



# **Addition Management Plan for Green Lakes East**

An Addendum to the Green Lakes  
State Park Master Plan (2011)

**October 2019**

**Andrew M. Cuomo**  
Governor

**Erik Kulleseid**  
Commissioner





# Addition Management Plan for Green Lakes East at Green Lakes State Park

Towns of Fayetteville and Manlius, Onondaga County

Prepared by the New York State  
Office of Parks, Recreation & Historic Preservation

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## Acronyms & Terms

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Agency	NYS Office of Parks, Recreation and Historic Preservation
AMP	Addition Management Plan
DEC	NYS Department of Environmental Conservation
EIS	Environmental Impact Statement
GLE	Green Lakes East
GLSP	Green Lakes State Park
Master Plan	Final Master Plan/Final Environmental Impact Statement for Green Lakes State Park
MSA	Metropolitan Statistician Area
NYNHP	New York Natural Heritage Program
NYS	New York State
OPRHP	NYS Office of Parks, Recreation and Historic Preservation
(the) Park	Green Lakes State Park
SEQR(A)	State Environmental Quality Review Act

# Introduction

## Purpose and Need

The need to prepare an Addition Management Plan (AMP) is driven by the acquisition of +/- 261 acres adjacent to Green Lakes State Park's (GLSP) southern and eastern boundaries. This land, hereafter referred to as Green Lakes East (GLE), was, in large part, purchased to enhance existing natural buffers and protect viewsheds of, and from within, GLSP. Jurisdiction for the parcels was transferred to the New York State Office of Parks, Recreation & Historic Preservation (OPRHP) in March 2018.

## Scope

The AMP provides direction for the operation, recreational enhancement, and natural resource protection of the GLE addition to GLSP for the next 5 - 10 years. The AMP helps to ensure the safety of park patrons and staff, and provides direction for the day-to-day stewardship, maintenance, and improvement of the addition. The AMP is an addendum to the Green Lakes State Park Master Plan/Environmental Impact Statement (Master Plan). The Master Plan was completed in 2011, prior to this acquisition. Parts of the AMP are summaries of information more fully described in the Master Plan. The Master Plan is available online at the following URL:

<https://parks.ny.gov/inside-our-agency/master-plans.aspx>

## Planning Process

On February 7, 2019, OPRHP hosted a Public Information Meeting at the Fayetteville Village Hall. More than 100 people attended the event, including representatives from several local recreation clubs. Over the course of the evening attendees viewed a presentation on the site's resources and were provided with an overview of the planning process. Attendees were encouraged to share with OPRHP staff the issues, impacts, and alternatives they would like explored and addressed in the AMP. In the month-long Public Comment period that proceeded the meeting, more than 75 comments, and a petition with over 400 signatures supporting the expansion of mountain bike trails, were received via mail and e-mail. These remarks were processed for consideration by the Planning team.

## Vision and Goals

The content of the AMP is consistent with the Vision, Goals, and Actions outlined in the Master Plan.

Factors such as budget constraints, changing intensity and type of land use, natural disasters, and other unforeseen occurrences may necessitate deviations from the AMP.



*The Northernmost Parcel of the Addition*



*Public Information Meeting Attendees in February 2019*



*The Planning Team on Site in November 2018*

# Setting

## Green Lakes State Park

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 western border is Route 257 and the eastern boundary is, in part, defined by Townsend Road. The southern boundary is a jagged line that abuts the village of Fayetteville and a portion of Route 5. See *Figure 01 - Vicinity Map*.

GLSP was established in 1928 when the State of New York purchased 500 acres surrounding Round and Green Lakes. The development of facilities began soon thereafter with the construction of an administration building adjacent to Green Lake, park roads, maintenance facilities, restrooms, and picnic grounds. In the 1930s, 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. After the CCC left the park, the camp remained vacant until 1942 when it was used as a prisoner of war camp during World War II.

OPRHP has continued to acquire lands surrounding GLSP to protect and buffer the Park's lakes and recreational resources from increasing development pressures. In fact, GLSP has nearly doubled in size in the past 20 years. With this most recent addition, Green Lakes East, the Park provides patrons enjoyment of, and protection for, more than 2,000 acres of scenic Central New York.



*Entrance to the Park from Route 290*

## Regional Setting & Recreational Need

The Town of Manlius is part of the U.S. Census Bureau's Syracuse Metropolitan Statistician Area (MSA). According to the Bureau's 2018 Annual Estimates of the Population, the MSA boasts a resident population of approximately 650,502 residents. The population of the Town of Manlius, according to the 2013-2017 American Community Survey 5-Year Estimate, is 32,282 persons. The population estimate reports that 89.9% of Manlius's population identified as White alone, 3.1% Black or African American alone, 3.5% identified as Asian alone, 0.6% from some other race alone, 0.3% as American Indian alone, and 2.6% of residents indicated they were of two or more races. 1.4% of Manlius's population was of Hispanic, Latino, or Spanish origin (they may be of any race). The Census Bureau estimates that there are 13,784 housing units in Manlius. The Town's median household income (2013-2017) is \$79,158.

In the 2020-2025 Draft Statewide Comprehensive Outdoor Recreation Plan (OPRHP, 2019), the Relative Index of Need (RIN) identifies needs of recreational facilities by county on a scale of 1-10, with one being the least needed and 10 being the most needed, as compared to the statewide average. For Onondaga County, recreational needs at, or above, the statewide average are: downhill skiing (8), local winter activities (8), golfing (7), court games (6), swimming (5), biking (5), fishing (5), and snowmobiling (5). Court games, downhill skiing, and snowmobiling are recreational activities not currently provided by GLSP.

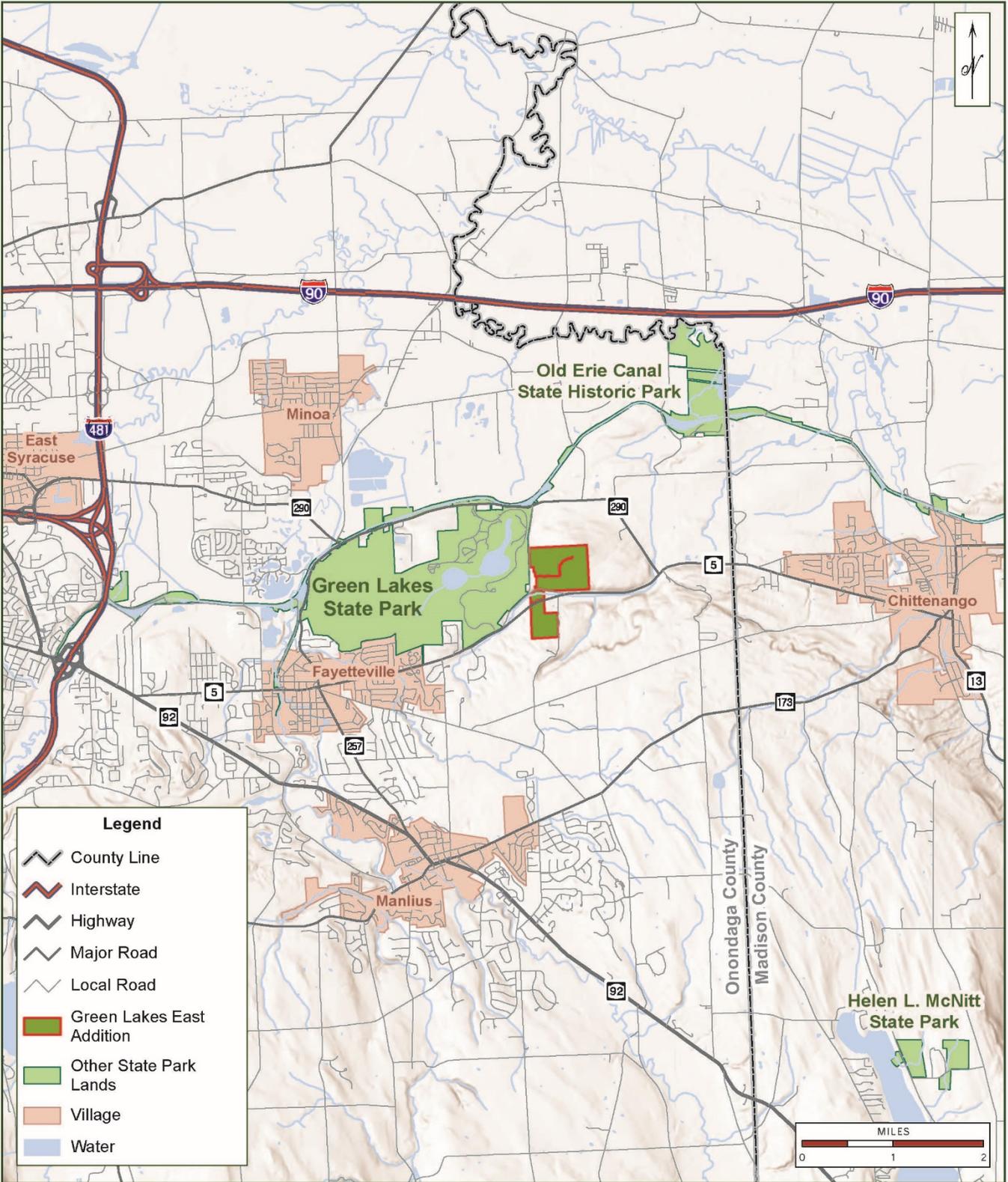


Figure 01 - Vicinity  
Green Lakes East (GLE) Addition

Green Lakes State Park

Map produced by NY State Office of Parks, Recreation and Historic Preservation, July 23, 2018

# Green Lakes East Property Overview

## Access Points & Parking

The Green Lakes East (GLE) addition to GLSP consists of three discrete parcels. The northernmost parcel, GLE-North, is +/-187.5 acres. The middle and southernmost (GLE-South) parcels measure +/-73.6 acres combined. The addition's perimeter is generally lined with trees and thick screens of natural vegetation.

No formal parking areas exist. Historically, property owners accessed the land using roadside pull-offs, rudimentary interior farming roads, and other undeveloped access roads running parallel to private property.



*Roadside Pull-Off on Pierson Road*

## Natural Resources

**Geology.** The defining bedrock geology of the addition is that of the Port Ewen Formation (Dpe), a type of limestone formed between 415 and 380 million years ago. Three formations—the Port Ewen, Syracuse, and Silurian Vernon—exist across GLSP, however, the Port Ewen formation dominates. More detailed information concerning geologic layers at GLSP can be found in the 2011 Master Plan, Chapter 3 - Environmental Setting.

**Topography.** The topography of GLE, the main body of GLSP, and the surrounding area was created by glacial forces between 10,000 and 14,000 years ago. The melt waters flowing from retreating glaciers created steep hillsides and rolling hills. Topography plays a significant role in the ecological and aesthetic value of the GLE addition. A portion of GLE is within the watershed of the Park's significant natural communities, upslope of the maple-basswood rich mesic forest (including some old growth forest), and its rare, well-known meromictic lakes (NYNHP, 2019). Elevations throughout the property reach a maximum height of 772+ feet. Scenic vistas as far away as five miles are visible from many locations within the site.

**Soils.** The soils within GLE 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. Till can be considered easily erodible and generally well drained. More detailed information concerning soils at GLSP can also be found in the 2011 Master Plan, Chapter 3 - Environmental Setting.

**Ecological Overview.** The newly-acquired acreage occupies a small portion of two separate hills and the valley between them. This undeveloped land has hardwood forests, wetlands, and agricultural fields. None of the ecological communities on these parcels meet the New York Natural Heritage Program's (NYNHP) criteria for statewide significance (Lundgren, NYNHP, Correspondence, 2019). The uplands support northern successional hardwoods, successional old fields, successional shrublands and possibly some small patches of maple-basswood rich mesic forest (ibid). Information concerning these community types as they occur at GLSP can be found in the Master Plan, Chapter 3 - Environmental Setting and Appendix A of this document.

Wildlife that likely occur on the property include white-tailed deer, eastern coyotes, wild turkeys, red fox and squirrels. The combination of open fields and tree-lined edges create habitats for multiple species of songbird and raptors. In the fall, the agricultural fields attract large numbers of resident Canada geese. The parcels also support a diversity of reptile and amphibian species.



*Red Fox (Vulpes vulpes)*

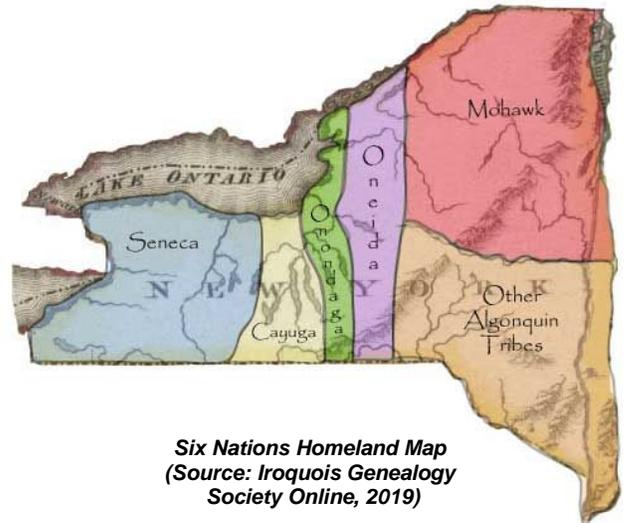
The middle parcel of the addition is dominated by freshwater wetlands. These wetlands are heavily invaded with the non-native common reed (*Phragmites australis*). Pools Brook, which runs through this parcel, is stocked annually with brook trout, occasionally with brown trout, and provides habitat for several other fish species including creek chub, eastern blacknose dace, white sucker, brook stickleback, and central mudminnow (NYSM, 2016; DEC, 2019).

**Rare Species.** Although several rare species are known historically from the vicinity (OPRHP, 2011), surveys in GLSP have not documented any current occurrences of rare plant or animal species (NYNHP, 2019). See *Appendix A*. The GLE property has not been surveyed specifically for rare species, but NYNHP staff evaluated the addition as having low potential for rarities (Lundgren, NYNHP, Correspondence, 2019).

**Invasive Species.** OPRHP staff have identified the prevalence of several non-native invasive plants on site due, in part, to land disturbance in previous years and the site's proximity to roadways. As of May 2019, the following invasive plants have been recorded on the property: pale swallow-wort, *Phragmites*, purple loosestrife, multiflora rose, dame's rocket, common buckthorn, garlic mustard, Asiatic bittersweet, honeysuckle, autumn olive, and Japanese barberry (iMapInvasives 2019; Hughes Correspondence, 2019; Bilz Correspondence, 2019). In addition, OPRHP staff have noted the presence of emerald ash borer (Brincka Correspondence, 2019). A full survey for invasive flora or fauna is expected to be conducted at GLE in the upcoming year.



*Japanese Barberry (Berberis thunbergii), an Invasive Species*



*Six Nations Homeland Map (Source: Iroquois Genealogy Society Online, 2019)*

## **Cultural History**

GLSP and the surrounding area has a significant cultural history. Prior to Anglo-European colonization, this area was part of the Homelands to the Onondaga Tribe of the Six Nations, also known as the Haudenosaunee. In the late 1700s, much of central New York—including the land that is now GLSP—was part of the Military Tract of Central New York. Under the Tract system, land was set aside as payment to Revolutionary War soldiers for their service. Accordingly, numerous farms were developed throughout the late eighteenth and early nineteenth centuries. Much of this land remains in agricultural use today, including segments of the GLE addition.

Staff members from the Historic Preservation Field Services Bureau visited GLSP in 2011 as part of the master planning process. At this time, staff explained that Native American habitation has been documented within this portion of the Central Region, however, detailed, park-specific, information was inconclusive. Ongoing research will be required to determine specific areas of archeological sensitivity within GLSP and its GLE addition.



*A View Southeast Toward Green Lakes State Park*



*Cellular Tower on the Northern Parcel*



*Agricultural Fields on the GLE-North Parcel*

## Scenic Resources

The establishment of GLSP was focused on protection of the area’s two meromictic lakes, and the desire to preserve forested vantage points of them. OPRHP principally acquired the GLE addition to enhance these natural buffers and viewsheds. The northernmost GLE parcel overlooks the Park’s historic golf course, designed by one of the game’s most innovative course architects, Robert Trent Jones. With panoramic views of the surrounding hills and lakes, the sightlines to—and from within—the golf course are a unique component of the GLE addition’s character. These recently-acquired parcels help protect this special visual dynamic from increasing development pressures on the area.

## Recreation Use

Prior to acquisition, property owners of the land now referred to as Green Lakes East permitted community members to hunt the site’s agricultural fields and woods. Consistent with OPRHP’s policy to allow hunting on newly acquired land where it has occurred prior to acquisition (OPRHP, 2010), OPRHP allowed recreational hunting at the property via self-issue permits during the 2018 deer hunting season.

## Infrastructure

**Structures.** An 80-foot tall cellular tower, operated by Independent Wireless One, Inc. is located on private property that runs through the center of the northernmost parcel of the addition. Property owners have granted OPRHP a 10-foot, non-exclusive, ingress/egress access easement to utilize the informal roadway that runs up to the structure from Pierson Road. The cellular tower is partially screened by a grove of maples and other deciduous tree species.

One underground stone cistern is also located on-site. This structure, a remnant from when the site was used extensively for agriculture, is intended to be left in situ and filled with gravel for health and safety purposes.

**Water and Electric.** No potable water systems or sanitary sewage disposal systems currently exist on-site. Electric service to the cell tower area—which is not park of State Park property—is provided by Niagara Mohawk Power Corporation.

## Permits & Leases

Historically, portions of the recently-acquired property have been in private agricultural use. When jurisdiction for the parcels was transferred to OPRHP in 2018, the Agency allowed this use to continue through the issuance of a Special Use Permit/Agricultural Lease, renewable on an annual basis. The Permit was reissued in 2019.

Terms and conditions of Special Use Permits issued by the Central Region include that OPRHP reserves the right to cancel at any time a scheduled or on-going program, activity or event due to improper compliance with Agency policies and procedures.

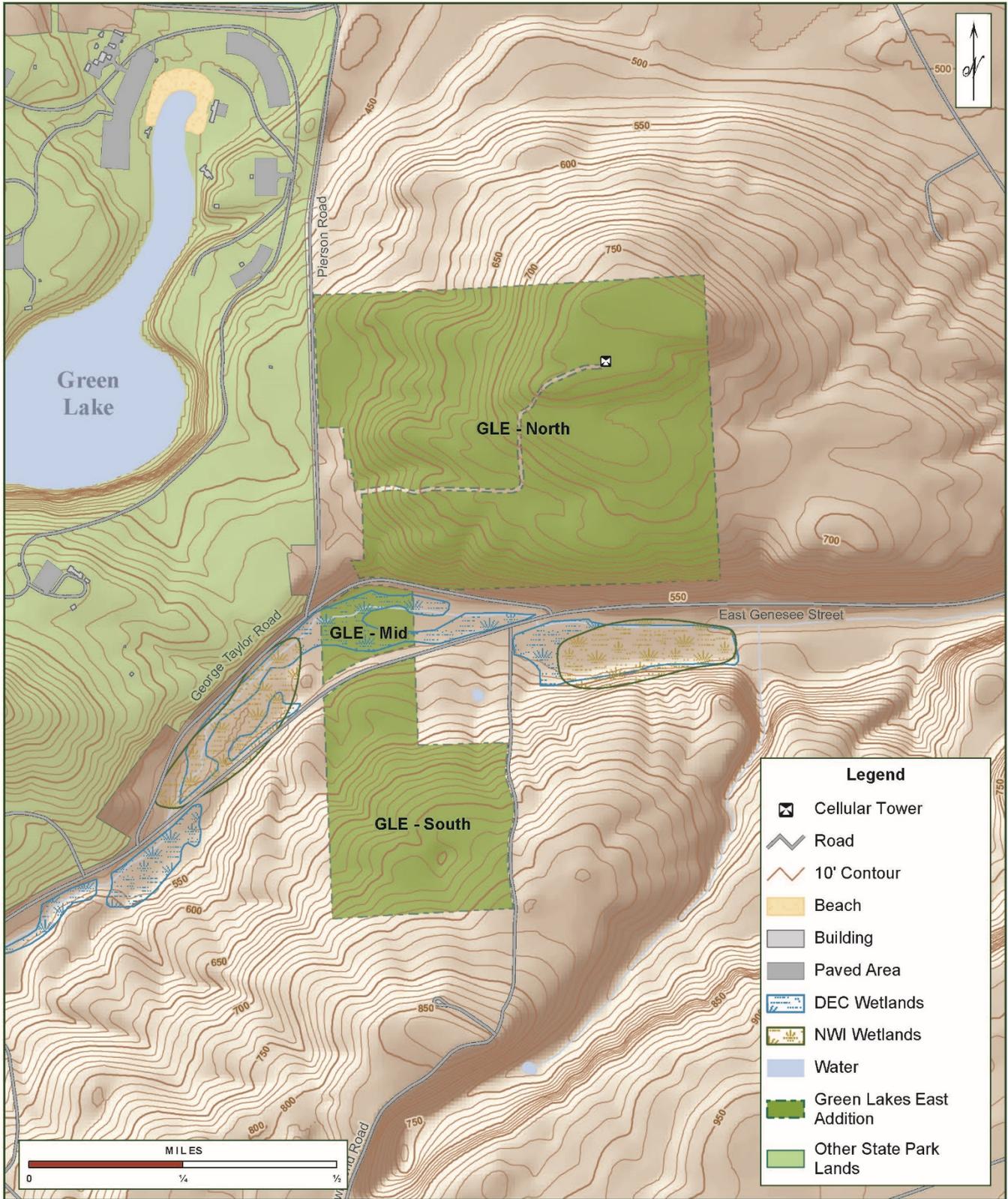


Figure 02 - Boundary and Topography  
Green Lakes East (GLE) Addition

Green Lakes State Park

Map produced by NY State GIS Bureau, July 23, 2019

# Management Plan

## Recreation Enhancement

GLSP is classified as a Recreation Park. In the main body of the Park there are a wide variety of recreation resources available: swimming, hiking, mountain biking, golf, disk golf, cross country skiing, snowshoeing, picnicking, fishing, nature studies, as well as opportunities for park visitors to relax and enjoy the area's natural and scenic beauty. The Green Lakes Trails Plan—a component of the Master Plan—identifies several goals dedicated to the expansion of recreation opportunities at the Park: permit hiking and running on all newly developed and designated trails, increase mountain bike loop opportunities, and preserve cross-country skiing and snowshoeing as allowed uses throughout the trail system in winter months.

New opportunities at the GLE addition to GLSP must achieve a balance between recreation interests and the preservation and protection of natural, cultural, and physical resources. Several recreational activities and amenities including, but not limited to, disc golfing, snowmobiling, and scenic viewing platforms, were proposed for the addition during the Public Information Meeting and subsequent Comment Period. The Planning Team carefully evaluated each alternative but determined that many suggestions were not the most appropriate alternative for the addition. Some reasons these alternatives were not identified as preferred alternatives include: a lack of infrastructure and/or utilities to support the proposed activity; a desired recreation amenity could be located elsewhere within the region; potential interference with historical farming activity on the land; other alternatives accommodated a greater diversity of park users; the introduction of an activity/amenity would require significant mitigation; and protection of viewsheds and natural buffers including watershed protection of the two meromictic lakes.



*Trails Planning Team on Site, June 2019*

### **Goal #1 – Trail Development**

The Trails Plan (Master Plan, Appendix B) provides for the development of an organized trails system to accommodate a variety of trail uses and provide interpretive experiences throughout the Park. Implementation of the Trails Plan at GLSP over the years has resulted in an organized trail system that accommodates walking/hiking, biking, cross-country skiing, and other activities. The Trails Plan provides maintenance guidelines, direction for accommodating a variety of year-round recreational uses, and advocates for sustainable design principles wherever possible.

The following alternatives were evaluated in the planning process for GLE. The Preferred Alternative, **Alternative iii**, best meets OPRHP’s mission, its vision for the Park, and helps to improve recreational opportunities at GLSP.

<u>Alternatives</u>	<u>Considerations</u>
i) <i>Status Quo: No Action</i>	<ul style="list-style-type: none"> <li>▪ Patrons exploring the site informally may impact natural resources.</li> <li>▪ Enforcement challenges.</li> <li>▪ No additional maintenance work required.</li> <li>▪ Reduces the potential spread of invasive species.</li> <li>▪ Does not address public demand.</li> </ul>
ii) <i>Develop trails across all parcels of the GLE addition.</i>	<ul style="list-style-type: none"> <li>▪ GLE-Mid poses access and site restrictions that limit recreation opportunities.</li> <li>▪ Limited areas appropriate to create access points or harmonious connectivity.</li> <li>▪ Would require multiple road crossings, including highway crossing.</li> <li>▪ Increases demands of maintenance staff.</li> </ul>
iii) <i>Develop non-motorized, multi-use trails on GLE-North.</i>	<ul style="list-style-type: none"> <li>▪ Addresses public demand for recreation on site.</li> <li>▪ Opportunity for partnerships with community groups.</li> <li>▪ Access may require road crossing from main body of Park.</li> <li>▪ Expands demands of maintenance staff.</li> </ul>



*Winter Recreation Enjoyed by Patrons of All Ages in New York State Parks*

**Goal #1A – Winter Trail Recreation**

With an average snowfall of more than 120 inches per year in the Syracuse Metropolitan Statistician Area, GLSP offers park patrons a wide variety of winter recreation opportunities.

While the interior portions of the GLE-North parcel are utilized for agricultural purposes during the growing season, in winter months, after the harvesting season has ended, the GLE-North parcel may offer a unique opportunity for Park staff and local user groups to collaborate and explore dynamic winter recreation opportunities.

To support Central New York’s vibrant and growing community of winter recreationists and year-round bike enthusiasts, Park staff will explore the feasibility of creating winter recreation trails across the northernmost GLE parcel. In accordance with the Park’s Trails Plan, the proposed winter trails could be accessible to cross-country skiers, snowshoers, fat biking aficionados, and other designated user groups.



***Views from the Green Lakes East Addition***

The development of non-motorized, multi-use trails at GLE-North will expand recreation opportunities for multiple user groups. New trails can be designed to take advantage of the natural and scenic resources of the site and may provide interpretation and education opportunities relating to those resources. The existing 10-foot, non-exclusive access easement from Independent Wireless One provides the ability for staff and park patrons to cross the site so long as the crossing does not interfere with land use by the easement owner.

The formation of seasonal winter-use trails across the GLE-North parcel—when the area’s agricultural fields lay dormant—would be complementary to the addition’s year-round trail network.

Parks staff will explore the feasibility of collaborative relationships with local recreation groups in order to develop and maintain trails in the GLE-North parcel. Volunteer groups would work in partnership with Park staff to plan, develop, monitor, and maintain the proposed trails on the site.

Additional trail development may be considered in the future to support ongoing initiatives to expand regional connectivity and recreation. A more detailed planning and environmental review process, along with Agency support, will be required to pursue this opportunity.

Trail design and development will follow the procedures and guidelines established in the “Trails Technical Document #1, Standards and Guidelines for Trails in NYS Parks.” *See Appendix B.* Prior to implementation, trail routing will be reviewed by OPRHP staff to avoid impacts to natural resources, areas with invasive species, and to ensure trails are sited in a sustainable manner.



*Canada Geese on Green Lake*



*Shotgun Hunting in New York State Parks*



*Bow Hunting*

## **Goal #2 – Hunting**

New York State contains an extraordinary diversity of wildlife that make a unique contribution to the ecological and recreational resources of the state. According to the DEC, hunting is among the most popular forms of wildlife recreation in the state, drawing nearly 700,000 New Yorkers and over 50,000 out-of-staters. Hunting is a safe and economically important outdoor pursuit, helping to balance wildlife populations while fostering an understanding and respect for the environment and the complexity in which it functions.

Hunting is regulated under New York State laws and DEC regulations. Under State law, the use of rifles for deer hunting is prohibited in Onondaga County. In addition, hunters hunting on lands under OPRHP's jurisdiction are required to obtain a regional hunting permit that may have additional restrictions. Under OPRHP regulations recreational trapping is prohibited.

Evidence of over-browsing by deer throughout the main body of Green Lakes has been observed (Rogers Correspondence, 2019). This is an indication of a high deer population. The types of damage associated with deer are degraded forest ecosystems, damage to landscaping, and vehicular collisions. Human health concerns related to deer include the transmission of tick-borne diseases such as Lyme disease, babesiosis, and ehrlichiosis.

GLSP also has a significant population of resident Canada geese. In great numbers, this population creates natural resource and public health concerns. Goose populations may overgraze, damaging important plant species and their droppings can impact water quality.

The following alternatives were evaluated in the planning process. The Preferred Alternatives, **Alternative i**, **Alternative ii**, and **Alternative iii**, best meet OPRHP’s vision and goals for the Park, help to enhance the stewardship of park resources, and improve recreational opportunities and experiences at Green Lakes.

<u>Alternatives</u>	<u>Considerations</u>
i) <b>Status Quo:</b> <b>Continue deer hunting on northern parcel.</b>	<ul style="list-style-type: none"> <li>▪ Historically, property has been hunted with bow, crossbow, gun, and muzzleloader.</li> <li>▪ Practice is consistent with OPRHP policy to allow historical hunting uses on acquired property.</li> <li>▪ Data gathered from hunting could help land managers make informed decisions about deer management, e.g. current population size, impacts on biodiversity.</li> <li>▪ Access challenges and parking.</li> <li>▪ Potential enforcement challenges.</li> <li>▪ Interaction between hunters and other Park users.</li> <li>▪ Continue legacy of hunting on site.</li> </ul>
ii) <b>Allow hunting on GLE-South.</b>	<ul style="list-style-type: none"> <li>▪ Historically, property has been hunted with bow, crossbow, gun, and muzzleloader.</li> <li>▪ Consistent with OPRHP policy to allow historical hunting uses on acquired property.</li> <li>▪ Data gathered from hunting could help land managers make informed decisions about deer management, e.g. current population size, impacts on biodiversity.</li> <li>▪ Access challenges and parking.</li> <li>▪ Potential enforcement challenges.</li> <li>▪ Parcel is of smaller size.</li> </ul>
iii) <b>Expand fall hunting season to include Canada Goose.</b>	<ul style="list-style-type: none"> <li>▪ Designated in-season deer and Canada goose hunting will be permitted on both GLE-North and GLE-South parcels.</li> <li>▪ Population control will benefit natural resources.</li> <li>▪ User group conflicts with a longer hunting season on site.</li> <li>▪ Potential conflicts with agricultural uses.</li> <li>▪ User demand to expand huntable game.</li> <li>▪ OPRHP retains discretion to shorten duration of hunting season on-site.</li> <li>▪ Goose hunting would be restricted to the September season.</li> </ul>
iv) <b>Expand hunting to include small game.</b>	<ul style="list-style-type: none"> <li>▪ User demand to expand huntable game.</li> <li>▪ Hunting season duration at site would be longer than desired to accommodate movement of other recreationists.</li> </ul>
v) <b>Eliminate hunting entirely.</b>	<ul style="list-style-type: none"> <li>▪ Hunting is available at 5 other Parks in the Central Region.</li> <li>▪ Some public opposition.</li> <li>▪ Would end legacy hunting.</li> <li>▪ Opportunity to gather species data lost.</li> <li>▪ Deer population will continue to impact natural resources.</li> </ul>

Hunting as a recognized recreation activity has been successfully conducted at more than 75 Parks, three Historic Sites, and three golf courses in the New York State Parks system. The Agency has a proven track record for implementing the proper policies, procedures, and permitting system to prevent unnecessary user conflicts.

State Parks has the authority to provide additional regulations and restrictions on recreational hunting within its facilities based on site-specific considerations. Bow, crossbow, shotgun, and muzzleloader will be permitted, in season, at GLE-North and GLE-South. Trapping is prohibited. All hunters are required to obtain a self-issued permit, either online or in person at the Park Office, before hunting. Hunters shall comply with all applicable sections of the Environmental Conservation Law, the Parks Recreation and Historic Preservation Law, and the Park permit. Provisions within these documents include, but are not limited to, the ability to erect a “non-permanent” tree stands, the prohibition of “cutting, placing nails or screws into, or otherwise damaging trees or other vegetation,” and the requirement that “firearms will not be loaded, or bows nocked with arrows until entering the hunting area.”

All hunting areas at GLE will be clearly signed and posted in accordance with OPRHP policy. Signs will be permanent and present year-round.

## Natural Resource Protection

Natural resource protection is necessary to preserve the natural communities and native biodiversity within GLSP, and to support water and ecosystem health. The AMP is consistent with, and will further the implementation of, the natural resource goals and natural resource protection strategies identified in the Master Plan, specifically wetland, wildlife, and invasive species management efforts.

There are no facilities planned for the acquired land other than natural surface trails. Trail design and development will follow sustainable practices included in the Agency’s “Standards and Guidelines for Trails in NYS Parks” document. Trail planning will be sensitive to the fact that part of the addition sits at the top of the meromictic lakes’ watershed and that keeping that section of the addition forested is critical to supporting lake hydrology. Furthermore, the parcel will be surveyed for invasive species for potential management efforts. No development is planned near, or in, the wetlands. Consistent with the Master Plan goal to “develop appropriate wildlife management strategies,” hunting will be allowed to manage deer and Canada goose populations.

The continued application of the Master Plan’s ecosystem-based management principles to the operational and resource protection activities at GLE recognizes the importance of allowing natural processes and succession to govern ecosystems, while also working to enhance passive recreation opportunities, such as wildlife viewing, in natural habitat.

## Scenic Resource Protection

The GLE addition to GLSP has significant scenic value. Consistent with the goals of the Master Plan, the property was acquired to protect and preserve park viewsheds, and to maintain historic vistas and landscapes. With no proposed development other than trails, permitted hunting, and agricultural leases at the site, the preservation of the property helps to accomplish the Park’s Master Plan goal to “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.”

## Interpretation & Education

The breadth and scope of interpretative themes within New York State Parks spans more than 400 years of history. Consistent with the Master Plan goal to expand interpretation and educational opportunities throughout GLSP, the GLE addition will be incorporated into Regional and Park efforts to develop interpretive signage and programming opportunities that discuss a myriad of historic, natural, and social themes.



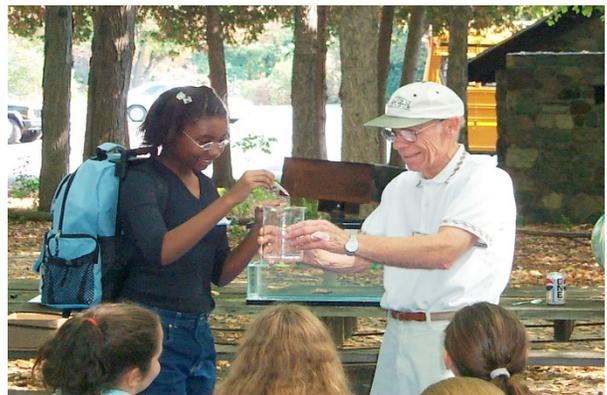
*Purple Loosestrife (Lythrum salicaria), an Invasive Species*



*GLE-North Seen from #10 Tee at GLSP Golf Course*



*Presentation at the Environmental Education Center*



*Learning About Water Resources*

## Access & Parking

As a series of undeveloped agricultural fields and woods, there are no formal parking areas at GLE. The potential need for dedicated parking areas to access the recently-acquired acreage was discussed at length during the planning process. Establishing parking at State Park facilities involves a thorough site study and analysis of existing conditions—which includes topographic and geotechnical surveys, wetland delineations, identification of permit requirements, drainage considerations—and an assessment of patron access needs and safety.

The following alternatives were evaluated in the planning process. The Preferred Alternatives, **Alternative ii** and **Alternative iv**, best meet OPRHP’s mission and its vision for the Park.



Lakeview Parking Lot

<u>Alternatives</u>	<u>Considerations</u>
i) <i>Status Quo</i> : No designated access or parking for GLE-North.	<ul style="list-style-type: none"> <li>▪ Patrons will find their own way(s) to access the site.</li> <li>▪ Safety and enforcement challenges with unrestricted access.</li> </ul>
<b>ii) Formalize access to GLE-North with trail from Lakeview parking lot.</b>	<ul style="list-style-type: none"> <li>▪ Lakeview is the closest existing parking facility to the addition; can park 136 vehicles.</li> <li>▪ Lakeview lot is currently underutilized and can support additional volume.</li> <li>▪ Patrons will hike +/-0.2 miles (~1,040 LF) from Lakeview lot to GLE-North.</li> <li>▪ Informal trail to Pierson Road exists east of Lakeview parking lot.</li> <li>▪ Patrons may need to walk the golf course perimeter around the #4 greens.</li> <li>▪ Lakeview is closed in winter to protect lake water quality from road salt.</li> <li>▪ Potential to plow portions of Lakeview lot in winter.</li> <li>▪ Patrons must cross Pierson Road.</li> <li>▪ Work with Town to sign road for pedestrians, explore need for culverts, etc.</li> </ul>
iii) <i>Create gravel lot off Pierson Road where roadside pull-off (school bus/snowplow turnaround) exists.</i>	<ul style="list-style-type: none"> <li>▪ Soils are not ideal for parking vehicles when wet.</li> <li>▪ Drainage issues.</li> <li>▪ Potential for overcrowding &amp; overnight parking; would require Park Police oversight.</li> <li>▪ Trash accumulation.</li> <li>▪ Lot design must be compatible with farming access needs.</li> </ul>
<b>iv) Access GLE-South using any legal access points.</b>	<ul style="list-style-type: none"> <li>▪ Few patrons expected to utilize parcel as access will be for hunting only.</li> <li>▪ No Parking signs exist along Townsend Road.</li> </ul>
v) Create gravel lot off Townsend Road to access GLE-South.	<ul style="list-style-type: none"> <li>▪ Soils are not ideal for parking vehicles when wet.</li> <li>▪ Drainage issues.</li> <li>▪ Potential for overcrowding and overnight parking; would require Park Police oversight.</li> <li>▪ Trash accumulation.</li> <li>▪ Lot design must be compatible with farming access needs.</li> </ul>

Providing safe, limited access to recreation opportunities at GLE is recommended to enhance GLSP patrons’ experiences. Potential impacts to the addition will be controlled through a limited access system. Park staff will post signage identifying official access points to the GLE property and these points will be demarcated on official Park maps and publications.

## **Operations**

Site management will be conducted in such a manner as to responsibly steward the property's resources while also providing safe recreational activity access. Regional and Park staff will endeavor to streamline operations to improve efficiency, promote sustainability, and to reduce barriers to access and enjoyment.

### **Management**

The GLE addition will involve minimal active management. No staff presence will be assigned to the property on a daily basis. The main body of the Park is staffed daily. Park staff generally consists of a Park Manager, Park Supervisor, and approximately eight Park Workers. During the summer operating season there are often more than 50 temporary and seasonal employees. The Park Manager will deal directly with staff and personnel to address management needs. Management practices will be consistent with current operating procedures and recommendations within the Master Plan. Any site-specific project or activity will be assessed for its compatibility with existing management, maintenance, recreation, and resource protection strategies and plans.

### **Maintenance**

Maintenance operations will be based out of the maintenance facility located in the main body of the Park. Park maintenance will be performed by a mix of fulltime and seasonal personnel. Employees will be directed to visit the GLE addition on a regularly scheduled, recurring, basis consistent with existing maintenance regimens. Routine maintenance will ensure the site can be accessed safely and enjoyed by all patrons. Maintenance practices may be modified in anticipation of special projects or events held on-site.

Staff will make a conscious effort to build and sustain volunteer agreements with committed community members and user groups. Organizations such as the Town of Manlius; the Village of Fayetteville Recreation; East Area Family YMCA; Syracuse Bike; Fleet Feet; CNY Dirt; Friends of Recreation, Conservation and Environmental Stewardship (FORCES); Excelsior Conservation Corps; the OPRHP Invasive Species Strike Teams and trail crews may be invited to participate in special or ongoing site projects. The development of a responsible, efficient, and conscientious volunteer base capable of maintaining and improving the site—with oversight from Park staff—will help to ensure appropriate site stewardship and management.

### **Permits**

Special Permits are issued for various recreation events, geocaching, orienteering events, and other unique activities. As of April 2019, a new, one-year Special Use Permit/Agricultural Lease was issued for the planting and harvest of crops on GLE-North. As of August 2019, permits for hunting on GLE-North or GLE-South are self-issued and may be obtained online or in person at the Park office. OPRHP reserves the right to cancel at any time an activity due to improper compliance with Agency policies and procedures. OPRHP further reserves the right to exercise any controls over the permitted activity which are felt to be in the public interest.

### **Public Health and Safety**

The State Park Police (Central) will have lead responsibility for ensuring the safety and security of the property. Park Police patrol and respond to all requests for emergency service involving law enforcement, safety, and security matters at Green Lakes. All accidents, crimes, and emergency situations are reported to the Park Police and appropriate local authorities. The Park Police at Green Lakes are based out of the Park Police headquarters, northwest from the beach area. All park areas are routinely patrolled by Park Police, and patrol routes will be expanded to include Pierson Road and the perimeter of the GLE addition. Park Police supervisory staff will meet with local law enforcement and Fire Departments to coordinate matters of site-specific, mutual concern. Park Police will also meet with local Ambulance Service and Emergency Medical Responders regarding dispatch of Emergency Medical Services (EMS) in case of emergency.

Tick-borne illnesses are of special concern to OPRHP, DEC, and State Department of Health staff statewide. Information on ticks, fire danger, and trail conditions will be posted as appropriate.

### **Public Notification and Signage**

Signage is intended to alert and guide the public as they enter and enjoy the site. Signage further aids Park Police and Park staff to maintain control of the property. Signs and information kiosks will be posted in appropriate locations to identify: OPRHP boundaries, rules and regulations, hours of operation, Park Police contact information, trail usage and trail maps, special permits, tick awareness, wayfinding assistance, and more.

## Environmental Review

Environmental review of proposed actions at State Park facilities is conducted in accordance with the State Environmental Quality Review Act (SEQR). OPRHP fully integrates the planning and environmental review processes. In general, activities that involve maintenance, rehabilitation, replacement in-kind, minor construction, minor temporary uses, mapping and information collection, and routine agency administration and management do not require further environmental review under SEQR. On the other hand, actions that are new or involve a significant change from existing conditions or uses are likely to require further environmental review under SEQR. The extent of environmental review needed can vary depending on the scope of the project and its expected impacts.

The AMP outlines the type of recreational and other land uses allowed on the newly acquired property. Potential uses of the property were the focus of the Public Meeting and subsequent Public Comment period. After further analysis by OPRHP, proposed actions include allowing hunting to be continued as an historical use on GLE-North and GLE-South, allowing agricultural harvest to be continued as an historical use on GLE-North, and development of a non-motorized, multi-use trail system on GLE-North. No new parking areas are proposed to support these uses. Parking for GLE-North will be via the Lakeview parking lot within the main park area with a connector path. Parking for GLE-South for hunters will be via nearby legal access points. Directional, trail, and interpretive signage will be installed as necessary to properly inform the public about access points, trail locations, safety, and educational information. Partnerships with local recreation groups will be explored to support the implementation of the AMP.

The decision to allow hunting to be continued as an historical use is consistent with Parks Policy on Fish and Wildlife Management in State Park and Historic Sites (2010). As hunting is a recognized and allowed recreation activity at many OPRHP facilities across the state, and there is no physical alteration associated with this action, it is considered a Type II action under SEQR Section 617.5 Type II (26): “Routine or continuing agency administration and management, not including new programs or major reordering of priorities that may affect the environment,” and is exempt from further review.

The decision to allow historical agricultural practices to continue with a Special Use Permit/Agricultural Lease is considered a Type II action exempt from further review under SEQR Section 617.5 Type II (4): “Agricultural farm management practices, including construction, maintenance and repair of farm buildings and structures, and land use changes consistent with generally accepted principles of farming” and (32): “license, lease and permit renewals, or transfers of ownership thereof, where there will be no material change in permit conditions or the scope of permitted activities.” Under terms of the Special Use Permit/Agricultural Lease, OPRHP reserves the right to cancel at any time an activity due to improper compliance with Agency policies and procedures. To ensure farming practices do not inhibit environmental stewardship goals, the Park will continue to assess the use and the issuance of a Special Use Permit/Agricultural Lease. This evaluation may include conversations and partnerships with Cornell Cooperative Extension of Onondaga County and the Onondaga County Soil & Water Conservation District. In the event the use is discontinued, the Park plans to explore an initiative to revegetate the area with native grasslands to promote resilience and species diversity, including habitat for grassland dependent birds.

Development of a new trail system on the property will require further on the ground assessments to determine appropriate trail alignments. This will include surveys for invasive species and further analysis of topography and on-site resources. Any trail planning to date has been conceptual in nature. Future trail planning and design will determine the level of review required under SEQR. This review will involve the preparation of an Environmental Assessment Form. If potential significant adverse impacts are identified, further analysis will be required to avoid or mitigate those impacts. If these impacts are unavoidable and significant, an Environmental Impact Statement may be required.

The AMP is consistent with the resource protection goals and strategies identified in the Green Lakes Final Master Plan/Environmental Impact Statement. The scenic viewshed and natural resource protection buffer will be maintained. Trail design and development will follow the Agency’s trails standards and guidelines for protection of resources. Approaches to interpretation and education, management, and operations mirror those identified in the Master Plan.

## Conclusion

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New York State is endowed with an abundance of natural, recreational, and cultural resources. With a mission to provide safe and enjoyable recreational and interpretive opportunities for all residents and visitors—to be responsible stewards of these inimitable resources—the ongoing interest in, and protection of, our State’s natural places is of utmost importance.

Consistent with the Master Plan goal to protect lands within, and adjacent to, Green Lakes State Park, the AMP sets forth a vision to sustainably enhance, expand, and protect the Central Region’s flagship park. Implementation of the AMP will further enhance the positive impacts State Parks engender in and around their host communities: from protecting incomparable natural resources to expanding amenities that support both economic and public health. Implementation of the AMP will help to ensure that the natural, cultural, and physical assets of Green Lakes continue to be available and protected for future generations, and that the Park is forever a place for visitors to enjoy, learn, and appreciate these unparalleled resources.

Bringing the AMP to fruition will require a substantial investment of time and resources from OPRHP with support from its public and private partners. These partnerships are a significant contributing factor to the successful protection and enhancement of Green Lakes. Park staff greatly appreciate the efforts of volunteers and partner organizations and look forward to their continued support as Green Lakes State Park expands its stewardship responsibilities into Green Lakes East.



*Green Lakes State Park*

## References

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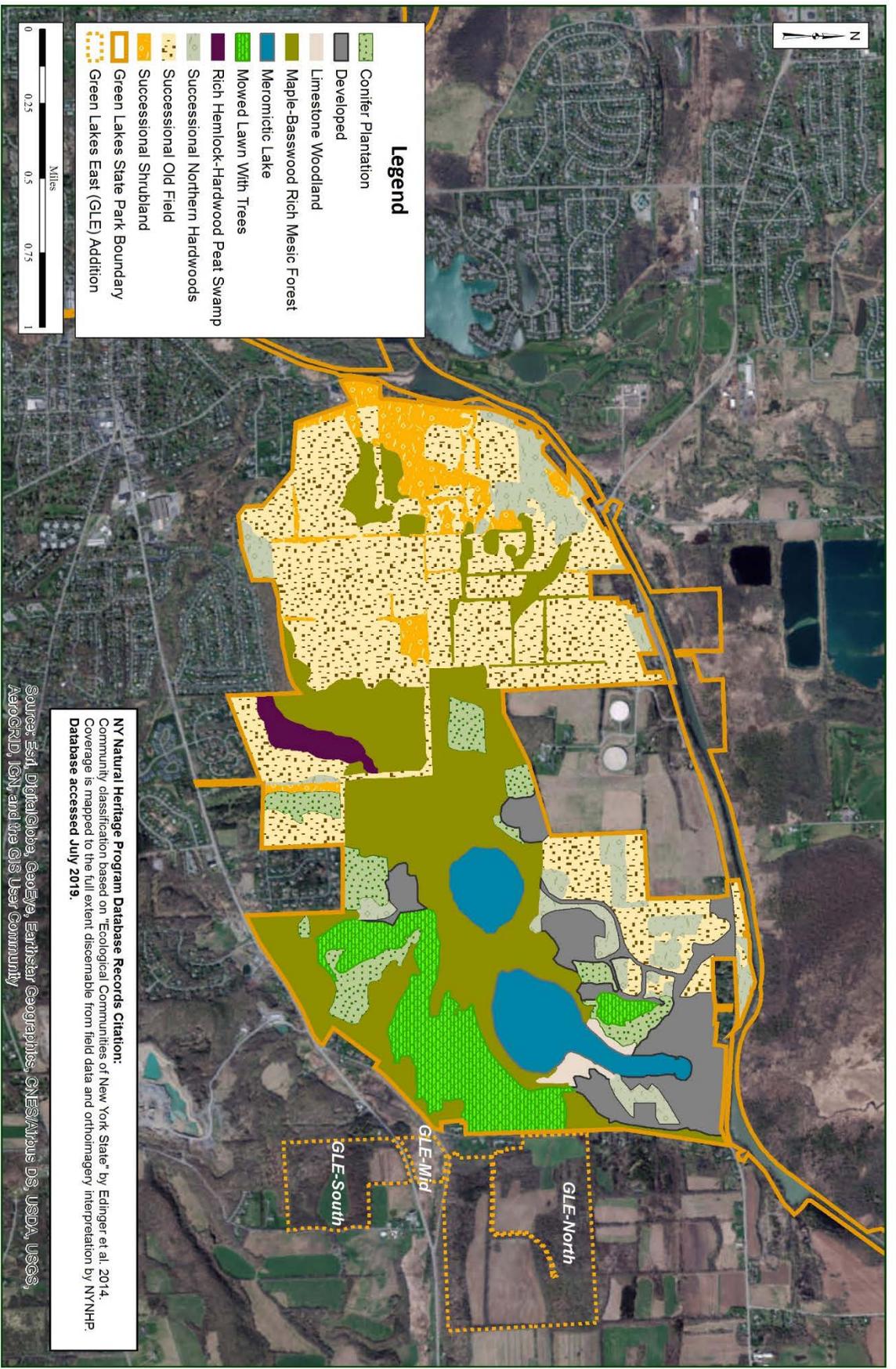
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## Personal Correspondence

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# APPENDICES



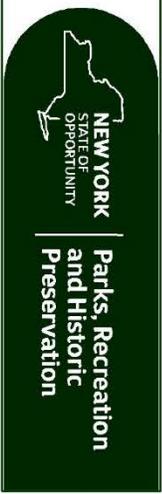
**NY Natural Heritage Program Database Records Citation:**  
 Community classification based on "Ecological Communities of New York State" by Edinger et al. 2014.  
 Coverage is mapped to the full extent discernable from field data and orthomagey interpretation by NYNHP.  
 Database accessed July 2019.

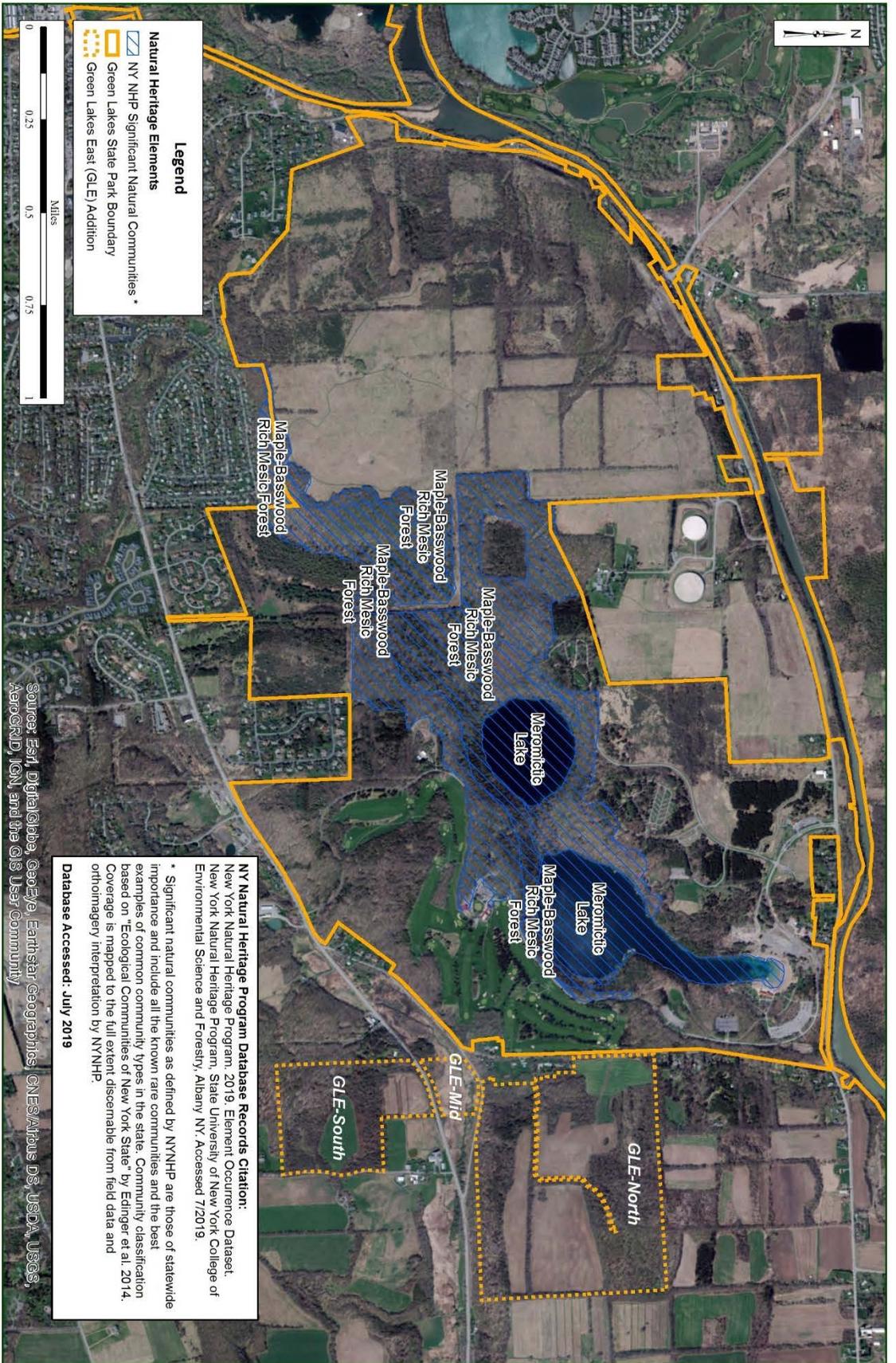
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

# Green Lakes State Park

## Ecological Communities

Map produced by NYS ORNHP GIS Bureau, October 22, 2019





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**NY Natural Heritage Program Database Records Citation:**  
 New York Natural Heritage Program, 2019. Element Occurrence Dataset. New York Natural Heritage Program, State University of New York College of Environmental Science and Forestry, Albany NY. Accessed 7/2019.

\* Significant natural communities as defined by NYNHP are those of statewide importance and include all the known rare communities and the best examples of common community types in the state. Community classification based on "Ecological Communities of New York State" by Edinger et al. 2014. Coverage is mapped to the full extent discernable from field data and orthoimagery interpretation by NYNHP.

Database Accessed: July 2019

# Green Lakes State Park Significant Natural Communities

Map produced by NYS Office of Parks, Recreation and Historic Preservation, October 22, 2019.



# Trails Technical Document #1

## Standards and Guidelines for Trails in NYS Parks

Prepared by  
NYS Office of Parks, Recreation and  
Historic Preservation  
Planning Bureau  
Agency Building 1  
Empire State Plaza  
Albany, NY 12238

April 29, 2010



## Standards and Guidelines for Trails in New York State Parks

A primary goal for all New York State Parks Trail Systems is to develop sustainable trails that have minimal impacts on the environment, require little maintenance, and meet the needs of the users. This document is one of a series of technical documents developed by State Parks to provide standards and guidelines for trail design and development, accessibility, and trail assessment and maintenance techniques that help ensure a sustainable trail system. Additional topics include guidelines for trail signage, trail monitoring, and trail closure and restoration. The complete list of technical documents is provided on the web at: <http://www.nysparks.state.ny.us/recreation/trails/technical-assistance.aspx>.

These documents were designed for use within New York State Parks but can be used as resources for trail projects outside of the Parks. Within State Parks, use of these documents for implementation of trail projects will be done in conjunction with a review and approval process as laid out in *Technical Document 7 - Trail Project Approval Process for NYS Parks*. These documents may be updated periodically. Additional documents will be developed in the future as part of this series.

This document provides standards and guidelines for trail development in New York State Parks. It identifies the need for standardized trail signage, provides trail development standards for a variety of trail types including for accessible trails, and includes a list of maintenance responsibilities and available manuals to be used as resources. This document also provides information on trail closure and restoration and trail monitoring.

### A. Trailheads, Kiosks, Signage

It is important that trail users have access to information regarding trails to enhance their experience. Trail information can be disseminated in a wide variety of formats, including kiosks, brochures, websites, guidebooks, and on-trail signs and blazes. But even with good trail guides and websites available, trail signage is indispensable. If trail users are uncertain about trail location or direction, they may become disoriented, or they may create new trails that damage the environment and become a challenge to rehabilitate.

A standardized sign system is a means of creating a cohesive and consistent image for the Park, enhancing its overall appearance, and providing simple guidelines that managers can follow to sign trails. The design and usage of all trailhead and kiosk signage and trail markers will be guided by *Technical Document 2: Trail Signage Guidelines for the New York State Park System*. This document includes information on naming and assessing trails, etiquette and safety, materials and techniques, trail symbols, types of signage, kiosks, sign maintenance, and other resources.

### B. Trail Development Standards

Trails should be developed using appropriate design standards based on desired uses. Considerations should be made for either a single or multiple treadway, tread width and surface, corridor and vertical clearance, sight distance, grades, and turning radius to provide an appropriate trail experience for expected users and levels of use.

Trail development and maintenance will be guided by design standards as provided in the table below for various types of uses. These standards should be used as a starting point and modified as necessary to address the natural characteristics of the resources and specific needs.

Trail Development Standards

Trail Type	Vertical Clearance	Corridor Clearance	Treadway Width	Surfacing Materials	Trail Length	Sight Distance	Grade	Turning Radius	User s/ Mile
Biking Class1 (Greenway Trail)	8-10 feet	10-12 ft. (1 lane) 12-16 ft. (2 lane) 16-20 ft. (2 lane – high volume)	6 ft. (1 lane) 8-10 ft. (2 lane) 12-14 ft. (2 lane – high volume)	Smooth pavement, asphalt, concrete, crushed stone, clay or stabilized earth.	Min. – 5 mi. loop (1.5-2 hour) 15-25 mi. of linear or loop trails (day trip)	Min. of 50 ft. up to 100 ft. on downhill curves or road crossings	0-5%; Max: 5-10% sustained; 15% shorter than 50 yd. Outslope of 2-4%	8-14 feet depending upon speed.	40
Mountain Biking	8-10 feet	1.5 – 6 ft. (1 lane)	Novice-36 in. Intermediate-24-30 in. Advanced-12-18 in.	Firm natural surface including soil, rocks, wood; hardened surface for wet areas.	Min. – 5 mi. loop (1.5-2 hour) 15-25 mi. of linear or loop trails (day trip)	Min. of 100 ft. up to 150 ft. on downhill curves or road crossings	Over all grade not to exceed 10%. Climbing turns not to exceed 7-12%. Out slope of 3-5%	Novice/ Intermediate - 8 ft. min. Advanced – 6 ft min.	10
Cross-country Skiing	8-10 ft. above snow depth. (10-12 ft in summer)	8 ft (1 lane) 10-12 ft. (2 lane)	4-6 ft. (1 lane) 7-8 ft. (2 lane) 8-10 ft. (up hill)	Snow with underlying bare soil, rocks or wood chips. Outsloped underlying material. Can be groomed or ungroomed.	0.5-3 mi. loops up to 4-8 mi. (2-4 hour trip)	Down hill runs, stream or road crossings 50 ft. Otherwise not critical	0-5%; Max – 10% sustained; 15-25% shorter than 50 yd.; 25-40% shorter than 50 yd., experts only. Outslope – 0-2%	Avoid sharp turns. Never locate a turn at the base of a downhill run. Min. - 50 ft. Preferred – 100 ft.	5-30
Hiking (Developed Interpretive, group or connector)	8-10 ft	4 –8 ft	4-6 ft	Bare soil, rocks, stone dust, or wood chips. May have hardened surface (concrete, asphalt or boardwalks) in high use areas.	0.25 – 5 mi. (1/2 day) 5-15 mi. (full day)	Not critical barrier on reverse curves may be used	0-5%; Max – 15% sustained; 40%+ shorter than 50 yd.; Outslope – 4% max	N/A	0-30
Hiking (Primitive Back-packing)	8-10 ft.	4-6 ft.	18 –30 in.	Bare soil, rocks, gravel, wood; hardened surface for wet areas.	Min – 5 mi.; 5-15 mi. (full day); 15 – 25+ mi. (multi-day)	Not critical	1-5%; Max - 15% sustained; 40-50% shorter than 50 yd.	N/A	1-5
Snowshoe	8-10 feet above snow depth (10-12 ft. in summer)	8 ft. (1 Lane) 10-12 ft. (2 Lane)	4-6 ft. (1 Lane) 7-8 ft. (2 Lane) 8-10 ft. up and down hill	Snow with underlying bare soil, rocks or wood chips. Outsloped underlying material. No grooming is needed.	3 mi. loops; 4-8 mi. (2-4 hr. trips)	N/A	0-5%; Max. - 10% sustained; 15-25% shorter than 50 yds. for experienced snowshoers	N/A	5-30
Horse	10-12 ft.	5-6 ft. (1 lane)	18-30 in. (1 lane)	Soils having a large percentage of rocks, clay and/or organic matter. Void of rocks football sized or larger. Little treadway	Min – 5 mi. (1-1.5 hours) 15-25 mi. of looped trails (full day)	Not critical unless 2 way traffic. 50-100 ft. 100-200 ft. at motorized road crossings.	0-10%; Max – 10% sustained; 20% shorter than 50 yd.	Min. 6 ft. Wider turns preferred.	5-15

				development required if soils are appropriate. In problem areas, water control measures may be installed. Brush and saplings should be cut flush or below ground level. Remove dead or leaning trees.			Outslope 4% max.		
Snowmobile	8-12 ft. above snow depth (10-12 ft. in summer)	1A- 14-16 ft. 1B- 14-16 ft. C- 8-12 ft. D- 8 ft. min.	1A –12 ft. 1B –8-12 ft. C –4-8 ft. D –4ft. min.	Groomed snow Groomed snow Groomed snow Ungroomed snow	5-50 mi.	Min – 50 ft. 100+ ft.	10 – 15%; Max - 25% sustained; 40% shorter than 50 yd.	Min. 50 ft. 100 ft.	15

### C. Accessibility

New trails and altered trails connected to an accessible trail or designated trailhead should be designed to improve accessibility for persons with disabilities. Trail conditions, including topography, geology, and ecology, and expected experience will limit the number of fully accessible trails. The *Draft Final Accessibility Guidelines for Outdoor Developed Areas* (AGODA), published in 2009 by the federal Architectural and Transportation Barriers Compliance Board (“Access Board”), contains the most recent standards used to design and construct pedestrian trails to be accessible, and to assess accessibility. There are some departures permitted from the technical provisions. Although the AGODA only applies to federal agencies or for trails that are designed or constructed using federal funds, State Parks will follow the proposed guidelines as closely as practicable and apply standards consistently on all State Park pedestrian trails. For further details, refer to the AGODA at <http://www.access-board.gov/outdoor/index.htm>. The following is an abbreviated listing of the proposed standards without the exceptions:

- Surface – The trail surface shall be firm and stable.
- Clear Tread Width – The clear tread width of the trail shall be 36 inches minimum.
- Openings – Openings in trail surface shall be of a size that does not permit passage of a ½ inch diameter sphere. Elongated openings shall be placed so that the long dimension is perpendicular or diagonal to the dominant direction of travel.
- Protruding Objects – Protruding objects on trails shall have 80 inches minimum clear head room.
- Tread Obstacles – Where tread obstacles exist, for concrete, asphalt or boards, they shall not exceed ½ inch in height; for all other surfaces, they shall not exceed 2 inches in height.
- Passing Space – Where the clear tread width of the trail is less than 60 inches, passing spaces shall be provided at intervals of 1000 feet maximum. Passing spaces shall be either 60 inches minimum by 60 inches minimum space, or an intersection of two walking surfaces which provide a
- T-shaped space provided that the arms and stem of the T-shaped extend at least 48 inches beyond the intersection.
- Slopes – Slopes shall comply with the following:
  - Cross Slopes – For concrete, asphalt or boards, the cross slope shall not exceed 1:48; for all other surfaces, the cross slope shall not exceed 1:20.
  - Running Slope – Running slope of trail segments shall comply with one or more of the provisions of this section. No more than 30 percent of the total trail length shall exceed a running slope of 1:12.
  - The running slope of any segment of a trail shall not be steeper than 1:8.
  - Where the running slope of a segment of a trail is steeper than 1:20, the maximum length of the segment shall be in accordance with the table below, and a resting interval shall be provided at each end of the segment.

Running Slope of Trail Segment		Maximum Length of Segment
Steeper than	But not Steeper than	
1:20	1:12	200 feet (61 m)
1:12	1:10	30 feet (9 m)
1:10	1:8	10 feet (3050 mm)

- Resting Intervals – Resting intervals shall be 60 inches minimum in length and shall have a width at least as wide as the widest portion of the trail segment leading to the resting interval. Where the surface is concrete, asphalt, or boards, the slope shall not be steeper than 1:48 in any direction; for all other surfaces, the slope shall not exceed 1:20 in any direction. 31
- Edge Protection – Where edge protection is provided along a trail, the edge protection shall have a height of 3 inches minimum.
- Signs – Newly constructed and altered trails and trail segments that are accessible shall be designated with a symbol at the trail head and all designated access points. Signs identifying accessible trail segments shall include the total distance of the accessible segment and the location of the first point of departure from the technical provisions.
- Where gates or barriers are constructed to control access to trails, gates and barriers shall provide a clear width of 32 inches minimum.

In all cases, it is recommended that basic information about trail characteristics be displayed at the trailhead. This allows the trail user the opportunity to determine if the trail is appropriate for their abilities. This information should be available for all trails regardless of whether they meet the accessible guidelines.

The following is a recommended list of information that should be displayed at the trailhead:

- Trail Symbol
- Total trail length (in linear feet)
- Length of trail segments meeting accessible standards (in linear feet)
- Location of the first point of exception to accessible standards
- Running slope (average and maximum)
- Maximum cross slope
- Minimum clear tread width
- Surface type, firmness, and stability
- Tread obstacles that limit accessibility
- Elevation (trailhead, maximum, and minimum)
- Total elevation change

## D. Maintenance

Maintenance of the trails is conducted by Park staff as well as in partnership with various trail user or Friends groups. Trail maintenance standards will utilize acceptable practices and methods in the maintenance of trails to the particular uses of the trails. Maintenance activities include:

- Maintaining drainage structures
- Water management such as development of knicks, rolling grade dips to divert water off of a trail
- Surface treatment
- Clearing and grubbing to maintain height and width clearances
- Maintaining bridges and other structures
- Maintaining signage
- Invasive species removal

- Using established trail construction and maintenance techniques to control water flow and stabilize trail surfaces.

These activities must be coordinated with the park manager. Activities that go beyond standard maintenance practices (blazing, clearing brush from treadway/tree pruning, maintenance of erosion control structures) will require the approval of the park manager (see *Technical Document 7 – Trail Project Approval Process for NYS Parks*). Park staff maintain the parking lots and support facilities.

The following manuals may be used as resource guides for trail maintenance:

- *Trail Planning, Design, & Development Guidelines*. State of Minnesota, Department of Natural Resources, 2007. Trails and Waterways Division. <http://www.dnr.state.mn.us/index.html>
- *Trail Maintenance Manual, 7<sup>th</sup> Edition Revised*. 2007. New York-New Jersey Trail Conference, Inc. <http://www.nynjtc.org/volunteers/vresource.html>.
- *Trail Construction and Maintenance Notebook*. 2007 Edition. Forest Service, US Department of Agriculture. <http://www.fhwa.dot.gov/environment/fspubs/07232806/index.htm>.
- *Lightly on the Land: The SCA Trail-Building and Maintenance Manual*. 2006. Robert C. Birkby, The Student Conservation Association. <http://www.thesca.org/>
- *Trail Solutions: IMBA's Guide to Building Sweet Singletrack*. 2004. International Mountain Bicycling Association. <http://www.imba.com/index.html>
- *Equestrian Design Guidebook for Trails, Trailheads and Campgrounds*. December 2007. US Department of Agriculture, Forest Service - Missoula Technology and Development Center. <http://www.fhwa.dot.gov/environment/Fspubs/07232816/index.htm>

These manuals may also be used as references for trail design and construction techniques.

## **E. Trail Closure**

Sometimes it is necessary to close or reroute a trail due to poor initial design, overuse, illegal use, or other natural factors having caused some type of degradation. The decision to close a trail or section of a trail can be the result of a trails planning process which considers the trail system as a whole or on a case by case basis. Closure of a trail or trail section will require the approval of the park manager (see *Technical Document 7 – Trail Project Approval Process for NYS Parks*).

Reclamation strategies include closure, stabilization, recontouring, revegetation, and monitoring. Each site should be evaluated individually for its potential to be rehabilitated. Trail restoration needs to be carefully planned, and the consequences of each strategy should be evaluated. Restoration can be as simple as blocking a closed section of trail and passively allowing the vegetation to recover, or include more complex projects, such as removing any trace of the tread, actively planting native vegetation, and constructing check dams to help stop erosion. Careful monitoring of a restored section of trail is then needed to ensure that little evidence remains of the old trail.

All plantings will be with native, non-invasive species. Vegetation should be allowed to grow on the abandoned trail where it intersects with a designated trail. Brush, rocks and other natural material should be placed on the abandoned trail for a distance so the linear characteristic of the trail can not be readily identifiable. These abandoned trails should not be identified on trail maps.

*Technical Document 3: OPRHP Guidelines for Closing Trails* provides the detailed process to be taken to close trails in state parks.

## **F. Monitoring Program**

A monitoring program should be developed to monitor trail conditions. A monitoring program will include an annual inspection of all trails and periodic inspections of trails throughout the year. Volunteers may aid in this process in many cases. The monitoring program should include:

- Monitoring trail use to avoid user conflicts and to ensure sustainability.
- Monitoring trail conditions, educating trail users, and utilizing other methods to identify and report the locations of invasive species.
- Where overuse is occurring, providing remediation through the use of water control and trail hardening techniques, by relocating sections of trail, and/or by limiting trail use.





**Parks, Recreation  
and Historic Preservation**