

Final Master Plan/ Final Environmental Impact Statement

For

Green Lakes State Park

March 23, 2011



Andrew M. Cuomo
Governor

Rose Harvey
Commissioner

Office of Parks, Recreation and Historic Preservation

Final Master Plan/
Final Environmental Impact Statement

for

Green Lakes State Park
March 23, 2011

The Town of Manlius, Onondaga County

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

Completed: March 23, 2011

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**SEQR
NOTICE OF COMPLETION OF A FINAL
ENVIRONMENTAL IMPACT STATEMENT**

Date of Notice: March 23, 2011

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

Title of Action: **Adoption and Implementation of a Master Plan for Green Lakes State Park**

SEQR Status: Type I

Location of Action: Green Lakes State Park is located in the Town of Manlius in Onondaga County, NY.

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 Plan and Final Environmental Impact Statement (FEIS) on the proposed action has been prepared and accepted by OPRHP. The Executive Summary of the Master Plan/FEIS describes the proposed action, the environmental setting, alternatives and potential environmental impacts and mitigation.

Agencies and the public are afforded the opportunity to consider the FEIS; this consideration period ends on April 4, 2011. Copies of the Final Plan/FEIS are available for review at the Park Office; at the offices of the agency contacts, the Fayetteville Free Library, 300 Orchard Street, Fayetteville, NY 13066, the Minoa Library, 242 Main St, Minoa, NY 13116 and the Manlius Library, 1 Arkie Albanese Avenue, Manlius, NY 13104. The online version of the Master Plan/FEIS is available at the following publically accessible web site: <http://www.nysparks.state.ny.us/inside-our-agency/master-plans.aspx>

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Acknowledgements

The Green Lakes State Park Final Master Plan/Final Environmental Impact (FEIS) statement is a result of a cooperative effort by many persons. The Office of Parks, Recreation and Historic Preservation (OPRHP) acknowledges the time and effort of each individual, public agency and interest group who participated in the development of the park and this Final Master Plan Document.

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Executive Summary

Introduction

The Commissioner of the Office of Parks, Recreation and Historic Preservation (OPRHP) is proposing the action of adoption and implementation of a Master Plan for Green Lakes State Park. The Final Master Plan/Environmental Impact Statement (EIS) was written to provide the opportunity for individuals, organizations and other government agencies to participate in the development of a State Park.

One public scoping/information meeting was held to gather information, concerns and issues surrounding the development and management of Green Lakes State Park.

The Commissioner has decided that a Master Plan/EIS is necessary to guide the management and development of the resources at Green Lakes State Park.

Park Background

Green Lakes State Park is located in the Central New York State Parks Region, in Onondaga County and the Town of Manlius. The park is located approximately five miles east of Syracuse and is bordered to the north by Route 290 and Old Erie Canal State Park. The park encompasses approximately 1,774 acres, is open year-round and hosts approximately 850,000 visitors annually. On a peak day, the park can have as many as 8,000 people with over 1,500 parking spaces filled. During the summer months, the main attractions to the park are the beach, picnic areas and the lakeside trails and golf course.

Environmental Setting

The topography of Green Lakes State Park was formed by glacial actions over 10,000 years ago. The torrents of rushing water from large glacial waterfalls carved plunge pools deep into the soil and limestone bedrock creating the lakes and the surrounding steep hillsides. The soils are derived from till, a variable mix of sand, fine textured loam, gravel and boulders deposited by the glaciers. Green Lake and Round Lake are two of eleven meromictic lakes in the United States. Green Lake is 192' deep and Round Lake is 180' deep and their combined size is 103 acres.

The park is very diverse with flora and fauna. Ecological communities in the park include grasslands, old growth forest, wetlands and successional shrubland. The park hosts a wide variety of wildlife and is abundant with many species of birds, fish, mammals, reptiles and amphibians.

There is a wide variety of recreation resources in the park. Camping and cabins are available for overnight visitors. Swimming, hiking, mountain biking, golf, disk golf, cross country skiing, snowshoeing, picnicking, fishing, and nature studies are all available at the park as well as diverse opportunities for park visitors to simply relax and enjoy the park's natural and scenic beauty.

Agency 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.

Park Vision

The natural, cultural, and physical resources of Green Lakes State Park will continue to be available and protected so that it is a place for visitors to enjoy, appreciate and learn about those resources as they participate in the recreational opportunities that the park offers.

Park Goal

Achieve a balance between recreational, interpretive and educational opportunities and the preservation and protection of the natural, cultural and physical resources of Green Lakes State Park.

Analysis & Alternatives

The Master Plan presents a series of “preferred alternatives” for future development and operation of Green Lakes State Park. Cumulatively, the actions described below present OPRHP’s long-term vision for the enhancement of the park.

The Master Plan

The Master Plan considers the historic, natural and recreational resources of the park and responds to recreational needs and safety of park patrons, protection of cultural and natural resources and principles of sustainability. The plan sets forth a long-term vision to guide future development of new and enhanced park facilities. The initiation of each specific action will be determined by the level of funding available to OPRHP in future years.

Classification

- The park will continue to be classified as a Recreation Park.

Designations

Bird Conservation Area

- 1,002 acres in the western half of the park is designated as a Bird Conservation Area.

Park Preservation Area

- Approximately 105 acres in the Old Growth area within the National Natural Landmark, and the area surrounding Round Lake, is designated as a Park Preservation Area.

Natural Resource Protection

The plan provides protection of natural resources through several means.

Lake Habitat Management

- Strategies will continue to be developed to protect lake habitat.
- Boating and the stocking of fish will continue to be limited to Green Lake.
- Rental boats will continue to be used limiting the potential for introduction of aquatic invasive species such as the zebra mussel.

Wetland Management

- Wetlands will continue to be monitored for impacts.
- The Brookside trail, located in or near a wetland, will be improved to reduce erosion from trail users.

- Strategies for the management and removal of *Phragmites* will be developed. New construction adjacent to a wetland will include the necessary siltation control devices to minimize impacts.

Grassland Management

- Strategies will be developed for the management of the grassland area in the western portion of the park.
- Shrubs, trees, invasive species and other successional field vegetation will be removed.
- A mowing schedule will be developed to improve habitat suitable for specific bird populations.

Wildlife Resources

- The current park policies concerning wildlife are effective and will continue.
- Deer management strategies will be developed on a regional level.

Invasive Species Management

- An Invasive Species Management Plan will be developed for Green Lakes State Park. The main goals of the plan will be to keep the park free of invasive species, and to identify core areas that are invasive free zones.

Recreation Facility Development and Programs

Recreation facility development has been reviewed and a number of actions will be undertaken to improve public recreation in the future:

Boating

- Continue to allow boating on Green Lake. Provide rental boats for patron use to protect the lake from the introduction of aquatic invasive species.

Fishing

- Continue to allow fishing in Green Lake.
- Improve areas around Green Lake to provide suitable locations for fishing and lake access.
- Continue fish stocking in Green Lake.

Basketball

- Replace the basketball courts around the beach area.

Disk Golf

- Maintain the existing disk golf course to continue to provide opportunities for recreational enthusiasts.

Swimming

- Continue to allow swimming in Green Lake within the beach area during designated hours.

Trails

Implement the Green Lakes Trails Plan. Key components of the plan include:

- Hiking and running are allowed on all existing, newly developed and newly designated trails.
- Mountain biking loop opportunities are increased.

- Cross-country skiing and snowshoeing remain as an allowed use throughout the trail system in winter months; trails will be appropriately signed in winter to encourage proper trail etiquette.
- Appropriate trail connections between high use areas are upgraded.
- Access to the trails in the western half of the park is enhanced to encourage use of these trails while reducing overuse and environmental degradation on and around the Lake Trails.
- Trail signage including trailhead and trail intersection signage is improved throughout the park to improve the visitor experience and increase patron safety.
- Access to and interpretation of cultural and historical resources within the park is improved.
- Unsustainable sections of trails are upgraded, realigned or closed to reduce erosion and environmental degradation of park resources.

Interpretation and Education

Interpretation and educational opportunities throughout the park are expanded and include the following:

- Develop new interpretive signage and brochures for the grasslands in the western portion of the park.
- Improve signage and panels to provide more information about the biodiversity and habitat sensitivity within and around the meromictic lakes.
- Construct viewing platform/areas around lake to further protect the unique habitats and fauna from overuse by park patrons. Interpretive panels will be installed at these locations to educate patrons.
- Continue to develop brochures, nature center displays, educational kiosks with interpretive signs, internet-based interactive maps, videos and other interpretive tools.
- Update the “*Project Enrich*” program.
- Continue the *Environmental Field Days (EFD)* program.
- Continue the Manlius Pebble Hill Stewardship Days program and expand to include more partners in similar educational programs.
- Construct a new park educational center near the existing Reserve Picnic Shelter.

Cultural Resource Protection

The cultural resources within Green Lakes State Park are a valued part of its history. The following actions will take place:

- Rehabilitation and/or modification of historic structures will be undertaken in consultation with OPRHP’s Historic Preservation Field Services Bureau (FSB) staff. Protection of cultural resources will be accomplished on a case by case basis. New structures will be compatible with their historic context. Projects that will result in ground disturbance may require consultation with FSB staff. An archeological sensitivity map will be developed in consultation with FSB staff to identify areas that have been disturbed, on slopes greater than 12 to 15 degrees and under permanent water features.

Scenic Resource Protection

Green Lakes State Park encompasses significant scenic resources. The following actions are included within the plan:

- Consider the scenic vistas throughout the park in all project implementation.
- Viewing platforms will be constructed around Green Lake to improve existing vista points or provide new ones.
- The trail system will be expanded to further improve the park patron's enjoyment of scenic vistas throughout the western portion of the park.
- Vegetation management proposed for the western portion of the park may improve some of the scenic vistas in the area.

Operations and Infrastructure

The following operational and infrastructure improvements will be implemented:

- Expand the park office in its current location to meet current administrative needs.
- Relocate the Park Police office from the maintenance area to the park office area.
- Construct an education center near the Reserve Shelter.
- Improve the Rolling Hills Campground in the short term. In the long term the campground will be relocated to an area south of the park office.
- Improve the Pine Woods Campground.
- Improve the golf course and Clubhouse.
- Improve the Lakeview Picnic Area including the construction of a permanent shelter.
- Improve the Hillside Picnic Area. After further assessment of the recently renovated Old Administration Building for group rental, vehicle parking may be considered within this area.
- Improve the Tulip Hill Picnic Area and assess the locations of grills and picnic tables. Improve connectivity to the beach area.
- Reopen the former Cedar Grove picnic area and expand picnic opportunities around the beach.
- Improve access to the Beach Picnic Area from the parking lots.
- Utilize the Old Administration Building as a rental facility for group functions and as a warming hut in the winter.
- Expand the maintenance facility to the area currently occupied by the Park Police upon their relocation to the park office area.
- Improve the Cabin Colony, including compliance with the American Disabilities Act (ADA).
- Construct a day use trailhead off of the campground roadway.

Implementation

Implementation of all of the above actions will require substantial investment of state funds, along with additional funding from other public and private sources. While implementation of certain actions will begin in 2011, OPRHP anticipates it will require ten to fifteen years – and perhaps longer – to accomplish all of the actions recommended in the plan. The implementation of the Master Plan for Green Lakes State Park is divided into three priority phases (Table 1). The initiation and completion of these priority phases will depend upon funding and demand and will be balanced with the need to make ongoing capital investments to maintain and rehabilitate the park's roads, utilities, buildings, and other infrastructure. The priorities groupings are conceptual and subject to reorganization based on available funding for specific components of any given group. Maintenance projects will be prioritized and scheduled in the three phases.

Table 1 Priority Phases

Implementation Priorities	Description/Development Component
Ongoing/Current	<p>Implement stormwater management strategies on a project by project basis.</p> <p>Make energy and water conservation improvements.</p> <p>Maintain and rehabilitate park roadways and parking areas.</p> <p>Implement the Beach Access Improvements Plan (enhance connections between Tulip Hill picnic area, Beach, etc.).</p> <p>Renovate the Hillside picnic area.</p> <p>Renovate the Tulip Hill picnic area.</p> <p>Renovate the Beach picnic area.</p> <p>Improve the Cabin Colony.</p> <p>Reconstruct the Cedar Grove picnic area.</p> <p>Rehabilitate the Old Administration Building.</p> <p>Renovate the Golf Club House interior and exterior.</p> <p>Continue the early detection and rapid response of invasive species.</p> <p>Make improvements to the golf course.</p>
Priority 1	<p>Upgrade the beach area septic system.</p> <p>Conduct a park-wide sanitary system assessment.</p> <p>Construct the connection between the Capital Facilities Regional Maintenance area and the park office, in conjunction with new fuel tank relocation.</p> <p>Improve Reserve Shelter area stormwater drainage.</p> <p>Improve the Green Lake outlet/weir.</p> <p>Develop the Interpretive Plan.</p> <p>Rehabilitate Boat House/adjacent booth and dock area as part of prioritized interpretive plans.</p> <p>Develop the Invasive Species Management Plan.</p> <p>Make improvements to the Lake Trail as per Trail Plan.</p> <p>Implement the Grassland Management Plan</p> <p>Improve entrance to the beach parking lots.</p> <p>Renovate the Tulip Hill picnic area.</p> <p>Conduct a boundary survey of park.</p>

Implementation Priorities	Description/Development Component
Priority 2	<p>Improve areas along Green Lake for viewing and fishing.</p> <p>Make Pine Woods campground improvements.</p> <p>Make Rolling Hills campground improvements.</p> <p>Improve the golf maintenance stockpile area.</p> <p>Deer management planning</p> <p>Continue implementation of the Trails Plan.</p>
Priority 3	<p>Expand the park office area and move the Park Police office.</p> <p>Design and construct the new campground area.</p> <p>Plant trees in proposed campground.</p> <p>New campground construction.</p> <p>Improve the Golf Maintenance Stockpile Area.</p> <p>Convert the Rolling Hills campground into a picnic area.</p> <p>Construct an educational center near the Reserve Shelter.</p> <p>Improve the disk golf course.</p> <p>Restore the golf course bunkers using original design.</p> <p>Remove the Nature Center (following construct of a new center).</p> <p>Renovate the Lakeview picnic area and construct a new shelter.</p>
As Needed	<p>Conduct studies of flora and fauna.</p>

Environmental Impacts

Environmental impacts associated with implementation of the Master Plan have been addressed under the following general areas: traffic and access, recreation/open space, land, water resources, biological resources/ecology, cultural/ archeological resources, scenic resources, and public health and safety. Actions outlined in the Master Plan are designed to minimize impacts in all of these areas.

The Master Plan does not significantly change traffic patterns or access to the Park. Some improvements are proposed that will provide safer traffic flow and better circulation and signage. Minor expansion is proposed for the golf course parking lot. Improvements are proposed for the East Beach parking area including the addition of treed islands and/or bioswales to divert stormwater. Creation of the gravel Trailhead Parking area will provide easier access to the trails in the western portion of the park and take some pressure of the Lake Trails.

The plan will result in substantial beneficial recreation and open space impacts. It provides a variety of new and improved recreation facilities and visitor amenities including an Education Center, trail system enhancements, and improvements to camping and picnic areas. Implementation of the Trails Plan will result in an organized trail system which will accommodate a variety of uses including walking/hiking, biking and cross-country skiing. A new park office and park police complex will provide improved visitor services while also incorporating sustainable design.

There will be some physical changes to the land, particularly where new recreation facilities and trails will be constructed or segments of trails relocated. Most new recreation facilities proposed in the plan, such as the campground relocation and Park Office/Park Police Complex, will be located in open areas many of which are already previously disturbed and require little ground disturbance. The construction of new trails or trail sections may require some vegetation removal and soil disturbance depending on type and location of the trail. Disturbance will be limited primarily to the required width of the trail corridor.

Implementation of the Master Plan will have minimal impact to water resources. Many actions included in the plan are designed to protect and improve lake water quality and will have beneficial impacts. Stormwater drainage improvements will be a component of each project within the park and implemented on a case by case basis. Trail improvements to the Brookside Trail will protect the wetland area, make a drier trail and keep people out of the wetland. Long term monitoring of the biota and lake water quality is included in the plan. Additional research will investigate methods to reduce the amount of sand leaving the beach and entering the lake. Designating lake access point and providing interpretive materials for anglers may also help prevent shoreline degradation. Round Lake, already a National Natural Landmark, will receive further recognition and protection with the proposed Park Preservation Area designation.

Overall the Master Plan will have a positive impact on the natural resources within the park. Limited new development is proposed in the park. Impacts associated with proposed improvements, such as the new campground location, new Education Center and park Office/Park police Complex, will be minimal since the proposed improvements have been sited in areas with previous disturbance or development, limited environmental sensitivity and which generally possess accessibility to and use of existing infrastructure. The importance of the natural resources within the park is recognized with the proposed designation of portions. The designations recognize these areas as containing significant ecological and scenic resources and the importance of these areas. Grassland birds will benefit through implementation of the Grassland Management Plan and native plants in the park will benefit from development of the invasive species plan. Improvements in waste management practices, particularly in the Golf Course Maintenance Stockpile Area, will reduce the potential spread of invasive species in the Old Growth area.

The Master Plan recognizes and protects the historic and cultural resources within the park. Removal of up to half the stone picnic tables at Tulip Hill has been determined to be an Adverse Impact on historic resources. Specific mitigation measures for the impact of this project are required, including documentation of the locations of the tables, photographs of the tables and their possible relocation elsewhere in the park. Additional rehabilitation and/or modification of historic structures will be done in consultation with Historic Preservation Field Services Bureau (FSB) staff on a case by case basis. New structures designed for the park will be compatible with their historic context. To assure no adverse impacts to archeological resources, areas may require consultation with FSB staff prior to any ground disturbance.

Implementation of the Master Plan will not result in any significant adverse impacts on scenic resources in the park. Views of Green Lake, Round Lake and the surrounding landscapes will be protected and maintained through the actions recommended in the plan. Important views will be

preserved. Historic landscapes and scenic vistas of the lakes will be analyzed and strategies developed to improve historic views while protecting significant species.

Public health and safety are an important element in park operations. Facility design and construction will meet applicable health and safety codes, including compliance with the Americans with Disabilities Act.

Some potential impacts that could occur during implementation of the plan may not have been adequately addressed in this plan/EIS. Under such circumstances, an additional or supplemental environmental review will be required. As part of the agency's responsibility under the State Environmental Quality Review Act, OPRHP will review proposed implementation projects with respect to consistency with this plan and EIS. Projects found to be consistent with the Plan can go forward without any additional review. Other types of proposals may require additional review.

Chapter 1 – Introduction

Planning and Environmental Review

The OPRHP planning process adheres to three basic principles:

- Planning must be coordinated and provide for public participation: Cooperation among appropriate governmental organizations, the public at large, special interest groups and the private sector is not only desirable but necessary.
- Planning is a continuing process: Assumptions for the classification and management of park resources must be constantly reevaluated in light of new information, changing needs and priorities, and resource character.
- Planning must be comprehensive: The information base, and pertinent additional research, should support the planning process and should encompass relevant social, economic and physical factors relating to the management and operation of the park and its resources.

The environmental review of proposed master plans for state park facilities is conducted in accordance with the State Environmental Quality Review Act (SEQR). OPRHP fully integrates the planning and environmental review processes. This document serves as both the Master Plan and the Environmental Impact Statement for Green Lakes State Park.

Sustainability is a philosophy on how to improve, operate and maintain State Parks and Historic Sites, while at the same time, minimizing or reducing the impacts State Parks and Historic Sites have on the natural environment.

Sustainability looks at the whole rather than the individual parts to maximize energy efficiency and minimize environmental impact; reduce use of fossil fuels; reduce or eliminate hazardous substances; protect biodiversity and ecosystems; and, use resources carefully, respectfully and efficiently to meet current needs without compromising the needs of other living creatures and the use of those resources by future generations.

OPRHP is committed to reducing its impact on the environment and to becoming more carbon neutral by adopting more sustainable practices in park development, improvement, operation and maintenance. Through out this Master Plan, sustainable practices and alternatives were incorporated and considered in the analysis, master plan and implementation sections and also during the development of the document.

To ensure that the Agency conserves and protects coastal and watershed ecosystems of NYS, the Agency has embraced the principles of ecosystem-based management (EBM). The principles of EBM are included and represented within the master plans as well as throughout implementation. These principles are: to start with a place based focus, base management decisions on the best available science, have measurable objectives to direct and evaluate performance, use adaptive management to respond to new knowledge and changing conditions, recognize interconnections within and among ecosystems, and involve stakeholders to incorporate local knowledge. An EBM approach to management ensures that decisions are made holistically focusing not on a single species or resource, but considering all parts of the ecosystems, including humans.

Introduction to the Park

Establishment of the park

Within the 1922 statewide park plan there were no plans for parks within the Central region. Both the Central region and a plan were created by the state legislature in 1925, after the State Council of Parks had been established. The Central Park region presented an opportunity to develop recreational activities according to the principles set out in the state park plan, which was developed in anticipation of population growth, urban expansion, loss of farmland, inadequate public parks, increasing private ownership of scenic land, and the growth of automobile transportation.

State Council of Parks purchased the 500 acres surrounding Green and Round Lake in 1928 for development of a new state park. A master plan was developed for the park and implementation soon began. Green Lakes State Park was created to provide the citizens of New York a scenic environment for recreation. Roadways, structures, picnic areas, a swimming beach and a golf course were constructed to provide opportunities for New York citizens to actively experience the outdoors.

Previous Planning Efforts

A master plan was completed for the park in 1928 soon after the purchase of the parkland. This plan, in addition to other master plans created in 1936, 1937, 1938, 1956 and 1970, helped to set the stage for the main character of the park and most of the features seen today. Through the years, additions and modifications to the park have been made to provide various other amenities. Some, such as the Rolling Hills and Pine Woods campgrounds were constructed as a result of these plans while other proposals such as the park office, bathhouse and the Route 290 entrance road were not.

A Resource Management Guide was created in 1996/97 to provide guidance for management and resource protection within the park and, most recently a beach access plan was prepared in 2008.

What has prompted the preparation of this report?

OPRHP recognized the importance of the planning process; master plans provide a vital link between park operations, resource management and patron uses. Green Lakes State Park has had several significant acquisitions since the previous planning efforts. This master plan was prepared to manage the park more effectively and to continue to provide a high level of service to park patrons.

Chapter 2 – Park Background

The Region

New York State is divided into twelve Park regions. Eleven of these regions are under the jurisdiction of the Office of Parks, Recreation and Historic Preservation (OPRHP). The twelfth region is composed of the Adirondack and Catskill Forest Preserves and is administered by the Department of Environmental Conservation (DEC). Green Lakes State Park is located in the Central Region which is administered by OPRHP. Regional characteristics of the counties and the region in which Green Lakes State Park is located are described in this chapter.

Location

Green Lakes State Park is located in the Central NY State Park Region, in Onondaga County and the Town of Manlius. The park is located approximately five miles east of Syracuse and is bordered to the north by Route 290 and Old Erie Canal State Park, and the Sisters of St. Francis' Alverna Heights property. The western border is Route 257 and the eastern boundary lies parallel to Pierson Road. The southern boundary is a jagged line that abuts the village of Fayetteville and a portion of Route 5. See Figure 1 – Vicinity Map.

Access

Green Lakes State Park is primarily accessed by car from State Highway 290 with a secondary entrance from Route 5. A few small parking areas are located along the perimeter of the park and serve primarily as trail access points. Pedestrian access is allowed from both a connection to the Old Erie Canal State Park and from surrounding neighborhoods.

Impact of the Park

Economic Contribution

State facilities, such as Green Lakes State Park, are an important component in the economic health of Onondaga County.

In March 2009, a study entitled “*The NYS Park System: An Economic Asset to the Empire State*” was prepared for Parks & Trails New York by the Political Economy Research Institute (PERI), University of Massachusetts-Amherst. This study found that the combination of state and visitor spending at all NY State Parks supports up to \$1.9 billion in economic output and business sales and up to 20,000 jobs throughout the state. For the Central Region, which includes Green Lakes State Park, the figures are \$134 million and 1,620 jobs. Visitor expenditures within the Central Region were estimated to be between \$39.9 million and \$82.2 million. The analysis by PERI was done on the regional level. In the discussion below, the economic impact of Green Lakes State Park is estimated using a slightly different methodology. Nonetheless, the results here, and the results from PERI are not in conflict with each other.

A recent survey, conducted in the summer of 2007, indicated that visitors from within the Central Region make up 85% of total park visitors. The percentage of visitors from Onondaga County was 50.5%, almost the identical figure found during the 1994 survey. (Since then, particularly in 2008, gasoline prices were unusually high and may have exerted downward pressure on the number of visitors travelling longer distances to the park). The attendance for fiscal year 2008-09 was 857,000 visitors. At the time of the previous estimate of economic impact in 1997, attendance was reported at

863,000. Thus, for the period 1994 through 2007, the park has had fairly stable attendance, both in total numbers and in geographic origins.

Using the methodology provided by the National Park Service in their “Money Generation Model”, and using the most recent survey and attendance data, and adjusting dollar figures to account for inflation, the current economic impact of Green Lakes State Park is estimated to be \$39.8 million annually. Each year, this amount should generate approximately \$1.2 million in local tax revenues and 865 Full-Time Equivalent (FTE) jobs. In conclusion, the economic impact of Green Lakes State Park on the Central Region and the Onondaga County area in particular, has remained the same due to consistent attendance figures and geographic characteristics, with an increase mainly due to inflation, and this amount can be considered significant for the area which the park is located.

Ecosystem Services

The park’s ecosystems including the Old Growth forest, national natural landmark designated meromictic lake, open fields and the services they provide to the community such as swimming opportunities, relaxation and enjoyment of wildlife, outdoor trail opportunities represent a value the park provides above the analysis provided in the above sections. This is both an intrinsic value in knowing that Green Lakes State Park and its unique natural landforms are protected and conserved and that the open space of the park is protected, as well as the value in the functions that the ecosystem provides, such as protection from flooding and filtering surface water runoff.

Green Lakes State Park in particular provides a service of open space relatively close to an urban center. That makes the park’s natural setting and key features a reason that people visit the park. The lakes, trails, scenic views and the natural outdoor swimming opportunity provided by Green Lake contribute to the value of the park.

Recreational Needs Assessment

According to the 2009 Statewide Comprehensive Outdoor Recreation Plan (SCORP), relaxing in the parks 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. Walking/jogging has the highest total of activity days followed by relaxing in parks, swimming, visiting museums/historic sites, and biking (OPRHP 2008).

The Relative Index of Recreational Needs in SCORP ranks needs in a county by assigning a numerical scale (10 being the highest need and 1 being the lowest) to an activity by considering the supply of recreation facilities and the level of participation and estimating how that level of participation will change in the future.

Green Lakes State Park attracts primarily local users with some visitors from surrounding counties and outside the region. Given its location in Central New York, the service area for the park is Onondaga County and the nearby counties of Madison, Oneida and Oswego.

The activities with the highest relative index of need in the service area are as follows: hiking, cross country skiing, fishing, equine activities, swimming, boating and camping. (See Table 2) Using these numbers these are the activities that will, over the period 2005 to 2025, experience the greatest growth in the service area relative to the existing supply of resources.

Recreational Needs from Public Comment

The comments received verbally and in writing at the public information meeting and subsequently by post mail and email weighed somewhat equally towards recreation and resource protection. This may indicate a general public desire to continue the recreational activities in the park while protecting the natural and cultural settings in which they reside.

Of the comments that were related to recreation, a comparison of the RIN index reveals that several of the needs expressed by the public are the same as those with the highest RIN scores and can be met at the Green Lakes State Park including: hiking, cross country skiing, fishing, swimming and camping. Equine activities are not accommodated at the park and boating is only allowed by park patrons who use the non-motorized boats available for rent at the park. In addition, running is a popular activity in the park that is not specifically listed in the RIN chart but can be accommodated at this park.

Table 2 - Recreational Index of Needs for the Service Area of Green Lakes State Park

Activity	Onondaga	Oneida	Madison	Oswego	Weighted Average
Relaxing in the Park	4	3	3	3	3.5
Swimming	6	5	4	4	5.2
Biking	5	4	4	4	4.4
Golfing	5	4	4	4	4.5
Walking for pleasure	6	4	3	3	4.7
Tennis	4	4	3	4	3.9
Court Games	3	3	3	3	3.0
Field Games	4	4	4	4	4.0
Equine Activities	7	5	4	5	5.4
Visiting Historic Sites	4	4	3	4	3.9
Camping	6	5	5	5	5.1
Hiking	8	5	5	5	5.9
Boating	6	5	4	4	5.2
Fishing	6	5	5	5	5.4
Local Winter	4	4	3	4	3.9
X-Country Skiing	8	5	5	5	5.8
Downhill Skiing	5	5	4	5	4.7
Snowmobile	5	5	4	4	4.6

The Park

Park History

The land on which Green Lakes State Park sits today has been many things to many people. Native Americans have camped in the region and survived off the fruits of the land. Following the Revolutionary War, the land was divided up into “military tracts” in 1781 and granted to Revolutionary War soldiers as payment for their services. In the early 1800’s, the land surrounding Round and Green Lakes was settled and throughout the century small passenger steamboats would bring people from Syracuse and Fayetteville to picnic, swim, boat and dance at what was once a

private resort community. In the late 1800's, the area became well known to naturalists as one of the most outstanding examples of meromictic lakes in the United States, attracting recreationalists and scientists from around the country and beyond. Today Green Lakes is one of the most studied meromictic lakes in the world (Thompson et.al. 1990).

State ownership of the land began in 1928 with the purchase of 500 acres surrounding Round and Green Lakes. The development of facilities began soon after with the construction of an administration building adjacent to Green Lake, park roads, restrooms and picnic grounds. In the 1930's the Civilian Conservation Corps (CCC) provided additional development within the park with the construction of the boat house, cabin colony, restrooms and the golf course. The CCC workers were housed in a camp which was located near what is now the golf course maintenance area. After the CCC workers left the park, the camp remained vacant until 1942 when it was used during World War II as a prisoner of war camp. Only remnants of these structures can be seen today near the entrance of the golf maintenance facility.

In an effort to protect the lakes and their watershed while providing additional recreation, the State purchased an additional 188 acres of land in 1975 on the southern boundary of the park. Since 1995 an additional 550 acres has been purchased. Former farm roads have been used for trail access on this additional acreage providing access to scenic vistas of the surrounding landscape.

Park Boundaries

The park occupies approximately 1,774 acres within the Town of Manlius. Adjacent to the park on the north and east sides are State Routes 290 and 257 along with the Old Erie Canal State Park, which is managed by OPRHP. The park is bordered by Pierson Road to the east. Along the south border, the park abuts several residential subdivisions located off of State Route 5. An additional State Parks parcel that is separate from Green Lakes State Park proper is Minoa Lakes, a small parcel on the northern side of the park bordered by County Route 55. See Figure 2 – Park Boundary and Topography Map.

Adjacent Land Uses

The land uses immediately adjacent to the park consist of residential, agricultural and vacant land (as defined by Onondaga County zoning maps). The park is adjacent to residential communities along the south and south/east boundaries. The western boundary abuts a mix of residential and agricultural land. To the north is a mix of vacant land and residential land. A few parcels of land lay between the park and Route 290. Several small residential parcels have frontage along Route 290. Two other tracks of land are zoned Community Services and Public Services and are bordered on three sides by the park. See Figure 3 - Adjacent Land Use Map.

Legal Constraints, Designations and Other Programs

Deed Restrictions

The current deed restrictions for the park consist of utility corridor right of ways. Agreements are in place with the Onondaga County Water Authority (OCWA), National Grid and Verizon allowing access along right of ways. The OCWA has a right of way for a 30" main distribution line that bisects the park property from north to south. From this line, OCWA provides water to the park from two locations along this right of way for both potable water and golf course irrigation.

National Grid and Verizon share a right of way through the park property under a utility permit with no expiration date. National Grid's service line is a high voltage transmission line that passes through the park for regional distribution. No other restrictions or agreements exist for the park.

Designations

The United States Department of Interior designated Round Lake as a registered National Natural Landmark in 1975. The lake, on both a national and global scale, is an exemplary example of a glacial meromictic lake in a natural environment.

Partnerships

Many partnerships exist with local volunteer and educational groups providing both educational opportunities for students, assistance with park maintenance and enhancing the patron experience. Several K-12 schools, colleges and universities such as SUNY College of Environmental Science and Forestry, Syracuse University and The Manlius Pebble Hill School, study the meromictic lakes and forest habitats, collecting data which can help protect and preserve these valuable resources. These partnerships foster a greater understanding of the ecosystem and create stewards of the land for future generations.

Other partnerships focusing on preserving biodiversity and the patron experience include AmeriCorps and the Izaak Walton League of America, which assist with invasive species removal projects, and the Environmental Field Days. The United States Fish and Wildlife Service, Audubon New York and the Sisters of St. Francis at Alverna Heights have partnerships with the park for grassland management and bird habitat restoration projects. Assistance on trail maintenance and construction projects is provided by the Central New York Dedicated Individuals for Responsible Trail-Use and Sprockids.

All of these partnerships are a significant contributing factor to the operation of the park and the protection of resources and their continuing support is vital. The park staff greatly appreciates the efforts of these students and volunteers and looks forward to continued support from these and others in the future.

Chapter 3 – Environmental Setting

Description of the Park

The park is located within scenic rolling hills and farmland five miles east of Syracuse bordered by many residential communities. The park has diverse natural and cultural qualities, capable of providing a wide range of recreational activities. The park regularly draws many recreationalists wishing for exercise or for a relaxing, contemplative experience within such a natural and scenic environment.

The park office, located south of Route 290 serves as the first point of contact for many first time visitors. The park manager and support staff offices are located in this building. Interpretation and educational programming are based both out of this office and a small nature center located within the Pine Woods Campground. All regular maintenance activities are coordinated from within the park. Policing and enforcement is provided by the Park Police and also coordinated from within the park.

The recreational activities currently permitted in the park take advantage of its spectacular lakes and gentle topography. The most common recreational pursuits include: swimming, hiking, mountain biking, running, golf, picnicking, snowshoeing and cross-country skiing. Other activities include fishing, wildlife viewing, row boating, playground usage, disk golf and geo-caching.

The Rolling Hills and Pine Woods Campgrounds provide 137 campsites and the opportunity to camp in a very scenic location within close proximity to urban and suburban areas. For those wishing for a cabin experience, CCC cabins constructed in 1932 are provided for patron use atop the steep slope leading to Round Lake and Green Lake.

On a peak day, the park can have as many as 8,000 people in it with over 1,500 parking spaces filled. During the summer months, the main attractions to the park are the beach, picnic areas and the lakeside trails.

Physical Resources

Geology

The bedrock geology within the park consists of three formations: the Port Ewen, Syracuse and Silurian Vernon formations. The vast majority of the park comprises the Port Ewen Formation, a type of limestone, formed between 415 and 380 million years ago. The area to the north and east of the lakes comprises the Syracuse and the Silurian Vernon Formations. The Syracuse Formation is a mix of shale and dolomite (limestone) forming approximately 440 to 360 million years ago from the deposition within a shallow ocean environment. The Silurian Vernon consists primarily of “redbeds” (reddish colored sedimentary deposits) with intercalated thin layers of fine grained green and black shales and dolomite formed approximately 420 million years ago. See Figure 4 – Bedrock Geology.

Topography

The topography of the park was created by glacial forces between 10,000 and 14,000 years ago. The melt water flowing from a retreating glacier created rivers with massive amounts of water and debris flowing from the surface of the glacier high above. The torrents of rushing water carved plunge pools deep into the soil and bedrock creating the lakes and the surrounding steep hillsides. When the glacier retreated and the rivers ceased to flow, the resulting changes to the topography can be seen today. The park is a maximum of 787 feet and minimum of 414 feet above sea level. The topography within portions of the park outside of the lake area were also created by glacial forces and can be

generally classified into two categories; rolling hills and moderately steep slopes. The rolling hill topography is located throughout much of the park including the upper grasslands, the golf course, campgrounds and day use areas. See Figure 5 - Slope Map.

Soils

The soils within the park are derived from till, a variable mix of sand, fine textured loam, gravel and boulders deposited by the glaciers over 10,000 years ago. The till is typically a poorly sorted sand-rich deposition and its permeability varies with compaction. The thickness is variable from three feet to one hundred and fifty feet. Till can be considered easily erodible and generally well drained. The areas around the lakes are particularly susceptible to erosion due to the delicate soils and steep slopes (NYSM 2008). The steep side hills above Green Lake experience erosion through (1) sheet flow exacerbated by the delicate and highly erodible soils in the area, (2) a decline in understory growth and (3) user impacts through the creation of social trails. Erosion should be considered when constructing features within the park including but not limited to trails, new structures, roadways and parking. See Figure 6 –Soil Drainage Map.

Water

The most significant water features of the park are its two glacially formed lakes - Green Lake and Round Lake. Green Lake and Round Lake are two of eleven meromictic lakes in the United States. Green Lake is 192' deep and Round Lake is 180' deep. These lakes are remnant plunge basins formed as glaciers receded from the area, and they are surrounded by the high walls of the surrounding gorge. The gorge walls protect the lakes from wind action. This, along with the depth of the lakes and chemical composition of the water prevent the waters in the lakes from undergoing vertical mixing as is common with other lakes and ponds. The lakes are often considered the main attraction to the park and contain unique algal and cyanobacterial populations and processes that produce the lakes' brilliant blue and green colors. The cyanobacteria grow in marl beds or freshwater reefs that can be seen from the shore at places like Deadman's Point.

The lakes are fed both by spring water and by surface run off during rain events. The watershed for the lakes consists of 1,236 acres and is primarily all under the ownership of OPRHP. See Figure 7 – Wetlands Map and Figure 8 – Watershed Map.

The meromictic lakes at Green Lakes State Park represent the largest (103 acres combined size) and best quality examples of this community type in New York State. Meromictic lakes are globally rare features and the two lakes in the park are recognized as some of the best examples in North America (Smith and Lundgren 2010). Round Lake, the smaller, more protected lake, has been designated a National Natural Landmark since 1975 by the United States Department of the Interior.

Wetlands

Within the park there are two primary wetland areas. The United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) identifies both of these areas as mapped wetlands. The first wetland is regulated by DEC. It is characterized as a rich hemlock-hardwood peat swamp. Located in the southern portion of the park upstream from Round Lake, this wetland is typical of its type with no known rare plant or animal species. The southern half of the Brookside Trail encroaches into the edge of this wetland which is causing erosion and widening of the trail.

The second wetland area within the park is located adjacent to the north beach parking lot at the outlet of Green Lake. Here, four individual wetlands are delineated, totaling 2.30 acres.

The wetlands are said to be Corps-jurisdictional areas, since they are associated with a tributary

system that connects to navigable waters. The parking lot and roadway fragment this wetland reducing the quality of its habitat. The wetland is also dominated in many parts by the invasive plant species common reed, or *Phragmites*, See Figure 7 – Wetlands Map.

Air

The air quality in Onondaga County is considered to be in attainment, meeting all air quality requirements. All of the measured pollutant levels were significantly lower than those required by the National Ambient Air Quality Standard, and fall under the Pollutant Standards Index category of having "good" health effects. (DEC 2009)

Natural Resources

The New York Natural Heritage Program (NHP) surveyed Green Lakes State Park for rare species and ecological communities, and a report of these findings was completed in 2000 (Evans 2000). In 2008, as part of the development of this master plan, NHP staff conducted additional surveys of the park to document possible new flora and fauna, specifically targeting areas where some species of rare plants were thought to have historically occurred. This information is contained in a report dated April 2010 (Smith/Lundgren. 2010). From these earlier reports, field observations and surveys, NHP and park staffs have identified key issues for consideration in the master planning process. In addition, general assessments of the park’s natural resources and management recommendations were developed through both the core team master planning process and a review of other documents prepared by non-agency partners (e.g., Kuehn 2009).

Ecological Community Overview

Ten distinctive community types were mapped within the 1768-acre State Park representing three classification systems and six subsystems. About three-quarters of the park is comprised of natural cover including lakes, forests, fields and successional shrublands. The remainder is comprised of recreational facilities classified as developed (campgrounds, picnic areas, beach, buildings, and the surrounding lawns) or mowed lawn with trees (which includes the golf course). Forests and fields comprise the bulk of the land cover, and these range in quality from good condition, dominated by native species, to poorer-quality examples with a higher prevalence of non-native plant species, and several woodlots in conifer plantation. The large areas of successional old field on the western half of the park are on more recently reverted farmlands. The center of the park was not farmed and supports the higher quality forest and lake communities (Smith/Lundgren. 2010).

Table 3 - Ecological Communities observed within Green Lakes State Park.

System	Subsystem	Community Type*	Acres
LACUSTRINE	Natural Lakes and Ponds	<i>Meromictic lake</i>	103
PALUSTRINE	Forested Peatlands	Rich hemlock-hardwood peat swamp	23
TERRESTRIAL	Barrens and Woodlands	Limestone woodland	12
	Forested Uplands	<i>Maple-basswood rich mesic forest</i>	470**
		Successional northern hardwoods	107

	Open Uplands	Successional old field	573
		Successional shrubland	106
	Terrestrial Cultural	Conifer plantation	91
		Developed	144
		Mowed lawn with trees	139
Total	(total may be different than park acreage due to rounding errors)		1768

* Significant natural communities are shown in bold print.

** 312 acres is mapped as statewide significant natural community; the remainder is in lower quality maple-basswood rich mesic forest of local significance.

Significant Natural Communities

Two significant natural communities were documented in the park – the meromictic lakes (Green and Round Lakes) and the maple-basswood rich mesic forest (Figure 10 – Significant Ecological Communities Map). Green and Round Lakes are often considered the park’s main attraction and provide great opportunity for research, education and recreation (e.g., fishing, hiking and swimming). The lakes are two of only eleven glacial plunge basin meromictic lakes in the United States. Round Lake is registered as a National Natural Landmark with the U.S. National Park Service. These meromictic lakes are oligotrophic and remain thermally and chemically stratified (no mixing) throughout the year. Some of the lakes’ unique features include calcium carbonate, marl “reefs” (microbialites) formed by cyanobacterial and algal populations; the presence of purple sulfur bacterium; and the water’s brilliant blue green appearance.

The forest community surrounding the lakes provides a buffer from adjacent development and recreational activities. The maple-basswood rich mesic forest is comprised of about 140 acres of old growth forest. Maple, hemlock, oak, basswood and tulip trees comprise the old-growth forest, and many approach 200 years old. The old-growth forest occurs as a narrow strip along the southwest corner of Green Lake and extends south and west of Round Lake to the adjacent Brookside development. The old-growth forest as defined in the State Nature and Historical Preserve Trust Act is protected (ECL Article 45, Section 0101-0117) as an “exceptional natural communities” on public lands. The OPRHP Policy on the Management of Trees (OPRHP 2010) also provides support for consideration of the values of the Old Growth forest. It recommends a thoughtful approach to cutting and clearing of trees. Much of the existing Old Growth forest in the state is hemlock-northern hardwood forest. The maple-basswood Old Growth forest that occurs at Green Lakes is very uncommon statewide. Plant diversity is high in the maple-basswood rich mesic forest due to the assortment of habitats, rich soils, and the lack of clearing over many years. Over browsing by white-tailed deer and heavy trail use have been identified as possible threats to the old-growth habitat in the park (Smith/Lundgren. 2010).

Flora

Green Lakes has a rich and diverse plant community, despite no current record of rare or endangered plants in the park. Many different species of old-growth hardwoods, shrubs and herbaceous plants occur in the maple-basswood rich mesic forest. Native plants of notable interest to park patrons include trilliums, jack-in-the-pulpit, maidenhair fern and the old-growth tulip trees. Several species of invasive plants currently threaten terrestrial and aquatic habitats, including pale swallow-wort, phragmites, purple loosestrife, garlic mustard and Japanese barberry.

Rare plants

The 2010 NHP report does not indicate the presence of any rare plant occurrences. However, four species have occurred historically, including the state endangered puttyroot (*Aplectrum hymale*) and nodding pogonia (*Triphora trianthophora*). NHP staff continue to survey for these rare plants, and there is potential for their recovery in the park. (Smith/Lundgren. 2010)

Fauna

The park supports a number of common mammal species such as fox, coyote, woodchuck, squirrel, skunk and raccoon. Signs of an over abundant white-tail deer population are evident throughout the park, including reduced understory in the hardwood forests and visible over-browsing on native maples, white cedars and staghorn sumac. In addition, deer tick abundance has increased in recent years with 50-60% of adult deer ticks testing positive for lyme bacterium. The park also supports a diversity of bird, fish, and reptile and amphibian species. One challenge for the park is balancing wildlife habitat protection with day and camping use by park patrons.

Four bat species were detected during a bat survey conducted in 2008. Detected species include big brown bat, little brown myotis, hoary bat and eastern red bat. Their presence indicates that the park provides some habitat to support bat diversity, which may become increasingly important with the recent bat declines in the northeast (Smith/Lundgren 2010).

Birds

Green Lakes State Park provides a diversity of habitats for birds and 161 different bird species have been documented within the park. Eleven state-listed birds have been observed in the park, including the bald eagle, short-eared owl, pied-billed grebe, northern harrier, osprey, sharp-shinned hawk, Cooper's hawk, northern goshawk, horned lark, vesper sparrow and grasshopper sparrow. The western half of Green lakes State Park contains several successional old fields, which cover a total of 400 acres and provide habitat for state-listed grassland bird species including the northern harrier, horned lark, vesper sparrow, and grasshopper sparrow. In 2009, grasshopper sparrows (state-listed as special concern) were observed and suggests that they are likely breeding in the park. The forested areas of the park also provide habitat for forest interior birds and the lakes provide foraging sites during migration and during the winter (Smith/Lundgren 2010).

Fish

Fish records for Green and Round Lakes are limited, and the 2010 NHP report does not provide any inventory of which species occur in the lake. Green Lakes is stocked annually with 5,000 yearling rainbow trout from the NYSDEC and Onondaga County's Carpenters Brook Fish Hatchery. In 2008-09, OPRHP observed several warm water species of fish in both lakes, including rock bass, pumpkinseed sunfish, banded killifish, and largemouth and smallmouth bass. Fishing is permitted in Green Lake only and is subject to NYS general angling regulations.

Rare animals

Preliminary database searches, record reviews and consultation with local biologists revealed no known records of rare animals in Green Lakes State Park. (Smith/Lundgren 2010). Although the Natural Heritage Program database does not contain any known records of rare animal species within the park's boundary, there may still be rare animals located within the park.

Cultural Resources

Green Lakes State Park has a very diverse and significant cultural history. From its use by Native Americans to its current function as a high use state park, the area has a long history of enticing people to it.

In 1781, much of central New York, including the land that is now Green Lakes State Park, was part of the Military Tract: land set aside as payment to servicemen for their participation in the Revolutionary War. The New York State government authorized the use of the Military Tract, which included two million acres, as a means to encourage men to enlist in the war. Although the United States government had already guaranteed each soldier at least 100 acres at the end of the war, by 1781 New York had enlisted only about half of its quota. Thus, the government authorized an additional 500 acres per soldier to entice additional recruits. In 1789 the tracts were surveyed and the first European American settlers began to arrive soon after. Numerous farms were developed throughout the area in the late eighteenth and early nineteenth centuries. Remnants of this historic tract delineation are visible today in the hedgerows and stone walls within the western portion of the Green Lakes State Park.

By 1879, Green Lakes, buffered by surrounding farms, was already a tourist attraction, and two private recreational areas developed around the lakes. These areas included accommodations such as recreation rooms, a dance hall, a boating dock, stables, a merry-go-round, band stand, and picnic areas. Steamboats regularly brought visitors to the lakes via the Erie Canal to enjoy the various recreational opportunities. No structures survive to illustrate this early recreational use of the park; however, archaeological evidence may provide links to this past cultural history.

In 1928, as part of the development of the comprehensive New York state park system, the Central New York State Parks Commission purchased 500 acres of land around the lakes for development as a state park. The commission understood the geological value of the lakes and the need to protect and preserve them, while also desiring to keep them available for public recreational use. A master plan was developed for the park by Laurie D. Cox, an important landscape architect and park planner. Cox designed many of the park's earliest structures and landscape elements. Although the original park plan was largely developed in the late 1920s, the Depression put an end to state funding for park development in New York. Therefore, much of the construction of the park was paid for through federal relief programs, such as the Temporary Emergency Relief Act (TERA), a funding source set in place from July 1932 until July 1933. In May of 1933 the Civilian Conservation Corps (CCC), a national program developed under Franklin D. Roosevelt to provide employment opportunities for young men, was established at the park. Many of the existing park buildings, including the old administration building, stone picnic shelter, maintenance area, staff housing, and maintenance area buildings were constructed during the initial development of the park. Other features, such as site grading, construction of roads, trails, utilities, picnic areas, cottages, and the golf course were constructed by the CCC workers under the supervision of Cox and the park's first superintendent Arvin Almquist. The golf course was designed and laid out by renowned course designer Robert Trent Jones. The Green Lakes Golf Course is the only State Park golf course designed by Jones in the Central Park region.

The CCC workers were also responsible for constructing their own camps, which included barracks, dining halls, and other structures where the young men lived, studied, and participated in sports and other recreational activities. The Green Lakes CCC camp was active between 1933 and 1941. During World War II, the surviving structures were reopened and used to house German prisoners captured during the war. Sometime after the war the remaining camp structures were removed. Several concrete foundations can be seen today where these structures once stood. See Figure 11 -Cultural

Resource Map for more information. See Table 3 – Building Inventory for the construction dates of all buildings within the park. See Appendix D for more information on historic structures.

Archeological Resources

A Phase/Stage 1A cultural resource study has been conducted at the park to determine archeological sensitivity. It indicates that Native American habitation has been documented within this portion of the Central region. However, detailed park specific information was inconclusive. Nevertheless, in addition to Native Americans, the region has a long history of previous use including post-Revolutionary War settlers and late nineteenth century tourists. Ongoing research is required to determine the detailed level of archeological sensitivity within various areas of the park. To date, no studies or surveys have provided evidence of Native American habitation within the park.

Scenic Resources

As mentioned earlier, Green Lakes State Park is the Central NY Park Region’s premier park. The establishment of the park was focused on the unique lakes within the park. The topography of the park provides opportunities to view these lakes in a number of ways. The open landscape of the west end of the park provides yet another aspect to the scenic quality of the park. The maples of the park provide a variety of fall colors for viewing. Nestled up against growing residential communities, Green Lakes State Park provides opportunities to view natural communities up close within the park from trails and recreation areas and from a distance outside the park from surrounding roads and communities.

Vistas

Green Lakes State Park offers many scenic vistas atop the grassland hillsides. Patrons can view as far away as five miles towards the surrounding landscape. East Syracuse is visible in the distance. Various homes and neighborhoods can be seen scattered in the foreground.

Many scenic vistas are also found internally to the park. Views from the golf course and atop the slopes above Green Lake and Round Lake provide many scenic vista points. Views from the trails around the lakes provide continuous scenic vistas of the lake, creating silhouettes of the dark trees upon the light blue/green lakes. See Figure 12 – Scenic Resources Map.

Recreational Resources

The recreational resources and activities at the park are based primarily on the spectacular scenery of the lakes and surrounding features. Visitors come to the park to experience its natural beauty, for peace and tranquility or to maintain a healthy and active lifestyle.

Green Lakes State Park has three major activity zones—golf, camping and day use. These uses are well established and take place around the primary natural features of Green and Round Lakes. The golf area includes a clubhouse with a restaurant and a practice putting green. There are 18 miles of trails throughout the park offering year-round uses including; hiking, biking, cross-country skiing and snowshoeing. The most popular trails encircle the lakes. See Figure 13 - Main Use Area.

The following recreational activities are allowed at Green Lakes State Park.

Swimming

One swimming beach is located within the park on Green Lake. It opens the Saturday of Memorial Day weekend and closes Labor Day. The beach serves up to 1,750 people on a summer day and is monitored by up to 21 life guards in the operating season.

Boating

A boat launching dock is located on Green Lake adjacent to the boat house. Row boats are provided for patron use for a fee. Patrons are not allowed to bring personal boats into the lake to preserve the integrity of the lake habitat.

Trails

There are 18 miles of trails in the park from wide trails surrounding both Green and Round Lakes, to trails winding through the forested areas and mowed trails through old agricultural fields in the western half of the park. Trail uses permitted in the park include hiking, running, mountain biking, cross-country skiing and snowshoeing.

Hiking/Running

Hiking and running are permitted on all trails in the park. Most hikes and runs begin at a beach parking lot and are focused primarily around the lakes. Trailheads and access points from surrounding neighborhoods are also used to gain access to the trails in the park.

Mountain Biking

Mountain biking is permitted on designated trails only. Bicycle use is not allowed on the Lake trails or on certain hiking trails throughout the park. See Appendix B - Trails Plan, Figure 1 – Existing Trail System.

Cross Country Skiing

Cross-country skiing is permitted on most trails in the park including a winter trail crossing the golf course. See Appendix B - Trails Plan, Figure 2 – Winter Ski Trails in the Trails Plan.

Snowshoeing

Snowshoeing is permitted on all trails in the park. It is also allowed on the golf course and on unplowed roadways if conditions allow.

Golfing

A scenic 18-hole golf course designed by Robert Trent Jones is located in the south-eastern section of the park. The golf area also includes a pro-shop, conference room, restrooms, shower rooms, restaurant and bar, golf cart rental as well as a warm up putting green and golf course maintenance area. There is a separate entrance to the golf course from Route 5 (this is closed in the winter). From the golf course there are also many panoramic vistas of both the surrounding landscape and the lakes.

Disk Golf

A 9-hole disk golf course is located near the reserve picnic shelter in an area that consists of mowed successional field and cedar trees.

Fishing

Fishing is allowed in Green Lake outside of the designated beach area. Through an annual stocking program, rainbow trout are added to the lake. Other fish, including black bass, native pumpkinseed sunfish and banded killifish are found in Green Lake. There have been occasional reports of other species in both lakes including northern pike and brown bullhead. Fishing is not allowed in Round Lake.

Picnic areas

Picnic areas are provided in four locations. The beach picnic area located adjacent to beach and playground has approximately 50 picnic sites. The Hill Side picnic area, located behind the bathhouse under the shade of trees has an additional 30 picnic sites. The Tulip Hill picnic area is located behind the Hill Side picnic area at the top of the hill. It has an open shelter, comfort station, picnic tables, open play fields and a parking area. The Lakeview picnic area, adjacent to the Tulip Hill picnic area has a tent structure, a comfort station, picnic tables and a parking lot. Grills for cooking food are provided at all picnic areas. See Figure 14 - Recreational Resources Map and Figure 13 – Main Use Area.

Campgrounds

There are two campground locations at the park, the Rolling Hills campground and the Pine Woods campground. Both of these campgrounds are located to the west of the lakes, Pine Woods has 64 campsites and Rolling Hills has 73 campsites. There are 42 campsites that include electric service within the park. The campground is open from mid-May to Columbus Day weekend.

Cabins

A cabin colony, constructed by the Civilian Conservation Corps (CCC) in the 1930's, includes seven cabins located to the north of Round Lake. Each cabin has electric, water and sewer and is open from mid May to Columbus Day weekend.

Interpretive/Educational Programs

Interpretive and educational programming is coordinated from the park office and a small nature center located in the Pine Woods campground. Educational programs and guided nature hikes are developed and led by seasonal naturalists and other partners from the local conservation community (e.g., Page Wildlife Rehabilitation Center, Rosamond Gifford Zoo, SUNY-ESF). Program topics have included native flora and fauna, invasive species, old-growth forest habitat, and lake ecology and geology. Educational kiosks are located throughout the park, especially around the lakes and within the old-growth forest. Since Round Lake has been designated as a National Natural Historic Landmark, it is often a focus for interpretive programming. In addition, a program entitled “*Project Enrich*” was developed at Green Lakes SP and is designed to train environmental educators and teachers to lead self-guided field trips to the park. The *Project Enrich* environmental education packets include a teacher’s manual, self-guiding brochures, and ecology journals. While the *Project Enrich* program still remains, its self-guided trails and materials need updating. Also, more teachers and educators need to be formally trained to sustain the program.

The park also hosts an event called *Environmental Field Days (EFD)* which is held annually in October. *EFD* consist of fun-filled environmental presentations and activities designed to fit the science curriculum for 5th and 6th grade classes from the greater Syracuse area. In 2009, nearly 900 5th and 6th graders from 13 different schools in the greater Syracuse area participated, but the event has hosted as many as 1400 students over three days of programming. In addition to OPRHP staff, many presenters from several different organizations volunteer their time and knowledge for *EFD*, including Page Wildlife Rehabilitation Center, Rosamond Gifford Zoo, Rogers Environmental Education Center, Barefoot Bob Astronomy, Izaak Walton League, Cornell Cooperative Extension and NYSDEC.

Visitation

The Park received approximately 850,000 visitors in the 2007-08 fiscal year coming to enjoy the numerous recreational opportunities and scenic resources the park has to offer. While the majority of patrons use the park May through August, visitors use the park year round. The majority of visitors reside within Onondaga and Madison Counties. However, visitors from around the world are attracted to the park.

Emergency Plans and Services

Park Safety and Security

To ensure the safety and security of park employees and patrons, a detailed schedule is designed to maintain adequate staffing to support operational needs with available permanent and seasonal staff. NYS Park Police are scheduled daily to assist employees and patrons with traffic control, enforcing rules and regulations and to respond to emergency situations. During the summer season Public Safety Rangers work under the Park Police to help with these duties. Any accidents, vandalism, break-ins and open doors after hours are reported to the park manager.

The park is staffed on a daily basis and the entrance booths are staffed during the summer season. All accidents, crimes and emergency situations are reported to the proper personnel. The park has an All Hazards Emergency Plan that is used during emergency situations.

Fire

In case of fire in the park, the 911 system will be called activating the appropriate fire department. There are several fire departments around Green Lakes that would respond to the emergency. The fire departments in the area include Fayetteville, Minoa, Kirkville and Dewitt. The NYS Park Police will also be notified and appropriate incident reports will be completed.

Police

Green Lakes State Park is under the jurisdiction of the New York State Park Police – Central Region Command. Green Lakes has a zone station located in the park that Police patrols originate from. The park is also served by the local municipality police departments of Manlius, the Onondaga County Sheriff's Department and the New York State Police.

Ambulance/rescue

Green Lakes State Park is served by the Fayetteville, Kirkville and Minoa Fire Departments during emergencies. Each department has ambulance and rescue service that responds to the park in emergency situations. The NYS Park Police are also notified and respond. The park's All Hazard Emergency Plan is also on site and referenced as needed.

Emergency Response

Numerous staff members have been trained in basic first aid and CPR and would respond to emergencies, the NYS Park Police would also be notified and would respond if able or have one of the local Police Departments respond.

Evacuation Plan

In the event of an evacuation of the park, the Incident Command System, a standardized, on-scene, all-hazard incident management process, is utilized with assignments originating from the park

manager to park staff. The park's All Hazard Emergency Plan is also consulted. The NYS Park Police, local police or fire departments are notified as needed.

Infrastructure

Roads

Green Lakes State Park is bordered on the north by State Rte. 290 and on the south by State Route 5. Route 257 borders the western edge of the park and George Taylor and Pierson Road form the eastern border of the park. The main park road 3 miles long, asphalt and generally runs in a north/south direction between routes 5 and 290. The section of this road between Route 290 and Lakeview Picnic Area is in fair condition. This road between Route 5 and Lakeview is in poor condition. The road leading to the campgrounds and cabin colony is in fair condition. The campground loop roads are in poor condition. Several paved and unpaved service drives are in good, fair, and poor condition.

Walkways and Paths

Walkways and paths are located throughout the park and provide connectivity between high use areas. Some walkways are in relatively good condition while others are in need of repair.

There are few formal walkways connecting developed areas around Green Lake to the picnic areas at the top of the hills. As a result, patrons have created several informal paths to the lake from these areas at the top of the hill. The connection from the east beach parking lot and the beach does not support the volume of pedestrian traffic throughout the summer and is in need of expansion.

Buildings and Structures

There are 49 structures located throughout the park, ranging from fully operational facilities to small unused structures which have fallen into disrepair. The newest structure, the beach area bathhouse, was completed in 2009 and serves as the main structure for all beach operations. The Old Administration Building, adjacent to the bathhouse is one of the first structures built in the park and is undergoing a renovation. Many other structures throughout the park are in need of updating or rehabilitation. Below is a list of all existing structures within the park. See Figure 15 – Building Inventory Map. Refer to Appendix D and Appendix I for more detailed information on the buildings and structures in the park.

Electric

The primary electric service is supplied into the park from two different locations, and park staff is currently responsible for maintenance of these high voltage lines. The south feed is an overhead, three phase, 4,160-volt primary service that feeds the golf course complex. The overhead service goes underground between the golf maintenance building and the clubhouse. A new pad mount transformer, installed in 2009, is located near the golf course parking lot and provides secondary power to the clubhouse and pro shop. This southern system varies in age and condition, from fair to good.

The north end feed is an overhead three-phase 13,200-volt primary service that enters the park behind the park maintenance complex and feeds the bathhouse, park office, campgrounds and park maintenance complex; it was installed in 1995. The primary overhead service goes underground in the maintenance area, and then continues underground throughout the park. Pad mounted transformers are located at various locations in the park to provide secondary power to the buildings. Campground electrical hookups no longer meet current demand.

Water

Potable water is provided to the park from the Onondaga County Water Authority on both the north and south sides of the park. New potable water mains were installed throughout the park in 2008-2009. Backflow prevention devices were installed on each service into the park, and require annual testing. However, the park office has a separate feed from OCWA, without backflow prevention, and was not included in this work. Existing secondary water service connections, which were not upgraded in 2008-09, range in condition from fair to good.

A new golf course irrigation system was installed in 2006, ending the use of the Round Lake Pump House system which withdrew water from the lake. The golf system now utilizes water from Onondaga County Water Authority (OCWA.)

Telephone

Telephone service is provided throughout the park. This system is comprised of both local utility-owned and park-owned lines. There are public pay phones located at the park. There are separate park phones for park staff use located throughout the park. Cell phone service is generally available throughout the park.

Petroleum Storage

The park maintenance area contains one underground 4,000 gallon gasoline tank and one underground 2,000 gallon diesel tank. The golf course maintenance area contains one 1,000 gallon above ground gasoline tank and one 1,000 gallon above ground diesel tank. The golf clubhouse basement contains four 275 gallon racked heating oil tanks, and is the only remaining park building still using an oil-fired system. The golf course also has one 300 gallon gasoline dike tank used to fuel golf carts.

Petroleum bulk storage is regulated by DEC. Green Lakes State Park is a permitted facility which currently meets all regulations.

Stormwater Drainage

The stormwater drainage system includes culverts, roadway ditches and drainage swales. These systems were constructed throughout the park's history and are in various states, generally in need of repair or replacement. Several culverts are undersized for their current watershed.

Stormwater from the hillsides surrounding the lakes affects the features below. When the drainage systems fail, stormwater flows across the areas below including the lake trails causing erosion into the lake.

Sanitary Sewers

All sanitary waste is treated through subsurface treatment systems at several areas throughout the park. Many of these sanitary sewer systems were originally constructed in the 1950's and 1960's and rebuilt throughout the 1980's. Other sanitary sewer systems were constructed in the 1980's creating a situation where many components will need replacement.

Access Points and Parking

Visitors have two potential vehicular access points onto park property. The main entrance is located off of Route 290. The second entrance is located off of Route 5 and considered the main entrance for the golf course. The golf course entrance is closed during the winter operating season.

Large, asphalt parking lots exist on both the east and west sides of the beach area, the Reserve Picnic area, and at the golf course on the south side of the park. The West Beach, Reserve Shelter, Tulip Hill, Lakeview, and Club House parking lots are in poor condition. The East Beach parking lot is in fair condition. The golf course parking lot is undersized and needs expansion. All paved areas are in need of routine maintenance, including shoulder scraping, culvert inspection and cleaning, striping, patching, crack sealing, and some may require complete reconstruction due to many years of deferred maintenance.

Access to the western portion of the park is limited due to parking restraints. The Rolling Hills Campground location creates a barrier to convenient day use access to almost half of the park.

Table 4 - Parking Capacity

Parking Lot	Quantity
Park Office	20
East Beach	378
West Beach 1	103
West Beach 2	116
West Beach 3	285
Golf Course	159
Tulip Hill	196
Lakeview	136
Reserve Picnic Area	105
Route 290 Trailhead	6
Parking Capacity Total	<u>1503</u>

Operations

Management

Management of the park is based from the park office where most administrative actions are conducted. The Park Police are based out of the Park Police headquarters adjacent to the beach area.

Maintenance

Maintenance operations are based from the maintenance facility located adjacent to the beach area. The area consists of several structures used for park maintenance, vehicle maintenance, construction practices and storage. Maintenance throughout the park is performed by a mix of full time and seasonal personnel.

Golf course maintenance is coordinated from the Golf Maintenance Area. It includes storage areas, maintenance shop. The storage and disposal of trees, stumps, clean fill material such as dirt and rock takes place in this area.

Hours of Operation

The park is open daily year round during daylight hours. The beach and boathouse are generally open daily during the summer between the hours of 11:00 AM and 7:00 PM. The cabin colony and campgrounds are open for camping from Mid May until Columbus Day. The golf course is open from mid April until November.

Fees

Entrance fees are collected from vehicles entering the park from Memorial Day weekend through Labor Day. Special use fees are also collected for those desiring to use rental pavilions, golf, row boats or camp in the park. The general policies guiding the implementation and collection of fees are established by OPRHP on a statewide basis.

Waste

Solid waste is collected from all public use areas by park staff and transported to a municipal landfill for disposal. Trees, branches, leaves and clean fill material such as dirt, rock and construction debris are transported to an open area adjacent to the Golf Maintenance Stockpile Area for on site disposal or composting. This location also serves as an area to cut and split firewood for use within the campgrounds by park patrons.

The campground dump station (for sewage disposal) is located adjacent to the Cabin Colony and is available for use by campers staying in the campground. Its current location and size are limiting factors and other locations should be considered.

Recycling

Recycling is promoted throughout the park by educational flyers and posters. Recycling bins for cans and bottles are provided throughout the park for public use. The park office recycles paper products, aluminum, plastic and glass. The park maintenance shop recycles their scrap metal and used oils.

Chapter 4 – Vision and Goals

Agency 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.

Park Vision

The natural, cultural, and physical resources of Green Lakes State Park will continue to be available and protected so that it is a place for visitors to enjoy, appreciate and learn about those resources as they participate in the recreational opportunities that the park offers.

Overall Park Goal

Achieve a balance between recreational, interpretive and educational opportunities and the preservation and protection of the natural, cultural and physical resources of Green Lakes State Park.

Recreation Goals

Overall Goal

To provide recreational opportunities compatible with the character of the park and its resources and complimentary to the opportunities provided within the surrounding area.

Goals

- Provide health and fitness opportunities for patrons to be physically active in an outdoor setting.
- Monitor and address user impacts on the natural, cultural, physical and recreational resources.
- Explore and discuss new recreational trends and activities to determine if they are compatible with the park vision and resources for potential future implementation/inclusion.
- Continue to provide year-round facilities and programs for the public.
- Provide a year-round, sustainable trail system that offers recreational and educational opportunities for a diversity of trail users that is compatible with the resources of the park.
- Implement programs and facilities that are consistent with regional and local needs and demands as well as identified within the Statewide Comprehensive Outdoor Recreation Plan, and other federal, state, regional and local plans and programs.

Natural Resource Goals

Overall Goal

To protect, preserve, enjoy and interpret the significant natural resources throughout Green Lakes State Park.

Goals

- Protect, manage and maintain areas important as habitat for rare, threatened, endangered or protected plant and animal species and community types.

- Identify areas with environmental sensitivity, such as wetlands, rare plants and ecological communities and direct intensive development away from such areas.
- Maintain, restore and/or improve the natural environment to improve the quality of natural resources and support biodiversity of plant and animal species.
- Encourage the propagation of species of plants and animals that are native and indigenous to the area.
- Monitor and control the impacts of invasive species on the biodiversity of plants and animals and on recreational opportunities.
- Protect and maintain the quality of water resources through watershed protection techniques.
- Maintain up-to-date inventories of biological resources.
- Improve the trail system throughout the park to help reduce overuse and environmental degradation on and around the Lake Trails.
- Apply the principles of Ecosystem-based Management to operational and resource protection activities within the park.
- Develop appropriate wildlife management strategies.

Open Space Protection Goals

Overall Goal

To protect open space within and adjacent to the park through acquisition, designation, coordination with existing partners, and creation of additional partnerships.

Goals

- Develop connections to nearby parks and other open spaces.
- Utilize open space protection strategies such as conservation easements and/or acquisition of land from willing sellers to create a buffer zone from surrounding development.

Cultural Resource Goals

Overall Goal

To identify, preserve, protect, and interpret the cultural resources of Green Lakes State Park.

Goals

- Identify and protect archeological resources.
- Investigate, evaluate and interpret key resources associated with potential Native American occupation, the Erie Canal, CCC and WWII use.
- Investigate, evaluate and interpret key resources from the Prehistoric Era.
- Develop programs and activities that interpret the history and culture of the area and the park.

Scenic Resource Goals

Overall Goal

To improve, preserve and protect various scenic resources within Green Lakes State Park.

Goals

- Design and locate activities, structures and infrastructure to fit into the park setting.
- Minimize impacts to the views surrounding Green Lake and Round Lake.

- Consider acquisition of properties or conservation easements that protect and preserve the parks viewshed.
- Manage and maintain the park’s historic vistas and landscapes.

Education and Interpretation Goals

Overall Goal

To provide an increased level of education and interpretation by developing programs to interpret the natural, cultural and physical resources and educate the park patrons of their importance.

Goals

- Provide year-round facilities for both self guided educational and interpretive opportunities and indoor programming.
- Develop public education and interpretation programs that foster appreciation and stewardship of the park’s natural, cultural, scenic and physical resources.
- Design interpretive programs that focus on the meromictic lakes, flora and fauna, CCC, Old Erie Canal State Park, WWII history, pre-state ownership, and pre-historic eras in the park.

Access Goals

Overall Goal

Provide appropriate access to the park and its natural, recreational and cultural resources in a manner that ensures the safety and security of park patrons and its resources.

Goals

- Provide and maintain access for emergency response and rescue operations.
- Provide safe and appropriate vehicular and pedestrian flow through the park.
- Identify, improve and maintain connections and access to Old Erie Canal State Park.
- Identify, provide and maintain appropriate public access to areas designated for public use.
- Improve access and use for persons with disabilities.

Operation and Maintenance Goals

Overall Goal

To provide a continued high level of service to patrons and employees in a safe, clean manner that protects the natural, cultural and recreational resources of the park.

Goals

- Replace high maintenance items with more sustainable, energy efficient, low maintenance items.
- Maintain the existing partnership and develop new ones for maintenance and operation of park facilities.
- Explore methods to remediate user impacts that cause patron safety hazards in high use areas of the park.

Facility Development and Capital Investment Goals

Overall Goal

To provide quality facilities consistent with standard park design aesthetics while being fiscally and environmentally responsible in their development.

Goals

- Provide appropriate facilities for park administration, Park Police, and Nature/Cultural/Interpretive Center functions.
- Upgrade and maintain the utility and drainage systems.
- Replace on site sewage treatment systems with connections to municipal sewage disposal systems.
- Develop a plan for the disposition of inactive landfills and old farm dumps in conjunction with DEC.
- Improve or expand camping opportunities for Canalway Trail and other transient users.
- Redesign and upgrade the campgrounds to improve the recreational experience.
- Create/update park signage plan.

Communication and Partnership Goals

Overall Goal

To facilitate information flow to park users and surrounding communities and partners and allow for the creation of partnership opportunities.

Goals

- Provide outreach to the community for support and involvement.
- Coordinate with local and state agencies in the conservation and protection of the natural, cultural and recreational resources of the park.
- Foster partnerships to assist with park operations and programs.
- Promote regional tourism.

Inventory, Monitoring and Research Goals

Overall Goal

To encourage new research that will improve the understanding and management of park resources.

Goals

- Continue cooperative research and data collection partnerships.
- Provide a coordinated approach to inventory, monitoring and research that facilitates data exchange.
- Develop and implement a monitoring program that measures conditions and changes within the park including but not limited to the lakes, old growth forest, grassland habitats and birds.

Sustainability Goals

Overall Goal

To protect the natural systems of the park and the region through the implementation of sustainable and environmentally sensitive management and operation practices.

Goals

- Use green technology in the construction and renovation of facilities.
- Replace park vehicles and maintenance equipment with those that are more efficient and/or do not use fossil fuels.
- Reduce energy consumption.
- Reduce mowing within the park.
- Improve solid waste management and recycling programs in park operations.
- Enforce and encourage the carry-in/carry-out policy where appropriate.
- Educate the park patrons on sustainable practices.

Chapter 5 – Analysis and Alternatives

Introduction

One of the important aspects in the master planning and environmental review process is the identification of alternatives and associated analysis. This section provides a description of the analysis of resources, development and selection of alternatives and how those alternatives are evaluated as part of the planning process for Green Lakes State Park. The detailed report is contained in Appendix A.

The analysis of alternatives used the information contained in Chapter 2 – Park Background, Chapter 3 – Environmental Setting, and Chapter 4 – Vision and Goals. Plan elements were identified and alternatives for each element were evaluated. All of the preferred alternatives were then reviewed in concert to determine if any additional adjustments were needed. The end product of this effort on plan element analysis was two master plan alternatives: Status Quo and Preferred Master Plan.

Analysis and Alternatives of Master Plan Elements

For each plan element the resource and inventory information was analyzed, identifying opportunities and limits of the resources and existing facilities. The findings from this analysis were used in developing and defining element alternatives pertaining to the stewardship of resources, recreation opportunities, and facility development.

Appendix A provides a thorough description of alternatives considered for natural resource stewardship strategies, recreation resource development/management, cultural resource protection, scenic resource protection and infrastructure development. The discussion of each element includes: 1) a background section with analysis, 2) a list of alternatives including the Status Quo alternative along with a listing of considerations for each alternative, and 3) identification and description of each preferred alternative.

Master Plan Alternatives

There are two Master Plan alternatives that have been considered for this plan (Refer to the table at the end of Appendix A). The first is the Status Quo Alternative which is a compilation of all the Status Quo element alternatives listed in Appendix A. Under this alternative, the park would continue to operate as it is now. The Status Quo alternative proposes no changes to natural resources protection strategies, recreation resource development/management, cultural or scenic resource protection and infrastructure improvements.

The second alternative is the Preferred Master Plan alternative. This alternative is a compilation of the preferred alternatives identified for each element discussed in Appendix A. OPRHP staff reviewed the listing of each preferred master plan element to determine if any adjustments were needed in arriving at the Master Plan. This synthesis review did not identify the need for any substantive changes in the set of preferred master plan elements. Thus, the Preferred Master Plan Alternative represents the master plan itself which is fully described in Chapter 6 – The Master Plan.

Selection of the Preferred Master Plan Alternative

Before the start of this master plan process, the park had been undergoing continued improvements. A new bath house, renovations to the Old Administration Building, Beach Picnic Area and maintenance and upgrading of the park's infrastructure has been ongoing.

This ongoing improvement and maintenance is important and is not overlooked as a significant factor in the analysis of master plan alternatives. Many of the recommended directions chosen in analyzed elements were the status quo alternatives. In addition, projects designed to improve on current functions and provide for new opportunities are included. These include changes to trail configurations and designations, natural resource protection strategies, recreation resource development and infrastructure improvements.

In choosing the Master Plan Alternative over the Status Quo Alternative, OPRHP is providing an overall direction for improvements and changes, which will have a positive impact on the recreation and natural resources within the park.

Chapter 6 – The Master Plan

This chapter provides a description of what will be done in the park as funds allow in terms of natural resource protection, recreation resource development, management and operations. The actions described here are based on the analysis in Appendix A and the preferred alternatives.

Classification

The park will continue to be classified as a Recreation Park.

Designations

Bird Conservation Area

The western half of the park is designated as a Bird Conservation Area. The BCA designation provides a level of recognition on a statewide level which adds to the overall significance of the park relative to other parks and open spaces in the state. Such designation will encourage the public not only to support or visit the park because of the bird species that may exist there but also to be more sensitive to their habitats during their stay. The BCA designation will not prohibit existing or future recreation uses or operational needs. Instead, the BCA designation will inform the planning process for future actions in the park. Projects not addressed in this master plan will be reviewed under SEQR.

If the BCA law is modified in the future, the designation will be reevaluated. See Figure 17 – Bird Conservation Area Map.

Park Preservation Area

A Park Preservation Area (PPA) will be designated. This area will include the Old Growth area in the National Natural Landmark and the area surrounding Round Lake.

If the PPA law is modified in the future, the designation will be reevaluated. See Figure 16 – Park Preservation Area Map.

Natural Resource Protection

Lake Habitat Management

Strategies will continue to be developed to protect lake habitat. Boating and the stocking of fish will continue to be limited to Green Lake. Rental boats will continue to be used limiting the potential for the introduction of aquatic invasive species such as the zebra mussel. Erosion will be managed where possible around the lakes by improving trails, better trail connections and stormwater management. Viewing platforms may be constructed enhancing park patron experience while reducing user based erosion at the lake's edge. Continued water quality monitoring results will be assessed for changes occurring in the lakes and if needed, impacts will be mitigated.

Old Growth Forest Management

The OPRHP Policy on the Management of Trees (OPRHP 2010) provides support for consideration of the values of the Old Growth forest. Old growth forest is rare in New York State and its protection in Green Lakes State Park is consistent with the policy's statement that as a general rule OPRHP follows a "passive management" approach, allowing natural processes and natural succession to govern the development of forest ecosystems.

Wetland Management

Wetlands will continue to be monitored for impacts. The Brookside trail, located in or near a wetland, will be improved to reduce trail widening and erosion from trail users. Strategies for the management and removal of phragmites will be developed. New construction adjacent to a wetland will include the necessary siltation control devices to minimize impacts.

Grassland Management

Strategies for the restoration and management of the grassland habitats in the western portion of the park for breeding and wintering grassland birds are included in the Green Lakes Grassland Management Plan – Appendix H (see also Figure 18). The plan addresses mowing, hedgerows, monitoring and maintenance activities. Recommendations for restoration and management have been coordinated with partners including the Sisters of St. Francis, the US Fish and Wildlife Service and Audubon NY.

Wildlife Management

The plan recognizes the impacts of deer and other wildlife on the native vegetation and their role in spreading invasive species and tick borne diseases. Management of wildlife at Green Lakes State Park will be consistent with OPRHP policies. State Parks will follow a “passive management” approach, allowing natural processes to maintain wildlife populations. However, there are situations when a more active management approach will be necessary in an effort to reach an ecological balance.

Consistent with agency policy, an integrated approach will be implemented to manage wildlife to: protect the health and safety of park staff and patrons, protect species at risk, protect and enhance biodiversity, and prevent damage to park buildings or infrastructure. Habitat management in the support of wildlife populations and biodiversity will be based on goals that lead to the appropriate functioning of local ecosystems. In addition, OPRHP will partner with the DEC and the Natural Heritage Program to identify and monitor populations and occurrences of endangered, threatened and other species at risk. In the case of federally endangered and threatened species, and migratory birds, the US Fish and Wildlife Service (USFWS) will also be consulted.

Deer population levels are adversely affecting the vegetation at the park through over browsing. Moreover, deer population management has been identified as an issue not only within the park, but also throughout the surrounding areas. Therefore, the master plan calls for convening a deer management team led by representatives of DEC and OPRHP to work collaboratively with other stakeholders in the region to identify and implement a comprehensive, long term approach to deer management.

Invasive Species Management

An Invasive Species Management Plan will be developed for Green Lake State Park based on the OPRHP Invasive Species Management Plan template. The Invasive Species Management Plan template contains protocols for identifying, controlling and eradicating invasive species in any park in the OPRHP system. Completion of such a plan for Green Lakes State Park and its implementation will give clear direction to the park staff that will be controlling invasives. The main goals of the plan will be to keep the park free of invasive species, and in particular to identify core areas that are invasive free zones. The plan will have sections specifically dealing with the issue as it pertains to the park and its resources as well as sections describing invasive species management in general throughout the state. Monitoring of trails and roadways will be conducted as an interim strategy to allow for early detection and early eradication of new populations. Staff will work in cooperation

with neighbors and partners to coordinate programs and control efforts looking at the possibility of preventing the movement of invasives into the park from other areas.

Additional scientific studies of both flora and fauna mentioned in the plan may be conducted as needed to further preserve and protect the resources.

Recreation Facility Development and Programs

Boating

Boating opportunities will remain the same with boating allowed only on Green Lake. Rental boats will continue to be provided for patron use. To protect the lake from aquatic invasive species, patrons will not be allowed to use personal boats. Boats used for research will be cleaned in advance of use and be free from invasive species. Boating for research purposes on a permit basis will be allowed in Round Lake and will follow procedures to prevent the introduction of aquatic invasive species.

Fishing

Certain areas around Green Lake will be enhanced to provide suitable locations for fishing and lake access without negatively impacting the lake. These areas will be constructed in a manner which will blend in with the surroundings and use natural materials. Designating lake access points and providing interpretive materials for anglers may also help prevent further degradation of the shoreline.

Basketball

Due to the popularity of basketball, courts will be replaced around the beach area.

Disk Golf

The disk golf course will remain the same and continue to provide opportunities for recreational enthusiasts.

Swimming

Swimming will continue to be allowed in Green Lake in the beach area during designated hours. Lifeguards will continue to be provided for patron safety during beach operation. The beach has expanded to its maximum capacity and will not be expanded further. Swimming opportunities will remain the same.

Trails

The Green Lakes State Park Trails Plan 2010 (Appendix B) provides guidance for the upgrading and maintenance of the trail system to accommodate a variety of year-round recreational uses and provide for educational and interpretive experiences. The Trails Plan includes some conceptual re-alignments of existing trails. These are examples of types of solutions needed to mitigate erosion problems and to bring Green Lakes' trails into compliance with the OPRHP Trail Standards (<http://nysparks.com/recreation/trails/technical-assistance.aspx>). Actual field conditions, terrain, maintenance concerns, environment, and potential environmental and cultural educational opportunities are all factors in deciding future trail adjustments.

Key components of the plan include:

- Hiking and running are allowed on all existing, newly developed and newly designated trails.
- Mountain biking loop opportunities are increased.
- Cross-country skiing and snowshoeing remain as an allowed use throughout the trail system in winter months; trails will be appropriately signed in winter to encourage proper trail etiquette.
- Appropriate trail connections between high use areas are upgraded.
- Access to the trails in the western half of the park is enhanced to encourage use of these trails while reducing overuse and environmental degradation on and around the Lake Trails.
- Trailhead parking lot is constructed adjacent to the campground road.
- Trail signage including trailhead and trail intersection signage is improved throughout the park to enhance the visitor experience and increase patron safety.
- Access to and interpretation of cultural and historical resources throughout the park is enhanced.
- Unsustainable sections of trails are upgraded, realigned or closed to reduce erosion and environmental degradation of park resources.

Coordination with volunteer groups and individuals for the development and maintenance of the trail system will continue and may be expanded. Newly designated and developed trails will be upgraded to use standards before designation and addition of uses. Trail design and maintenance guidelines and resources are provided in the Trails Plan. A long-term maintenance and monitoring plan will be developed to ensure the continued sustainability of the trail system. For more information, see Appendix B – Green Lakes State Park Trails Plan.

Interpretation and Education

Interpretation plans for the park include the development of new interpretive signage and brochures for the open fields and grasslands located in the western portion of the park. In addition, current signage and panels will be enhanced to provide more information about the biodiversity and habitat sensitivity in and around the meromictic lakes. Placing new interpretive panels and construction of a viewing platform/area are being considered to further protect the unique habitats and fauna at Deadman’s Point and other areas from overuse of the area by park patrons.

In addition, brochures, nature center displays, educational kiosks with interpretive signs, internet-based interactive maps, videos and other interpretive tools will continue to be developed in order to support the environmental and cultural education programming in the park.

Environmental Education

A program entitled “*Project Enrich*” was developed at the park and is designed to train environmental educators and teachers to lead self-guided field trips in the park. The *Project Enrich* environmental education packets include a teachers manual, self-guiding brochures, and ecology journals. While the *Project Enrich* program still remains, its self-guided trails and materials need updating. Also, more teachers and educators need to be formally trained to sustain the program. This program will be updated.

The park also hosts an event called *Environmental Field Days (EFD)* which is held annually in October. *EFD* consist of fun-filled environmental presentations and activities designed to fit the science curriculum for 5th and 6th grade classes from the greater Syracuse area. The trails around the

West Beach parking lot at Green Lake and the Reserve Picnic Shelter are highly utilized for these activities. This program will continue in the future.

Environmental education will be expanded in the future to include more partners, programs and events such as EFD. For example, the park is entering its second year of hosting Manlius Pebble Hill Stewardship Days during which all students (pre-K-12) visit the park from this local school for environmental programming and park improvement projects.

In addition, a new park nature center or regional nature center will be constructed near the existing Reserve Picnic Shelter. This nature center will be open to the public on a seasonal or year round basis depending upon whether it functions for the park or entire Central Region. This facility will need an adjacent area for buses to load and unload school groups.

Cultural Resource Protection

Historic Resources

Rehabilitation and/or modification of historic structures will be in consultation with OPRHP Field Services Bureau (FSB) staff. Protection of the cultural resources will be accomplished on a case by case basis. New structures will be compatible with their historic context.

Archaeological Resources

To facilitate the protection of archeological resources which could exist but have not been identified, a map will be developed in consultation with FSB to identify areas that have been disturbed, on slopes greater than 12 to 15 degrees and under permanent water features. Remaining areas may require consultation with FSB prior to any ground disturbance in accordance with New York State Parks, Recreation and Historic Preservation Law, Section 14.09.

Scenic Resource Protection

Vista Management

The scenic vistas throughout the park will be considered in all projects. Viewing platforms will be constructed around Green Lake to enhance existing vista points or provide new ones. The trail system will be expanded to further enhance the park patron's enjoyment of scenic vistas throughout the western portion of the park. Additionally, vegetation management proposed for the western portion of the park may enhance some of the scenic vistas in the area.

The scenic vistas from the golf course clubhouse are part of the historic landscape. Through the years, views of the lake have become obscured by vegetation growth. An analysis of views of the lake will be conducted and strategies developed to enhance historic views while protecting significant species. Historic landscapes and scenic vistas of the lakes will be analyzed and strategies developed to enhance historic views while protecting significant species. Guidance will be provided as needed by OPRHP regional landscape architects.

Operations and Infrastructure

The operation and infrastructure for specific areas or structures in the park are identified below. Building locations can be found on Figure 15 - Building Inventory Map.

Park Office

The location of the park office will remain the same and provides the opportunity for patrons entering the park to stop and orient themselves with the park features. The addition onto the existing structure is a sustainable practice, making use of the existing building, utilities and parking. The use of “green” energy efficient technology will be considered during the design of this and all other structures identified below.

Park Police Office

The Park Police office will move from the maintenance area as part of the expansion of the park office area. This area is well suited for development and the requirements needed by the Park Police and staff. Shared uses such as bathrooms, parking, conference room and kitchen is a sustainable option and will provide better communication between park staff and police. Additionally, the maintenance area will be less congested once the Park Police office has moved.

Education Center/ Reserve Shelter

In the short-term, providing enhanced educational and interpretive opportunities in the park will include creating satellite areas that discuss certain themes. Using existing structures is a sustainable alternative and makes use of a historic structures which otherwise might not have the funding for restoration. Other interpretive areas will be designated at key locations around the park. The long-term goal is the construction of an education center in proximity of the Reserve Shelter and the associated recreation area. The Reserve Shelter will remain as an open shelter and as an outdoor classroom area. The new educational center will be constructed with similar architecture and include educational themes which would include both park and regional topics. Upon the design of this area, site drainage shall be addressed to minimize erosion along the lake trail.

Rolling Hills Campground

The campground will be moved to a new location southwest of the park office as part of the long term plan. This area will provide a higher quality experience for patrons, it protects the lake watershed, reduces the impact to the vegetation and allows for the western portion of the park to be used more conveniently reducing the day use impacts to the lake area. In the short term, the existing campground will be improved including campsite surfacing, increased distance between campsites, the installation of a recycling station, providing a vegetative buffer between campsites and where possible, electrical upgrades and the improvement to stormwater management.

Pine Woods Campground

The Pine Woods Campground will receive enhancements including campsite surfacing upgrades, an increase in the vegetative buffer between campsites where possible, grading and drainage improvements to reduce the soil erosion into the lake and improved signage. The electric hookup system will be upgraded and new sites may be electrified. Additionally, a recycling station will be installed for patron use.

Golf Course

Improvements to the golf course include the rehabilitation of bunkers and golf cart pathways, the redesign of the golf cart parking area on the 18th tee, improvements to stormwater drainage from the course, and construction of a pavilion, which will also be used for golf cart storage in the off season. Research into the historic course layout is ongoing and effort will be made to be consistent with the original Robert Trent Jones design. The clubhouse will continue to have both interior and exterior

improvements including the redesign of the patio area. The patio is on multiple levels, the new design will create a patio surface which is ADA accessible, preferably on one level. Additionally, options for the adaptive reuse of the Old Golf Barn will be investigated.

Lakeview Picnic Area

The Lakeview Picnic Area will be improved. A permanent shelter that is compatible with park architecture will replace the tent. Stormwater management will be improved to reduce the rate of water flowing into the lakes and creating soil erosion.

Hillside Picnic Area

The Hillside Picnic Area will have improvements including stormwater management and the enhancement of the surfacing to reduce soil erosion into the lake. After further assessment of the recently renovated Old Administration Building for group rental, vehicle parking may be considered in this area.

Tulip Hill Picnic Area

The Tulip Hill Picnic Area will be improved. Stormwater management will be integrated into the improvement of the open areas and parking lots. The condition, quantities and locations of picnic tables and grills will be assessed and improvements made. Sixty-one picnic tables, constructed by the CCC are located within this area. Thirty or fewer of these picnic tables will be removed from their present location to provide additional space between the remaining tables. If feasible, these tables will be relocated to a more appropriate location. See Appendix G for more information. Access to the area will be improved both for ADA and to provide more convenient connections to the beach area. Signage in the area will be reassessed and designated service drives will be moved away from the high use area.

Cedar Grove Picnic Area

The former Cedar Grove Picnic Area will be reopened and expand picnic opportunities around the beach.

Beach Picnic Area

Access to the Beach Picnic Area from the parking lots will be improved. The area to the east of the Green Lake outlet will be reseeded and a designated ADA accessible picnic pad will be constructed. Stormwater runoff and the condition of the grass will be improved throughout the entire picnic area. The restroom facilities within the beach area will be evaluated to determine if demand warrants the need for additional facilities. If usage trends indicates a need, additional restrooms will be provided either through the adaptive reuse of the boat house or through the construction of an additional restroom.

The Old Administration Building

The Old Administration Building will remain as a reservable rental building for group functions. It will be used as an area for interpretive programming throughout the year. During the winter months, the building will continue to be used as a warming hut. The restrooms will remain open whenever possible.

The Maintenance Area

The maintenance area will expand to the area currently occupied by the Park Police upon their relocation to the park office area. Congestion will be reduced and material and equipment storage areas will be expanded.

The Cabin Colony

The Cabin Colony will have improvements. The area will be assessed by OPRHP staff and be brought into compliance with the American Disabilities Act (ADA). If an existing structure can be improved to meet ADA requirements and not significantly impact its historic integrity, this option may be considered. The construction of an additional, ADA compliant cabin with compatible architecture will also be considered.

Roads

The existing program of maintenance, repair and reconstruction of roads will continue. A new access point will be created into the west beach parking lot adjacent from the maintenance area road. This new access point will consolidate three intersections into one, replace two parking lot entrances and provide an organized road system. See Final Master Plan Map.

Parking

A day use parking lot will be constructed along the campground road to allow day users convenient access to the western portion of the park. The golf course parking lot will be improved and expanded to better meet the needs of patrons. Parking will be constructed in the day use area upon the relocation of the Rolling Hills Campground. The beach parking lots will see improvements as indicated in the Beach Access Improvements (Appendix F).

Walkways and Paths

Improvements to the walkways surrounding the beach area will enhance circulation and provide greater connectivity between parking lots, the lake, the beach and picnic areas. See Appendix F - Beach Access Improvements for more information. All other existing walkways and paths will undergo a detailed assessment to determine which areas are in need of repair or reconstruction. Suitable surfacing materials and construction techniques will be evaluated on a case by case basis. New designated pathways will be considered where usage trends show the need and protection of the resources is required.

Stormwater

Deteriorating or undersized culverts will be replaced to enhance stormwater management. All designs of areas such as picnic areas or camping areas will take into consideration sustainable stormwater management strategies such as rain gardens to reduce undesirable inflow into Green and Round Lakes. Roadway repair projects will include an assessment of the stormwater control features.

Waste Management

For many years, waste such as brush, logs, stumps, stone, concrete, soil and lumber have been regularly moved and removed from areas of the park and stockpiled or disposed of in the golf maintenance area. This area serves the park well and will continue to be used to stockpile certain debris. The following information provides guidelines for the operation of this area.

Vegetative Debris/Golf Maintenance Stockpile Area

To better manage vegetative debris and reduce the potential spread of invasive species, the following actions should take place:

- Continue to disallow the practice of pushing stumps, branches and debris over the edge of the site towards the Old Growth forest.
- Continue to keep the golf maintenance stockpile area organized, and utilize it as a composting area for leaves, wood chips, and brush waste.
- Create a buffer strip with native seed between the forest/brush edge and the composting area.
- Designate a separate area to stockpile/recycle/separate bulk materials such as sand, topsoil, gravel, stone and boulders.
- Integrate a formal composting station into these vegetative recycling efforts.
- Minimize the generation of brush and stumps by continuing to leave dead and downed trees in place to the extent possible. Continue implementation of the hazardous tree program.
- Continue to use downfall as firewood for campers.
- When possible, chip woody debris in place. Use on adjacent trails or cast into the woods where appropriate.

Note: Spot eradication of invasive species should be aggressively pursued and plant materials disposed of properly. Invasive species should not be chipped or sent untreated to another landfill. These items should be incinerated or managed in another appropriate manner to minimize the spread elsewhere. Seek consultation from the Environmental Management Bureau as needed.

Construction & Demolition Debris

Construction and demolition materials (as defined by Environmental Conservation Law NYCRR Part 360-7) will either be placed and layered inside the golf maintenance area loop road, be buried on the project site, or hauled off site as part of a particular project's or contract's specifications/costs.

Other types of construction waste, (e.g. steel, rubber, batteries, appliances) will be hauled to the Elm Grove lot, which will serve as a temporary transfer station until waste is removed in a timely manner to an appropriately designated off site landfill or recycling center. The Elm Grove lot is not intended as long-term storage for wastes.

Garbage Disposal and Recycling

Garbage and recycling improvements are identified below.

- Increase number of trash/recycling stations in park, especially in campgrounds and at beach.
- Consider a composting/trash/recycling pull off station in the park near the Rt. 290 entrance area as part of a local pilot project. Research alternate funding sources.
- Consider alternate methods for waste collection within picnic areas.
- Consider contracting out waste collection to a private firm.
- Investigate whether to increase or decrease the number of dumpsters and/or relocate them as appropriate.
- Coordinate with the Onondaga County Recycling Recovery Agency (OCRRA) as a recycling partner.

Dog Waste

Dog waste collection stations are provided within the park. Improvements are identified below.

- Continue collection by park staff from dog waste stations for disposal in regular trash.
- Consider additional stations on the upper and western trails.

Campground Dump Station

A dump station for registered campers is provided within the park. Improvements are identified below.

- Move campground dump station to a more suitable location farther away from the lakes and more convenient for park patrons.

Utilities

Electricity

The park will continue to own the electrical infrastructure within park boundaries and buy electricity from National Grid. Alternative forms of on site electricity generation, such as the solar panels, will be explored.

Telephone

The park will continue to own the telephone infrastructure with the park boundaries. Upgrades will take place on an as needed basis.

Water

The water system will continue to have improvements on an as needed basis or in conjunction with other construction projects.

Sanitary Sewer

The sanitary sewer system will continue to have improvements on an as needed basis or in conjunction with other construction projects. See the sanitary sewer information in Appendix A for more detailed information. If a municipal sanitary sewer system is constructed along Route 290 adjacent to parkland, connection into this system will take place.

Petroleum Storage

Petroleum storage will continue in its current locations and capacities with the exception of the maintenance area storage tanks. These fuel tanks will be moved to the Capital Facilities Construction Crew Headquarters area located adjacent to Route 290 and away from Green Lake.

Storm Water Drainage

Storm water management strategies will be implemented in all site designs on a case by case basis to control and filter runoff into the lakes.

Vehicular Entrance Control/Access

The existing vehicular entrances will be maintained with both the Route 290 entrance and the Golf Course entrance from Route 5 serving as the main access points for the park. Access will continue to be controlled through the use of a contact station located at each entrance. During the winter season, the main entrance from Route 290 will be the only vehicular access.

Concessions

Concession contracts will enhance the experience of visitors to the park by providing quality products and services at prices comparable to the local market, offered by well-qualified private-sector businesses and/or not-for-profit organizations.

Implementation

Timeline

The Master Plan sets forth OPRHP’s vision for capital improvements and operational and natural resource management enhancements to Green Lakes State Park for the next ten to fifteen years. As stated at the beginning of this chapter, the agency has not developed detailed cost estimates for each of the proposed actions. Cumulatively they will cost tens of millions of dollars to implement. The pace and sequencing of recommended actions will be determined by the availability of funding, which is a function of the size of OPRHP’s annual capital budget and the need to balance investments throughout the entire State Park System. As opportunities present themselves, other avenues of funding and partnerships, separate from the state budget, may be sought to advance the master plan. The utilizing of partnerships especially in advancing the natural resource protection part of the plan will be pivotal. The master plan will be reviewed annually to select projects that will be added to the park’s budget for implementation and to assess the progress of plan implementation.

The implementation of the Master Plan for Green Lakes State Park is divided into three priority phases. (Table 5) The priority groupings described below are conceptual and subject to reorganization based on available funding for specific components in any given group. Implementation of all aspects of the master plan will be guided by a stewardship team comprised of Green Lakes State Park staff, Central Region staff and other agency staff as needed.

Table 5 - Priority Phases

Implementation Priorities	Description/Development Component
Ongoing/Current	
	Implement stormwater management strategies on a project by project basis.
	Make energy and water conservation improvements.
	Maintain and rehabilitate park roadways and parking areas.
	Implement the Beach Access Improvements Plan (enhance connections between Tulip Hill picnic area, Beach, etc.).
	Renovate the Hillside picnic area.
	Renovate the Tulip Hill picnic area.
	Renovate the Beach picnic area.
	Improve the Cabin Colony.
	Reconstruct the Cedar Grove picnic area.
	Rehabilitate the Old Administration Building.
	Renovate the Golf Club House interior and exterior.

Implementation Priorities	Description/Development Component
	<p>Continue the early detection and rapid response of invasive species. Make improvements to the golf course.</p>
Priority 1	<p>Upgrade the beach area septic system. Conduct a park-wide sanitary system assessment. Construct the connection between the Capital Facilities Regional Maintenance area and the park office, in conjunction with new fuel tank relocation. Improve Reserve Shelter area stormwater drainage. Improve the Green Lake outlet/weir. Develop the Interpretive Plan. Rehabilitate Boat House/adjacent booth and dock area as part of prioritized interpretive plans. Develop the Invasive Species Management Plan. Make improvements to the Lake Trail as per Trail Plan. Implement the Grassland Management Plan Improve entrance to the beach parking lots. Renovate the Tulip Hill picnic area. Conduct a boundary survey of park.</p>
Priority 2	<p>Improve areas along Green Lake for viewing and fishing. Make Pine Woods campground improvements. Make Rolling Hills campground improvements. Improve the golf maintenance stockpile area. Deer management planning. Continue implementation of the Trails Plan.</p>
Priority 3	<p>Expand the park office area and move the Park Police office. Design and construct the new campground area. Plant trees in proposed campground. New campground construction. Improve the Golf Maintenance Stockpile Area.</p>

Implementation Priorities	Description/Development Component
	<p>Convert the Rolling Hills campground into a picnic area.</p> <p>Construct an educational center near the Reserve Shelter.</p> <p>Improve the disk golf course.</p> <p>Restore the golf course bunkers using original design.</p> <p>Remove the Nature Center (following construct of a new center).</p> <p>Renovate the Lakeview picnic area and construct a new shelter.</p>
As Needed	<p>Conduct studies of flora and fauna.</p>

Sustainability

In keeping with a strong commitment to sustainability, OPRHP will continue to increase the incorporation of sustainable practices into its daily operations. In addition, OPRHP will implement the following measures in the park.

- New construction - Continue to consider green materials and concepts including the use of natural lighting, energy efficient electric fixtures, low flow water fixtures, efficient heating and cooling systems and recycled products.
- Parking Lots, Roads and Pathways – During the design of the new day use parking lot and new/renovated pathways, sustainable surfacing options will be considered. During the renovation of existing roads and parking lots, stormwater filtration options will be considered.
- Adaptive Reuse of Structures – The reuse of historic structures may take place. Structures may house interpretive information.
- Vehicles and equipment – Alternative fueled and energy efficient vehicles and equipment will be considered upon replacement or purchase.
- Renewable Energy – The agency will explore the harnessing of renewable energy sources, such as solar panels and geothermal heating systems. Heating and cooling improvements will be added, where possible, such as attic fans to decrease the energy use of air conditioners, and centralized air to replace wall units.
- Maintenance – The use of alternative fueled equipment and alternative fuels such as solar, electric and propane fueled equipment and bio-based products (including soy based chain-saw oil and biodegradable products) will be considered. The proper storage and disposal of chemicals and fuels, limiting the storage of chemicals on site to the quantity which can be used in one year, and the proper clean-up of spills shall all remain a high priority for the park maintenance staff. The recycling of used oils, batteries and metal will be continued.
- Trails – Sustainable trail construction practices will be utilized to reduce erosion due to water run off as well as recreational use and the need for maintenance.
- Waste disposal – Visitors and staff will be encouraged to participate in solid waste reduction and recycling programs. Signage will be considered to encourage visitors to recycle at designated recycling stations in the park. Park staff will continue recycling in the park.

- Water Conservation – The park will continue water conservation measures including the use of low flow fixtures. The use of green infrastructure techniques such as rain barrels can be used to minimize water use and reduce runoff.
- Wastewater – Wastewater is minimized through the use of low flow fixtures in renovations or new construction. The outdated water treatment systems will be upgraded to improve wastewater treatment.
- Stormwater management – Enhance stormwater management throughout the park to protect water quality in the lakes and creeks. New site designs will consider green stormwater management techniques.
- Vegetation - If plantings are needed, native species will be used to reduce water and maintenance requirements. The reduction of mowing will be considered where appropriate.
- Education – Staff will educate visitors on the park’s sustainable features. Sustainability will be a component of the interpretive plan for the park. Interpretive information on panels and displays will be included to educate visitors on what they can do to lead a more sustainable lifestyle.
- Energy Efficiency – existing systems will be audited and re-commissioned to improve energy efficiency.
- Pest Control – The use of pesticides will be in accordance with the Agency’s Pesticide Reduction Policy. (<http://nysparks.com/inside-our-agency/public-documents.aspx>) Integrated Pest Management (IPM) and organic pest control methods will be utilized for golf course maintenance as recommended by “*Reducing chemical use on golf course turf: Redefining IPM*” (Portness, Grant, Rossi; 2009)
- Waste Reduction – A concerted effort will continue to be made to reduce office/administrative waste, construction and yard/food waste. On-site composting will be explored and considered. Recycling stations will be installed in each campground for patron use.

Land Acquisition

OPRHP will evaluate and consider acquisition of fee, title or easement of adjacent properties or existing in holdings as they become available for purchase for purposes of recreation and resource protection. Additionally, a boundary survey of the entire park will be conducted.

Partnerships

Green Lakes State Park staff continues to be committed to collaborating with groups that are interested in furthering the vision and goals of the park. The park is also interested in working with other outside groups to further the park’s contribution to and participation in the recreation resources of the area.

The park, through the regional office, continues to reach out to the larger service area to encourage individuals, groups and agencies to contribute to the park. While the existing partnerships identified in Chapter 2 will remain, additional partnerships will be encouraged to assist with operational, resource protection and funding needs. These include, but are not limited to, the creation of partnerships with local and regional utility companies to assist with erosion control, invasive species management and the reintroduction of native vegetation on their right of way corridors that impact the park. Additionally, to assist in emergency response at locations around the park, OPRHP will open dialog with adjacent public and private landowners for the development of emergency access agreements and/or access points.

The park will also continue to work with state and federal agencies, such as New York State Department of Environmental Conservation (DEC), the Army Corps of Engineers (ACOE), the US Fish and Wildlife Service (USFWS), as well as universities, local, county and regional governments.

Chapter 7 - Environmental Impacts and Mitigation

Introduction

Consistent with the intent of the State Environmental Quality Review Act (SEQRA), environmental factors were considered in evaluating the plan alternatives and in selecting the preferred alternative, i.e., the Final Master Plan, which is described in Chapter 6. Chapter 7 focuses on the environmental impacts and mitigation of adverse effects; however, for the purposes of SEQRA compliance, the entire document (Master Plan/FEIS) satisfies the requirements for an environmental impact statement as specified in Part 617, the rules and regulations implementing SEQRA. The environmental setting of Green Lakes State Park is discussed in Chapter 3 and Chapter 5 in conjunction with Appendix A which contains the alternatives analysis.

This chapter has two primary parts: a summary of environmental impacts associated with alternatives and a more detailed analysis of impacts associated with implementation of the Final Master Plan including a discussion of mitigation measures.

Environmental Impacts of Alternatives

In Chapter 5 and Appendix A (Analysis and Alternatives), alternative management and development directions were developed for the park using information on existing conditions, the analysis of recommended directions for activities, and constraints and considerations identified in the resource analysis. The preferred alternative for the entire park (i.e. the Final Master Plan) consists of the preferred alternative for each identified activity and resource.

Much of the information on the environmental impacts of alternative actions is presented in Appendix A. The following is a summary of the findings from the impact analysis.

Status Quo Alternative

The Status Quo alternative consists of the current facilities and practices as described in Chapter 3 (Environmental Setting). Under this alternative, the current resource protection, operation and facility management practices would continue. The increasing demands on the park would not be addressed or impacts mitigated. Any improvements would be assessed on a case by case basis.

The Status Quo alternative would not result in any additional adverse environmental impacts. The potential for long-term indirect adverse environmental impacts is likely, however, since there would be no plan to guide use, protection or development of the park. As more park visitors seek to use the park, additional demands will be placed on the natural, cultural and recreational resources. Without the guidance provided by the Master Plan, which directs more intensive use and development toward areas with capacity for such use and away from the more sensitive areas of the park, the potential for adverse impacts on environmental resources increases.

Trail proposals would occur and be addressed on a case-by-case basis without the guidance of an overall trails plan for the park. Undesignated trails would continue to develop in areas of the park that might not support their use. Issues such as the introduction of invasive species of plants and wildlife into the park would be handled on a case-by-case basis.

Preferred Alternative and the Final Master Plan

The preferred alternative is the compilation of the preferred recreation activity and resource stewardship options identified during the Analysis and Alternatives process summarized in Chapter 5 and detailed in Appendix A. The Final Master Plan provides considerable recreational and

resource protection benefits. This compilation was subject to a final evaluation by OPRHP staff to assure that there was consistency among the various alternatives. The final master plan provides considerable recreational and resource protection benefits. This Final Master Plan/EIS also identifies potential adverse impacts, both short and long term, as well as ways to minimize, if not eliminate, them to the fullest extent possible through appropriate mitigation, design and operational measures. Impacts and mitigation, in addition to information provided in Chapter 5 and Appendix A, are discussed in the following sections. From a long-term perspective, implementation of the park master plan will have beneficial environmental impacts by insuring that the most sensitive areas of the park will be monitored and provided appropriate stewardship and that the ecosystems and the services they provide are maintained, preserved and protected.

Potential Environmental Impacts associated with Implementation of the Master Plan and Mitigation

Traffic and Access

The Master Plan does not significantly change traffic patterns or access to the park. After analysis of the roads, access and parking capacity, it was determined that these facilities generally function effectively in their current configuration. Some improvements are being proposed that will provide safer traffic flow.

Improvements will be made to circulation at the West Beach Parking area such as the new entrance to the beach area and the removal of the existing two entrances.

There is no increase in parking size. In some areas the parking area is reduced along with the amount of impervious surfaces. The addition of basketball courts will also reduce the number of parking spaces while adding a popular recreation activity.

Improvements to East Beach parking area, as part of the beach access project, improves directional signs for vehicular and pedestrian traffic, installs sidewalks separated by curbs and plantings for pedestrian safety, installs treed islands and/or bioswales to divert stormwater and restripes the lot with a new parking and improved traffic circulation layout. This will reduce the number of parking spaces and impervious surfaces and provide more shade.

A new 25 car gravel parking area will be developed to serve as a Trailhead Parking area providing easier access for park patrons to the trails in the western portion of the park. This was designed to encourage people to use these areas and to take some pressure off the lake trails.

The Golf Course Parking Area will be expanded in width by 20 feet and restriped to improve circulation and maximize the use of existing spaces. The number of spaces will not increase. It will increase paved surfaces in the park and require some tree removal.

Recreation/Open Space

The implementation of the Master Plan will have a positive impact on recreational and open space opportunities at the park. The plan outlines a variety of new and improved recreation facilities and visitor amenities including an Education Center, trail system improvements, and improvements to camping and picnic areas.

The trails planning process has resulted in a comprehensive assessment of the existing trails at the park as well as an opportunity for evaluation of new trail uses and routes. Implementation of the Trails Plan will result in a better organized trail system which will accommodate a variety of uses including hiking, biking, cross country skiing and snowshoeing. The improved trail system provides

increased recreational opportunities and experiences through upgrades to existing designated trails, the development of additional trails and designation of new trail uses. It also improves the trail signage system and accessibility for patrons of different abilities.

The Master Plan provides improved interpretive opportunities for both natural and cultural resources. This will include in the short term providing improved education and interpretive opportunities at a number of satellite areas using existing facilities and reusing an historic structure. Ultimately a new Regional Educational Center is proposed. In addition, brochures, nature center displays, educational kiosks and other interpretive tools will continue to be developed to support the environmental and cultural education programming in the park.

OPRHP will evaluate and consider acquisition of fee, title or easement of adjacent properties or existing in holdings as they become available. Future land acquisitions would provide additional open space for the park, as well as recreation and resource protection.

Land

The Master Plan may result in some physical change to the land, particularly where new park facilities and trails may be constructed or segments of trails relocated. The final master plan calls for continued rehabilitation and maintenance of the park's existing facilities. Most new facilities proposed in the plan, such as the campground relocation and Park Office/Park Police complex, will be located in open areas. Many of these areas are previously disturbed and require little ground disturbance.

Due to the high use of the trail system and the diversity and sensitivity of the natural resources in the park, a trails plan has been prepared in conjunction with the master plan to provide direction and guidance for development, management and maintenance of a sustainable multi-use trail system (Appendix B). Discussion of alternatives and considerations were included in that plan.

The Trails Plan includes some conceptual re-alignments of existing trails. These are examples of types of solutions needed to mitigate erosion problems and to bring Green Lakes' trails into compliance with the OPRHP Trail Standards. Actual field conditions, terrain, maintenance concerns, environment, and potential environmental and cultural educational opportunities are among the factors deciding future trail adjustments.

Implementation of the Final Trails Plan would increase the total designated trail mileage from the existing trail system by 1.7 miles of trail. This net increase includes newly developed and designated trails minus those trails that may be closed. The Trails Plan recommends closure of 3.5 miles of trail which includes re-aligned portions of trails, remaining undesignated trails and a few existing unsustainable trails.

The proposed construction of new trails or trail sections may require some vegetation removal and soil disturbance depending on the type and location of the trail. Disturbance would be limited primarily to the required width of the trail corridor. Trail construction would follow the policies and guidelines for trail building that have been established by recognized trail organizations and governmental agencies. By following these guidelines, work would be completed in a manner that maximizes the protection of the resources of the park.

Improvements made to existing trails intend to make them more sustainable and improve their drainage thereby, reducing erosion potential and impacts to the lakes and wetlands.

Water Resources

Implementation of the Master Plan will have minimal impact to water resources. Many actions included in the plan are designed to protect and improve lake water quality. It is not anticipated that the Master Plan will have any adverse environmental impacts on water bodies and wetlands within the park.

Surface/Subsurface

Stormwater drainage will be a component of each project within the park and implemented on a case by case basis. All new trail work will be designed to control stormwater and minimize erosion. Stormwater drainage within the park encompasses a wide range of systems, both natural and constructed, such as roads, parking lots and other impermeable surfaces. A significant amount of this runoff and associated eroded material flows into both Green and Round Lakes. Reducing the amount of stormwater runoff into the lakes is important to protect the water quality of these unique lakes. Many areas will receive analysis and redesign to minimize erosion and sedimentation of the lakes and outfall stream.

Storm water management strategies will be implemented in all site designs on a case by case basis to control and filter runoff into the lakes.

The Trails Plan identified several trails with drainage problems, including wet areas. Routine water abatement techniques such as water bars will remedy many of these problems. The work will be undertaken using the established guidelines referenced in the Final Trails Plan.

Wetlands

The park contains two important wetland areas. A section of the Brookside Trail currently travels along the edge of the NYS Department of Environmental Conservation (DEC) regulated wetland, a rich hemlock-hardwood peat swamp. The section of trail is persistently muddy and trail users have both widened the trail tread and created social paths on the side slope to avoid the wet sections and trampling vegetation. The trail will be upgraded by raising the trail tread above the wetland using a combination of geogrids and boardwalks. There will be potential short term impacts to the wetland area during construction but it ultimately will protect the wetland area by providing a better trail that is dry and thereby keeping users out of the wetland area.

Plans are also being designed to improve the path and walkway alignments from the beach parking lot to the beach area which goes through the US Army Corps of Engineers (COE) regulated wetlands. More detail is needed on the alternatives proposed and potential wetland impacts. Further environmental reviews will be required.

Plans for construction of boardwalks or work next to wetlands may require consultation and permits from the DEC and/or the COE. Staff will consult with these agencies as appropriate.

Meromictic Lakes – Significant Ecological Community

Green Lake and Round Lake are significant natural communities that are globally uncommon and rare in New York State. The Master Plan provides for continued protection of these rare sensitive lakes. Long term monitoring of the biota and lake water quality to identify changes occurring in the lakes over time is included in the plan. Much is still unknown about the underwater communities in the lake and further survey work will be conducted. Additional research will investigate methods to reduce the amount of sand leaving the beach and entering the lake. Sand leaving through the lake outlet will continue to be monitored for impacts. If adverse impacts to the lake are found, methods to mitigate these impacts will be developed. Designating lake access points and providing interpretive

materials for anglers may also help prevent further degradation of the shoreline. Shoreline areas will be monitored for overuse and trampling of this vegetation.

Boating will continue to be limited to Green Lake (except for permitted research purposes) and to rentals only, thereby controlling the number of boats on the lake and the introduction of aquatic invasive species. Round Lake, a National Natural Landmark will receive further protection as part of the Park Preservation Area.

Underground fuel storage capabilities are being moved from the maintenance area to aboveground tanks located at the Capital Facilities Construction Crew Headquarters area and away from Green Lake.

Trails plan recommends trail improvements to minimize erosion occurring on the lake trails. Additional preventive maintenance measures will be implemented along the lake trails to address water management and natural and user-based erosion. Development of a day use/trail head parking area at the existing Rolling Hills camping area will help to disperse trail users from the lake trails and reduce user impacts on the lakes themselves. Closing undesignated social trails and appropriately marking trail connections between picnic areas will discourage people from creating additional trails and sliding down the side hills to access the lake trail.

Biological Resources/Ecology

Overall, the Master Plan will have a positive impact on the natural resources within the park. Limited new development is proposed in the park. Direct impacts associated with proposed improvements, such as the new campground location, new Education Center and Park Office/Park Police complex, will be minimal since the proposed improvements have been sited in areas with previous disturbance or development, limited environmental sensitivity and which generally possess accessibility to and use of existing infrastructure.

The importance of the natural resources within the park is recognized with the proposed designation of a portion of the park as a Park Preservation Area (PPA) and Bird Conservation Area (BCA). The PPA will include the Old Growth area in the National Natural Landmark boundary and the area surrounding Round Lake. The BCA includes the western half of the park focusing on the Old Growth Forest and the grassland areas. The designations recognize these areas as containing significant ecological and scenic resources and the importance of these areas.

Plants

The Master Plan will have beneficial impacts on the vegetation within the park. The designation of portions of the park as a PPA under Article 20 of Parks, Recreation and Historic Preservation Law includes provisions for protection, research and interpretation of these resources. Proposed development of new recreational infrastructure will be sited in areas of low environmental sensitivity. They are planned for areas within current lawns, previously disturbed areas minimizing impacts to native or historic vegetation. In areas where facilities are moved, such as the Rolling Hills Campground and the Nature Center, the former site may be restored. Any new plantings will be with native, non-invasive plants. This will have a beneficial impact on the overall ecosystem in that area.

Of primary benefit to native plants in the park will be development of an invasive species management plan, implementation of the Grassland Management Plan (Appendix H) and formation of a collaborative deer management team which will look at deer population levels adversely affecting the vegetation at the park. By managing non-native, invasive plants, native plants will be given more opportunity to persist in the park. Since these native species have adapted together over

many years in this area, the relationships and mutualisms that have evolved will be a benefit to both native plant and animal populations that have been coexisting for many years.

Rare Plant Species

There are no rare plants species that occur in the park, possibly due to disturbances such as deer browsing and invasive species. Four historical records for rare plant populations have been recorded and have not been observed for at least 100 years. Because a comprehensive survey of the entire park has not been done, it is still possible that rare plant species may or may not occur in the park. Additional surveys for rare plants may be undertaken.

Significant Ecological Communities

The implementation of the master plan will have beneficial impacts on the park's natural resources. The natural resource protection strategies that have been developed through the planning process will result in enhanced protection of the two significant ecological communities at the park.

Meromictic lakes – (see above – water resources).

Maple basswood rich mesic Old Growth Forest– As stated in the trails plan, an informal trail limited to hiking only (Ridge Trail) will be designated in an attempt to minimize vegetation trampling and soil erosion from the creation of additional social trails. Some re-routing and new trail development will occur in the Old Growth area. The plan does entail developing a portion of the Farmers Hill Connector Trail and closing a steep portion of the Hernia Hill Bypass Trail within the Old Growth area. Trails will be closed using appropriate trail closure techniques including revegetation with native plants. New trail construction will use sustainable practices and follow established OPRHP trail development standards for use. It is anticipated that no trees will need to be removed in order to locate the new trail. There is a lot of distance between the trees so the trail should be able to avoid impacting the root systems. Regional Landscape Architect and/or Natural Resource Steward will be on site to monitor trail layout and design to minimize any impacts to the trees. The trail will be designated for hiking and biking.

Improvements in waste management practices particularly in the Golf Course Maintenance Stockpile Area will reduce the potential spread of invasive species in the Old Growth area by no longer pushing stumps, branches and debris over the edge of the site towards the forest. Creating a buffer strip with native seed mix between the forest/brush edge and the composting area will further protect the habitat.

Invasive Species

The development of an Invasive Plant Management Plan will provide needed guidance and a planning framework to prioritize efforts so that control of invasive plants can be done in the most effective manner. The main goals of the plan will be to keep the park free of invasive species and in particular to identify core areas that are invasive free zones. The plan will provide management strategies to monitor and control invasive plants, particularly those affecting sensitive species and habitats.

Ongoing practices in the park include some control of invasive plants when problems are identified. Ongoing invasive species control projects will benefit native plants and communities by providing them more opportunity to persist in the park. Only rental boats are allowed on Green Lake and no public boats are allowed on Round Lake, limiting the potential for the introduction of aquatic invasive species.

Monitoring of trails and roadways will be conducted as an interim strategy to allow for early detection and early eradication of new populations. Staff will work in cooperation with neighbors and partners to coordinate programs and control efforts aimed at preventing the possible movement of invasives into the park from other areas.

Operational changes at the Golf Course maintenance Stockpile Area will reduce the potential for the spread and introduction of new invasive species in the area into the Old Growth Forest.

Wildlife

Overall, the proposed Master Plan will have a beneficial impact on wildlife resources within the park through the additional protection afforded by establishment of a Park Preservation Area and Bird Conservation Area. The habitat and open space protected by these designations is a benefit to wildlife. Since most of the proposed new facility developments are located in areas that are already developed for recreational use, these improvements and new developments will result in little impact on the wildlife in the area. Current wildlife policies and practices such as fish stocking and control of nuisance wildlife, as needed, will continue.

Management and reduction of invasive species will benefit native animals as well as native plants. Since the native species in this area have been coexisting and have adapted together over many years, the mutual relationships that have evolved will continue. Removal of an existing culvert and upgrading drainage (intersection of Brookside Trail and Powerline Trail) will allow for water and wildlife movement under the trail tread.

Deer population levels are adversely affecting the vegetation at the park through over browsing. Moreover, deer population management has been identified, as an issue not only within the park, but also throughout the surrounding areas. The master plan calls for convening a deer management team led by representatives of DEC and OPRHP to work collaboratively with other stakeholders in the region to identify and implement a comprehensive, long term approach to deer management.

The construction and use of new trails in the park has the potential to impact wildlife. Wildlife can be impacted by trails either directly through trail creation or indirectly through the effects associated with trail uses.

Birds

Designation of the park as a BCA will provide added recognition of the importance of the park to migratory songbirds and grassland birds and state listed species. A Management Guidance Summary (MGS) has been developed for the BCA and is included in Appendix C. The MGS provides recommendations relating to habitat protection, access, operation and education and outreach programs focusing on the protection of birds and bird habitats at the park. Additional funds may also be available through the BCA program for bird survey work, construction of kiosks and other educational materials. A Grassland Management Plan (Appendix H) has been prepared to manage the successional old fields in the western portion of the park which will further benefit breeding and wintering grassland birds. Grassland-dependent birds have declined precipitously at both the regional and national level. Many grassland birds have been listed as Species of Greatest Conservation Need by the NYS Department of Environmental Conservation. The total project area could comprise nearly 400 acres representing the largest expanse of grassland habitat within the NYS park system.

Rare Animals

No rare animal species have been identified in the park. Because a comprehensive survey of the entire park has not been done, it is still possible that rare animal species may or may not occur in the park. Additional surveys for rare animals may be undertaken.

Cultural/Archeological Resources

The master plan recognizes and protects the historic and cultural resources within the park. Staff members from the Field Services Bureau (FSB) visited the park as part of the master plan process and conducted an initial assessment of the historic structures found in the park (Appendix D). Elements of the park have been determined to be eligible for listing on the National Register as contributing elements to the historic character of the park. The plan identifies the need for a comprehensive analysis of the historic resources in the park.

The picnic tables at Tulip Hill have been identified as a character defining feature of the picnic area and the proposed removal of one half of the tables has been determined by FSB to have an Adverse Impact on the historic resources (Appendix F). The tables are being removed to improve the picnic area and its operations. FSB identified specific mitigation measures for the impact of this project including documentation of the locations of the tables, photographs and possible relocation of some of the tables for reinstallation elsewhere in the park.

Additional rehabilitation and /or modification of historic structures in the park will be done in consultation with FSB staff on a case by case basis. All work near or on these features other than normal maintenance and repair will be submitted to FSB for review. New structures designed for the park will be compatible with their historic context. To assure there are no adverse impacts to archeological resources, a map will be developed in consultation with FSB to identify areas that have been disturbed, on slopes greater than 12 to 15 degrees and under permanent water features. Remaining areas may require consultation with FSB prior to any ground disturbance in accordance with New York State Parks, Recreation and Historic Preservation Law, Section 14.09.

Scenic Resources

Implementation of the Master Plan will not result in any significant adverse impacts on scenic resources in the park. The park's scenic quality is one of its most important resources. Views of Green Lake, Round Lake and the surrounding landscapes will be protected and maintained through the actions recommended in the plan. Important views will be preserved.

Historic landscapes and scenic vistas of the lakes will be analyzed and strategies developed to enhance historic views while protecting significant species. Guidance will be provided by the regional landscape architects.

Scenic vistas throughout the park will be considered in planning for all projects. New facilities in the park will also be designed to be in keeping with the park's character. The recommendations in the plan for protection of the natural, historic and recreational resources will result in the protection of the scenic resources.

Public Health and Safety

Public health and safety are an important element in park operations. Facility design and construction will meet applicable health and safety codes, including compliance with the Americans with Disabilities Act. OPRHP places a strong emphasis on safety. For example, lifeguards at State Park beaches must be certified through safety training programs, such as American Red Cross Lifeguard Training, which must include pool and waterfront lifeguarding certifications; First Aid

Basics and CPR/AED for the Professional Rescuer (CPR/AED/FPR). In addition, there is ongoing monitoring of bathing beach water quality. OPRHP will continue to operate drinking water and wastewater facilities at the park in accordance with all Department of Health and DEC standards.

Information on ticks, fire danger and trail conditions will be posted as appropriate. Serious injuries or accidents will be reported to NYS Park Police and/or local fire protection or ambulance services through the 911 system or directly to the 24/7 NYS Park Police dispatch center at 315 492-6422.

Impact on Growth and Character of Community and Neighborhood

Implementation of the Master Plan is not expected to increase the use of the park significantly. The new environmental education center and camping facility will attract some additional visitors and school groups. There will be positive on-going economic impacts to the communities surrounding the park.

The implementation of the Master Plan will impact the region through an increase in State spending due to construction of the improved facilities. Proposed capital improvements include relocation of the campground area, construction of a regional education center to provide visitors and schoolchildren with greater educational experiences, and various improvements to the trail system, golf course and historic structures. These expenditures will have a positive economic impact on the local economy and possibly a longer-term effect on the region around Green Lakes in the form of increased tourism. The capital improvements will make Green Lakes State Park a more attractive destination and provide income to local businesses and individuals through the purchase of goods and services. This is the impact caused by direct sales. These local businesses and individuals, in turn, circulate this money through the local economy, obtaining the goods and supplies that they need. This is the total economic impact caused by indirect and induced sales. Both of these economic activities generate jobs and additional tax revenues for local governments.

Chapter 2 –Park Background stated that the economic impact of Green Lakes State Park was estimated at \$39.8 million, based on current attendance figures. With the implementation of the Master Plan, attendance may be expected to increase. With this increase, the long-term effect would result in increased tax revenues, local expenditures and jobs. However, it should be kept in mind that there are factors outside the control of OPRHP, such as the price of gasoline and the overall state of the economy that will also influence these impacts.

Many of the communities and their residents adjacent to the park take advantage of the many opportunities the park has to offer. The park is unique in that it is a large open/natural area in an urban/suburban area. The park will continue to provide current activities and the master plan proposes to improve some of the activities through improvements to picnic areas and better access to trails, particularly in the western area of the park. The character of the park and the surrounding neighborhood will not be impacted by these changes.

Unavoidable Adverse Effects

The proposed Master Plan will result in minor unavoidable adverse impacts. There will be some minimal permanent loss of pervious soils surface and vegetative cover as a result of improvements to picnic and camping areas and construction of new facilities such as the park office, police station and environmental education facility as well as the potential development of new trail connections. This will be monitored by OPRHP personnel and action will be taken, if necessary, to prevent any significant impacts from occurring.

In addition to the impacts outlined above, there will also be minor temporary adverse air and noise impacts (i.e. fugitive dust, noise from construction machinery, etc.) associated with construction of proposed improvements.

Some additional impervious surfaces will be added to improve access and parking. This will be balanced with providing pervious surfaces where operationally feasible and providing landscape, drainage improvements and biofiltration swales.

Irreversible and Irretrievable Commitments of Resources

The planning, development and implementation of this Master Plan, including construction of additional facilities and the undertaking of additional management activities, will involve the irreversible and irretrievable commitment of public resources in the form of time, labor, materials and energy use. It will also require a commitment to the increased long term operation and maintenance costs of the park.

Supplemental Environmental Review

Portions of this Master Plan/EIS are somewhat general or conceptual, such as elements of the beach access plan presented in Appendix G. Decisions regarding the type and extent of certain actions will be dependent on the findings from more specific studies or analysis still to be completed. For example, construction of a new campground may require additional analysis or study such as archeological surveys. The findings from these site specific evaluations may identify impacts that were not adequately addressed in this Plan/EIS. Under such a circumstance, an additional or supplemental environmental review will be required. As part of our responsibility under the State Environmental Quality Review Act, OPRHP will review proposed implementation projects with respect to consistency with this plan and EIS. Projects found by OPRHP to be consistent with the plan can go forward without any additional review. Other types of proposals may require additional review ranging from completion of an environmental assessment form to perhaps a site specific environmental impact statement.

To assist in this consistency evaluation, the following types of actions have been identified as likely to require additional review under SEQR:

- Any new actions not addressed within the Master Plan that do not meet the Type II categories with Part 617, the rules and regulations implementing SEQR;
- Any change from the preferred alternative for recreational and facility elements of the plan which would result in significant environmental impacts;
- Any leases, easement, memoranda of understanding, or other agreements between OPRHP and private entities or other agencies that affect resources in a manner that is not sufficiently addressed in this plan;

Relationship to Other Programs

Sustainability and Ecosystem-Based Management (EBM)

This plan incorporates the agency's sustainability initiative and goals. Related to the sustainability initiative is using an ecosystem approach under the EBM program. This was discussed in Chapter 6 under the Relationship to Other Programs section. Energy efficiency and potential for on-site energy generation was also discussed under Sustainability in Chapter 6.

Installation of recycling bins in the park and active recycling efforts will be done in concert with public education. This will increase public awareness of the need for recycling and increase sustainability beyond park borders.

The principles of EBM will be followed to the greatest extent possible in plan implementation. This plan integrates the interests and activities affecting the park while recognizing impacts and influences beyond the border. Where appropriate, work should be science based. OPRHP will strive to establish measurable objectives for projects and programs and will adapt management in response to monitoring and feedback. The plan also addresses ecosystems and their health and will promote their wise management and restoration where possible. The health and functionality of natural systems are being considered and promoted with the Master Plan. The agency and park staff continually reach out to our park partners, and also strive to foster connections with the park's neighbors, the local communities, universities and more regional agencies and organizations. The master planning process has considered public input from the early stage of planning and outreach, and the EIS process will further integrate public input with the plan.

Chapter 8 – Comments and Responses

Introduction

This section contains the responses to the comments received by OPRHP on the Draft Master Plan and Draft Environmental Impact Statement (DEIS) for Green Lakes State Park. The Draft Master Plan/DEIS was issued August 25, 2010. A Public Hearing was held on September 16, 2010, in the Fayetteville Village Hall, Fayetteville, NY. The comment period ended October 8, 2010.

During the Public Hearing, 19 of the 50 people in attendance spoke and their comments were recorded. During the comment period for the Draft Master Plan/DEIS, the Agency received 35 comment letters. A list of persons providing comments is included at the end of this chapter.

OPRHP appreciates the time and effort that persons interested in the future of Green Lakes State Park have invested in their review and comments on the Draft Master Plan/DEIS and their participation in the public hearing.

The types of comments received included document editing suggestions, requests for clarification of information presented in the document, and comments related to specific aspects of the plan. All comments were reviewed and organized by categories.

Responses to these comments are found in this section and were considered in the revisions found in this Final Master Plan/Final Environmental Impact Statement (FEIS).

Comments and Responses

Plan and Process

Comment: Text Edit Concerning Biking

On page four of the trails plan there is a statement that says; "Use, mostly by bikes, has worn a path through the grass layer of the trails on the western side of the park." This statement about bikes is unnecessary and should be removed from the plan.

Response:

This statement was part of a longer sentence used for clarification regarding some erosion assessment points on the Trail Assessment map (Figure 3). The complete sentence has been modified to now read: "It should be noted that some erosion assessment points in the western portion of the park were areas where trail use had worn a path through the grass layer; these locations are not necessarily considered an erosion issue."

Comment: Future Trail Development

- Provide language in the plan for the development of future proposals of single-track trails.
- More detail is needed that discusses the process on how future trail proposals will be handled.
- The plan should enable the local park staff to create and approve new trail segments as appropriate. The park staff needs to have the power to make new trails happen as they think appropriate and within confines of the parks needs and environment.

Response:

Proposals for modification of the Green Lakes State Park trail system beyond what is specified in the trails plan will be evaluated by the Park Manager in consultation with Regional staff and, if deemed necessary, the OPRHP Trails Planner. In some cases, environmental review will be required under the State Environmental Quality Review Act (SEQRA). A *Trail Project Approval Process for NYS Parks* has been developed since the publication of the Draft Master Plan/Trails Plan. A reference and link to the Approval Process document has been added to the Implementation section on page 22 of the Trails Plan.

Comment: Trail Location Error

There is a minor error with maps at the intersection of the Brookside Trail and the Powerline Trail. The stream that leaves the wetland runs to the west of the Powerline/Brookside Trail. The master plan maps show it on the east side of the trail then crossing.

Response:

This has been corrected.

Comment: Wetland Delineation Error

Based on vegetation and water levels during the year, I believe the wetland near the Brookside Trail extends further than the maps indicate.

Response:

Data used in the creation of maps are from the NYS Department of Environmental Conservation and The National Wetland Inventory database and were suitable for the purposes of this master plan. Future actions that may affect wetland areas will require more detailed delineation of wetlands.

Comment: Missing Conifer Plantations

On page 12 and figure 9, there is a list and map of Ecological Communities. Directly behind the main park office and also to the east of the road to the campgrounds (north of the road to Reserve Shelter) are conifer plantations. These are not shown on the map, and the acreage quantities are probably wrong as well.

Response:

This has been corrected.

Comment: Native Americans Habitation

On page 15 (“Archeological Resources”), the text states, “No studies or surveys have provided evidence of Native American habitation within the park.” Yet page 21 of the Draft Trails Plan states, “During pre-colonial times, the lands within Green Lakes State Park were once occupied by Native Americans.” Please reconcile these statements. They seem to contradict each other.

Response:

The trails plan and master plan have been corrected to clarify that Native American habitation of the park has not been documented.

Comment: Carry-in/carry-out

Page 27 mentions a carry-in/carry-out plan. Park management mentioned to me that a carry-in/carry-out policy was attempted a number of years ago and failed. Please provide specifics about how the new plan will be different from the old plan and how it will succeed where the other failed.

Response:

Many OPRHP parks and sites employ a carry-in/carry-out policy and it is generally effective. It is true that Green Lakes State Park attempted a carry-in/carry-out program a number of years ago and it was less than successful. That said, OPRHP continues to encourage patrons to abide by the carry-in/carry-out policy in several areas of the park. However, certain areas of Green Lakes are typically more highly populated and refuse and recycling containers are provided to help keep the park clean at all times. The park will continue to provide refuse and recycle bins in these high-use areas and will also continue to work with the Onondaga County Recycling Recovery Agency (OCRRA) to reduce waste and encourage recycling where opportunities exist.

Comment: Park Preservation Area Activities

Page 31 indicates part of the park will become a Park Preservation Area. The Park Preservation Law gives a sample of passive recreation activities which are permitted, but omits mountain bikes from that sample. The master plan should explicitly state that biking is a passive activity and that it will continue to be permitted through the proposed Park Preservation Area.

Response:

While not specified in the Park Preservation System Law, the plan team has determined that mountain biking is an appropriate activity in the proposed Park Preservation Area for Green Lakes State Park and will continue to be allowed on designated trails. As with all uses within Park Preservation Areas the design and location of mountain bike trails and access points will take into consideration use compatibility and natural resource protection.

Wildlife

Comment: Honey Bee Habitat

Habitat for the nationally declining and disappearing honey bee population should be created within the park. The habitat area can also serve as an ecological exhibit for school groups.

Response:

The European honey bee (*Apis mellifera*) is not native to the United States, and typically requires managed hives, which are not part of the operations of Green Lakes State Park. However, the park is comprised of vast areas of pesticide- and herbicide-free grassland, woodland, and hedgerow habitat, which is conducive to a variety of native species of bees and other important pollinators, and which would serve as an excellent ecological educational opportunity, as suggested.

Comment: Deer Management

- The deer problem at the park was not addressed in the plan. A deer management plan NEEDS to be a mandatory component of the master plan.
- Deer from the park eat the neighbor's landscape plantings causing significant damage.

- Deer are a problem for drivers on adjacent roadways causing regular car accidents; fatalities may soon occur. To reduce deer-vehicle collisions, consider installing devices, currently used in other countries, which will either alert the deer to danger or alert the driver to danger.
- Future deer management should not only involve DEC and OPRHP but also community members and the Sisters of St. Francis at Alverna Heights. Non-hunters should be represented in proportion to their numbers in the general population.
- The plan fails to prioritize any management of the deer herd with other components of plan implementation. Why wasn't the full range of alternatives covered in this case?
- Veterinarians from the area have all pointed to Green Lakes as being ground zero for another Lyme disease explosion. The deer tick issue needs to be addressed at the park.
- Hunting should not be allowed in the park as a recreational activity. If deemed necessary, the implementation of deer management strategies should not include lethal means of control. The park is small enough and the deer population contained enough that a sterilization program could be implemented. This method has come a long way from where it was ten years ago and has shown much success and promise. Green Lakes should take the lead on this issue and prove there are alternatives.

Response:

Deer population at Green Lakes will be addressed as a wildlife issue in the larger area of the Town of Manlius and the Village of Fayetteville, both of which border the park and share wildlife communities. There is a need to study wildlife population on a regional basis and not just as a focus on Green Lakes State Park. The agency is working with the DEC on deer population management within state park settings and will cooperate as a fully participating member of any regional efforts formed to address population control needs and strategies. The agency does not agree with the assessment that Green Lakes is “ground zero” for Lyme disease but rather the potential for Lyme disease is present throughout the state and region including individual private properties. Green Lakes is merely a representation of the larger local picture. State Parks will continue to provide education materials regarding health and safety issues at the park that are related to ticks. The Department of Transportation installed deer alert devices along route 290 during the 2001 reconstruction of that roadway.

For information on deer and how to minimize impacts to vegetation, please see the following:

<http://www.gardening.cornell.edu/factsheets/deerdef/>

<http://www.dec.ny.gov/animals/7211.html>

Comment: Hunting

- Green Lakes is too small an area to make any change with deer population. Allowing hunting at Green Lakes will only open up the last of safe recreation for others during hunting season.
- The potential for a child, a pet, an elderly walker, or anyone else to get hurt from hunting is much too high a risk to take to satisfy a small group of assertive hunters. Given all the other places hunters have to go hunting, why would anyone consider taking this risk? Green Lakes is too small and narrow of a Park to allow hunting. Additionally, how could hunting be proposed when nearly every deer in the Park is tame and acclimated to people?
- Hunting, whether by bow, by gun or by trapping has no place in Green Lakes State Park and request that OPRHP not allow hunting or trapping in Green Lakes State Park.

- Deer hunting with bows should be allowed in the park, limiting the quantity of hunters in the park by use of a permitting process or drawing.
- Bow hunting is not mentioned as a recreation alternative in Appendix A or the implementation plan. Controlled, permit hunting opportunities at Green Lakes should be considered.

Response:

Hunting has not been allowed within Green Lakes State Park in the past and there are no plans to provide for recreational hunting at the present time. Hunting is a recognized recreation activity within State Parks. State Parks has the authority to provide regulations and restrictions on recreational hunting within its facilities based on site specific considerations.

Comment: Winter Bird Feeding Station

A winter bird feeding station, surrounded by unobtrusive fencing, if needed, could be created, and then maintained by volunteers or a 'Friends of Green Lakes' association. It could make a great exhibit for school groups.

Response:

Such a station will be considered within the context of environmental education programming.

Comment: Coyotes

In following the principles of Ecosystem-based Management (EBM) as stated on page one of the Plan, would a natural predator, such as the coyote, be viewed favorably in the Park?

Coyotes migrated to the Park four to six years ago and reduced deer populations by preying on young deer. Given EBM states that 'decisions are made holistically focusing not on a single species or resource, but considering all parts of the ecosystem', will the presence of this animal then be considered in the context of its natural place in balancing an ecosystem?

Coyotes will migrate into the Park again. Will they be tolerated for their ecological role or will poisonings and poaching occur as has been rumored in the past? Could this animal serve as an educational tool towards a greater understanding of species interrelationships and more fully functioning ecosystems?

What part of EBM will be referenced for the inevitable presence of this animal?

Response:

The presence of a coyote or coyote populations in Green Lakes State Park is viewed favorably in an ecosystem context as natural predators are essential components to ecosystem function. Parks understands the importance of biodiversity and works to advance environmental stewardship, supporting resilient ecosystems while also providing safe and enjoyable recreational activities. With this in mind any individual animal that becomes a public health and safety issue would be evaluated within that context on a case-by-case basis. Any necessary action taken would be evaluated within a regional context.

Comment: Fishing

The stocking of Green Lake should be discontinued. Anglers leave trash around the lake and the earthworms they use are not native to this continent. Non-native earthworms have been documented in a number of cases to cause forest decline, including a well known study in Central Park.

Response:

Recreational fishing in Green Lakes State Park has been a traditional use and will continue. It provides benefits to anglers and is consistent with getting youth outdoors to not only enjoy the environment but to appreciate it and understand it better. State Parks will work closely with DEC to enhance its environmental education efforts with regard to the concerns outlined in this comment.

Comment: Bird Conservation and Trails

- Do not cut more trails through the Bird Conservation Area. It fragments the fields, making them less attractive to grassland nesting birds.
- On page 34, the Plan states, 'Access to the trails in the western half of the park is enhanced to encourage use of these trails while reducing overuse and environmental degradation on and around the Lake Trails'. What do 'enhanced' and 'encourage' in this context mean? Will this include new trails or something different than what is proposed on Figure 4 of Appendix B? If so, would new trails in the grassland management area, the same area proposed as a Bird Conservation Area (BCA), create objective and maintenance conflicts in terms of effort to create contiguous grasslands and suitable habitat for grassland bird conservation?
- Current trails seem to meet usage needs and the proposal to move them to the perimeter of the grasslands supports objectives for reducing disturbance to nest-building and creating more contiguous grasslands. Would removing hedgerows and adding new trails gain anything in terms of creating contiguous grasslands?

Response:

The statement on page 34 of the master plan refers to the trail system modifications as presented in the trails plan. These include development of new trails, modified trail alignments and closures as depicted on Figures 4-7 as well as upgrades to some existing trails. These also refer to the future development of the day-use parking lot and accessible trail into the western park area.

Habitat fragmentation is a concern with respect to biodiversity. The trail system proposed for Green Lakes State Park however is not felt to appreciably increase fragmentation and sets a limit on the amount of trails created in the park. There are no new trails proposed for the park beyond what is contained in the trails plan. Monitoring of bird and bird habitat is an important element for proper plan implementation. State Parks will work with local bird organizations for such monitoring efforts and should significant adverse impacts be noted steps will be taken to mitigate such impacts. Removing hedgerows would provide more contiguous habitat for grassland birds but as addressed in the Grassland Management Plan, priority removals have to be balanced with other uses and impacts.

Comment: Grassland Management

Plant and cultivate native grasses in the grassland management areas and Bird Conservation Area to provide more suitable breeding and migratory habitat rather than relying on natural succession and the probable regeneration of invasive plants.

I would like to see some of the open fields planted with grasses favored by grassland bird species.

Response:

This suggestion will be addressed through the grassland management and monitoring program overseen by the agency. Where replanting is needed, parks will use native grasses taking into account grassland birds. Our immediate concern is managing and maintaining grassland habitat

through mowing practices. At a later date, we would consider planting grasses that will best safeguard and enhance bird populations at Green Lakes.

Recreation

Comment: Boating in Green Lake

The master plan does not mention much about boating. The plan should consider alternatives which include kayaks and canoes in your rental options and provide a boat inspection/permitting process for patrons wishing to use their own boats in the lake.

Response:

The Park does not have any plans to expand our current rental options to include other alternatives such as canoes and kayaks. There are greater safety risks and operational limitations associated with these types of vessels. Canoes and kayaks are typically more unstable and require comparably more operator skill than the Park's current fleet of row boats and paddle boats.

There are several environmental reasons that we do not wish to permit privately-owned vessels in the lakes at Green Lakes State Park. Of most importance, if kayaks or other boats are not properly inspected or sanitized could introduce invasive aquatic species to the lake. These animals could be present in even small amounts of water or, in the case of aquatic plants, establish themselves from just a small piece of vegetation. Keeping rental boats on site significantly decreases the chances that any of the above invasives will be introduced to the lake.

The environmental reasons along with facilities management issues such as volume of traffic, supervision and lake carrying capacity all play into the decisions on what activities that we feel are appropriate for the lake.

Comment: Minoa Lakes

Swimming and boating should be allowed at Minoa Lakes and addressed as an alternative in the plan.

Response:

Minoa Lakes is not addressed in the Green Lakes Master Plan.

Comment: Diving Boards

Consider replacing the diving boards at the waterfront.

Response:

Due to safety concerns, diving boards will not be reinstalled at the park.

Comment: Lap Swimming

Provide additional lanes to the adult swim area. This is the only lake public swimming area with lap lanes. Central New York has recently seen a tremendous increase in triathlon participation recently in overcrowding in the lap swimming lanes. Also, some marker warning of the end of the lane, even a tied ribbon four feet from the end, would be nice. This would be really important for the shorter lap lane that ends in one corner with a metal pole.

Response:

Additional lap lane swimming will be considered for the 2011 season.

Comment: Archery

Consider adding an archery range somewhere on the hillside behind the Green Lakes north entrance building.

Response:

An archery range is not consistent with the current recreational uses at the park and is not considered safe at a park with such a high patron density.

Trails

Comment: Brookside Trail Alternative

Why was Option 2 chosen for the Brookside Trail re-alignment over Option 3? Option 3 seems more cost affective and would restore the wetlands damaged by the existing trail.

The plan for the Brookside trail needs to be rethought. Please indicate why the cost and maintenance of boardwalks and other such devices is necessary when a well designed bench cut trail up the hill would be just as effective, less costly and easier to maintain.

Response:

Alternative 2 was chosen due to the use of an existing corridor and its public access off a public street. Improving the existing corridor was deemed to have less impact than constructing a new trail. Major improvements to the existing alignment have not been implemented to date. The corduroy placed in the trail tread is considered a short-term solution. Mitigation efforts will be implemented during trail upgrades and for restoration of the wetland area. If this alternative is not successful, rerouting the trail (Alternative 4) will be considered.

Comment: Brookside Trail – Mountain Bike Access

The Brookside Trail should be designated to allow multiple uses.

Response:

The trails plan calls for adding biking to the majority of the Brookside Trail with the exception of the section between the Old Growth and Round Lake Trails. Biking will be designated as an allowed use on the specified sections once the trail is upgraded.

Comment: Brookside Trail - Wetlands

Water should not be diverted from the wetlands to dry out the Brookside Trail as proposed. Species adapt to wetlands and depend on that water, especially during a downpour in a dry spell.

Response:

The trails plan calls for restoring the natural drainage that was blocked when a culvert was installed in the existing stream channel. Water will not be diverted from the wetlands.

Comment: Ridge Trail

The Ridge Trail should be closed. It is heavily eroded and would have to be entirely rebuilt. It's location along the edge of the hill encourages social paths to the lake. With proper signage, campers and day users can find the lakes via the Old Growth/Rolling Hills trail or from the trail by the cabins.

Response:

During trail assessments, the majority of this trail was found to be sustainable and in good condition. There are a couple of short, steep, eroded sections that will require a reroute or potentially installation of a culvert. The plan also calls for slight reroutes, fencing or installation of signage to address trail sections that are close to the ridge for safety, to keep people on trails and to discourage development of social trails. Development of a direct route between the camping area and Round Lake was deemed appropriate. Other alternatives explored were not feasible.

Comment: Ridge Trail

Please allow mountain biking on all trails that allow hiking in the upper areas of the park away from the lakes including the following: connection between Rolling Hills Camping area and Round Lake Trail, aka the Proposed Ridge Trail on the "mid park area" map, aka RI or Ridge Trail. This would be an excellent alternate connector to the temporary day use trailhead that would then connect mountain bikes to the southern trails. Please make this a shared use trail open to mountain bikes.

Response:

The Ridge Trail will be designated for hiking only to limit the number of users and therefore reduce the impacts to the area. This trail is located in the old growth forest area directly above Round Lake. Limiting the number of users will help protect the natural resources. A multi-use connection in the mid-section of the park will be maintained along the Old Growth Trail.

Comment: Brookside-Ridge Trail Connector

As described on Page 13 of the Trails Plan, how will a short connector trail through a sensitive wildflower area be good for the park?

- It is drawn as a fall line, which is not in the character of any other part of the plan.
- Assuming it is built sustainably (and not as the line suggests), describe how it will not merely mirror the Ridge trail and Brookside trail in following the contours (which is how it would be built not on the fall line).

Response:

This short connector trail was included in the draft plan to address concerns that users would create social (desire line) trails down this slope to more quickly access the Round Lake Trail, as had been noted during trail assessments. By directing users to a designated signed connector, impacts to the steep slope and sensitive area should be reduced.

At this time, the plan has been revised and does not include the development of this short connector trail. Signage will be installed along the Ridge Trail at the top of this area to alert users as to the sensitive resources and directing them to the appropriate trail access for Round Lake. Should these efforts prove unsuccessful, park management may reconsider developing a short trail in this area. The new trail would be at a sustainable grade of less than 15%.

Comment: Expense of fixing trail damage due to mountain bike use

The master plan does not properly address the unavoidable, expensive trail repair that will occur as a result of mountain bikes. Consider an extra mountain bike user fees that will cover this cost. Bikers don't even have to pay the gate fee when accessing by Manlius Center or when they ride into the park.

Response:

State Parks is not considering implementing any additional fees at this time.

Comment: Skiing Only Trails

Adopt skiing only trails in the park and separate multiuse trails where snowshoe and hiking are also permitted. After a certain accumulated depth of snowpack, signs should go up to keep hikers off even the mixed use trails.

Response:

As per the trails plan, cross-country skiing will be allowed on winter-use trails as depicted on Figure 10 and snowshoeing will be allowed on all trails. Signage regarding winter use of trails will be installed to educate users on proper trail etiquette.

Comment: Warming Hut link to trails

If the Old Administrative Building is to be a warming hut in winter, it should have a skiing only trail from there to the rest of the trail system.

Response:

There is a newly-designated cross-country ski trail heading northeast from the warming hut that connects to the trail system. Due to the scale of the maps within the plan, it is hard to view this new trail.

Comment: Cross-Country Ski Racing

Consider using the Park as a venue for cross country ski racing and possibly snowshoe racing as that sport is gaining popularity. To have a respectable ski race, the trails would almost certainly need to be groomed -- at least for that event. Could the Plan accommodate bringing in private or state owned motorized groomers?

Response:

As noted in the trails plan, special events utilizing the trail system with an expected attendance of 25 persons or more are required to have a permit. Each permit application is evaluated to determine potential impacts and compatibility with the natural, cultural, and recreational resources of the park. Contact the park office for additional information.

Comment: Motorized Recreation

Please continue to exclude motorized recreation.

Response:

The park will continue to allow only non-motorized recreation.

Comment: Accessible Trails

Page 9 of the Trails Plan describes the “Lake Trails” but hides (within the section) the accessible trail plan for Rolling Hills and Farmers Hill, neither of which is a “Lake Trail.” These remarks do not belong in the “Lake Trails” section. Make a new section to describe them. Most people missed this part of the trails plan.

Response:

The accessible trail is only one of a number of modifications to the trail system made in an effort to reduce overuse and environmental degradation on and around the Lake Trails’ (a goal of the master plan).

Comment: Parallel Trails

On page 17 of the Trails Plan alternative 3 for Old Growth indicates one of the “pros” is that this alternative “eliminates parallel trails.” Green Lakes is not a long-distance trail system, and it is nothing but parallel trails. What would we do in a recreational park without trails? Please justify why eliminating parallel trails is a “pro”.

Response:

In this instance, the elimination of parallel trails, in conjunction with eliminating an unsightly trailhead, moving the trail off of the maintenance road, and providing a more sustainable trail alignment further away from the park boundary and residences, was deemed appropriate. This may not be the case in other instances in the park.

Comment: Old Growth Trail Reroute

Page 27 of the Trails Plan describes sustainability problems in Old Growth, and suggests the solution is “water management techniques, such as knicks and rolling grade dips, to be implemented to reduce erosion” and “deberming and re-establishing the out slope may”. These are not appropriate actions for the part of the trail north of Golf Maintenance. This part is the worst kind of fall line – in a gully. This part of the trail must be relocated. Relocating the trail will alleviate the erosion issues and also provide for a trail that is not too steep according to current guidelines.

Response:

During trail assessments, the erosion along this section of trail was discussed. Considerations included minimizing trail construction within the Old Growth area and above Round Lake. Utilization of water management techniques was deemed appropriate in this instance. Adequate numbers and well-placed knicks and rolling grade dips should reduce erosion along this section of trail. Trail conditions will be monitored and re-assessed on an annual basis.

Comment: Trail Signage

The *Trail Signage Guidelines for the NY State Park System* says that every trail intersection should be signed to indicate the usage of the trail. With 30 intersections in the western part of the park alone, the park would be responsible for at least 90 signs indicating most trails will be for all uses allowed in the park. This is not feasible.

Please suggest an alternative for Green Lakes, such as a post with a junction identifier, and only including allowed uses in the content of a sign where there is a junction of restricted with unrestricted trails. Language could be included that would state that hiking, biking, skiing, and

snowshoeing are assumed, unless otherwise indicated, and that a sign be at the junctions where there is a trail use difference.

Response:

The *Trail Signage Guidelines* state that “trail intersections should be well-labeled using different symbols or text (on markers or signs) to signify different trails” (page 16). This does not imply the need to include allowed uses on all intersection signage. Trail uses will be identified on all trailhead signage and where specific uses are not allowed on trails or trail sections.

Comment: Sprockids

The trails are great for beginner Sprockids mountain bike riders but the more advanced kids, and adult riders, would benefit from more interesting and challenging trails. Please designate some of the reroutes and new mountain biking trails to be built as narrow single track style trails.

Response:

Per the trails plan, Fawn Run and Farmers Hill Connector trails and the extension of the Indian Ovens Trail will be developed as multi-use single-track trails (~18-30 inch tread width).

Comment: Indian Ovens Trail

Please allow mountain biking on the Indian Ovens access trail.

- Please consider making this trail single track.
- The actual rocky Indian ovens portion of the trail could still be designated as no biking – if for no other reason than to let people unfamiliar with it know that it is not appropriate for riding.
- Bikes should be allowed in the Indian Ovens area. People climb all over the rocks and bikes will cause no more environmental damage than hikers.
- If a new section of trail is constructed near the Indian Ovens, the current loop through the rocks should be revisited. Sections of the trail are not well placed, encouraging users to walk all over the rocks.

Page 16 of the Trails Plan states; “Hiking will remain as the only designated use on this trail due to the sensitivity of the Indian Ovens resource and limiting the number of users on the trail.”

- Why do we need to limit the number of users on the trail? This is already one of the least used trails in the park. I have never encountered another person on this trail.
- Considering that bikers and hikers have a similar impact on the trail, and especially considering the fact that bikers simply cannot ride through the rocky part of the Indian Ovens, justify why bikers should not be allowed on this trail.
- What is the sensitive part of this resource? If there is a sensitive part of the Indian Ovens, describe how foot traffic will not adversely impact it.
- Considering that bikers are less likely to leave a trail than foot traffic, if there is a sensitive part of the Indian Ovens, describe how bike traffic will adversely impact it while hiking will not adversely impact it.

Response:

The Indian Ovens Trail will allow hiking and biking. The plan has been revised. The new trail section to connect to the Old Growth Trail to create the loop will be constructed as single-track trail. The short spur trail to the Indian Ovens formation will remain as hiking only. This is to deter bikers from riding on the formation for safety reasons and potential impacts. Signage will be installed at the junction of the spur trail to indicate that bikes are not allowed past this point.

Comment: Rolling Hills Trail

Page 27 indicates the Rolling Hills trails should “re-establish outslope and/or re-align with rolling grade dips the section north/east of Rolling Hills Camping Area to alleviate wet trail conditions.” The trail should be realigned, but both the map (figure 3) and personal experience indicate there are no wet trail conditions in that area. However, the trail aligns to the fall line in many places, as it climbs to the bench and descends. Please be more descriptive or correct the description.

Response:

The sentence should read “*northwest* of the Rolling Hills Camping Area.” The text in the plan has been modified. This comment refers to the short section of trail between the Rolling Hills Camping Area and the park boundary. It was noted on multiple site visits that this section of trail was muddy. Minor realignments, debanking or rolling grade dips on this trail section will improve moist trail conditions, particularly after rain events.

Comment: Multiple Use Trails

- The so called single track bike trails will only widen in the future. The bike trails already have created multiple tracks from deep tire grooves.
- Except for the lake trails nearly all park trails are now used by mountain bikes. The park is no longer a dedicated hiking trail park. It is all multiple-use trail and the lowest quality hiking.
- Good hiking does not identify with biking like the bikers claim. Hikers identify with wilderness where there is no mechanization, only foot trails. The hiking experience is as important as any other kind but ignored by the multiple use trail thinkers.
- Mountain bikes should not be allowed on single track trails. They cause erosion, widening of the trail tread and should not be allowed in the park.
- I have been walking in the park for years and overall, I have not had positive experiences with bikers. I find the mountain bikers at Green Lakes to be disrespectful towards hikers. The park doesn't need more trails; it needs more courteous, respectful rule abiding bikers.

Response:

Mountain biking is a suitable activity for the single track trails identified in the trails plan and will be allowed in the park. Various points on the trail system have erosional issues due primarily to improper layout and water flow. Widening of trails is typically due to users avoiding wet and muddy sections or eroded areas.

Upgraded signage may include educational material on trail etiquette for all trail users.

Comment: Trail Impact Assessment

An assessment of the impacts of future trail projects should be conducted before construction begins.

Response:

Future trail projects, not included in the trails plan, will be evaluated by the Park Manager in consultation with Regional Staff and if deemed necessary OPRHP Trails Planner. Impacts from any trail proposal outside the trails plan will be considered before construction begins. A formal review process for trail projects is included in the document: *Trail Project Approval Process for NYS Parks* located at: <http://nysparks.com/recreation/trails/technical-assistance.aspx>.

Comment: Farmer's Hill Trail - Debris

The proposed Farmer's Hill Connector Trail intersects with the Farmer's Hill Trail close to old debris. Please keep the trail away from that area unless you plan on removing the debris.

Response:

The Park will continue debris removal as funding and staff time allow.

Comment: Farmer's Loop/Black Trails

The proposed merger of the Farmer's Loop Trail and the Black Trail would change the character of the trails. One of the pleasures of those trails is imagining the history of the fields, how the hedgerows separated properties and what it was once like. Rerouting the trails removes that history.

Response:

OPRHP will address this concern after further assessment and analysis of the opportunities and constraints.

Comment: Power Line/Hernia Hill By-pass Trails

- The Power Line Trail should be improved in place rather than constructing new trail and redirecting patrons to the Old Growth Trail. The construction of a new trail would disturb access to the wetlands for wildlife. The Power Line Trail is already heavily impacted by erosion and will continue to be pruned by the power company regardless of if the trail is there or not.
- I would merge the trail to the existing Power Line Trail or even rebuild the Hernia Hill Bypass rather than impact a new area with a new trail. If the trail is built it should be wider than single track. The Hernia Hill Bypass was single track up until a few years ago. It has steadily increased in width since then. It is unrealistic to expect that the new trail will remain single track given the increased use of the trail if a day use lot is build and if the trail is open to bicycles.

Response:

OPRHP will address this concern after further assessment and analysis of the opportunities and constraints.

Comment: Vista Trail

The wet section of the ravine in the Vista Trail could be addressed without relocating the entire trail.

Response:

OPRHP will address this concern after further assessment and analysis of the opportunities and constraints.

Comment: Grassland Trails – Single Track

More single track should be provided in the grassland area. Mowed double track trails in the fields should be moved into the woods to provide a more enjoyable experience for park patrons, reduce mowing by park staff and protect large open tracts of grassland for bird habitat.

Response:

One goal of the master plan is to improve the trail system throughout the park to help reduce overuse and environmental degradation on and around the Lake Trails. To accommodate increased numbers of users, including large groups and trail events, park mowers and vehicles, and accessibility, it was deemed appropriate to maintain the 6-8 foot wide mowed trails for the majority of the western portion of the park. The Grassland Management Plan was considered as part of the analysis.

Comment: Trail Improvements

Before the new day-use parking lot is constructed to enhance access to the western portion of the park, trails should be modified to accommodate increased use, social trails should be closed and signs posted to educate patrons on the reasons why they should stay on marked trails.

Response:

Trails in the western portion of the park will be improved per the trails plan. Parking lot construction will take into consideration current usage and trail condition before construction. Additional signage to educate users on reasons to stay on trails will be considered as signage upgrades occur throughout the park.

Comment: Special Off-Trail Privileges For Hunters

How can hunters be given special privilege to go off-trail when at every other time of the year other recreational users are told NOT to go off-trail? Rules of the Park should apply to everyone without exception.

Response:

Hunting is not allowed in the park.

Comment: Make Trail Signage a Higher Implementation Priority

The plan describes signage to direct people away from the destructive social trails, to the correct transit points. However, there is no priority given to that signage. Making this signage a high priority is a simple and fairly inexpensive way to affect the spirit of this plan. Please include this as a #1 priority.

Response:

Appropriate trailhead and directional signage will be installed as resources are made available.

Comment: Trail Sign Replacement

Trail signage has recently been installed in the park, replacing existing signs. Why are these signs being replaced in their present location through the grasslands rather than along the edge of the grasslands as proposed in the trails plan?

Response:

Until the master plan is formally adopted and implementation of the trails plan commences, the designated trail system will remain in its current form and alignments.

Comment: Trail Construction

New trails should not be constructed because it bisects the existing habitats. One of the treasures of the park is its large undisturbed habitats that help maintain the diverse species within.

Response:

The overall park goal is to achieve a balance between recreational, interpretive and educational opportunities and the preservation and protection of the natural, cultural and physical resources of Green Lakes State Park. The modifications to the trail system included in the plan were based on balancing these opportunities with protection of resources.

Pesticides and Herbicides

Comment: Usage

The proposal to use some pesticides and herbicides in the control of invasive plants in the grassland management area could potentially leach low levels of harmful chemicals into the food chain that could go undetected for many years. If used, how will this and associated risks be monitored?

Response:

State Parks has adopted a policy that limits the use of pesticides on state parkland. Please see the OPRHP Pesticide Reduction Policy at <http://nysparks.com/inside-our-agency/public-documents.aspx>

Comment: Golf Course moving/expansion

Part or all of the golf course should be moved to the grassland area on the eastern side of the park in order to protect Green Lake from pesticides and other pollutants in the run off from the golf course.

Response:

The historic status of one of the earliest Robert Trent Jones-designed courses, as well as the exorbitant expense of relocating the golf course and its associated buildings, utilities, and operations to a different area of the park preclude such a move. However, runoff quality and quantity are very relevant issues at various points around the lakes, the mitigation of which are part of current planning discussions.

Acquisition

Comment: Acquisitions

Make land acquisition a higher priority and consider the wetland south of the intersection of Pierson and George Taylor Roads and adjacent to Route 5.

The property adjacent to the trail accessed from North Manlius Road near Stearns Bridge on the Erie Canal is up for sale.

Response:

The acquisition of surrounding open space at Green Lakes is a regional priority conservation project as addressed in the 2009-2013 New York State Open Space Conservation Plan. Both of these parcels are adjacent to Green Lakes State Park and may be considered in future land acquisitions if willing sellers and adequate funding is available. For more information, please see the OPRHP Open Space Conservation Plan at <http://nysparks.com/inside-our-agency/public-documents.aspx>

Development

Comment: LEED construction

- On page 43 it is stated that new buildings are to be constructed with sustainable methods in mind, but there is no mention in the plan of an alternative to be LEED certified. It is not even an Alternative that was discounted. Indicate why LEED construction is not an option in the plan.
- A renovated/expanded Park Office/Park Police Office should definitely be powered with renewable energy.

Response:

LEED certification and sustainability are always considered by Parks in constructing new or renovated facilities and will be incorporated when applicable at Green Lakes.

Comment: Proposed Campground

- People do not want to camp in a campground with sapling trees which provide no shade. If planting new trees in the proposed campground and constructing the new campground happen at the same time, there will be a lull in campground visitation as the trees mature enough for people to desire to camp there. Campground design and tree planting should be a higher priority than 3, so that there is a reasonable assurance that the trees will mature before the campground is constructed and used.
- The proposed campground location in the Symphony Hill area, off of a main roadway is in a very visible location. An alternate location, less visible from the roadway should be chosen. Additionally, there is a concern about the quantity of new campsites being proposed.

Response:

OPRHP recognizes this issue and understands the urgency. The design and planting plan will be produced as time and other regional priorities allow. The planting of vegetation will take place before the construction of the campground and as funding becomes available, allowing trees to mature in place. Due to the other, more pressing priorities, this item will remain as priority 3 in the master plan. Potential future influences such as budget and staffing may shift this and any other priority accordingly. The quantity of sites proposed will be similar to what is in the Rolling Hills Campground. Any increase in campsites at the park will be minimal upon the conversion of the Rolling Hills Campground into a picnic area.

Comment: Campground Expansion

Explore areas for campground expansion other than where it's currently proposed. Rather than move the campground to the Symphony Hill area, the area around Minoa Lakes should be developed for both camping and swimming.

Response:

Minoa Lakes was not considered part of this plan for Green Lakes State Park.

Comment: Include non-electric and/or walk-in sites

Page 36 describes the new camping plan. There is no specific plan for non-electric sites. Since some campers like to tent camp without the distractions of neighbors who abuse their electricity, please include some specifics about an area of non-electric sites. Please justify the statement “All campsites should be electrified.” Some campers seek campsites that do not have electric hookups. Also, why is there no set of “walk-in” campsites in the campground (which generally are nonelectric)?

Response:

The agency technical services staff will consider both of these recommendations during their design of the new camping plan.

Comment: Rolling Hills Campground Upgrades

Why are you putting money into upgrading the Rolling Hills Campground before you move it to a new location?

Response:

Relocation of the campground requires considerable site evaluation and design work as part of its implementation. In the interim, the proposed investments into the existing facilities are targeted at meeting current health and safety standards and maintaining the quality of recreation experience at these facilities expected by our patrons.

Comment: Natural Landscaping

Create natural landscaping with native plants and perennials around park buildings, on the new proposed treed islands in the large parking lots, and at road/crosswalk intersections. This will create more interesting and diversified landscapes and reduce overall mowing areas.

Response:

Native landscaping will be a component of the parking lot and other park improvement projects.

Comment: Expanded Parking

There is an entrance to the park right now off of Manlius Center that holds six cars. There are regularly 15 cars parked there on the weekends. That area could be opened up to make parking somewhere up in the back region in what we call the Serengeti Plains.

Enlarging the pull-off on NY Route 290 to accommodate a few more cars would provide more than enough additional parking for trail users. There is no need to grade the old service road and put a parking lot in the grasslands.

Response:

This parking lot is an informal lot and no changes will be made.

Comment: Trail Head Parking Lot Paving and Marking

The trailhead parking area located along Route 290 should have a standardized NYS Department of Transportation driveway pavement configuration, including signs and pavement markings. This design can be finalized in the highway work permit review process.

Response:

OPRHP will work closely with DOT to address this need.

Comment: New lodge and restaurant

A lodge and restaurant should be constructed that provides housing and meals for ecotourists and other patrons.

Response:

At this time, additional buildings, such as a lodge and restaurant, within Green Lakes to accommodate ecotourists are not being contemplated. Given the setting and considerable use at Green Lakes, it is felt that these type of amenities are best provided by the private sector outside of the park.

Comment: Education Center Location

Page 36 describes a proposed education center at the Reserve Shelter. This is a fantastic idea, but the master plan should state that the final location should not interfere with the large field, which is an attraction to groups who rent the Reserve Shelter.

Response:

The design of the area has not begun. The use of the recreational field will be considered by Regional Landscape Architects during the projects design phase.

Implementation

Comment: Monitoring Master Plan Implementation

The plan does not describe the future implementation of the plan in enough detail. It should discuss how the implementation will be monitored.

Response:

Additional detail will be provided on implementation. A key element is an annual meeting of regional and park staff to review the master plan and the status of its implementation. This implementation team is the primary driving force behind assuring that implementation is occurring.

Comment: Cost Projections/Generation of Funds

The plan does not include a cost projection, construction costs for various projects or how much the implementation of the plan will generate. Will the new plan generate more money and/or people coming to the park? The plan is good, but in this day and age and money being so tight, who's paying for it? Does the money that's generated at the park stay at the park or does it go right into a fund?

Response:

Generation of estimates for construction costs and other projects is not possible at this time. It is likely that the implementation of the plan will result in a small increase in attendance but such increase is felt to be within the capacity of the park infrastructure. The plan itself has elements that call for relocation of recreation so as to more equitably spread out impacts of recreation use.

Funds from vehicle use fees are placed in an account to address statewide capital infrastructure needs. They are used for State Park facilities but are not specifically dedicated to work within Green Lakes. Funding for capital projects is assessed and assigned on an annual basis statewide. While Green Lakes in any given year may not have construction projects of a cost equal to its revenue, another year it may very well have a major construction project well in excess of the revenue taken in during that year.

Comment: Deer Management Implementation

The creation of an interagency group looking at the long-term management and reduction of the deer population is an effective step in studying and addressing these issues. This is routinely cited in the plan. However, the plan does not prioritize this process and it is not included along with other park implementation priorities. For example, it is not included in Table 1 of the Executive Summary, nor is it included anywhere else in the plan. It would be nice to know where this fits in with other priorities knowing that this plan may take 10, 15 or 20 years to implement.

Response:

Deer management planning has been added to the plan as a Priority 2. Parks will work with DEC in developing any necessary deer management strategies.

Volunteerism

Comment: Volunteer Request

Several comments on the master plan were submitted to create a friends group, a Volunteer Hours Reward Program or to proactively engage existing volunteer groups to assist with litter clean up, trail maintenance and construction, resource protection, and other park projects as needed by the park.

Response:

Volunteers continue to be important to park maintenance and resource protection, and State Parks encourages such partnerships. Successful programs, however, require leadership, a focused plan, and ongoing commitment on the part of the volunteers under the guidance from State Parks in order to be effective. Viable groups interested in organizing volunteer efforts for Green Lakes should contact the park office.

Comment: Trail group/Adopt a Trail Program

An organized trail group should be formed for the park and consist of mountain bikers, hikers and runners. A volunteer based “adopt a trail” program should be implemented to address trail maintenance and construction projects.

Response:

Chapter IV. D. Coordination of the trails plan discusses the development of a volunteer Trails Working Group that would help monitor and maintain trails. This group would work with park staff to provide a coordinated approach in managing and improving the park’s trails.

Comment: Sprockids Partnership

Will the master plan allow the CNY Sprockids/Green Lakes partnership to continue in future trail projects?

Response:

The partnership between Sprockids and Green Lakes is a positive one and will continue. It provides much needed opportunity for youths to get outdoors and in the environment. The activities and recreation of the Sprockids program will be within the guidelines of the master plan and consistent with the protection of the park's natural resources.

Education and Interpretive Programming

Comment: Nature Walks

Are guided nature walks only for designated groups such as school groups or are they open to the public? If they are open to the public, they should be publicized better.

Response:

Nature walks are provided to both school groups and the general public. Providing interpretive programs, including the publicizing of the events beforehand, however, is subject to the limitations of staffing and funding. With regard to notifications, Parks will make more determined efforts to publicize such walks through Friends organizations and the internet where feasible.

Comment: Programming Between Parks

OPRHP should connect the programming efforts at Green Lakes with Clark Reservation and Three Falls Woods to include a comprehensive program on old growth forests, meromictic lakes and the Jamesville limestone shelf. As an alternative program, bikes could be provided for tours and a history lesson of the Erie Canal.

Response:

Both of these suggestions are valid and will be evaluated by parks staff as to strategies for implementation.

Comment: Environmental Education

The park should establish educational programs for gardeners whose property abuts the park so they can learn what type of shrubs and flowers to plant that are less palatable to deer as well as other mitigation strategies.

The park should continue to place small kiosks and panels to inform the public of the Park's outstanding natural resources.

Future education and interpretation should include the impacts patron use has on the park.

Response:

Within the limitations of environmental education resources, the park will provide information to adjacent land owners regarding mitigation of the impact of deer browse on gardens and landscape plantings. The park's natural resources will be further interpreted through programs and educational kiosks and panels. Finally, OPRHP staff will consider methods to integrate information into its educational programming on how patron actions may impact the park's resources.

For information on deer and how to minimize impacts to vegetation, please see the following websites:

<http://www.gardening.cornell.edu/factsheets/deerdef/>

<http://www.dec.ny.gov/animals/7211.html>

Recycling

Comment: Concessionaire should participate in OCRRA's food program.

On page 44 of the Master Plan – Onondaga County Recycling Recovery Agency (OCRRA) has a food recycling program for institutions with cafeterias. The summer concessionaire at the beach most likely has a lot of food waste. The concessionaire should participate in OCRRA's program.

http://www.ocrra.org/yardwaste_food.asp

Response:

State Parks has an agreement with the concessionaire at the beach. The extent to which that agreement provides the opportunity to recycle food wastes will be evaluated with the concessionaire. If such recycling is within the parameters of the agreement and deemed feasible it will be initiated with OCRRA. OPRHP continues to encourage our concession partners to work with OCRRA to find innovative ways to reduce waste and increase recycling.

Comment: Recycling

Page 39 describes garbage disposal and recycling. Please respond to each of the following points:

- The Onondaga County Resource Recovery Agency (OCRRA) is one of the premiere recycling agencies in the country. Why is OCRRA not listed as a partner to Green Lakes to help with its recycling?
- Without camper education (especially with out-of-town campers who do not know of OCRRA), Green Lakes will not get campers to use the extra recycling stations and composting and these ideas are likely to fail. Please include specific ideas about educating campers about recycling opportunities.
- Is the “local pilot project” an OPRHP sponsored project, or is it a community project? Please clarify.
- Is there a need to recycle 1-pound “disposable” propane tanks at Green Lakes? Around the country, some parks with a large camping contingency have recycling/reuse stations for 1-pound tanks common for table-top camp grills.

Response:

OCRRA has been listed as a recycling partner within the final master plan. OPRHP will provide additional information to overnight visitors regarding recycling opportunities. The “local pilot project” is a partnership between OPRHP and park visitors. Green Lakes currently accepts one pound propane tanks from campers for recycling.

Tourism

Comment: Ecotourism

One of the most important businesses is tourism, especially ecotourism. The plan should look further into the future and envision the park as an ecotourist destination.

Response:

Ecotourism is a valid consideration at state park facilities. Green and Round Lakes, because of their meromictic status, provide special opportunity for ecotourism. The park, especially as a part of the regional setting, is an appropriate ecotourism resource.

Comment: Weddings

Weddings are big business and bring tourist to the area. Many people would like to get married in a park. Each region should have a wedding planner that helps brides plan weddings at the various parks in the region.

Response:

Events such as weddings are allowable within state parks under permit. Permit administrators determine the type of conditions associated with each event. With respect to weddings, the planning is within the realm of the couple being married within the guidance of conditions within the permit.

Miscellaneous

Comment: Debris and Trash Removal

The following debris and trash should be cleared from the park;

- Two junked cars along the Deer Run Trail. One is a blue Ford just off the trail, uphill and about ¼ mile from where the trail cuts off down to the emergency entrance off SR 257. The other is also adjacent to the trail and is located between the two unnamed short cut trails that run off the Deer Run Trail. It is upside down and looks like a yellow AMC product.
- Near the foundation of the farm silos where the Farmer's Hill trail joins the Overlook trail there is miscellaneous scattered farm equipment junk. Also, there is a steel bar imbedded in the ground on the trail just south of the existing wooden bench that is a hazard.
- Along the eastern section of the Farmer's Hill trail, about ¼ mile south of the steel power line pylon and just into the tree line there is a large collection of what appears to be household appliances and assorted trash.

Response:

The removal of debris from past ownership in the remote areas of the park is important to OPRHP and will be undertaken as funding and staff time allows.

Comment: Grass Cuttings

Could cuttings from the grassland management program be utilized as a source of biofuels?

Response:

Cuttings from grassland management are not likely to be of the type suitable for biofuels. In addition, by allowing the cuttings to recycle back into the management area more nutrients and habitat elements will be made available for bird conservation.

Comment: Alternative Revenue Generation

Can the Park be managed to derive revenue from funds other than public use fees? What about lease revenue for a maple producer to tap trees in designated areas?

Response:

Production of maple syrup has been conducted within state parks as part of environmental educational programming. While not specifically addressed by any agency policy, state parks generally does not permit the sale of our natural resources by commercial entities.

Comment: Golf Course Entrance Pavement Marking

The golf course entrance should have pavement markings installed including; lane markings, median hatching; and a stop bar. The NYS Department of Transportation will only allow a single lane exit.

Response:

OPRHP will work with DOT in advancing this work.

Comment: Dog Waste Stations

Please install and maintain dog waste bag dispenser/collection stations and various points/intersections on the western trails. Specific locations include the following;

- At the foot bridge where the Brookside trail intersects with the Old Growth trail.
- Adjacent to the Rolling Hills trail near the current Rolling Hills camping area.
- At the intersection of the Overlook trail and the Farmer's Hill trail.

Response:

Additional dog-waste-bag dispensers will be considered at these and other locations.

Persons / Organizations Who Provided Comments

Name	Title	Organization
Alongi, Dave	Resident	
Anderson, Nathan	Co-Director	CNY Dedicated Individuals for Responsible Trail-use (DIRT) and Sprockids
Anderson	Resident	Sprockids
Armstrong, Hamilton	Resident	
Bacon, Kenneth	Resident	
Bailey, Annette	Resident	
Bates, Robert	Resident	
Becker, Ron	Resident	
Bingham, Sue	Co-Director	CNY Dedicated Individuals for Responsible Trail-use (DIRT) and Sprockids
Curtis, Karl E.	Resident	
DeHaven, Robert C.	Resident	
Duncanson, Bob	Resident	
DeStefano, Linda	Resident	
Deter, Eric	Resident	
Ewing, Greg	Resident	
Flint, Joseph A	Acting Director	NYS Department of Trans., Planning and Program Management Group
Goodfellow, John	Owner	Four Seasons
Griffiths, Robert	Resident	
Gruenbaum, William T.	Resident	
Jureller, Robert	Resident	
Kaufman, Bill	Resident	
Lameneke, William	Resident	
Dreiling, Mary	Resident	
Millhouse, Michael	Resident	
Mix, David	Resident	
Patrick, Sister Margaret	Resident	Sisters of St. Francis - Alverna Heights
Peters, Eric	Resident	

Reller, Ben	Assistant Director	Bike Syracuse
Ricciardillo, Peter	Resident	
Roaring, Ronda	Publisher	ILovetheFingerLakes.com
Rose, Eileen	Resident	
Rosenthal, Selma	Resident	
Shumacher, Dave	Resident	
Shupe, Scott	Resident	
Sleight, Vonden	Resident	
Smith, Jerry	Former Director	Syracuse Bike Trail

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Personal Communication

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Julian Adams, OPRHP

