scenic Trails in 1968.

Nature Trail: Moderate length trail (3/4 to 2 miles) with primary function of providing an opportunity to walk and study interesting or unusual plants or natural features at user's pleasure. The ideal nature trail has a story to tell. It unifies the various features or elements along the trail into a related whole.

Primary Trail: Continuous through routes that originate at trailheads. Primarily for directing users through an area while promoting a certain type of experience.

Rail-Trail (Rail-to-Trail): A multi-purpose public path (paved or natural) created along an inactive rail corridor.

Rail-with-Trail: A trail that shares the same corridor with active rail traffic.

Recreationway: A unified system of linear interconnected open spaces and natural areas that accommodate trail uses, and where possible, other compatible and supporting activities.

Single-Use Trail: One that is designed and constructed for only one intended user (i.e. hiker use only).

Social Trail (Wildcat, Way, Informal): Unplanned/unauthorized trails that develop informally from use and are not designated or maintained by an agency; often found cutting switchbacks or between adjacent trails.

Spine Trail: A regional trail that acts as a "backbone" to a regional trail system.

Spur Trail: A trail that leads from primary, secondary, or spine trails to points of user interests — overlooks, campsites, etc.

Trail: A linear corridor, on land or water, which provides for access for recreation and transportation as well as related outdoor education and sport activities. A trail may link two or more points or be a looped system with the same start and end point. It may be single or share use; non-motorized and/or motorized; single season or year-round; narrow or wide; urban and/or rural; and comprised of various types of surfaces. It may be a stand-alone entity or part of a broader corridor such as a greenway. The term trail has evolved to include routes on existing transportation systems that link points of a specific program perspective usually of a historical theme.

Trail Route: The general location of a trail from a point of origin to a point of destination. The point of origin and destination may be the same as for a loop trail; or a linear corridor connecting two separate points. Within the trail route, a trail corridor would be defined.

Trailway: The portion of the trail within the limits of the excavation and embankment.

Travelway: The trail as a whole, including the trail tread and the cleared areas on either side of the trail.

Water Trail (River Trail, Canoe Trail, Blueway): A recreational waterway on lake, river, or ocean between specific points, containing access and day use and/or camping sites for the boating public.

Appendix E -

Wildlife as a Recreational Resource

Types of Recreation

Species or Group of Species	Knowledge of Presence	Incidental to Other Activity	Observation/Study	Hunting	Trapping	Other
INVERTEBRATES						
Buck Moth	x		x			
Chittenango ovate amber snail	x	x				
Karner blue butterfly	x	x	x			
Uncommon freshwater mussels	x		x			
Uncommon butterflies and moths		x	x			Collecting
Common butterflies and moths		x	x			Collecting
Uncommon dragonflies and damselflies	x		x			Use for fishing bait
Other vulnerable invertebrates	x		x			
REPTILES AND AMPHIBIANS						
Common reptiles and amphibians	x	x	x	x	x	Collecting, exhibit, education, fishing bait
Introduced reptiles			x			
Other endangered and threatened reptiles and amphibians	x	x	x			
Sea turtles	x	x	x			
Uncommon reptiles and amphibians	x	x	x			Collecting, fishing bait, exhibit, education
BIRDS						
American bittern	x		x			
Black duck	x	x	x	x		Banding
Crow	x	x	x	x		
Woodcock	x		x	x		
Bald eagle	x	x	x			National symbol

Types of Recreation

Species or Group of Species	Knowledge of Presence	Incidental to Other Activity	Observation/Study	Hunting	Trapping	Other
Black skimmer	x	x	x			
Black tern	x	x	x			
Brant		x	x	x		
Canada Goose	x	x	x	x		Income for commericial shooting providers
Canvasback	x	x	x	x		
Nighthawk	x	x	x			
Raven	x		x			
Snipe	x		x	x		
Common tern	x	x	x			
Cormorants	x	x	x			
Cuckoos	x	x	x			
Bluebird	x	x	x			Nestbox construction
Fish Crow			x			
Golden eagle	x	x	x			
Grassland sparrow	x	x	x			
Gray partridge		x		x		Privately stocked birds on shooting preserves
Grebes		x	x			
Herons and ibis	x	x	x			
Least bittern	x	x	x			
Least tern	x	x	x			
Loggerhead shrike	x		x			
Loons	x	x	x			Symbol of wilderness
Mallards	x	x	x	x		Income, shooting, preserve, feeding, banding
Mourning dove	x	x	x	(x)		(Hunting not legal in NY)
Mute swan		x	x			

Types of Recreation

Species or Group of Species	Knowledge of Presence	Incidental to Other Activity	Observation/Study	Hunting	Trapping	Other
Nesting gulls		x	x			
Bobwhite	x	x	x	x		Income, breeders
Northern harrier	x	x	x			
Osprey	x	x	x			
Owls	x	x	x			Nestbox programs
Peregrine falcon	x	x	x			Falconry
Piping plover	x	x	x			
Red shouldered hawk	x	x	x			
Ringnecks duck and common goldeneye		x	x	x		Wilderness indicator in breeding season
Ringnecked pheasant		x	x	x		Breeding, shooting, preserve, income, rearing, recreation
Roseate tern	x	x	x			
Ruffed grouse	x	x	x	x		
Sedge wren	x		x			
Spruce grouse	x	x	x			Boreal indicator
Swallows	x	x	x			Mosquito reduction
Turkey vulture	x	x	x			
Upland sandpiper	x		x			
Wild turkey	x	x	x	x		Guide income
Wood duck	x	x	x	x		Fly tying, taxidermy, nestboxes
Brushland/forest edge nesting birds - 39 species	x	x	x			
Coot, moorhen and rails - 8 species	x		x	x		
Forest interior nesting bird s- 30 species	x	x	x			
Miscellaneous bird species- 19 species	x	x	x			
Non-resident raptors - 8 species	x	x	x			
Oceanic birds - 15 species	x	x	x			

Types of Recreation

Species or Group of Species	Knowledge of Presence	Incidental to Other Activity	Observation/Study	Hunting	Trapping	Other
Open field nesting birds - 5 species	x	x	x			
Other ducks and mergansers - 16 species	x	x	x	x		Banding
Other gulls - 10 species	x	x	x			
Other permanent resident raptors - 6 species	x	x	x			
Tundra swan, snow goose	x	x	x	x		
Other terns - 5 species	x	x	x			
Rare nesting species in northern hardwood and spruce-fir forests - 14 species	x	x	x			Wilderness indicator
Sea ducks - 7 species	x	x	x	x		
Shore birds - 37 species		x	x			
European starling, house sparrow, rock dove	x	x	x			Observation and feeding in highly urban conditions, horming pigeons
Urban/Suburban nesting birds - 11 species	x	x	x			
Wetland riparian nesting birds - 16 species	x	x	x			
MAMMALS						
Allegheny woodrat	x		x			
Beaver	x	x	x		x	Wildlife impoundments, fur income
Black bear	x	x	x	x		Taxidermy, trophies, bear parts (except meat)
Bobcat	x	x	x	x	x	Taxidermy, fur income
Cottontails	x	x	x	x		Dog field trails
Dolphins - 9 species	x	x	x			
Eastern coyote	x	x	x	x		Trophies, fur income
Fisher	x	x	x		x	Fur income
Foxes	x	x	x	x	x	Fur income, folk lore
Harbor porpoise	x	x	x			

Types of Recreation

Species or Group of Species	Knowledge of Presence	Incidental to Other Activity	Observation/Study	Hunting	Trapping	Other
Indiana bat	x		x			
Lynx	x		x			A federal and state-listed species. There is no season for Lynx in NY.
Marten	x	x	x		x	Fur income
Mink	x	x	x		x	Fur income
Moose	x	x	x	(x)		Wilderness symbol, drama of large size, tourist income, (Hunting not legal in NY)
Muskrat	x	x	x	x	x	Fur income, young trappers, habitat magmt. For other wetland species
Porcupine	x	x	x			Indian crafts
Racoon	x	x	x	x	x	Fur income
River otter	x	x	x		x	Fur income
Seals	x	x	x			
Small-footed bat	x		x			
Striped skunk	x	x	x	x	x	Scent gland, fur income
Squirrels	x	x	x	x		
Varying hare	x	x	x	x		
Virginia opossum	x	x	x		x	Only North American marsupial
Weasels	x		x		x	Fur income
Endangered whales	x	x	x			Emotional symbols
White-tailed deer	x	x	x	x		Hunters benefit state economy, trophies
Woodchuck	x	x	x	x		
Other bats - 7 species	x	x	x			
Northern flying, red, southern flying, squirrels and eastern chipmunk	x	x	x			
Other whales - 6 species	x	x	x			
Native mice, voles and lemmings- 9 species	x	x	x			
Shrews and moles - 10 species	x	x	x			

Appendix F -

State Parks, Historic Sites and Other Properties

Region	Unit	County(ies)	Unit Type
Allegany	Allegany	Cattaraugus	Park
	Cuba Lake Reservation	Allegany	Other
	Lake Erie	Chautauqua	Park
	Long Point (on Lake Chautauqua)	Chautauqua	Park
	Midway	Chautauqua	Park
Central	Battle Island	Oswego	Park
	Betty & Wilbur Davis	Otsego	Park
	Bowman Lake	Chenango	Park
	Canadarago Boat Marine Park	Otsego	Marine Park
	Chenango Valley	Broome	Park
	Chittenango Falls	Madison	Park
	Clark Reservation	Onondaga	Park
	Delta Lake	Oneida	Park
	Fort Ontario (NR)	Oswego	Historic Site
	Frenchman Island	Oswego	Other
	Gilbert Lake	Otsego	Park
	Glimmerglass	Otsego	Park
	Green Lakes	Onondaga	Park
	Herkimer Home (NR)	Herkimer	Historic Site
	Hudson-Mohawk Trail	Herkimer	Trail
	Hunts Pond	Chenango	Park
	Hyde Hall (NHL/NR)	Otsego	Historic Site
	John Burroughs Memorial(NHL/NR)	Delaware	Historic Site
	Lehigh Valley Trail	Madison	Trail
	Lennox Forest Demonstration Area	Delaware	Other
	Lorenzo (NR)	Madison	Historic Site
	McNitt Property	Madison	Other
	Mexico Point	Oswego	Park
	Mexico Point Marine Park	Oswego	Marine Park
	Old Erie Canal	Madison/Oneida/ Onondaga	Historic Park
	Oquaga Creek	Broome/Delaware	Park
	Oriskany Battlefield(NHL/NR)	Oneida	Historic Site
	Pixley Falls	Oneida	Park
	Riddell	Otsego	Park

Region	Unit	County(ies)	Unit Type
Central	Sandy Beach	Oswego	Park
	Selkirk Shores	Oswego	Park
	State Park at the Fair	Onondaga	Park
	Steuben Memorial	Oneida	Historic Site
	Verona Beach	Oneida	Park
Finger Lakes	Allan H. Treman Marine Park	Tompkins	Marine Park
	Beechwood	Wayne	Park
	Black Diamond Trail	Tompkins	Trail
	Bonavista	Seneca	Park
	Buttermilk Falls	Tompkins	Park
	Canandaigua Lake Marine Park	Ontario	Marine Park
	Catharine Valley	Schuyler/Chemung	Trail
	Cayuga Lake	Seneca	Park
	Chimney Bluffs	Wayne	Park
	Deans Cove Boat Launch	Seneca	Boat Launch
	Fair Haven Beach	Cayuga	Park
	Fillmore Glen	Cayuga	Park
	Ganondagan (NHL/NR)	Ontario	Historic Site
	Harriet Hollister Spencer Recreation Area	Ontario	Park
	Honeoye Marine Park	Ontario	Marine Park
	Indian Hills	Steuben	Park
	Keuka Lake	Yates	Park
	Lodi Point Marine Park	Seneca	Marine Park
	Long Point (Cayuga Lake)	Cayuga	Park
	Mark Twain	Chemung	Park
	Newtown Battlefield Reservation (NHL/NR)	Chemung	Park
	Parrot Hall	Ontario	Historic Site
	Pinnacle	Steuben	Park
	Robert H. Treman (NR)	Tompkins	Park
	Sampson	Seneca	Park
	Seneca Lake	Ontario/Seneca	Park
	Sonnenberg	Ontario	Historic Park
	Sterling Conservation Easement	Cayuga	Other
	Stony Brook	Steuben	Park
	Taughannock Falls	Tompkins	Park
	Two Rivers	Tioga	Park
	Watkins Glen	Schuyler	Park
Genesee	Braddock Bay	Monroe	Park
	Canal Park - Lock 32 (Pittsford)	Monroe	Other
	Conesus Lake Marine Park	Livingston	Marine Park
	Darien Lakes	Genesee	Park
	Durand Eastman (Irondequoit Bay)	Monroe	Other

Region	Unit	County(ies)	Unit Type
Genesee	Genesee Greenway	Monroe	Trail
	Genesee River	Monroe	Other
	Hamlin Beach	Monroe	Park
	Irondequoit Bay Marine Park	Monroe	Marine Park
	Issac Property (Irondequoit Bay)	Monroe	Other
	Lake Ontario Parkway	Monroe/Orleans	Parkway
	Lakeside Beach	Orleans	Park
	Letchworth	Livingston/Wyoming	Park
	Oak Orchard Marine Park	Orleans	Marine Park
	Silver Lake	Wyoming	Park
Long Island	A.E. Smith/Sunken Meadow	Suffolk	Park
	Amsterdam Beach	Suffolk	Park
	Bay Parkway	Nassau	Parkway
	Bayard Cutting Arboretum (NR)	Suffolk	Park
	Belmont Lake	Suffolk	Park
	Bethpage	Suffolk/Nassau	Park
	Bethpage Parkway	Nassau	Parkway
	Brentwood	Suffolk	Park
	Brookhaven	Suffolk	Park
	Caleb Smith Park Preserve (NR)	Suffolk	Park Preserve
	Camp Hero	Suffolk	Park
	Captree	Suffolk	Park
	Caumsett State Historic Park (NR)	Suffolk	Historic Park
	Cold Spring Harbor	Suffolk	Park
	Connetquot River (NR)	Suffolk	Park Preserve
	Gilgo Beach	Suffolk	Park
	Heckscher	Suffolk	Park
	Heckscher State Parkway	Suffolk	Parkway
	Hempstead Lake	Nassau	Park
	Hither Hills	Suffolk	Park
	Hither Woods	Suffolk	Park
	Jamesport (Key Span)	Suffolk	Park
	Jones Beach	Nassau	Park
	Loop Parkway	Nassau	Parkway
	Meadowbrook Parkway	Nassau	Parkway
	Montauk Downs	Suffolk	Park
	Montauk Parkway	Suffolk	Parkway
	Montauk Point	Suffolk	Park
	Napeague	Suffolk	Park
	Nissequogue River	Suffolk	Park
	Northern State Parkway	Nassau/Suffolk	Parkway
	Ocean Parkway	Nassau/Suffolk	Parkway
	Orient Beach	Suffolk	Park

Region	Unit	County(ies)	Unit Type
Long Island	Planting Fields Arboretum (NR)	Nassau	Historic Park
	Ploch Property	Suffolk	Other
	Robert Moses Parkway & Causeway	Suffolk	Parkway
	Robert Moses	Suffolk	Park
	Sag Harbor	Suffolk	Park
	Sagtikos Parkway	Suffolk	Parkway
	Shadmoor	Suffolk	Park
	Southern State Parkway	Nassau/Suffolk	Parkway
	Sunken Meadow Parkway	Suffolk	Parkway
	Trail View	Nassau/Suffolk	Park
	Valley Stream	Nassau	Park
	Walt Whitman Birthplace (NR)	Suffolk	Historic Site
	Wantagh Parkway	Nassau	Parkway
	Wildwood	Suffolk	Park
Niagara Frontier	Amherst	Erie	Other
	Beaver Island (9)	Erie	Park
	Big Six Mile Creek Marina	Erie	Marine Park
	Buckhorn Island	Erie	Park
	Darwin Martin House	Erie	Historic Site
	DeVeaux Woods	Erie	Park
	Devil's Hole	Niagara	Park
	Earl W. Brydges Artpark (NR)	Niagara	Park
	Evangola	Erie	Park
	Fort Niagara	Niagara	Park
	Four Mile Creek	Niagara	Park
	Golden Hill (NR)	Niagara	Park
	Joseph Davis	Niagara	Park
	Knox Farm	Niagara	Park
	Niagara Gorge Trail	Erie	Trail
	Niagara Reservation (NHL/NR)	Niagara	Park
	Old Fort Niagara (NHL/NR)	Niagara	Historic Site
	Reservoir	Niagara	Park
	Robert Moses Parkway	Niagara	Parkway
	South Parkway	Erie	Parkway
	Strawberry Is.	Erie	Park
	West River Parkway	Erie	Parkway
	Whirlpool	Niagara	Park
	Wilson-Tuscarora	Niagara	Park
	Woodlawn Beach	Erie	Park
New York City	Bayswater Point	Queens	Park
	Clay Pit Ponds	Richmond	Park Preserve
	East River	Kings	Park
	Empire - Fulton Ferry (NR)	Kings	Park

Region	Unit	County(ies)	Unit Type
New York City	Gantry Plaza	Queens	Park
	Graniteville Quarry	Richmond	Other
	Hudson River	New York	Park
	Riverbank	New York	Park
	Roberto Clemente	Bronx	Park
	South Beach	Richmond	Other
Palisades	Bear Mountain (NHL/NR)	Orange/Rockland	Park
	Blauvelt	Rockland	Park
	Bristol Beach	Ulster	Park
	Fort Montgomery (NHL/NR)	Orange	Historic Site
	Franny Reese Preserve	Ulster	Park
	Goose Pond Mountain	Orange	Park
	Harriman	Orange/Rockland	Park
	Haverstraw Beach	Rockland	Park
	High Tor	Rockland	Park
	Highland Lakes	Orange	Park
	Hook Mountain	Rockland	Park
	Iona Island (NRL/NR)	Rockland	Park
	Knox Headquarters (NHL/NR)	Orange	Historic Site
	Lake Superior	Sullivan	Park
	Long Mountain Parkway	Orange	Parkway
	Minnewaska	Ulster	Park Preserve
	New Windsor Cantonment(NR)	Orange	Historic Site
	Nyack Beach	Rockland	Park
	Palisades (NHL/NR)	Rockland	Park
	Palisades Interstate Parkway	Rockland	Parkway
	Perkins Memorial Parkway	Rockland	Parkway
	Rockland Lake	Rockland	Park
	Schunnemunk	Orange	Park
	Senate House (NR)	Ulster	Historic Site
	Sterling Forest	Orange	Park
	Stony Point Battlefield (NHL/NR)	Rockland	Historic Site
	Storm King (NR)	Orange	Park
	Tallman Mountain (NHL/NR)	Rockland	Park
	Washington Headquarters (NHL/NR)	Orange	Historic Site
Saratoga-Capital District	Athens Boat Launch	Greene	Boat Launch
	Bennington Battlefield (NHL/NR)	Rensselaer	Historic Site
	Cherry Plain	Rensselaer	Park
	Coxsackie Boat Launch	Greene	Boat Launch
	Crailo (NHL/NR)	Rensselaer	Historic Site
	Crown Point (NHL/NR)	Essex	Historic Site
	Grafton Lakes	Rensselaer	Park
	Grant Cottage (NR)	Saratoga	Historic Site

Region	Unit	County(ies)	Unit Type
Saratoga - Capital District	Guy Park (NR)	Montgomery	Historic Site
	Hudson River Islands	Columbia/Green	Park
	Hudson-Mohawk Trail	Albany/Schenectady/ Montgomery	Trail
	John B. Thacher	Albany	Park
	John Brown Farm (NR/NHL)	Essex	Historic Site
	Johnson Hall (NHL/NR)	Fulton	Historic Site
	Lake Lauderdale	Washington	Park
	Max V. Shaul	Schoharie	Park
	Mine Kill	Schoharie	Park
	Mohawk River	Schenectady	Park
	Moreau Lake	Saratoga	Park
	Peebles Island(NR)	Saratoga	Park
	Rexford Aqueduct	Saratoga/ Schenectady	Historic Site
	Saratoga Lake Marine Park	Saratoga	Marine Park
	Saratoga Spa(NR/NHL)	Saratoga	Park
	Schodack Island	Rensselear/ Greene/ Columbia	Park
	Schoharie Crossing (NHL/NR)	Montgomery	Historic Site
	Schuyler Mansion (NHL/NR)	Albany	Historic Site
	Susan B. Anthony	Washington	Historic Site
	Thompson's Lake	Albany	Park
	Washington Co. Trail	Washington	Trail
Taconic	Appalachian Trail	Dutchess	Trail
	Clarence Fahnestock	Putnam	Park
	Clermont (NHL/NR)	Col/Dutch	Historic Site
	Clinton House (NR)	Dutchess	Historic Site
	Donald J. Trump	Putnam/Westchester	Park
	Franklin D. Roosevelt	Westchester	Park
	Harlem Valley Rail Trail	Col/Dutch	Trail
	Hart's Brook Nature Preserve & Arboretum	Westchester	Other
	Hudson Highlands (NR)	Dutchess/Putnam	Park
	Husdon Boat Launch	Columbia	Boat Launch
	James Baird	Dutchess	Park
	John Jay Homestead (NHL/NR)	Westchester	Historic Site
	Lake Taghkanic	Columbia	Park
	Margaret Lewis Norrie	Dutchess	Park
	Ogden & Ruth Livingston Mills	Dutchess	Park
	Olana (NHL/NR)	Columbia	Historic Site
	Old Croton Aqueduct(/NR)	Westchester	Historic Park
	Peter Jay	Westchester	Other
	Philipse Manor Hall (NHL/NR)	Westchester	Historic Site
	Quiet Cove Riverfront Park	Dutchess	Park
	Rockefeller Park Preserve	Westchester	Park Preserve

Region	Unit	County(ies)	Unit Type
Taconic	Staatsburgh(NR)	Dutchess	Historic Site
	Taconic	Columbia/Dutchess	Park
	Taxter Ridge	Westchester	Other
	Wonder Lake	Putnam	Park
Thousand Islands	Black Lake Boat Launch	St. Lawrence	Boat Launch
	Black River Trail	Jefferson	Trail
	Burnham Point	Jefferson	Park
	Canoe Picnic Point	Jefferson	Park
	Cedar Island	St. Lawrence	Park
	Cedar Point	Jefferson	Park
	Chaumont Boat Launch	Jefferson	Boat Launch
	Coles Creek	St. Lawrence	Park
	Crab Island	Clinton	Park
	Croil Island	St. Lawrence	Park
	Cumberland Bay	Clinton	Park
	DeWolf Point	Jefferson	Park
	Eel Weir	St. Lawrence	Park
	Galop Island	St. Lawrence	Park
	Grass Point	Jefferson	Park
	Great Chazy Boat Launch	Clinton	Boat Launch
	Higley Flow	St. Lawrence	Park
	Jacques Cartier	St. Lawrence	Park
	Keewaydin	Jefferson	Park
	Kring Point	Jefferson	Park
	Long Point	Jefferson	Park
	Macomb Reservation	Clinton	Park
	Mary Island	Jefferson	Park
	Point Au Roche	Clinton	Park
	Point Au Roche Boat Launch	Clinton	Boat Launch
	Robert Moses	St. Lawrence	Park
	Robert Wehle	Jefferson	Park
	Rock Island(NR)	Jefferson	Park
	Sackets Harbor (NR/UCP)	Jefferson	Historic Site
	Southwick Beach	Jefferson	Park
	St. Lawrence	St. Lawrence	Park
	Stony Creek Boat Launch	Jefferson	Boat Launch
	Waterson Point	Jefferson	Park
	Wellesley Island	Jefferson	Park
	Westcott Beach	Jefferson	Park
	Whetstone Gulf	Lewis	Park
	Wilson Hill Boat Launch	St. Lawrence	Boat Launch

Appendix G -

State Nature and Historical Preserves

Name	Town	County
Squaw Island	Canandaigua	Ontario
Showy Lady slipper Parcel	New Hudson	Allegany
Parish Gully	Italy	Yates
Clark Gully	Middlesex and Italy	Yates
Cicero Swamp	Cicero	Onondaga
Labrador Hollow	Fabius/Truxton	Onondaga/Cortland
Reinstein Woods	Cheektowaga	Erie
Bog Brook	Southeast and Patterson	Cortland
The Oak Bush Plains State Preserve	Babylon and Huntington	Suffolk
David A. Sarnoff Pine Barrens	Southampton	Suffolk
Rocky Point Natural Resource Management Area	Brookhaven	Suffolk
Albany Pine Bush Preserve	City of Albany, Colonie and Guilderland	Albany
Camillus Forest Unique Area	Camillus	Onondaga
Zoar Valley Unique Area	Otto and Persia/Collins	Cattaraugus/Erie

Appendix H -

Open Project Selection Process Rating Forms

2007 EPF/2008 LWCF PRIORITY EVALUATION FORM ACQUISITION PROJECTS

RELATIVE FINANCIAL STATUS: (Criterion I)
The relative financial status of area impacted by the project. The focus is on two elements: poverty level by zip code and population density by Minor Civil Division. (0-20 POINTS)

PLANNING PROGRAMS: (Criteria B, C)
Points are determined by how the proposed project relates to statewide policies and program initiatives such as public access to the Erie Canalway National Heritage Corridor; is a priority project within, or contributes to, the NYS Open Space Conservation Plan or Local Waterfront Revitalization Program (LWRP); is located within an Empire Zone; is consistent with the NYS Historic Preservation Plan goals and/or a Heritage Area Systems (HAS) Management Plan; if the project is located within a Certified Local Government (CLG) and how the project contributes to the CLG and/or whether the subject property is designated under a local preservation ordinance; as well as any other Federal or State plans that apply which clearly indicates the acquisition of this property is a priority for the applicant, and whether the property has a prior, established formal status, i.e., National Estuary, National Historic Landmark, Designated Wetland, etc. (0-20 POINTS)

RESOURCE MANAGEMENT AND PROTECTION: (Criterion A, B, C, D, E, H)
Points are awarded for projects that contribute to and protect one or more of the major resource categories identified in New York State Open Space Conservation Plan. (0-25 POINTS)

PROJECT EMPHASIS: (Criterion F, G, H)
This will assess whether the project meets one or more of the Commissioner's overall priorities and those that are announced for this funding round and for its relevance, as listed on Pages 1 and 2. These include:

- Revitalizing Parks and Historic Sites
- Natural Resource Stewardship and Interpretation
- Creating Connections beyond Parks
- Sustainability (0-25 POINTS)

REASONABLENESS OF COST: (Criteria B, F)
Points are determined by assessing the completeness of the budget for the project, the eligibility and need for the cost items, as well as their cost-effectiveness. (0-25 POINTS)

REGIONAL ASSESSMENT: (Criteria A, B)
Points are determined by assessing the need of the project based on all Acquisition applications received within a region. Each region has 10 points to assign. (0-10 POINTS)

MAXIMUM POINTS 125

CONSISTENCY WITH THE HUDSON RIVER GREENWAY SYSTEM: (Legislatively Designated)
Applicants providing a letter from the Hudson River Greenway affirming that the project is consistent with the Hudson River Greenway criteria of natural and cultural resource protection, regional planning, economic development, heritage and environmental education, and public access to the Hudson River will receive a 5% bonus.

2007 EPF/2008 LWCF PRIORITY EVALUATION FORM
PARKS DEVELOPMENT PROJECTS

RELATIVE FINANCIAL STATUS: (Criterion I)
The relative financial status of area impacted by the project. The focus is on two elements: poverty level by zip code and population density by Minor Civil Division. (0-20 POINTS)

LOCAL ASSESSMENT: (Criteria A, B, C, D, E, F)
This is an evaluation to assess the local need for the project based on documented **local** planning efforts made and the service area. Some factors to be considered are: number of similar facilities within the service area, condition of facilities, reason for the condition of the facilities, level of use of existing facilities, accessibility by residents, year-round accessibility of facilities, anticipated level of use of proposed facilities and emergencies and mandates. This is an evaluation of the need for the project identified within a community and not an evaluation of the project against other regions. (0-15 POINTS)

This is an evaluation considers the service area and the extent the project the needs for an aging population, encourages participation by the youth, response to the changes in the composition of the population and social condition of the community, accessibility and energy conservation. (0-5 points)

STATEWIDE PROGRAMS: (Criteria B, I)

Points are determined by how the project relates to statewide policies and program initiatives such as public access to the Erie Canalway National Heritage Corridor; is a priority project within, or contributes to, the NYS Open Space Conservation Plan or Local Waterfront Revitalization Program (LWRP); is consistent with a Heritage Area Systems (HAS) Management Plan; if the project is located within a Certified Local Government (CLG) and how the project contributes to the CLG; as well as any other Federal or State plans that apply. (0-10 points)

EMPIRE ZONE: (Criteria B, I)
Points are based on a community's recognition as an economically depressed area. If the project site is located within one of the Empire Zones identified by ESDC, a letter from the appropriate Zone Coordinator is required to receive these points. (0 or 5 POINTS)

STATEWIDE NEED: (Criterion C)

Project Assessment: These points are based upon calculations from the "Relative Index of Needs" table in SCORP. (0-10 POINTS)

ENVIRONMENTAL CONTRIBUTION: (Criterion H)
Assessment of the extent that the project will protect environmentally significant resources (i.e.; species that are of special concern, endangered, threatened or that are rare, exploitable or vulnerable as identified on DEC or DOS lists, wetlands, significant habitat areas as identified on DEC, DOS or Natural Heritage Program inventories, historical and/or cultural resources, or are within a designated area of statewide scenic significance. (0-5 POINTS)

PROJECT EMPHASIS: (Criterion G)
This will assess whether the project meets one or more of the Commissioner's overall priorities and those that are announced for this funding round and for its relevance, as listed on Pages 1 and 2. These include projects that promote sustainability by incorporating the principle of energy conservation, smart growth and natural resource protection. The level of emphasis within these project attributes may change from year to year. (0-20 POINTS)

REASONABLENESS OF COST: (Criteria B, F)
Points are determined by assessing the completeness of the budget for the project, the eligibility and need for the cost items, as well as their cost-effectiveness. (0-25 POINTS)

REGIONAL ASSESSMENT: (Criterion B)
Points are determined by assessing the need of the project based on all Parks Development applications received within a region. Each region has 10 points to assign. (0-10 POINTS)

MAXIMUM POINTS 125

CONSISTENCY WITH THE HUDSON RIVER GREENWAY SYSTEM: (Legislatively Designated)
Applicants providing a letter from the Hudson River Valley Greenway affirming that the project is consistent with the Hudson River Greenway criteria of natural and cultural resource protection, regional planning, economic development, heritage and environmental education, and public access to the Hudson River will receive a 5% bonus.

Appendix I -

Recreation Facility Design Guidelines

Standards and Development Guidelines

Recreational Opportunity Standards*

Facility Type	Service Area	Approx. Size in Acres	Max. Travel Time	Means of Access	Comments
Play lot	0.2 sq. mi.	2500 sq. ft. to 1 ac	10 min.	By foot or By bicycle	Similar to a Pocket Park but typically combined with residential development, may have some play equipment.
Pocket park	0.2 sq. mi	2500 sq. ft. to 1 ac	10 min.	By foot or by bicycle	Primarily passive recreation areas for office workers and shoppers.
Neighborhood Park	0.8 sq. mi.	5 to 10 ac	20 min.	By foot or by bicycle	Should contain a balance of passive areas with landscaping, and active areas such as play fields, court games, tot lots, etc.
Community Park (serves multiple neighborhoods)	0.8 sq. mi. to 28 sq. mi.	20-50 ac	30 min.	Automobile, Mass transit, bike, hiking or trail	Offers both passive and active recreational opportunities. Not intended for scheduled or organized athletic events. May include play structures, game courts and fields, swimming pools or beaches, trails, individual and group picnic areas, landscaping and gardens, and/or areas for concerts or plays. Support facilities such as parking and comfort stations would be needed.
Urban Parks (serves entire city)	28 sq. mi. to 50 sq. mi.	50-150	30 min.	Automobile, mass transit, bike, hiking or trail	Extensive day use areas; may include play structures, game courts and fields, swimming pools or beaches, trails, individual and group picnic areas, landscaping and gardens, and/or areas for concerts or plays. Support facilities such as parking and comfort stations would be needed. Provides 4-season activities and may accommodate organized athletic leagues or events.
Large Regional Parks (serves a county)	50 sq. mi. +	40+	1-2 hrs.	Automobile, charter bus, mass transit, or major trail	In addition to activities mentioned for Urban Parks, these parks may include camping, picnicking , water access and selected winter activities such as ski touring, or snowmobiling
Metro	28 sq. mi. to 50 sq. mi.	25	30 min.	Limit vehicle access. Promote non-motorized modes of access.	Urban parks emphasizing special recreational cultural or historical themes and activities, day and evening operation during all seasons

*Partially derived from National Recreation and Parks Association
**Not applicable

Facility Development Standards

Facility Type	Instant Max. User Density	Standard Per 1000 Pop	Comments
Skating Areas (natural)	500 users/acre	1 site/2,500	This category includes non-refrigerated rinks
Camping	20 users/acre	N/A	Density figures based on 5 sites per acre, 4 users per site
Picnicking	35 users/acre	N/A	Density figures based on 10 tables per acres, 3.5 users per table
Boating	6-8 acres/boat	N/A	This figure is for both powered and sail boating. There are generally 3 users in each boat.
Skiing	30 users/acres of developed slope	N/A	
Big Game Hunting	1 hunter/5 acres	200 acres/1,000	
Fishing (Stream)	5 users/mile	.5 mi. stream/1,000	
Golf Course	8 users/hole	.5 holes/1,000	
Field Games	15 users/acre	3 acres/1,000	The following may be provided through off- peak use of school facilities
Swimming Pool	1 user/25 sq. foot	750 sq. ft./1,000	The following may be enclosed to extend seasonal use
Tennis Courts	4 users/court	1 court/2,000	The following can be lighted and converted for ice skating
Basketball (Courts)	16 users/court	1 court/1,999	

Recommended Park Design Criteria

Durability - At highly developed parks, permanent features, such as buildings, roads, and utilities should be designed to have a probable life expectancy as set forth by State Law, and incur only normal annual operating maintenance costs. Other park facilities should be inspected regularly for deterioration of environment or condition.. If deterioration has occurred, the facility should be assessed for best repair methods; this may involve closing the area for an amount of time to allow for natural regeneration.

Ground Cover - Pedestrian diagramming anticipating the movement of the recreating public, as well as studies of natural plant cover should be undertaken to allow design which will assure the preservation of 75% of the existing or planted ground cover (grass, trees, forest litter, etc.)

Drinking Fountains and Toilets - All parks developed for concentrated public use, except those to which users travel 5 minutes or less, should have drinking fountains and toilet facilities. Consideration of winterization should be made at facilities in urban areas or in winter sports areas. All public health regulations are to be followed, including provision of hand washing facilities at all sanitary facilities. Accessibility of drinking fountains and toilets is required for people with disabilities.

Traffic Hazards - Intensively used facilities, particularly tot lots and playfields, with high volume peripheral roads or streets should be fenced or have naturalistic barriers provided to protect users from traffic hazards.

Noise Levels -Noise buffers should be provided so that the noise level does not exceed approximately 68 dBA (the level which impedes normal conversation) in day-use areas in parks. In urban passive parks, noise levels should be masked through natural "white noise" generators (e.g. waterfalls, brooks, leaves rustling) which produce a less obtrusive, broader-range sound. Buildings or other solid barriers can also be effective noise-reducers when they are placed properly to block the line of site from the noise source.

Road Design - Road design within parks should be oriented toward speed control (e.g., super-elevation, vertical and horizontal curvature, etc. which allow higher speeds on curves should be avoided); pedestrian and bicycle areas should be clearly marked; roads should be built to accommodate recreational trailers and busses where activities allow these uses; roads should be designed only for intended usage (width and classification of construction should correspond to intended carrying capacity and seasonal or year-round-use); directional and regulating signage should comply with current acceptable standards.

Mass Transit Access -Facilities which accommodate large crowds should be designed to facilitate bus and other mass transit services on a priority basis.

Accessibility for Persons with Disabilities - All park facilities design should facilitate access and use by persons with disabilities and the aged - see the Accessibility section in the Programs and Initiatives Chapter for more information. A percentage, as outlined by the federal accessibility standards, of all parking must be made available to people with disabilities. Ramps should be placed to allow for access to main facilities. All accessibility ramps should be made with a maximum slope of 1:12 and a resting plateau every 30 feet. All ramps over 6 inches in height or 6 feet in length are required to have hand rails on both sides, any drainage grates are to be placed perpendicular to the direction of travel with openings no greater than ½ inch. Accessible drinking fountains are required to have a clear paved space in front that is 48 inches wide and 30 inches deep. The water fountain should be no more than 36 inches high with a clearance of 27 inches and minimum depth of 17 inches. All public toilet buildings need to be accommodating to peoples with disabilities. (Fogg, 2005)

Parking - Formal parking areas should accommodate no less than 50 cars (if the facility capacity warrants) and no more than 1,200 cars in one area; the amount of parking area which should remain unpaved (turf) depends upon anticipated use patterns and soil conditions — bus unloading platforms should be closest to the activity areas. Environmentally sensitive surfacing techniques should be implemented when possible to decrease run off and stream volume. These techniques include minimizing paved surfaces and allowing the parking area to be crushed stone and top soil. There are also porous paving surfaces that are available as well as techniques of open grid-type pavers/ topsoil and plantings. (Fogg, 2005)

A reasonable number of surfaced parking spaces should be made accessible to people with disabilities. All parking spaces should be located near and accessible to other facilities by way of accessibility routes that are stable, firm, slip resistant and not exceeding 5% slope. (Fogg, 2005)

Safety - In an urban context, lighting should be added to increase hours of use and help assure personal safety. Play areas should be paved with resilient material. Appropriate signing, marking, clearance of lines of site, and similar measures should be a component of any project to increase safety of users.

Lighting – Should fit in with the character of the site. For safety there should be adequate lighting on any facility which is open overnight, without interfering with the natural surroundings and neighboring uses. Lights should use the most energy efficient design available, not create light pollution and only be on when necessary for safety or presentation.

Picnic Areas - There should be at least 80 to 120 picnic sites for an economical operation with a maximum of 10 sites per acre; toilet facilities within 500 feet of sites and drinking fountains within 250 feet. Parking should be located within 400 feet of the picnic table; for picnic areas that are designed for smaller groups two cars per picnic unit is appropriate. (Fogg, 2 005)

Visitors tend to prefer areas that are partially shaded and have a sense of privacy from other groups; they also prefer areas that are close to their car and when possible a body of water. 10% of sites are required to be accessible to those with disabilities, but more is encouraged. For picnic tables, slopes between 5 and 20 percent require terracing to create a level surface for visitors to eat. If local interest calls for it, a picnic shelter can be built that can be used for large groups; these shelters typically include trash cans, picnic tables and barbecue units for the group that has reserved it. If the need is determined, there may be some type of food sale available within the picnic area. Food services should be located to maximize visitor access while not adversely affecting the resource or facility function. (Fogg, 2005)

Swimming Areas – Swimming areas include natural areas of coastal beaches and freshwater lakes as well as man made areas which include swimming pools and lagoons. The size of the swimming area should be developed to meet needs and maintenance capability, with aesthetics and safety being the first priority. Provision for off-peak use of the facilities for competition and instruction should be made where possible.

Beach Areas – Safety is the foremost concern when designing beach areas for swimming and other activities. There should be special precautions taken, including life guard facilities, first aid and easy access for emergency vehicles to the beach. There is typically a strong connection between picnicking and swimming, so provision for picnicking should be made at beach areas, including benches and trash cans. For linear beaches, several access points along the beach should be located to disperse the users and their needed facilities. Some type of food service facilities, ranging from vending machines to a restaurant complex, should be provided at all major beach areas, as well as adjacent eating areas. (Fogg, 2005)

Camping Areas - There are different styles of camp sites ranging from primitive walk-in sites to more organized cabins; the type of camping area should be determined by available site and user needs. For facilities that offer camping as the primary activity, 70-75 sites are needed for economic feasibility. Campsite areas should be comprised of loops with approximately 25-35 sites to a loop; 7,500 square feet per site; sites should have approximately 75 feet frontage. No site should be more than 300 feet from toilet facilities and a potable water supply must be within 250 feet. Some campsites should be designed and marked as accessible for persons with disabilities. (DOH Laws, 2007)

The natural environment is a determining factor when locating campsites, the topography should be gently rolling and soils should be permeable to allow for good drainage to prevent muddy spots. Shade trees and understory vegetation is desirable for comfort and privacy. Electricity is a frequently requested camper amenity and should be a site amenity if it fits the character of the camping area. Electricity is necessary at comfort stations and common areas for safety lighting and camper needs. Consider using photovoltaic sources and natural light for energy conservation. Access to at least one pay phone is necessary at overnight facilities; it should be located at a contact station or camp center complex. (Fogg, 2005)

Trails – Attention should be paid to the type of user on the trail and conditions put in place to make it a positive experience. Segregate motorized and non-motorized trail users whenever possible to decrease dangerous encounters between these two groups. Separate hiking and horseback riding groups to provide for improved safety and sanitation. (Fogg, 2005)

Parks and recreation facilities act as a good starting point for trails; they can provide users with safety information, control of use and information on the trail. Trail connections to all major parks systems and internal trail routes

should be provided. Different user groups require different types of trails, but when designing the trail alignment, terrain, topography, aesthetic value, points of interest, road crossings, other dangers and the destination should be considered. The trails should fit in with the land so that there is a natural feel, there should be vistas created to present views and they should avoid poor soil to decrease erosion and environmental degradation. For service and emergency vehicles to access different points along the trail there is need for a width of 8 feet. (Fogg, 2005)

For cross country trails, 20 miles or longer, it is a good idea to have overnight stopping points every 7-10 miles. These areas should fit in with the natural environment, be located off the main trail to increase privacy for the camper and be located at least 1 mile from nearest parking area (to discourage use other than from the trail). These types of facilities are desirable to shelter hikers from inclement weather, especially in areas with frequent precipitation. When possible, these areas should have a source of potable water, sanitary facilities and rubbish containers. (Fogg, 2005)

For bike specific trails there are certain design standards that can make for a more positive experience. Removal of obstructions less than 7 feet above the trail and 2 feet beyond the edge of the trail is necessary and this should be maintained monthly to improve sight distance. (Fogg, 2005) Bicycle surface (paved) should be considered in urban or suburban areas or major statewide trails.

For equestrian trails and facilities the needs of both the horses and riders will need to be met. Adequate car and trailer parking facilities are necessary at the trailheads. It is helpful to provide for distances of straight trail to allow for the horses to run, these areas should be inspected for unseen holes or depression for the safety of the horse and rider. (Fogg, 2005) The trail surface should be smooth, firm and stable natural material. Large rocks and loose, soft sands present a trip hazard for horses and should be removed. Paved surfaces are slippery and uncomfortable for horses to walk on and should be avoided.

Boating - Boat launch ramps and adequate parking areas should be provided at all marine facilities, typically 40 to 60 parking spaces per lane of launching. The launch ramp should have a slope of between 7-15% and be 12-16 feet wide. Depending on expected use there may be need for more than one launching ramp; determination of demand can be made by inventorying and studying existing use of boat ramp launches and parking facilities and comparing it to the capacity of the water body for boating activities. Sanitary facilities should be located less than 300 feet from the launching ramp, with one facility per 150 cars.

Conflicting uses should be adequately separated; for example faster paced jet skiing should be separated from non-powered boating and swimming activities. Depending on use there may be need to zone boating areas to provide for no-wake zones for fishing boats, canoes and kayaks. Provisions should be made to allow fishermen access and winter uses, such as ice fishing, skating, or snowmobiling where potential exists.

Extended Season Use - Basic park facilities should be designed and constructed for extended season and off-hour use. Enclosed facilities with minimal heating requirements would afford early and late seasonal use of urban and suburban parks and lighting of game and activity areas would encourage extended use. Building orientation can extend the use of buildings into the winter by positioning the windows to get the most warmth from the sun.

Energy Conservation - Now recognized as a national goal, energy conservation consideration should be applied to construction, operation, and maintenance of park facilities. To reduce the usage of fossil fuels it is important to use natural sources of lighting, heating and cooling. Orientation of buildings relative to the sun can have the effect of maximizing sun potential during long northern winters. For facilities that will be used primarily during the summer, consider building in a way that will minimize heat absorption and maximize a cool breeze. There are different heat sources available including solar or geothermal which will decrease energy consumption. These types of systems can be put on display for the public to promote sustainability and conservation at the park.

Buildings should be constructed to maximize the use of natural light for daytime use. If electric lighting is required, using timers, motion sensing switches and photo sensitive switches can be used to reduce electricity consumption and control light pollution. Also using energy efficient light bulbs and lower wattage bulbs can reduce consumption costs.

Using alternative fuel Park vehicles is a way to reduce fossil fuel consumption in park operations. (These options have

been discussed in detail in the Sustainability Chapter).

Water Conservation - Every effort should be made to conserve the use of water in park operation as well as in public consumption. Many parks have their own water supplies where as some are connected to municipal water supplies. Parks that operate in summer months can put heavy stresses on their water supplies. Maintaining native vegetation can aid in not only maintaining water quality but water quantity. In designing facilities, using automatic flush toilets and waterless toilet systems (composting toilets), water saving shower heads, shower timers, sink faucets with motion sensors and on demand water heating units can conserve water and energy resources.

Shorelines - Construction in or near shore areas should be avoided. Any construction within these areas should have adequate setbacks to accommodate long-term erosion with a margin of safety for the life of the facility. Beach facilities should be movable and/or easily replaceable.

Coastal Erosion Areas - Non-structural measures should be utilized if possible to address erosion control in coastal areas. Planting of certain native species can help to reduce erosion and maintain the coastline.

Fresh and Saltwater Marshes and Wetlands - Construction within these areas should be avoided and management strategies should be developed to protect hydraulic function, water quality and habitat values.

Signs – Signs that use color recognition and symbols to convey messages have been increasingly useful for parks, especially in areas where language differences are common. Directional signs should be made of material that is readily available and long lasting, with at least a 10 year life span. Traditional symbols usually work the best, they are easy to recognize and design. When sign systems are being laid out, take into consideration the visual distance and reaction time needed to understand the message, as traveling speed increases the sign size must also increase. (Fogg, 2005)

Signs can also display information for self-guided tours and interpretive programs. The information displays can provide information that will make the experience more educational and valuable. Providing information about the trail system at the beginning will make the user feel more comfortable with their surroundings and make for an improved visit. At trailheads, signs can describe trail length and relative difficulty so that visitors can make informed decisions. This is also an appropriate place to store smaller portable maps or fliers as well as collect donations. The information displays, when placed in a prominent place, can also provide information on wildlife that may be in the area as well as make users aware of any precautions to be taken for dangers that may be in the area. Use language that encourages good behavior from visitors. These signs should be large, appropriately placed and lit if the area is to be used during the evening. Alternative languages may be required dependent on the expected user group.

Stream and River Access – Informational signs should be provided at launch sites of non powered boats, including kayaks and canoes. These signs should include information on the difficulty classification, locations of take out, approximately how long the trip it will take as well as information on any dangerous waters in the area. Depending on the length of the river and typical visitor's trip length, it may be appropriate to provide stopover points. These stopover points may have picnic sites, possible primitive camping, drinking water and sanitary facilities, as well as vehicular access for maintenance. (Fogg, 2005)

Recreational Boating Facility Development Standards

In May of 2006, the States Organization for Boating Access (SOBA) published an updated set of boating facility development standards in the second edition of the Design Handbook for Recreational Boating and Fishing Facilities. The following lists some of these guidelines and provides additional guidelines for designing and constructing boating/marine facilities in New York State.

- The land areas should provide a minimum of 1.25 - 1.5 the size of the gross water area within the marina basin.
- The water area should provide for 3-5 still fishing boats per acre or when trolling, one boat per acre.
- The following do not provide optimum conditions but rather represent a minimum requirement

Sail Boats	*6-8 acres/vessel*
Water skiing	*15-20 acres/vessel*
Row Boating	*1 acre/vessel*
Power boating	*6-8 acres/vessel*
Trip canoeing	*1.25 mi. of stream/canoe*

- Channel width should be at least 40 feet or accommodate two boats passing safely at no-wake speed.
- Maneuvering areas in marina basins should be 2.25 times the length of the largest vessel using the marina. Piers and bulkheads must be fitted with adequate cleats or bollards, spaced approximately 20′ apart. The cleats should preferably be hardwood 10′ - 12′ long; and through bolted rather than lag bolted in place. Bulkheads should be provided with vertical fenders or wearing strips extending well below and above the water level, and spaced approximately eight feet apart to preclude the possibility of vessels being caught or hung under stringer pieces.
- Maneuvering areas at launch ramps should have ample room to allow for a vehicle with a trailer to line up with the launch ramp. If a circular design is used, it is recommended that a 60-foot minimum outside diameter travel way be constructed.
- It is recommended that at high turnover sites, 20 to 30 parking spaces per launching lane is usually adequate. Facilities with low turnover may require 30 to 50 parking spaces per launching lane because users' vehicles are parked longer.
- Parking area facilities vary greatly in size depending on the number of cars, trailers and number of launching ramps. The design of stalls should be laid in a manner to allow pull through movement and to eliminate a need to back the trailer from a congested location. The area should be located no more than 500′ from the launching site. Hard surfaced walks between the two must be provided to accommodate wheel chairs. Parking space sizes recommended by SOBA are as follows:

Standard vehicle towing	*10′ x 40′*
R.V. towing	*10′ x 50′*
Vehicle Only	*9′ x 18′*
Accessible Parking	*15′ Wide*

(refer to the Access Board Website at www.access-board.gov)

The grade or slope should be a minimum of 2% and not exceed 8%. Accessible parking spaces should have a maximum grade of 2% within spaces.

- Launching ramps may be concrete, gravel, expanded metal, or asphalt. Concrete ramps should be scored transversely to provide a good gripping surface.
- The Army Corp of Engineers suggests that the width of launching ramps should be guided by the length of the specific ramp. Ramps under 50′ should be 12′ wide, between 50′ and 75′ - 14′ wide, over 75′ - 16′ wide.
- Recommended grade of ramps will vary depending upon water depths, fluctuations, hull forms, size of vessel, and weight and power of the towing vehicle. The graduation should generally lie between 12% and 15%.
- Tops or pilings should be heavily coated with asphalt and topped with concrete, metal or fiberglass caps. Floating piers must be fitted with pad eyes to facilitate handling.
- All timbers around piers should be ACQ preserved in accordance with AWPA C1 and C5 standards.
- Pilings should be of oak, Douglas fir, green heart, or yellow pine because of greater wearing qualities. Decking should be of oak, maple or green heart for similar reasons.
- Main walkways and catwalks should be 6-8′ feet wide to accommodate movement of equipment. Minor walkways should be at least three feet wide. These dimensions also allow for barrier-free access.
- Walkways should be fitted with low lights for illumination of deck areas and boats. Walkways and gangways must be free of cleats to allow barrier-free access for persons with disabilities. Anti-skid material should be placed on gangways and pedestrian ramps. Gradients should not exceed 10%.
- Deck planking should be spaced no greater than 0.25′ apart to provide for proper drainage.
- Life rings should be provided at all supervised launching and fishing sites for emergency use, and ladders should be provided where hoists, rather than ramps, are used for launching of vessels.
- Handrails should be placed at vessel boarding sites and meet accessibility guidelines. Where no tidal rise and fall or significant fluctuation exists, handrails might be extended out over the water.
- Fishing sites shall be accessible and meet the ADAAG.
- One sanitary facility per gender per 150 cars should be located within 300 feet of the launching ramp (Fogg, 2005)

Park Design Considerations

The design criteria recommended here reflect considerations in park design that have, through practical experience proven to be indispensable to acceptable park development and use. A primary consideration is the physical characteristics of the site. The preservation of the natural and historical character of a potential recreation site constitutes a great part of the recreational experience and is dependent upon proper assessment of the site's ability to accommodate man-made intrusions. The type of soil and the slope of the site are among the most significant factors since they affect the natural vegetation, drainage, and susceptibility to erosion or soil compaction. Another significant factor is how the potential recreationist's needs can best be satisfied within prevailing physical constraints. This requires a full examination of anticipated use patterns, such as a day use, camping, parking accommodations, roadway layout, pedestrian flows, user safety, etc.

The age and activity level of the user is also important to keep in mind as it will dictate what types of park facilities are needed. For the youngest users, pre-school aged children, the play area should be located outside of the general foot traffic, as well as away from all vehicular traffic by a distance of approximately 200 feet or more. It is important that there are few moving parts that could possibly injure young children as well as an area for the supervising caregiver to sit. If possible keep the younger children's areas away from the older children's play area. (Fogg, 2005)

For children who are in elementary school the major design consideration should be to make the play area interesting and challenging to the children who will want to explore. Not as much adjacent seating is needed for caregivers for this age group, but safety of user is still a major priority. (Fogg, 2005)

For older children and young adults, the play facilities should be located where there is desire to attract this age group, such as attached to beaches and swimming facilities. Some facilities to consider include volleyball courts, skateboard ramps, weightlifting facilities and basketball courts. (Fogg, 2005)

Older people also enjoy spending time outdoors and there are certain considerations for these types of facilities. It is important to provide space for visiting, sitting and viewing the other park activities. Consider integrating the older people's spaces to encourage intergenerational interactions. (Fogg, 2005)

Microclimatic considerations should be major determinants in the location and orientation of facilities within a park. Transportation, prevailing wind direction, density and height of overstory, and also seasonal variances in the angle of the sun can seriously affect the comfort of park users in various activities.

Access to recreation facilities is another major design consideration. Improvement necessary to accommodate cars is among the largest expenditure in the development of most parks. The use of non-auto modes for access, particularly mass transit, bicycle, and pedestrian should be encouraged since it will minimize investments for parking and road facilities, conserve land resources for actual recreational use, conserve energy resources, and promote use by a broader socioeconomic sector of the population. To this end, arrangements for bus loading and unloading should be located near the recreation areas within parks and exclusive bus lanes should be provided where traffic warrants. Adequate and appropriate bike facilities should be provided as well, including bike lockers or racks and information regarding bike paths throughout and between parks and attractions.

Safety considerations within parks are critical to good park design, not only from the view point of liability, but also because hazardous conditions may detract from the park patrons' enjoyment of the recreational experience. Obviously, swimming facilities must be designed with safety as the paramount criterion. High traffic volume roads and other dangerous features, such as cliffs or mines, should be screened or fenced-off. Less obvious improvements, such as the clearance of low dense shrubbery and the installation of lighting will enable users to see and avoid potential hazards. Clear and concise signing is also important to warn users of hazards that may be an unavoidable part of their recreation experience (ticks, wild animals, etc.); awareness of surroundings will add to visitors feeling of well-being and safety.

In addition, the intrusion of peripheral influences should be screened where necessary and practicable. For example, planting bands or earth berms can cut down on the influence of external traffic and other noises. Conflicting activities should be separated where possible and points of potential conflict must be clearly marked.

Maintenance Considerations

The amount of maintenance required per recreationist is very much related to intensity of use, user attitudes reflected in vandalism and misuse, site characteristics, type of activity, and age of facility. Anticipated use and site characteristics must be recognized in site location and design, choice of materials, and programming of maintenance and services. As with new development, maintenance requires sound fiscal planning.

Maintenance of facilities for less intensive activities, such as hiking, canoeing, backpacking, and even camping, depends on the innate ability for the environment to absorb user impacts and activity rotation practices. The ability of the natural environment to regenerate varies greatly because of variations in soil conditions, types of vegetation, slopes or climates. While five years is adequate to restore most brush cover, areas with thin soil and cool climate, as exemplified by alpine conditions, may require centuries for recovery.

Facilities should never be designed to attract use beyond the level at which environmental deterioration can be quickly repaired by natural processes. If facility design is compatible with site characteristics, those facilities that generally receive more intensive use are less expensive per user due to decreasing marginal maintenance costs. Maintenance costs increase, however, when the carrying capacity is exceeded and severe site degradation occurs. In fact, several years revenue may be lost if the facility must be closed for regenerative purposes. To reduce the need for major rehab projects, regular inspections are necessary to monitor any deterioration and maintain environmental quality. It is important that park staff are made aware of what issues to look for so reports can be made of unusual activity; training of staff on environmental quality issues could be done at employee orientation.

High maintenance requirements are inherent in certain specialized facilities. Golf courses, and clay tennis courts, for example, require far more maintenance than trails serving the same number of people. On the other hand, these specialized facilities frequently can generate revenues to offset their higher maintenance costs.

Older facilities require more maintenance than new facilities, due to normal attrition associated with age. Contemporary changes in park design are intended to avoid some of the maintenance and operation headaches of the past, up to date as-builts should be kept at the facility to maintain a comprehensive look of the park for future changes.

Efficient scheduling of major rehabilitation projects can reduce excessive maintenance and operation costs. It is important that each year the park facility is surveyed for major projects that managers feel need to be completed, this survey can then be prioritized and appropriately budgeted for. Also, safety and programming components should be recognized as a potential deterrent to vandalism as well as a necessary part of the recreation services provided.

Appendix J -

Federal and State Wild, Scenic and Recreational Rivers

National Rivers Inventory for New York State

River	County	Length (miles)	Year Listed/ Updated	Reasons for Listing
Abijah River- Confluence with South Sandy Creek to Leepy Rd.	Jefferson	2	1982	O
Allegheny River- Great Valley Creek to Townsend Hollow.	Cattaraugus	10	1982/ 1995	H/ H,F
Ampersand Brook (Adirondack Province River System)- Stony Creek Ponds to Ampersand Lake	Franklin	8	1982	O
Ausable River- Mouth at Lake Champlain to confluence of East & West Branches (Au Sable Forks)	Clinton, Essex	22	1982	S, F, O
Ausable River- East Branch -Ausable Forks to Marcy Swamp	Essex	37	1982	S
Ausable River, West Branch- Ausable Forks to headwaters near Heart Lake.	Essex, Clinton	35	1982/ 1995	S, G, F/ S, R, G, F
Basher Kill- Confluence with Nerversink River to NY Rt. 17 at Wurstboro.	Orange, Sullivan	13	1995	W
Batavia Kill- Confluence with Schoharie to Windham	Greene	11	1982	S, R
Batten Kill- Route 22 to Arlington	Washington, Bennington	18	1982	S, G, H
Bear Gulf- Confluence with Sandy Creek to headwaters north of Woodard Road	Jefferson, Lewis	3	1982	G, O
Beaver Kill- One mile upstream for Spring Brook to headwaters .	Ulster, Sullivan	31	1982/ 1995	S/ S, R
Black Creek- Confluence with Genesee River to NY Rt. 237 near Pumpkin Hill.	Genesee, Monroe	29	1995	R, W
Black River- Dexter Dam to U.S. 11 Bridge in Watertown	Jefferson	12	1995	S, R, F
Black River- Kayuta Lake to North Lake	Herkimer	15	1982	R, O
Black River- Carthage to Lyons Falls.	Jefferson, Lewis	35	1982/ 1995	G, O/ R, G, H, O
Black River- Norton Road upstream to Forestport Dam.	Lewis, Oneida	26	1995	S, R
Blue Mountain Stream- Confluence with Pleasant Lake stream to Clear Pond	St. Lawrence	9	1982	O
Bog River- Tupper Lake to dam below Hitchins Pond	St. Lawrence	7	1982	S, O
Bog River- Tupper Lake to Bog Lake	St. Lawrence	20	1982/ 1995	S, R, O
Boreas River- Brace Dam to Boreas Ponds	Essex	6	1982	O

River	County	Length (miles)	Year Listed/ Updated	Reasons for Listing
Boreas River- Confluence with the Hudson River to Boreas Ponds	Essex	17	1982/ 1995	S, R, O
Boreas River- Confluence with the Hudson River to Cheney Pond	Essex	11	1982	O
Bouquet River- Lake Champlain to the confluence with the North Fork	Essex	48	1982	S, R, F
Bouquet River, North Branch- Confluence with Main Branch to Trout Pond	Essex	19	1982	O
Bouquet River, North Fork- Bridge at Rt. 73 to head-waters on Dial Mt.	Essex	6	1982	S, O
Bouquet River, South Fork- Bridge at Rt. 73 to headwaters	Essex	6	1982	S, O
Canisteo River- Confluence with Tioga River to South Hornell Road.	Steuben	46	1995	R
Carmans River- Long Point to the Long Island Expressway	Suffolk	6	1982	R
Catskill Creek- South Cairo to headwaters	Greene, Albany, Schoharie	32	1982	R
Cattaraugus Creek- Buttermilk Creek to Yorkshire.	Erie, Cattaraugus	14	1982/ 1995	G/ R, G
Cattaraugus Creek- South of NY State Thruway to North Gowanda.	Erie, Chautauqua, Cattaraugus	11	1982/ 1995	R, F
Cattaraugus Creek- South of the NY State Thruway to North Gowanda	Erie, Chautauqua, Cattaragus	11	1982	R
Cattaraugus Creek- Gowanda to Buttermilk Creek	Cattaraugus	20	1982	R, G, O
Cattaraugus Creek, South Branch- Confluence with Cattaraugus Creek to Skinner Hollow Road bridge located off NY Rt. 12 northeast of village of Cattaraugus.	Cattaraugus	12	1995	S, R
Cedar River- Confluence with Hudson River to the outlet of Cedar Lakes.	Hamilton, Essex	40	1982/ 1995	S, G, F, W, O/ S, R, G, F, W, O
Chataqua Creek- Route 20 Bridge in Westfield to Putnam Road	Chatauqua	11	1982	S
Chateaugay River- Pulp Mill Road to the Forge.	Franklin	5	1982/ 1995	G, H
Chateaugay River- Park Boundary (Lower Chateaugay Lake) to Bluff Point (Upper Chateaugay Lake)	Franklin	4	1982	S
Chateaugay River- Canadian border to the aban-doned railroad line near Chateaugay	Franklin	6	1982	S, G, O
Chateaugay River - Abandoned railroad line near Chateaugay to the Forge	Franklin	7	1982	G, O
Chemung River- West of South Corning Rd. to Fitch Bridge	Chemung	6	1982	G
Claverack Creek- Stottville to Red Mills	Columbia	8	1982	R
Clyde River- West of Clyde to Creager Bridge	Wayne	9	1982	H

River	County	Length (miles)	Year Listed/ Updated	Reasons for Listing
Cohocton River- Confluence with Tioga River to Atlanta.	Steuben	37	1995	R, G, F
Cold River- Confluence with Raquette River to Duck Hole	Hamilton, Franklin, Essex	14	1982	O
Conewango Creek- PA Border to Clear Creek near Jamestown	Chautauqua-Cattaraugus	33	1982	O
Connetquot River- Johnson Avenue to south of Sunrise Highway.	Suffolk	6	1982	R, O
Deer River- Confluence with the St. Regis River to APA boundary	Franklin, St. Lawrence	36	1982	O
Deer River- Park boundary to Deer River Flow	Franklin	6	1982	S
Delaware River, East Branch- Hancock to East Branch.	Delaware	17	1995	R, O
Delaware River, East Branch- Harvard to Downsville	Delaware	10	1982	C, O
East Canada Creek- Dogleville to headwaters near Powley Place.	Herkimer, Fulton, and Hamilton (13 rm/ 27 rm)	27	1982/ 1995	S, F/ S, R, F, O
East Stony Creek- Great Sacandaga Lake to Lixard Pond.	Hamilton and Warren	25	1982	O
Esopus Creek- Ashokan Reservoir to Winnisook Lake.	Ulster	27	1995	S, R, F
Fall Stream- Piseco Lake to Mud Lake.	Hamilton	7	1995	S, R
Fish Creek- Oneida Lake to confluence of East and West Branches.	Oneida	16	1995	R, F
Fish Creek, East Branch- Confluence with West Branch to East Branch Fish Creek Reservoir.	Oneida	17	1995	S, R, F
Fish Creek, West Branch- Confluence with the East Branch to NY Rt. 13 bridge above Westdale.	Oneida	25	1995	R, F, W
Fox Creek- Confluence with South Sandy Creek to the Loraine - E. Boylston Rd.	Jefferson	7	1982	O
Genesee River- Portageville to NY Route 19 Bridge at Belmont	Allegany, Wyoming, and Livingston	40	1982/ 1995	O/ R, O
Genesee River- Rt. 19 bridge at Belmont to Rt. 19 bridge at Shongo	Allegany	25	1995	O
Genesee River- Mount Morris to Portageville	Wyoming (1982- 7 rm/ 1995- 21 rm)	21	1982/ 1995	G/ S, R, G
Genesee River- NY State Thruway to Rt. 36 near Mount Morris	Monroe, Livingston	40	1982	O
Genesee River- NY Route 252 to Route 36 near Mt. Morris	Monroe and Livingston	49	1982/ 1995	R, O
Grasse River- Northernmost Park boundary crossing to confluence of Middle and South Branches	St. Lawrence	5	1982	F
Grasse River, Middle Branch- Confluence with the South Branch to confluence with Pleasant Lake Stream and Blue Mountain Stream	St. Lawrence	15	1982	O
Grasse River, North Branch- Park Boundary to Church Pond	St. Lawrence	25	1982	W

River	County	Length (miles)	Year Listed/ Updated	Reasons for Listing
Grasse River, South Branch- Confluence with the Middle Branch to Center Pond	St. Lawrence	44	1982	S, F
Great Chazy River- Robideau Road Bridge to Chazy Lake	Clinton	6	1982	S
Gulf Stream- Confluence with Sandy Creek to the headwaters of Jacobs Creek	Jefferson, Lewis	20	1982	G
Hoosic River- Hoosick Falls to near North Pownal	Rensselaer	10	1982	O
Hoosic River- Confluence with the Hudson River to Schaghticoke	Rensselaer	6	1982	G, O
Hudson River- North of Barrytown to south of Malden on Hudson	Ulster, Columbia, Dutchess	5	1982	F, H, O
Hudson River- North of Coxsackie Island to above New Baltimore	Greene, Columbia	5	1982	H, O
Hudson River- Congluence with the Sacandaga River to the confluence with the Opalescent	Essex, Hamilton, Saratoga, Warren	82	1982	S, R, G, O
Hudson River- North of Hudson to south of Coxsackie	Greene, Columbia	4	1982	H, O
Hunger Kill- Confluence with the Normans Kill to Kydius St.	Albany	5	1982	
Independence River- Confluence with the Black River to Pine Grove Rd.	Lewis	4	1982	G, O
Independence River- Park Boundary to Little Diamond Pond	Lewis, Herkimer	20	1982	S, F, W
Indian River- Confluence with the South Branch of the Moose River to Brook Trout Lake	Hamilton, Herkimer	16	1982	O
Indian River - Confluence with the Hudson River to Indian Lake	Essex, Hamilton	8	1982	F
Indian River- Antwerp to headwaters	Jefferson, Lewis	32	1982	G
Jordan River- Carry Falls Reservoir to Marsh	St. Lawrence, Franklin	21	1982	S, O
Kaikout Kill- Confluence with the Hunger Kill to the headwaters pond near the City of Albany boundary	Albany	2	1982	S, C
Kayaderosseras Creek- One mile north of Ballston Spa to Rock City Falls	Saratoga	7	1982	R
Kinderhook Creek- Confluence with Stockport Creek to NY Rt. 22 bridge.	Columbia, Rensselaer	46	1995	R, F, H
Kunjamuk River- Confluence with the Sacandaga River to South Pond	Hamilton	20	1982	S, O
Little Hoosic River- Confluence with the Hoosic River to near Petersburg	Rensselaer	6	1982	O
Long Pond Outlet- Confluence with the West Branch of the St. Regis River to Long Pond	St. Lawrence	16	1982	O
Mad River- Confluence with the North Branch to the headwaters near the county boundary	Oswego, Jefferson	9	1982	O
Marble River- Hatchery to headwaters.	Franklin	4	1995	O
Marion River- Raquette Lake to Utowana Lake	Hamilton	5	1982	H, C

River	County	Length (miles)	Year Listed/ Updated	Reasons for Listing
Mill Creek- Confluence with the Hudson to Garnet Lake	Warren	13	1982	O
Mohawk River - North of Rt. 12 to Stanwix	Oneida	8	1982	O
Mohawk River- Delta Reservoir upstream to confluences of East and West Branches near hamlet of West Branch.	Oneida	12	1995	H
Mongaup Creek- Fish hatchery to Mongaup Pond; Henry Brook from Mongaup Creek to Hodge Pond.	Sullivan	5	1995	O
Moose Creek- Confluence with Cold River to Moose Pond	Essex	5	1982	O
Moose River- Park Boundary to the confluence with the Middle and South Branches	Lewis, Herkimer	16	1982	S, R, G
Moose River, Middle Branch- Confluence with the South Branch to the confluence with the North Branch	Herkimer	10	1982	S, R
Moose River, North Branch- Confluence with the Middle Branch to Big Moose Lake	Herkimer	19	1982	S, O
Moose River, South Branch- Confluence with the Middle Branch to Little Moose Lake	Herkimer	39	1982	S, O
Neversink River- Southwest of Cuddebackville to Rock Hill	Ulster, Sullivan	16	1982	G
Neversink River, East Branch- Confluence with West Branch near Claryville to junction with Erts Brook near Denning.	Sullivan, Ulster	8	1995	S, R, F, H
Neversink River, West Branch- Confluence with East Branch to junction with Biscuit Brook near Fronst Valley.	Sullivan, Ulster	8	1995	S, R, F, H
Nissequoque River- Confluence with Long Island Sound to New Mill Pond.	Suffolk	8	1995	
Normans Kill- NY State Thruway to Route 146	Albany	14	1982	R
Oak Orchard Creek- Lake Ontario to Lockport Road bridge.	Orleans	44	1995	R, W
Opalescent River- Confluence with the Hudson River to Flowed Land	Essex	15	1982	O
Osgood River- Jones Pond Outlet to Meacham Lake	Franklin	13	1982	S, O
Oswegatchie River- Two miles south of Heuvelton to Rt. 87 bridge	St. Lawrence	8	1982	S
Oswegatchie River- Route 87 bridge to Natural Dam	Jefferson, St. Lawrence	34	1982	S
Oswegatchie River- Wanakena to Partlow Mill Dam	St. Lawrence, Herkimer	21	1982	S, F, C, O
Oswegatchie River, Middle Branch- Confluence with the Main Branch to the headwaters near Walker Lake	Herkimer, St. Lawrence, Lewis	41	1982	S, F, C, O
Oswegatchie River, West Branch- Fullerville dam backwater to Harrisville northern boundary	St. Lawrence, Lewis	12	1982	S, F, O
Oswegatchie River, West Branch- Southern boundary of Harrisville to Buck Pond	Herkimer, Lewis	34	1982	S, F, H, O

River	County	Length (miles)	Year Listed/ Updated	Reasons for Listing
Otselic River- South Otselic to Torpy Pond.	Chenango	16	1995	O
Otter Brook- Confluence with the South Branch of the Moose River to Lost Pond	Hamilton	10	1982	S, F, W, O
Otter Creek- Confluence with the Black River to Pine Grove Rd.	Lewis	1	1982	G, O
Otter Creek- Confluence with the Black & Big Otter Lake	Lewis	16	1982	O
Oulaska Pass Brook- Confluence with Cold River to headwaters	Essex, Hamilton	3	1982	O
Peconic River- Great Peconic Bay to Red Maple Swamp near ridge.	Suffolk	16	1995	S, R, F
Piseco Lake Outlet- Confluence with the West Branch of the Sacandaga to State Route 10	Hamilton	5	1982	O
Pleasant Lake Stream- Confluence with the Middle Branch of the Grasse River to Pleasant Lake	St. Lawrence	5	1982	O
Poesten Kill- West of Poesten Kill to Dyken Pond	Rensselaer	10	1982	R, G
Poultney River- Lake Champlain to headwaters near Tinmouth, VT.	Washington (NY), Rutland (VT)	50	1995	R, F
Raquette River- Confluence with Carry Falls Reservoir (Jamestown Falls) to the outlet of Raquette Lake	St. Lawrence, Franklin, Hamilton	73	1982	S, C
Red River- Confluence with the South Branch of the Moose River to headwaters	Hamilton	10	1982	S, F, C
Roaring Brook- Confluence with the Black River to Martinsburg	Lewis	4	1982	G, O
Rock River- Confluence with the Cedar River to Lake Durant	Hamilton	8	1982	S
Rondout Creek- NY Rt. 55 bridge (head of Rondout Reservoir) to headwaters near Peekamoose Lake.	Sullivan, Ulster	12	1995	S, R
Rondout Creek- Hudson River to junction with Sandberg creek near Napanoch.	Ulster	39	1995	S, R, F
Round Lake Outlet- Confluence with Bog River to Round Lake	Hamilton, St. Lawrence	3	1982	O
Sacandaga River- Great Sacandaga Lake inlet to Lake Pleasant outlet	Hamilton	31	1982	S, R, F, H
Sacandaga River, East Branch- Confluence with the main Branch to Botheration Pond	Hamilton, Warren	24	1982	S, F, O
Sacandaga River, North Branch- Confluence with the West Branch to headwaters (Canary Pond)	Hamilton	6	1982	O
Sacandaga River, West Branch- Confluence with the main branch to headwaters near Silver Lake Mountain	Hamilton	34	1982	S, R, F, O
Salmon River- Park Boundary to Elbow Ponds	Franklin	12	1982	S, R
Salmon River- Salmon Reservoir to the headwaters of the East Branch	Oswego	10	1982	O
Salmon River- Route 81 to Lower Reservoir	Oswego	9	1982	R

River	County	Length (miles)	Year Listed/ Updated	Reasons for Listing
Salmon River, North Branch- Salmon Reservoir to Castor Pond	Oswego	5	1982	O
Sandy Creek- Mouth at Lake Ontario to Route 81	Jefferson	12	1982	O
Sandy Creek (Sandy Creek System)- East of Adams to the headwaters	Jefferson	17	1982	O
Sangerfield River- Wickwire Road to NY Rt. 12 bridge.	Madison, Oneida	10	1995	S, F, W
Saranac River- Bridge crossing south of Elsinore to Upper Saranac Lake outlet	Clinton, Franklin, Essex	66	1982	S, R, H
Saranac River, North Branch- Confluence with the main branch to Mud Pond	Clinton, Franklin	20	1982	O
Schoharie Creek- Prattsville to headwaters	Greene	29	1982	S, R
Schoharie Creek- Near Vroman's Nose to the Blenheim-Gilboa Pump Storage Project dam	Green	15	1982	G
Schoharie Creek- New York State Thruway to Esperance		18	1982	R, G, O
Schroon River- Confluence with the Hudson River to the outlet of the former Deadwater Pond	Warren, Essex	67	1982	S, G, W, O
Scriba Creek- Oneida Lake to headwaters near Salt Road (Rt. 183).	Oswego	14	1995	F, O
Shawangunk Kill River- Confluence with Wallkill River to Orange Conty line near New Vernon.	Ulster	30	1995	R
Shingle Gulf- Confluence with Sandy Creek to the headwaters east of Whitesville Road	Jefferson, Lewis	4	1982	G, O
Silver Lake Outlet- Confluence with the West Branch of the Sacandaga to Silver Lake	Hamilton	5	1982	O
South Branch Opalescent River/Skylight Brook- Confluence with Opalescent to headwaters	Essex	5	1982	O
South Sandy Creek- Mouth at Lake Ontario to the headwaters at the unnamed pond on the Lewis-Jefferson County boundary	Lewis, Jefferson	28	1982	G
Spring Creek- Confluence with Oatka Creek to headwaters.	Livingston, Monroe	6	1995	R, G, O
St. Regis River- Brasher Falls to Lower St. Regis Lake	St. Lawrence, Franklin	46	1982	S, R, O
St. Regis River, East Branch- Confluence with the main branch above Santa Clara to headwaters at Meacham Lake	Franklin	18	1982	S, O
St. Regis River, West Branch- Confleunce with the main branch at Winthrop to Allen Falls Reservoir	St. Lawrence	17	1982	O
St. Regis River, West Branch- Parishville to headwaters at Little Fish Pond	St. Lawrence, Franklin	42	1982	S, F
Susquehanna River- NY Rt. 206 in Bainbridge to Otsego Lake outlet at Cooperstown.	Chenango, Delaware	57	1995	S, R
Taghkanic Creek- Confluence with Claverack Creek to headwaters	Columbia	24	1982	R
The Branch- Confluence with Schroon River to Elk Lake	Essex	12	1982	O

River	County	Length (miles)	Year Listed/ Updated	Reasons for Listing
Thirteenth Brook- Confluence with Hudson River to Thirteenth Lake	Warren	5	1982	O
Tomhannock Creek- Confluence with the Hoosic River to the Boston-Maine railroad bridge	Rensselaer	2	1982	G, O
Trout Brook- Pottersville to Olmstedville	Essex, Warren	8	1982	O
Unadilla River- Confluence with the Susquehanna River to West Edmeston	Ostego, Chanango, Madison	37	1982	R, O
Upper & Lower Twin Brooks- Confluence with Opalescent to headwaters	Essex	6	1982	O
Wallkill River- Hamburg, NJ to the Merritts Island, NY area	Orange	14	1982	O
Wallkill River (including Shawangunk Kill)- Sturgeon Pond to Wallkill (confluence with the Walkill River to Pine Bush)	Ulster- 19 rm (Ulster, Orange- 12 rm)	31	1982	H
Wallkill River- South of the Montgomery Airport to Route 17	Orange	7	1982	O
Wappinger Creek- Nooteming Lake to headwaters at Thompson Pond	Dutchess	15	1982	G
West Canada Creek- Harvey Road bridge crossing to Mud Lake	Herkimer, Hamilton	36	1982	S, R, O
West Canada Creek, South Branch- Confluence with West Canada Creek to headwaters	Herkimer, Hamilton	18	1982	S, R, O
West Stony Creek- Confluence with the Sacandaga River to Peck's Lake	Fulton, Hamilton	15	1982	O

Total NYS NRI miles =	3208

Abbreviations	
S= Scenery	W= Wildlife
R= Recreation	P= Prehistory
G= Geology	H= History
F= Fish	C= Culture
O= Other Values	rm= river miles

State Designated Wild, Scenic and Recreational Rivers

	River	Number of Miles Classified		
		Wild	Scenic	Recreational
National	Delaware (Upper) River		23.1	50.3
State Initial (Located within the Adirondack Park)	Ampersand Brook		8.0	
	Ausable River		9.0	
	Ausable River (West)			5.0
	Boreas River		11.5	
	Bouquet River (North Fork)		6.0	
	Bouquet River (South Fork)		5.5	
	Cedar River	7.0	5.0	
	Cold River	17.0		
	Hudson River	13.0	9.0	
	Indian River	13.0		
	Moose River (South)		24.5	
	Opalescent River	11.0		
	Sacandaga River (East)	11.5		
	Sacandaga River (West)	7.0		
State Additional	Ausable River (East)			28.3
	Ausable River (Main)			22.0
	Ausable River (West)			29.5
	Black River		7.8	6.6
	Blue Mountain Stream		9.0	
	Bog River		7.3	
	Bouquet River			47.3
	Carmens River		7.3	1.0
	Cedar River	7.3	10.0	11.0
	Connetquot River			5.8
	Deer River		6.2	
	East Canada Creek		20.9	
	Fall Creek			
	Genesee River		22.1	
	Grasse River (Middle)		14.5	
	Grasse River (North)		25.4	
	Grasse River (South)		38.9	5.2
	Hudson River			58.6
	Independence River		26.0	0.5
	Indian River			8.3
	Jordan River		18.0	
	Kunjamuk River	8.0	10.4	
	Long Pond Outlet		16.0	
	Marion River		5.0	
	Moose River (Main)		15.8	
	Moose River (Middle)			13.4
	Moose River (North)		6.0	13.0
	Moose River (South)		14.4	
	Nissequogue River		1.4	1.4
	Oswegatchie River (Main)	18.5		2.3

	River	Number of Miles Classified		
		Wild	Scenic	Recreational
State Additional	Oswegatchie River (Middle)	14.5	7.0	
	Oswegatchie River (West)		7.0	6.1
	Otter Brook		10.0	
	Peconic River		13.5	5.5
	Piseco Outlet	4.2		
	Ramapo River			3.5
	Raquette River		33.8	39.0
	Red River		9.7	
	Rock River		6.9	1.2
	Round Lake Outlet		2.7	
	Sacandaga River (East)			14.0
	Sacandaga River (Main)			31.0
	Sacandaga River (West)	9.0		10.6
	Salmon River			12.3
	Saranac River (Main)			60.4
	Schroon River			66.7
	Shawangunk Kill River			
	St. Regis River (East)		14.5	6.1
	St. Regis River (Main)		15.5	7.0
	St. Regis River (West)		35.0	5.5
	West Canada Creek (South)	5.9		9.7
	West Canda Creek		17.0	11.0
	West Stony Creek		7.7	8.7
	Total	146.9	541.2	557.5
	Total for the System	1245.5		