

# Final Master Plan/ Final Environmental Impact Statement

For

## Robert G. Wehle State Park

November 17, 2010



David A. Paterson  
Governor

Andy Beers  
Acting Commissioner

Office of Parks, Recreation and Historic Preservation



**STATE ENVIRONMENTAL QUALITY REVIEW (SEQR)  
NOTICE OF COMPLETION OF A  
FINAL ENVIRONMENTAL IMPACT STATEMENT**

**Date of Notice:** November 17, 2010  
**Lead Agency:** New York State Office of Parks, Recreation and Historic Preservation (OPRHP)  
**Title of Action:** **Adoption and Implementation of a Master Plan for Robert G. Wehle State Park**  
**SEQR Status:** Type I  
**Location of Action:** Robert G. Wehle State Park is located in the Town of Henderson in Jefferson 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 December 3, 2010. Copies of the Final Plan/FEIS are available for review at the Park Office; at the offices of the agency contacts and the Henderson Free Library, 8939 State Route 178, Henderson, NY. 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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Final Master Plan/  
Final Environmental Impact Statement  
for  
Robert G. Wehle State Park

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*The Town of Henderson, Jefferson County*

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

Completed: November 17, 2010

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## **Acknowledgements**

The Robert G. Wehle State Park Final Master Plan/Final Environmental Impact 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.

In a cooperative effort, the Agency worked with and coordinated input from the following agencies and schools: New York State Department of Environmental Conservation, United States Department of Agriculture and Cornell University.

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## **Executive Summary**

### ***Introduction***

The Commissioner of the Office of Parks, Recreation and Historic Preservation (OPRHP) is proposing the adoption and implementation of a Master Plan for Robert G. Wehle 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 the State Park.

Two public scoping/information meetings were held to gather information, concerns and issues surrounding the development of Robert G. Wehle State Park. Meetings were held in the park in Henderson, NY on July 14, 2009 at 3:00 PM and at 7:00 PM. A 30-day comment period was provided to collect comments and suggestions from patrons wishing to provide written comment. Additional visitor information was collected from a four month visitor survey. The public hearing on the Draft Master Plan/DEIS was held at the park in Henderson, NY on August 10, 2010 and the public comment period ended September 3, 2010.

The Commissioner has decided that a Master Plan/EIS is necessary to guide the management and development of the resources at Robert G. Wehle State Park. The Commissioner has also decided that the final plan is to be made available for public review and comment. There has not been any decision regarding the adoption of the Final Master Plan.

### ***Park Background***

The park is located on the eastern side of Lake Ontario on Stony Point, approximately eight miles south of Sackets Harbor.

In 1990, Robert G. Wehle sold 1,067 acres to the NYS Department of Environmental Conservation (DEC). After discussions between DEC and Mr. Wehle, it was determined that the land would be transferred to the Office of Parks, Recreation and Historic Preservation (OPRHP) for management as both a recreational facility and a facility which focuses on conservation. Following this transfer, Robert G. Wehle State Park was created in 2004 to provide a place for patrons to enjoy scenic views of Lake Ontario, the vast trail system and park facilities.

An Interim Management Guide (IMG) was written for Robert G. Wehle State Park in April 2004 in which OPRHP documented the uses, facilities and existing features in the park. In 2008 the ecological communities and significant species were recorded by the Natural Heritage Program and identified in the Natural Heritage Report for the park. A Phase 1A cultural report was conducted for the park identifying culturally significant aspects in the park. A more detailed Phase 1B cultural survey was conducted in 2008 for the main entrance roadway project. A five-year capital improvement plan was developed in 2004 to guide the development during the first years of the park's existence. The five-year capital improvement plan has, for the most part, been implemented.

### ***Environmental Setting***

The park occupies 1,067 acres in the Town of Henderson in Jefferson County. The park has three miles of Lake Ontario shoreline. The southern boundary is adjacent to the NYS DEC Henderson Shores Unique Area.

There are eleven ecological community types located in the park. Of the eleven, calcareous pavement barrens and calcareous shoreline outcrops are identified as significant natural communities

(Lundgren and Smith, 2008). These calcium-rich bedrock outcrops are one of the most prominent features of the park. There are approximately 98 acres of wetland habitat in the park. The primary water feature is Lake Ontario which provides significant scenic vistas.

The flora of the park is characteristic of limestone areas of northern and western New York and the wildlife is typical of the region and the rural setting. The park has an extensive infestation of the invasive plant pale swallow-wort. Research by the U.S. Department of Agriculture into the control of pale swallow-wort is currently being conducted in the park. The park's wildlife is also typical of the region and the rural setting.

Between 1895 and 1947, the U.S. military used the property for training purposes. The area was known as the Stony Point Rifle Range. Several historically significant structures remain on the land today including spotter stations, building foundations and rifle range landscape features.

In 1968 Robert Wehle acquired the land from his father's estate, constructing several of the structures seen on the site today. Buildings from the Robert Wehle period include the former Wehle summer home, a log cabin, barns, dog kennels, maintenance shed, bird coops and other supporting structures. Archeological studies have been conducted in the park showing signs of previous habitation by Native Americans, farmsteads and military activities.

Recreational activities in the park include hiking, mountain biking, cross country skiing, picnicking, tennis court, volleyball, and hunting. Interpretive/educational displays are also available for patron use throughout the park. The former Wehle summer home is a reservable rental compound overlooking Lake Ontario.

## ***Vision and Goals***

### **Agency Mission Statement**

The mission of The Office 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**

Robert G. Wehle State Park will continue to be a place for visitors to enjoy, appreciate and learn about the park's natural, cultural, and physical resources, and participate in the recreational opportunities that the park offers.

### **Park Goal**

To be responsible stewards of the natural, cultural and physical resources of Robert G. Wehle State Park while making available to the public compatible recreational, interpretive and educational opportunities.

## ***Analysis & Alternatives***

The master plan presents a series of "preferred alternatives" for future development and operation of the park. Cumulatively, the actions described below present OPRHP's long term vision for the enhancement of the park.

## ***The Master Plan***

### **Natural Resource Protection**

The plan includes the following management strategies which will provide guidance and direction for the management of significant natural communities, invasive species, water resources, flora and fauna and the protection of natural resources through the following actions:

- Protect and buffer wetland habitat.
- Conduct additional rare plant surveys.
- Implement the Invasive Species Management Plan.
- Continue the existing mowing regime to control swallow-wort and continue to support ongoing study and research of pale swallow-wort control at the park.
- Protect the calcareous shoreline outcrops by monitoring shoreline areas for impacts such as trampling and invasive species and maintaining shoreline buffer vegetation.
- Protect the calcareous pavement barrens through invasive species management and reduction of trails through this area.

### **Recreation Facility Development and Programs**

Recreation facility improvements will include the following elements.

#### ***Trails***

Hiking, mountain biking, cross country skiing and snowshoeing are allowed on all trails. All trails have been named and will be blazed with appropriate signage at all intersections. Trail improvements, reroutes or closures will take place per OPRHP Trail Standards. Improvements to the trail system will include:

- Close certain undesignated trails as identified on Figure 16 – Trail Map.
- Redesign or realign areas identified as wet conditions per Figure 13 – Trail Assessment Map and Appendix D.
- Remove the portion of the Dancing Dog Trail along the fence line from within the wetland.
- Realign a portion of the Bobolink Trail around calcareous pavement barren habitat. Portions of the trail will be lined with large rocks to help guide patrons.
- Realign a small portion of the Midge Trail. The portion of the Snakefoot Trail that connects to Parking Lot B will be renamed the Midge Trail.
- Install new trail head signage that will provide information about the trail such as its length and difficulty.
- Move the Marksman Trail away from the park road.
- Continue mowing and snow grooming operations on trails.

#### ***Fishing***

- Continue to provide fishing access.

#### ***Group Camping***

- Construct a group camping area within the park that will include fire rings and open areas to pitch tents.

## **Hunting**

- Continue to provide hunting opportunities. Two small sections of park property will be removed from the designated hunting area.

## **Cultural Resource Protection**

The park has an extensive military history within the Jefferson County Region. As such, the protection and interpretation of the cultural resources is also an important part of the master plan. Associated actions include:

- Interpret the firing range and wall as a significant cultural feature.
- Clear the firing wall of vegetation through the cutting of trees and shrubs.
- Continue to mow the berms and firing range.
- Remove trees from the firing range to enhance the visual connection with the firing wall.
- Install interpretive panels to educate patrons on the significant military activities.
- Interpret the watch stations and foundations from the military era.
- Repair or reconstruct watch stations as deemed necessary and in accordance with Field Services Bureau guidance.
- Protect the archaeological resources on a case by case basis where ground disturbance is anticipated during construction.

## **Scenic Resource Protection**

Scenic resources are an important feature within the park. Protection will be given to the scenic nature of the park through the following actions:

- Protect the viewshed from Lake Ontario. The design and location of the picnic area and overlook will use materials which blend in with the surroundings. The design of the picnic shelter will consider low pitch roof lines, natural color tones, and placement and vegetative screening to minimize or eliminate view of this structure from the lake.
- Enhance views of the lake along the Snakefoot Trail through the selective removal of trees or shrubs at key points along the trail. Existing vista points will be maintained.

## **Interpretation and Education**

Interpretation and education throughout the park will be enhanced by the following actions:

- Implement the Swallow-wort Interpretive Plan for Robert G. Wehle State Park.
- Construct and install swallow-wort seed check/boot cleaning stations.
- Provide interpretation and education on other topics such as the park's military, geologic and natural history.

## **Infrastructure and Operations**

- Provide the log cabin as an optional amenity with the reservation of the rental house compound. Based upon usage trends and patron comment, the long term goals for the log cabin may be as a stand alone rental structure, separate from the rental house compound.
- Continue to use the two barns as storage space and to serve the future operational needs of the park.
- Continue with the rental of the Wehle house compound. (Maximum occupancy of eight). Large group events will be permitted on a case-by-case basis. Improvements will be made to the septic

system. Access to the game room will be improved, consistent with the Americans with Disabilities Act (ADA).

- Maintain the roadway and parking layout. Improvements to the gravel service road will take place to provide access to the log cabin for patron use.
- Maintain the existing picnic area located on the southwestern shore as is. A small ADA accessible picnic area will be constructed closer to the main parking lot and include an overlook of Lake Ontario. If deemed necessary, a small picnic shelter will be constructed adjacent to this proposed picnic area.

## **Implementation**

The master plan presents a vision for the rehabilitation and construction of improvements to the park. The plan identifies two priority levels and actions which are ongoing throughout the park. The pacing of plan implementation will depend on the availability of funds and labor to advance the proposed improvements, which need to be sequenced with other capital improvements in the park and Thousands Islands Region. The priority groupings identified on the Implementation Table in Chapter 6 are conceptual and subject to reorganization based on available resources.

## ***Environmental Impacts***

Consistent with the intent of the State Environmental Quality Review Act (SEQR), environmental considerations were among the criteria used in evaluating alternatives and in selection of elements within the Master Plan. Categories of impacts that were evaluated were: traffic and access, recreation, water resources, biological resources/ecology, cultural/archeological resources, scenic resources, public health and safety, and growth and character of the community and neighborhood. Actions outlined in the master plan are designed to minimize impacts in all of these areas. The plan proposes minimal changes to traffic circulation or access and current capacity is expected to meet the proposed needs. Changes to the trail layout, the addition of a new picnic and overlook area and group camping area, and the rental cabin option will all augment recreation opportunities at the park. Protection of shoreline plant communities and utility upgrades at some facilities will protect water resources. Plans for improved management of cultural/archeological resources will not only serve to protect those resources but will also offer new interpretive opportunities. The maintenance of appropriate overlooks and the careful design of shoreline development will protect scenic resources. Health and safety of patrons and staff will continue to be a priority. Overall the additional amenities are not expected to significantly increase visitation of the park.

The establishment of a new picnic area overlook, group camping area, and the clearing of the firing range and gun wall will require the removal of approximately three to five acres of some trees and shrubs. Clearing will be kept to a minimum and will provide improvements to recreation and historic interpretation. Approximately 2.5 miles of existing trails will be removed but the revised trail layout will clarify routes and lead to better enjoyment of the remaining 13.5 miles of trails in the park. The master plan also includes the adoption of an invasives species management plan. This plan will provide a framework to prioritize control efforts so that control of invasive plants can be done in the most effective manner from both an ecological and economic perspective. Near term activities that will be implemented under this plan include installation of swallow-wort seed check/boot cleaning stations and experimental swallow-wort control plots where swallow-wort will be tilled and removed and replaced with native vegetation.

As the park is located within New York's coastal area, the master plan was reviewed for consistency with the NY Coastal policies. Based on review of applicable policies it is OPRHP's determination that the plan will not substantially hinder the achievement of any of the State's coastal policies.

# Chapter 1: Introduction

## *Planning and Environmental Review*

### Planning

The New York State Office of Parks, Recreation and Historic Preservation (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 re-evaluated 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.

### Environmental Review

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 Robert G. Wehle State Park.

To ensure that master plans conserve and protect coastal and watershed ecosystems of the Great Lakes, the Agency has embraced the principles of ecosystem-based management (EBM). The principles of EBM are included and represented throughout the master plan as well as the development and implementation of the plan. These principles are: start with a place based focus, base management decisions on the best available science, provide 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.

### Sustainability

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. Sustainable practices and alternatives were considered in the planning process and incorporated throughout the master plan.

## ***Introduction to the Park***

### **Establishment of the park**

In 1990, Robert G. Wehle sold 1,067 acres to the Department of Environmental Conservation (DEC). After discussions between DEC and Mr. Wehle, it was determined that the land would be transferred to the Office of Parks, Recreation and Historic Preservation (OPRHP) for management as both a recreational facility and a facility which focuses on conservation. Following this transfer, Robert G. Wehle State Park was created in 2004 to provide a place for patrons to enjoy scenic views of Lake Ontario, the vast trail system and park facilities.

### **Previous Planning Efforts**

An Interim Management Guide (IMG) was written for Robert G. Wehle State Park in April 2004 in which OPRHP documented the uses, facilities and existing features in the park. In 2008 the ecological communities and significant species were recorded by the Natural Heritage Program and identified in the Natural Heritage Report for the park. A Phase 1A cultural report was conducted for the park identifying culturally significant aspects in the park. A more detailed Phase 1B cultural survey was conducted in 2008 for the main entrance roadway project. Cultural and natural analysis and surveys have been ongoing, from that time. A five-year capital improvement plan was developed in 2004 to guide the development during the first years of the park's existence. The five-year capital improvement plan has, for the most part, been implemented.

### **What has prompted the preparation of this report?**

The Robert G. Wehle State Park master plan has been prepared to provide long-term safe recreational opportunities that are compatible with the resources while protecting the park's natural, cultural and scenic resources. The park, established in 2004 has been operating under short-range planning initiatives. The master plan provides for long range planning and opportunity for public input and will guide the direction of the park.



## **Chapter 2 – Park Background**

### ***The Region***

New York State is divided into 12 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). Robert G. Wehle State Park (park) is located in the Thousand Islands Region administered by OPRHP.

### **Location**

Robert G. Wehle State Park is located in the Town of Henderson in Jefferson County. The park is located on the eastern side of Lake Ontario on Stony Point, approximately eight miles south of Sackets Harbor. See Figure 1 – Vicinity Map.

### **Access**

The main entrance to the park is accessed from Schoolhouse Road. A satellite parking area for approximately 10 cars is located on Windmill Road and provides access to the trail system. Additionally, patrons have pedestrian access to the park via the adjacent Department of Environmental Conservation’s Henderson Shores Unique Area. A parking lot is provided by DEC off Lighthouse Road.

### **Recreational Needs Assessment**

As a relatively new state park created in 2004, Robert G. Wehle State Park has the potential to provide increased recreational opportunities for residents of Jefferson County as well as visitors to the region.

According to the Statewide Comprehensive Outdoor Recreation Plan 2009-2013 (OPRHP, 2008), “relaxing in the park” continues to be the recreation activity enjoyed by most New York State residents. This is followed by walking/jogging, visiting museums/historic sites, and swimming and biking. The Relative Index of Needs indicates that most of the existing and projected recreational needs for Jefferson County are at or below the state average. Those activities at the state average, indicating, at the very least, the need to maintain or increase current levels of service are cross country skiing, hiking and snowmobiling. While snowmobiling is not an allowed activity in Robert G. Wehle State Park, cross country skiing and hiking can be accommodated at the park. Since the opening of the park in 2004, it has continued to assist in meeting the existing and projected recreational needs of the area.

## **Recreational Needs from Public Comment**

The comments received verbally and in writing during the public comment period for the master plan reflected suggestions on the types of activities people would like to have at the park. Recreational activities suggested through public comments included hiking, mountain biking, cross country skiing, snowshoeing, walking, equestrian activities and snowmobiling. All of these activities are allowed at the park with the exception of equestrian activities and snowmobiling.

## **Park Boundaries**

The park occupies 1,067 acres in the Town of Henderson in Jefferson County. The park has three miles of Lake Ontario shoreline. The southern boundary is adjacent to the NYS DEC Henderson Shores Unique Area. The other areas of the park border private land which is primarily undeveloped successional fields with minimal residential development.

## **Adjacent Land Uses**

The land uses immediately adjacent to the park consist primarily of vacant or residential land (as defined by Jefferson County zoning maps). The vacant land classification includes the Henderson Harbors Unique Area owned by DEC. The adjacent residential land is primarily successional farmland with minimal adjacent development visible from the park land. See Figure 2 - Adjacent Land Uses.

## ***Partnerships, Deed Restrictions and Designations***

### **Partnerships**

Robert G. Wehle State Park receives funding support, on an annual basis, from distributions from the Robert G. Wehle Charitable Trust. A five person committee to monitor the Trust's performance was established after Mr. Wehle's death.

OPRHP has partnered with the United States Department of Agriculture and Cornell University to study Pale Swallow-wort, an invasive plant, within the park. Research plots have been established and are monitored on a regular basis to determine strategies for management and control of this invasive species.

### **Deed Restrictions**

No deed restrictions are present for the park with the transfer of jurisdiction of the property from DEC to OPRHP. The transfer of jurisdiction is dated August 11, 2003. DEC requested that the transfer of jurisdiction be conditioned upon the continuation of hunting by the public on such land and cooperation by OPRHP with DEC on preservation of existing wildlife habitat, targeted wildlife species and protection of rare, threatened or endangered species.

### **Designations**

The park currently has no State or Federal designations. The master planning process will determine if designations are suitable for the park.

## **Chapter 3: Environmental Setting**

### ***Physical Resources***

#### **Geology**

The bedrock within the park is relatively close to the surface and consists primarily of Ordovician Rocks, including the Lorraine Trenton Black River Group. The shales, siltstones and sandstones of the Lorraine Group record a well-defined sea bottom marine community geological sequence. The Black River and Trenton geological groups are shallow water carbonates, such as limestone and some dolostone, which were deposited at or just below the shoreline in an ancient, shallow sea. The bedrock layer, as a result of years of erosion, is generally between 0” and 20” below the surface. The shallow depth of the bedrock is a limiting factor for development at the park. Underground utilities such as septic systems and buried electric lines need additional engineering and funding in areas of shallow bedrock conditions.

#### **Topography**

The park is roughly 250 to 310 feet above sea level and is generally flat with a gradual slope downward from northeast to southwest. The gradually sloping topography begins at lake level on the southwest end of the park and rises to cliffs as high as 85 feet along the shoreline at points near the park office. The topography has been a limiting factor in providing lake access opportunities given the steep, vertical shoreline near the main use area. See Figure 3 – Slope and Topography.

#### **Soils**

Soils within the park are generally shallow with depths to bedrock from 0-20”. The primary soil types within the park consist of the Benson-Galloo complex (BgB), and the Galloo Rock outcrop complex (GbB). Both of these soil types are very rocky with gradually sloping grades between 0 and 8%. In addition to these, there are smaller pockets of gravel and gravelly loam located in the western portions of the park including Groton Variant gravelly loam, Newstead Silt Loam and Farmington Loam. Each of these soil types are generally well drained on their own. Other influencing conditions such as shallow soil depths may impact their permeability. See Figure 4 – Soils for information on soil types and their locations.

#### **Water**

The primary water feature at the park is Lake Ontario. It receives the water from all of the other Great Lakes. It has 393 cubic miles of water and an average retention time of six years. Its watershed includes portions of Ontario and New York, and covers 24,720 square miles. The western part of the Canadian portion of the basin is highly urbanized and the remainder is largely in agriculture. The main flow of the lake is northeast toward the St. Lawrence River.

The entire lake shoreline within the park is rocky, consisting of calcareous shoreline outcrops and cobble shores (See Ecological Communities). Access to the water is available at the picnic area and at the end of the main access road. Two small man-made ponds constructed by Mr. Wehle, one for ornamental purposes and one to provide water for grazing animals, still exist today.

#### **Floodplains**

According to the National Flood Insurance Program maps for the Town of Henderson the park is located within a “Zone C” area which is an area of minimal flooding. These maps also indicate that

Lake Ontario at elevation 249' is within a "Zone A1" which is the 100 year flood zone. Any areas of shoreline at elevation 249' or below would be subject to such flooding.

## **Wetlands**

According to the DEC freshwater wetland regulatory maps, approximately 15.8 acres of regulated wetland Y-1 exist in the northern part of the park. The remainder of wetland Y-1, a forested/shrub wetland, extends northward beyond park boundaries. Based on this mapping, DEC regulated wetlands account for roughly 1.5% of the park. A larger DEC regulated wetland complex exists south and east of the park within the adjacent Henderson Shores State Unique Area. See Figure 5 - Wetlands Map.

According to National Wetland Inventory mapping, which uses a much smaller wetland area threshold for mapping, there are seven different wetlands located within the park. They total approximately 82 acres and are scattered fairly evenly throughout the park. These wetlands represent approximately 7.5% of the park and include deciduous and coniferous forest/shrub wetlands as well as emergent and deepwater wetlands.

## **Air**

The air quality in Jefferson County is considered to meet 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 within the Pollutant Standards Index category of having "good" air quality. (DEC 2009)

## ***Natural Resources***

### **Ecological Communities**

The New York Natural Heritage Program survey (Lundgren and Smith, 2008) identified eleven ecological community types at Robert G. Wehle State Park. These are calcareous cliff community, calcareous pavement barrens, calcareous talus slope woodland, limestone woodland, successional old field woodland, successional red cedar woodland, calcareous shoreline outcrop, cobble shore, shallow emergent marsh, silver maple-ash swamp and sinkhole wetland (Figure 5). Although not included as a natural community type, it should be noted that large areas of the park are maintained as mowed lawn. Ecologically, the mowed areas of the park serve the purpose of reducing the spread of pale swallow-wort seeds. See Figure 6 – Ecological Communities Map.

Of the eleven natural community types identified at the park, calcareous pavement barrens and calcareous shoreline outcrop were identified as significant natural communities (Lundgren and Smith, 2008). Calcareous pavement barrens, or alvar, are landforms that originated from sedimentary deposits in a vast, shallow inland sea that covered much of New York approximately 450 million years ago. These areas often harbor rare species of plants and animals.

Calcareous shoreline outcrops occur along almost the entire Lake Ontario shoreline within the park. These outcrops of calcium-rich bedrock, such as limestone, are one of the most prominent features of the park. There are several hundred occurrences statewide of varying quality. This community type is limited to the calcareous regions of the state. The communities at Robert G. Wehle State Park are considered one of the few high quality examples. See Figure 7 – Significant Communities Map.

## **Flora**

The flora of Robert G. Wehle State Park is characteristic of limestone areas of northern and western New York, where shallow limestone bedrock affects everything from soil depth and drainage to soil

chemistry and susceptibility to erosion. Most of the park contains second growth forest due to past human use and is comprised of a diverse assemblage of young and mature trees and shrub and herbaceous plant species (Lundgren and Smith 2008).

## Rare Plants

The New York Natural Heritage Program survey also identified several specimens of *Ulmus thomasii* within the park. Known as "cork elm" for the distinctive corky ridges on its twigs and branches, this species is listed as threatened by New York State, but is not identified federally on the "Endangered and Threatened Wildlife and Plants" list published by the U.S. Fish and Wildlife Service. This species has a limited range in New York State consisting mostly of the areas along Lake Ontario and the Finger Lakes. Primary threats to cork elm are logging of larger trees and Dutch elm disease.

## Fauna

The park's wildlife is typical of the region and the rural setting. The park supports a wide diversity of mammals, birds, fish, amphibian, reptile and insect species that are common to the northeastern United States.

## Endangered, Threatened and Rare Animal Species

According to the New York State Breeding Bird Atlas, Stony Point, where the park is located provides habitat for 90 total bird species, three of which are designated as species of special concern in New York: Cooper's Hawk (*Accipiter cooperii*), Sharp-shinned Hawk (*Accipiter striatus*), and Whip-poor-will (*Caprimulgus vociferus*).

## Invasive Species

Invasive species are defined as species (e.g. plants or animals) non-native to the ecosystem that cause or are likely to cause economic or environmental harm, or harm to human health. Invasive species can develop extremely large populations, usually due to a lack of competition or predation, thereby causing adverse effects such as a loss of wildlife habitat and impacts to landscapes and ecosystems.

The park contains an extensive infestation of the invasive plant pale swallow-wort (*Cynanchum rossicum*). This is an aggressive invasive species from the milkweed family that can form dense patches that crowd out native plant species and impact wildlife habitat. In addition to being a long-lived perennial, pale swallow-wort is a prolific seed producer and produces allelochemicals that inhibit the development of neighboring plants. These adaptations likely play a strong role in pale swallow-wort's ability to almost completely take over habitats in both sunny old-fields and shaded woodlands. As pale swallow-wort densities increase, the physical and chemical ecology of these areas is altered. Swallow-wort can adversely affect grassland bird populations and insects such as monarch butterflies in infested areas (<http://www.nps.gov/plants/alien/>). Pale swallow-wort's aggressive spread also threatens rare ecological communities such as globally rare alvar plant communities in the pavement barrens.

Swallow-wort is not only a serious problem for biodiversity at the park but also presents challenges for maintenance and enjoyment of the park's trails (Lundgren and Smith, 2008). Due to the large extent of its coverage at the park, control has proven difficult and currently consists of expanded mowing operations in an attempt to limit the plant's spread. Research by the U.S. Department of Agriculture into the control of pale swallow-wort is currently being conducted in the park. There is currently educational information about swallow-wort at park kiosks. Other invasives species are

present at the park and include multiflora rose (*Rosa multiflora*), buckthorn (*Rhamnus cathartica*), phragmites (*Phragmites australis*) and purple loosestrife (*Lythrum salicaria*). The invasive animal, Zebra mussel (*Dreissena polymorpha*), is also present in Lake Ontario (Lundgren and Smith, 2008).

## **Fish**

Fish species common in Lake Ontario include brown trout, rainbow trout (including steelhead), coho salmon, chinook salmon, pink salmon, lake trout, Atlantic salmon, bass, muskellunge and tiger muskellunge, northern pike, walleye, lake sturgeon, American eel, yellow perch and sunfish. The two small ponds in the park do not support fish populations.

## **Recreational Resources/Activities**

There are several recreational resources provided at the park.

### **Picnicking**

The park has one picnic area on the shore of Lake Ontario with access to the water's edge. It includes ten picnic tables, a group grill and a composting toilet. Patrons are required to park in the visitor parking lot and walk one and one-half miles to use this facility. The capacity of the picnic area is between 20 and 50 people.

### **Tennis Court**

A concrete tennis court located near the visitor center was included with the property upon purchase. The court is in good condition and is used frequently on weekends. See Figure 8 – Main Use Area Map.

### **Volleyball Court**

A sand volleyball court located near the visitor center was developed at the park subsequent to acquisition by the State and provides another recreational opportunity for park patrons. See Figure 8 – Main Use Area Map.

### **Hunting**

Hunting for large and small game is allowed during the State regulated seasons in designated areas throughout the park. State rules and regulations apply. See Figure 9 – Hunting Map.

### **Trails**

The park includes 16 miles of mowed trails which meander along the lake's edge and through both forest and successional fields. Lake side trails provide many scenic vistas from the bluff top while other trails provide scenic views of the interior areas of the park. The trail system connects to the adjacent Henderson Shores Unique Area, allowing patrons to experience both areas. Hiking, mountain biking, cross country skiing and snowshoeing are allowed on all trails. See Figure 10 – Existing Trails Map.

**Table 1 - Trail Descriptions**

<b>Trail Name</b>	<b>Mileage</b>	<b>Blazing</b>	<b>General description</b>
Bobolink	1	Blue	Trail cuts through wooded and open pavement barrens passing two spotters boxes along the way to the Henderson Shores Unique Area.
Dancing Dog	2.25	Green	Winding around the wooded northern section of the park this trail links the main parking area with the Snakefoot trail offering views of Lake Ontario from atop 85' bluffs.
Huckleberry	.6	Purple	Trail meanders through wooded areas in the interior of the park.
Jungle	1.6	Brown	This trail wanders around the wooded interior of the park.
Knickerbocker	.5	Black	This trail offers a shortcut from the main parking area to Dancing Dog along the edge of the old firing range.
Marksman	1.4	Red	Winding from the interior property line to the lake shore, this trail cuts through the heart of the park's wooded area.
Midge	.5	White	A quick trail leading from Snakefoot to the rental house compound, this trail skates along the edge of the park's pavement barrens.
Snakefoot	5.5	Yellow	This long looping trail starts in the main recreation area of the park leading along the shoreline to the south passing many views of the lake and islands eventually following the property line with the adjacent parcels.
Unmarked	2.7	none	These trails run as connectors between the various other trails.
<b>Total Mileage</b>	<b>16</b>		

## ***Cultural Resources***

### **Historic**

Between 1895 and 1947 the U.S. military used the property for training purposes in preparation for warfare. The area was known as the Stony Point Rifle Range and housed soldiers for several days at a time as they trained for land, oversea and air combat. The Stony Point Rifle Range was the main firing range used by Pine Camp (now Fort Drum), Fort Ontario and Madison Barracks.

Stony Point Rifle Range was used for overland artillery practice until 1925 when the U.S. Coast Guard began to use Stony Point for anti-aircraft gun training. The firing took place along the shoreline over Lake Ontario. Anti-aircraft guns would shoot at targets which were either floated in the lake or pulled behind an aircraft. The firing range was also used as a temporary landing field during this period. In 1926, Madison Barracks and Fort Ontario considered abandoning the firing

range due to its disrepair. In 1927 the decision was made that extensive facilities were already in place and that they should continue to use it. The Army repaired the facility in April and began hosting troops.

During World War II, the firing range was used heavily for artillery training. The facility had many mess halls, a kitchen, a training staff tent, sleeping quarters and other support structures. The remnants of these structures can be seen throughout the park today including the concrete spotter boxes, the rifle range and associated landscape features, foundations, sewage treatment facility, a water pump house, roadways and more. See Figure 11 – Cultural Resources Map.

In the 1950's, after the military use of the property, Robert Wehle's father, Louis Wehle, purchased the land with Thomas Nagle. Together, they used the land for cattle grazing and agriculture until 1964 when Louis Wehle passed away. Recent archeological surveys have shown remnants from this period including a farmstead foundation.

In 1968, Robert Wehle acquired the land from his father's estate, constructing several of the structures on the site today. Buildings from the Robert Wehle period include the former Wehle summer home, a log cabin, barns, dog kennels, maintenance shed, bird coops and other supporting structures. These buildings, while significant to the recent use of the park, are all outside the "period of significance" for the park (when the property gained its historic significance and National Register Eligibility). They are not considered a significant historical element within the park and are not National Register Eligible.

The following buildings, structures, landscapes and/or sites are located within the park.

### ***Rifle Range Landscape Features***

A series of low earthen berms running across the former firing range were used by soldiers, situated in a prone position, as they fired their weapons at the firing wall. The firing wall is approximately 10 feet tall and served to protect soldiers from gunshot as they waved target flags. The firing wall is constructed from a combination of earth, stone and concrete and remains a significant feature from this military period.

### ***Spotter stations***

Six small concrete spotter stations (also known as pill boxes or watch boxes), located along the shore line and farther inland, are considered contributing historic features. The existing conditions of these spotter stations vary widely from feature to feature. At least one spotter station is severely deteriorated from wave action exacerbated by wind, water and ice. Others have only a small amount of concrete deterioration, while others are in overall good repair.

### ***Foundations***

There are several building foundation in the park including the "Officer's Quarters," the water treatment plant, and the footings of a former building near the visitor center. From a historic preservation standpoint, all of these foundations are in relatively good condition.

### ***Former Water Pumping Building***

This small concrete building near the shore at the northern part of the park is a contributing feature from the rifle range/target training period(s) of the property's use. At present it lacks a roof, but from a historic preservation standpoint is in fair to good condition overall, with equipment fairly intact.



### ***Former Wehle Residential Compound Structures***

The buildings at and around the former Wehle residence include the guest house, game house, guest cabin, garages, stables and barns. As mentioned earlier, these buildings are all outside the period of significance for the park, and are not considered a significant historic element within the park. They do, however, document the past use of the park.

### ***Former Wehle Game Bird and Dog Structures***

These structures include the remaining kennel features, bird enclosures, statuary, animal graves, etc. These features are also outside the period of significance for the park, and are not considered significant historic features.

## **Archeological**

A Phase 1A Archeological Sensitivity Assessment for Robert G. Wehle State Park was completed in September, 2004. This report recommends that a Phase 1B survey be done in the previously undisturbed portions of the park prior to any future sub-surface work. A Phase 1B survey was completed for the new entrance roadway in March 2005. The survey identified a farmstead and various artifacts from the Stony Point Rifle Range era.

## **Scenic Resources**

The park provides many scenic views of Lake Ontario, Galloo Island and, in the distance, Canada. Vista points maintained in the park include the picnic area, rental house compound, the log cabin and areas along the Snakefoot and Dancing Dog trails.

## **Interpretive/Educational Programs**

Interpretive and educational programming includes informational kiosks in the main use area which educate park patrons about the Wehle family history and swallow-wort management. A small visitor center located near the main parking lot provides additional information about the Wehle family and the Elhew Kennels (the name of Robert Wehle's kennel for English pointers).

## **Infrastructure**

The Park has several structures with varying levels of infrastructure associated with each. Below is information on each one and the level of service provided. See Figure 8 – Main Use Area and Figure 12 – Base Map for structure and roadway locations.

## **Structures**

### ***Park Office***

The park office, constructed in 2008, is located adjacent to the maintenance area and serves as the headquarters for all operational and administrative needs.

### ***Visitor Center***

The visitor center is located near the park office and the main parking lot. Constructed in 2008 through the rehabilitation of an existing structure, the visitor center offers exhibits and information about the park and its history and provides restroom facilities for park visitors. The visitor center also serves as a warming hut during winter months.

### ***Maintenance Buildings***

The maintenance area serves as the headquarters for all maintenance needs and provides ample storage for equipment. A new maintenance shop was constructed in 2008.

### ***Barns***

Two barns are located adjacent to the rental compound and log cabin. They serve as additional covered storage areas for park materials and equipment.

### ***Log Cabin***

The log cabin is located on the bluff overlooking Lake Ontario. It is furnished with two bunk beds, a wood stove and chairs. The cabin is not ADA accessible and not open for public access.

### ***Rental House Compound***

The rental house compound rents by the week during the main season, from mid May to mid September, and can be rented daily during the off-season through mid October. It is closed for the remainder of the year. The compound includes the following,

- The main cottage features a sun porch, two bedrooms with private baths, living room with fireplace and a fully furnished kitchen and laundry room. The main cottage is ADA accessible.
- The guest cottage features two bedrooms with private baths, bay windows and a kitchenette with sink, microwave and small refrigerator. The guest cottage is not ADA accessible.
- A third building, a former artist's studio serves as a recreational game room and is not ADA accessible.

### **Electric**

The primary electrical system is owned and maintained by National Grid up to the two transformers on the property. One transformer is located behind the recreation room of the rental compound. The other is located behind the visitor center. The secondary electrical system on the property is owned and maintained by NYS OPRHP.

### **Water**

The park has three potable water wells: one at the maintenance shop/office: one at the visitor center: and one serving the rental house compound. The water systems at the shop and visitor center are UV treatment systems, while the rental compound is a chlorine treatment system.

### **Restrooms**

There are public restrooms in the park visitor center. Waterless restrooms are available near the tennis court, and the picnic area on the west end of the property. The rental compound has a private full bathroom with tub, toilet and lavatory for each of the compound's four bedrooms.

### **Telephone**

The telephone system is owned and maintained by Frontier up to the same locations as the National Grid primary electrical system transformers on the property. One telephone termination point is located behind the recreation room of the rental compound. The other is located behind the visitor center. The remainder of the telephone system on the property is owned and maintained by NYS OPRHP.

Radio and cell phone reception is limited at various locations within the facility.

## **Petroleum Storage**

Petroleum storage includes one 185 gallon gasoline storage tank and one 185 gallon diesel tank located in the staff parking lot near the maintenance shop/office. The tanks are relatively new and new electric dispensers have been installed.

## **Roads and Parking**

The road network within the park includes a 2000 foot long, two-lane paved entrance road leading to a paved 38 car parking lot. A 400 foot single lane paved road leads from the main parking area to the maintenance/shop parking area. There are approximately 5000 feet of single lane stone roads from the main parking area to the rental compound. The stone roads are constructed of a 2” stone base with crusher fines and include a stone dust topping. The stone dust topping needs to be maintained each year. Maintenance includes the dragging the road surface to remove the highs and lows along the roadways. Stone is added each year to keep a smooth roadway. The remainder of the roadways consist compacted earth roads typical of a field access roadway. In general, the roadways are in good shape.

## ***Operations and Maintenance***

### **Park Season, Hours and Special Events**

The park is open seven days a week from sunrise to sunset. The visitor center is open during park hours.

Special events and group events are allowed at the park year round. Fees are charged for the rental house compound. Scouting events and other group events are also held at the park. Groups must apply for a permit which requires proof of insurance and identifies the number of people attending.

## ***Emergency plans and services***

### **Safety and Security**

To ensure the safety and security of park employees and patrons, a detailed schedule is designed to maintain adequate staffing, using both permanent and seasonal employees, to support operational needs. Park Police patrol the area to enforce park rules and regulations.

### **Fire**

The park is served by the volunteer fire department and rescue squad from the Town of Henderson. In all incidences that occur, the New York State Park Police are notified and appropriate incident reports are completed.

### **Police**

The park is under the jurisdiction of the Thousand Islands Region State Park Police, headquartered at Alexandria Bay. Patrols by the State Park Police originate from Westcott Beach State Park. If a situation occurs that requires additional service or an immediate response is not possible by State Park Police, assistance may be requested from the New York State Police and Jefferson County Sheriff’s Office.

## **Ambulance/Rescue**

The park is served by a volunteer rescue squad and paramedics from the Henderson Fire Department, with assistance from State Park Police and park staff.

## **Evacuation Plan**

In the event of an evacuation of the park, a standardized, on-scene, Emergency Action Plan is utilized with assignments originating from the park manager to park staff. Command and control of the evacuation of patrons from within the park is immediately assigned to park staff. State Park Police are contacted and assistance is request from regional park headquarters. New York State Police and the Jefferson Country Sheriff’s Office may also be called upon for assistance.

## **Chapter 4: Park Vision and Goals**

The vision and goals described below uphold the preservation, recreation and environmental education values of the park and OPRHP while guiding management and development actions.

### ***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***

Robert G. Wehle State Park will continue to be a place for visitors to enjoy, appreciate and learn about the park's natural, cultural, and physical resources, and participate in the recreational opportunities that the park offers.

### ***Overall Park Goal***

To be responsible stewards of the natural, cultural and physical resources of Robert G. Wehle State Park while making available to the public compatible recreational, interpretive and educational opportunities.

### ***Natural Resource Goals***

#### **Overall Goal**

Protect, conserve, enjoy and interpret the significant natural resources throughout Robert G. Wehle 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, and direct intensive development away from such areas.
- Maintain, restore and/or enhance 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 as well as recreational opportunities and activities within the park.
- Protect and maintain the quality of water resources both on and associated with the park.
- Apply the principles of Ecosystem-based Management to operational and resource protection activities within the park.
- Maintain up-to-date inventories of biological resources.
- Provide opportunities for research and study of the parks natural resources.

## ***Recreation Goals***

### **Overall Goal**

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

### **Goals**

- Continue to provide year-round facilities and programs for the public.
- Maintain the year-round trail system for a diversity of trail users 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.
- Continue to maintain existing recreational opportunities and develop new opportunities as appropriate.

## ***Cultural Resource Goals***

### **Overall Goal**

Identify, preserve, protect, and interpret the elements of Robert G. Wehle State Park that are significant to the history, archeology and culture of the local community, region, state and nation.

### **Goals**

- Identify, protect and study archeologically significant resources within the park
- Minimize or avoid disturbances within archeologically sensitive areas.
- Investigate, evaluate and interpret key resources resulting from military use and significance of the area.
- 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.
- Provide opportunities for research and study of the parks cultural resources.

## ***Scenic Resource Goals***

### **Overall Goal**

Enhance, preserve and protect various scenic resources within Robert G. Wehle State Park

### **Goals**

- Enhance and maintain scenic vistas.
- Design and locate activities, structures and infrastructure to minimize visual impacts and to fit into the park's setting.
- Provide greater opportunities to view landscapes and other natural features.
- Identify key scenic resources for potential acquisition for viewshed protection.
- Minimize visual impacts of the shoreline from off shore viewing areas.

## ***Open Space Protection Goals***

### **Overall Goal**

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

### **Goals**

- Research connectivity to nearby parks and other open spaces.
- Create a buffer zone to development using open space protection strategies.

## ***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 traffic and pedestrian flow through the park.
- Provide and maintain appropriate public access to areas designated for public use.
- Provide access to park resources for persons with disabilities in accordance with the Americans with Disabilities Act Accessibility Guidelines (ADAAG).

## ***Education and Interpretation Goals***

### **Overall Goal**

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**

- Develop public education and interpretation programs that foster appreciation and conservation of the park's natural, cultural, scenic and physical resources.
- Design interpretive programs that focus on invasive species management, military presence and the Wehle Family.
- Provide interpretive programs designed for the general public and for organized groups.
- Design programs that are compatible with the protection of park's resources.
- Provide year-round interpretive opportunities.
- Develop partnerships that can offer interpretive programs designed for park patrons and groups.
- Improve and maintain the visitor center to serve as a centralized location for education and interpretive programming.

## ***Operation and Maintenance Goals***

### **Overall Goal**

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, low maintenance items
- Provide adequate funding for operational needs.
- Provide adequate staffing consistent with the needs of the park.
- Maintain the existing partnership for maintenance and operation of park facilities.

## ***Sustainability Goals***

### **Overall Goal**

Protect the natural systems of the park and the region through the implementation of sustainable and environmentally sensitive management and operation actions.

### **Goals**

- Use green technology in 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.
- Improve solid waste management and recycling programs in park operation.
- Improve and expand sustainable park operation practices.

## ***Facility Development and Capital Investment Goals***

### **Overall Goal**

Provide quality facilities consistent with the park's design aesthetic and sustainable/green buildings practices

### **Goals**

- Develop a signage plan for the park according to regional standards for emergency response and operational needs.
- Explore the use of alternative pavement and surface hardening methods/materials.
- Expand picnicking opportunities.
- Enhance accessibility to the park.
- Explore overnight camping opportunities.

## ***Communication and Partnership Goals***

### **Overall Goal**

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

### **Goals**

- Maintain and enhance the partnership with the Robert G. Wehle Charitable Trust.
- Provide outreach within the community for volunteerism and relationship building.
- Coordinate with local and state agencies in the conservation and protection of the natural, cultural and recreational resources of the park.



- Provide opportunities for input regarding park management and development from the public.
- Provide opportunities for the creation of new partnerships.
- Promote regional tourism.
- Continue and enhance partnerships to assist with operations and programming at the park.

## ***Inventory, Monitoring and Research Goals***

### **Overall Goals**

Encourage efforts to inventory, monitor and conduct scientific research of the natural and cultural resources of the park.

### **Goals**

- Continue cooperative research and data collection partnerships such as those currently ongoing with swallow-wort control.
- 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.



## **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 essentially represents a concise summary of a detailed report on Analysis and Alternatives evaluated as part of the planning process for Robert G. Wehle 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. 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 park office, maintenance shop and visitor center were constructed and improvements have been made to the rental house compound to improve park patrons' experiences. 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 master plan alternative. Many of the recommended directions chosen in analyzed elements were the status quo alternatives. In addition, projects designed to improve on current functions, identify future improvement to existing facilities, and provide for new opportunities are provided. These include changes to trail configurations and designations, natural resource protection strategies, recreation resource development and infrastructure not currently in the park.

The preferred master plan alternative provides for improved natural resource protection. It recommends the implementation of swallow-wort management strategies through the Robert G. Wehle State Park Invasive Species Management Plan (ISMP, Appendix B). It also recommends protection and enhancement strategies for the parks significant communities. An ISMP was preferred over current efforts or not preparing a plan due to the need to set goals and priorities, identify best management practices, and measure effectiveness.

Various military structures located throughout the park are significant cultural resources but are currently deteriorated and visitors are not aware of their significance. The preferred alternative includes needed strategies to identify, interpret, and further protect these cultural resources, as well.

The park provides opportunity for scenic vistas, but the need for an area easily accessible was identified in the planning process. In addition, the size and access to the existing picnic area are limited. Although a new picnic area on the shore was considered, instead the alternative of an overlook of Lake Ontario with a picnic area was preferred due to easier accessibility. Recreational opportunities will be enhanced by improvements to the trail system, which are needed to designate and mark trails with additional signage, address erosion and protect sensitive natural resources such as wetlands. Although primitive camping was considered, the creation of a group camping area available by permit was identified as a priority that should be included in the plan because groups currently using the park for various outdoor educational programs are allowed to camp overnight in tents on an informal basis. Siting alternatives were considered, and the site chosen that would not require new support facilities.

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.

**Table 2 - Comparison of Status Quo and Preferred Master Plan Alternative**

<b>Element/Topic</b>	<b>Status Quo Alternative</b>	<b>Preferred Master Plan Alternative</b>
Park office	The park office was constructed in 2007 and is located within the maintenance area.	No changes are recommended for this building.
Maintenance area	The maintenance area consists of several buildings. A new shop was constructed in 2007 and is located in the same structure as the park office.	No changes are recommended for these buildings.

Element/Topic	Status Quo Alternative	Preferred Master Plan Alternative
Visitor Center	The Visitor Center was opened in 2008 and will receive minor changes to enhance visitor satisfaction.	No significant changes are recommended for this building.
Picnicking	A picnic area is provided one and a half miles from the parking lot on the shore of Lake Ontario.	A second picnic area is constructed one quarter mile from the parking lot and will include ten picnic tables in the short term. In the long term, a picnic shelter will be constructed.
Fishing	Fishing is allowed from the shoreline. The park does not have a designated fishing access location.	No changes are recommended. Informal access to Lake Ontario may be achieved through the existing picnic area and at the southwest portion of the park.
Trail activities	Hiking, mountain biking, cross country skiing and snowshoeing are allowed on all 16 miles of trail. In the winter, four miles of trail are groomed.	Hiking, mountain biking, cross country skiing and snowshoeing are allowed on all trails. Minor improvements will be made to the trail system.
Rental Compound	The rental compound is used by both large and small groups.	The rental compound will continue to be used by both large and small groups. The septic system will be replaced and minor improvements will be made to enhance the experience of the park patrons.
Log Cabin	The log cabin is not open for public use. The cabin continues to deteriorate.	The log cabin will be available for public rental as an optional rental feature for patrons renting the compound. Upon demand, the long term goals for this structure may include having it as a stand alone rental cabin including restroom facilities, electric, roadway improvements and the realignment of the Snakefoot Trail.
Barns	The barns are in good condition and used for storage.	The barns will continue to store materials and equipment.
Roadways	The main roadway and parking lot are asphalt. Secondary roadways and parking lots are gravel. The secondary roadway to the rental compound is single lane.	No changes are recommended for any roadways.

Element/Topic	Status Quo Alternative	Preferred Master Plan Alternative
Bird Conservation Area	The park is not designated as a Bird Conservation Area (BCA).	Little is known about the potential for bird habitat at the park. Designation may be considered when more detailed information is known about birds within the park.
Cultural Resources	Cultural resources from the military era are unprotected. Ground disturbing projects receive an archeological review.	The military features including the firing range, gun wall and the spotter stations will be managed to protect the features. The firing range will have some vegetative management and the firing wall will be cleared of vegetation. Ground disturbing projects are subject to an archeological review.
Interpretive and Education Programs	Interpretation and educational opportunities are provided at four kiosks and within the visitor center. A swallow-wort interpretation plan has been developed.	Interpretation and educational opportunities are expanded to include additional topics such as the military activities. The swallow-wort interpretation plan will be implemented to educate patrons.
Invasive Species Management	Invasive species are controlled through mowing. Studies are underway to determine effective methods of control.	An Invasive Species Management Plan is developed and provided as Appendix B of the master plan. Various methods of control will be implemented and studied. Mowing will remain a significant method of controlling swallow-wort

## **Chapter 6: The Master Plan**

### ***Classification***

The park will remain classified as a Scenic Park, which reflects the scenic nature and the type and level of development proposed within the master plan.

### ***Designations***

#### **Bird Conservation Area (BCA)**

The potential for BCA designation exists in the park. However, there is a need for additional information before recommendations are made. OPRHP staff will coordinate with state and local experts to determine if a BCA designation should be considered.

### ***Natural Resource Protection***

#### **Invasive Species Management**

As stated in Chapter 3, the biggest threat to biodiversity in the park is the prevalence of the aggressive non-native plant, pale swallow-wort. The preparation of an invasive species management plan provides guidance and priorities so that control efforts may be undertaken in the most effective means possible, both ecologically and economically. See Appendix B – Robert G. Wehle State Park Invasive Species Management Plan for more information.

#### **Significant Natural Communities Management**

##### ***Calcareous Shoreline Outcrops***

The protection of the calcareous shoreline outcrops will be incorporated into the design of the new picnic area. In addition the master plan calls for the protection of shoreline buffers vegetation at vista areas. The shoreline outcrop community will be monitored for overuse and invasive species.

##### ***Calcareous Pavement Barrens***

The manual removal of invasive plants in the calcareous pavement barrens followed by the restoration of native species is the most appropriate course of action at this time, as recommended in Appendix B – The Robert G. Wehle Invasive Species Management Plan. The current extent of the barrens will be maintained. If expansion of the barrens is considered in the future, management practices such as mechanical removal of inconsistent plant species or the use of prescribed burning may be utilized.

The trail network through the barrens will be reduced to promote a balance between recreation and conservation of this rare habitat. Trails within the barrens have been identified and will be evaluated for relocation away from or around the most sensitive barren areas on a case-by-case basis. Trail relocations described in Appendix A and shown on Figure 15 – Trail Modification Map are conceptual. Specific locations for reroutes will be determined through detailed fieldwork by OPRHP staff.

## ***Recreation Facility Development and Programs***

### **Trails**

Hiking, mountain biking, cross country skiing and snowshoeing are allowed on all trails. All trails have been named and will be blazed with appropriate signage provided at intersections. Trail improvements, reroutes or closures will take place per OPRHP Trail Standards (Appendix C). See Figure 15 – Trails Modification Map for more information.

Improvements to the trail system will include the following.

- Close certain undesignated trails as identified on Figure 16 – Trails Map.
- Improve or realign areas identified with wet conditions per Figure 13 – Trail Assessment Map and Appendix D.
- Remove several small unmarked trails as identified in Appendix A and Figure 15 – Trail Modifications Map.
- Remove the portion of the Dancing Dog Trail along the fence line from within the wetland.
- Realign a portion of the Bobolink Trail around calcareous pavement barren habitat. Portions of the trail will be lined with large stones to create a more clearly defined trail and keep patrons and equipment from unnecessarily leaving the trail.
- Realign a small portion of the Midge Trail. The portion of the Snakefoot Trail that connects to Parking Lot B will be renamed the Midge Trail.
- Install new trail head signage that will provide information about the trail such as length and difficulty.
- Move the Marksman Trail away from the park road.
- Continue mowing and snow grooming operations on trails.

### **Fishing**

Continue providing fishing access.

### **Group Camping**

A group camping area will be constructed within the park. Its location will allow campers to make use of an existing restroom facility and water spigot. The design will include fire rings and open areas to pitch tents for approximately 75 people. See Figure 14 – Group Camping and Day Use Alternatives Map.

### **Hunting**

A small section of park property will be removed from the designated hunting area. This small area is separated from the rest of the park by North Schoolhouse Road and is not considered a popular hunting area. All other designated hunting areas will remain open for hunting and be administered in accordance with State hunting rules and regulations. See Figure 9 – Hunting Map.

## ***Cultural Resource Protection***

### **Firing Range and Wall**

The firing range and wall are National Register eligible features and will be interpreted as a significant cultural feature within the park. The firing wall will be cleared of vegetation through the cutting of trees and shrubs. All vegetation will be cut flush with the wall leaving the roots intact to minimize disturbance to the historic structure. The berms and firing range will continue to be



mowed. Trees will be removed from the firing range to enhance the visual connection with the firing wall. Tree and shrub removal will take place as needed. Interpretive panels will be installed to educate patrons on the significant military history of the site. Archeological clearances are not required for the cutting of vegetation from the firing range or wall. See Appendix C - Cultural Resources Recommendations Memo.

## **Watch Stations and Foundations**

The watch stations and foundations from the military era are National Register eligible features and will be interpreted as a means to inform visitors of their importance and to help protect their composition. These structures are in various conditions and will be evaluated further. Repair or reconstruction will be done as deemed necessary in accordance with Field Services Bureau guidance. Until that time, these structures will remain in their present condition. See Appendix C - Cultural Resources Recommendations Memo.

## **Archaeological Resources**

Archaeological artifacts have been located within the park including objects from previous military activities, farmstead settlements and Native American presence. A Phase 1A Archeological Sensitivity Assessment for the park was completed in 2004. A Phase 1B archeological survey was conducted before the entrance roadway construction. Any new ground disturbing development may require a Phase 1B survey to identify any archaeological significance before development begins. Projects which are not ground disturbing will not require archeological clearances. See Appendix C - Cultural Resources Recommendations Memo.

## **Wehle Structures**

All buildings and structures constructed by Robert Wehle are not eligible for listing on the National Register. These structures and their grounds will be maintained for existing uses or adaptive reuse. See Appendix C - Cultural Resources Recommendations Memo.

## ***Scenic Resource Protection***

### **Viewshed from Lake Ontario**

The viewshed from Lake Ontario will be protected and considered in the design and location choice for the picnic area and overlook. The overlook design will incorporate materials that blend with the surroundings. The design of the picnic shelter will consider placement, low pitch rooflines, natural color tones and vegetative screening to minimize or eliminate view of this structure from the lake.

Views of the lake will be enhanced along the Snakefoot Trail through the selective removal of trees or shrubs at key points along the trail. Existing vista points will be maintained.

## ***Interpretation and Education***

As stated in Appendix A, recommendations from the “Swallow-wort Interpretive Plan for Robert G. Wehle State Park” (Veverka, 2010) will be implemented. Swallow-wort seed check and boot cleaning stations will be installed at entry/exit points and additional interpretive panels will be provided at swallow-wort research areas, trailheads and at the visitor center. These actions will provide park patrons with a better understanding of this invasive plant and encourage them to participate in preventing its spread.

Additional interpretation and education on other topics, such as the park’s military activities, geology and natural history, will also be provided. OPRHP is interested in speaking with any

individual with information concerning the history of the park. Outreach will be conducted within the confines of available resources.

## ***Infrastructure***

### **Structures**

#### ***Log Cabin***

The log cabin will be an optional amenity provided for an additional fee with the reservation of the Rental House Compound. The cabin will receive enhancements before it becomes available for public use including the addition of a pit toilet, electricity and roadway improvements. Based upon usage trends and patron comment, the long term goal for the log cabin may be as a stand-alone rental structure, separate from the rental house compound.

#### ***Storage Barns***

The use of the two barns will remain as storage space and for the future operational needs of the park.

#### ***Rental House Compound***

The rental house compound will continue to serve both large and small groups to provide unique, high quality experiences for a variety of patron uses. Improvements will be made to the septic system. The size of the group will determine the additional support services that will be required for each event.

### **Roads and Parking**

The roadway and parking layout will remain unchanged. The current parking lots meet the capacity needed for park use. The asphalt roadway and parking area have been recently installed and are in very good condition. The gravel roadway to the rental house compound will remain as a single lane gravel road in keeping with the character of the park. Improvements to the gravel service road will take place to provide access to the log cabin for patron use.

### **Picnic Areas**

The existing picnic area located on the southwestern shore will remain as is. A small picnic area will be constructed closer to the main parking lot and will include several picnic tables. The trees in this area will be thinned. All hardwoods will remain to provide shade. The portion of the Snakefoot Trail leading to this area will be enhanced to provide access to the picnic area and meet ADA requirements.

If deemed necessary, a small picnic shelter will be constructed adjacent to the proposed picnic area allowing groups to have convenient access to a picnic shelter in a very scenic location. Its design and location will incorporate ways to minimize its visibility from the lake. The enclosure of this shelter will be explored during its design.

### **Overlook**

An overlook will be included within the proposed picnic area. Visual impacts from the lake will be considered during the design of the area and minimized to the greatest extent possible.

## ***Operations and Maintenance***

The planning process has identified various aspects related to the alternatives which could impact park operations and infrastructure. Below is a list identifying the areas where potential demands on park staff and the operation of the park may be affected by the implementation of the master plan.

### **Mowing**

All day-use areas as well as multiple fields will continue to be mowed for recreational use as well as swallow-wort management.

### **Group camping area**

Routine mowing will be provided in the group camping area.

### **Picnic area**

The new picnic area will need some minimal pruning of vegetation, grading and the removal of rocks if necessary. Routine maintenance will include mowing and litter removal.

### **Rental compound**

The maintenance and operational demand of the rental compound will remain relatively unchanged with the implementation of the master plan.

### **Trail maintenance**

Maintenance of all trails will continue to be an operational component at the park. The trail assessment will be used to inform the maintenance program for the trail system.

### **Upkeep of gravel surfaces**

All gravel roads will continue to be maintained. The gravel ADA trail access to the picnic area will be maintained as needed to remain in compliance with ADA regulations.

### **Upkeep of interpretive structures**

Interpretive panels will be cleaned and maintained twice per year.

### **Upkeep of cultural resources**

The firing range will continue to be mowed. Some tree removal will be done. The firing wall will be cleared of vegetation. Occasional maintenance will be required to keep trees from growing on this structure.

The concrete spotter stations and other foundations will not require any maintenance in the short term. If deemed appropriate in the future, preservation techniques can be discussed with Field Services Bureau staff.

### **Swallow-wort Management**

In addition to the mowing of swallow-wort mentioned above, maintenance staff will install the proposed seed check/boot cleaning stations every August before the swallow-wort seed pods open, and remove and store them before the first snowfall. Maintenance of these stations will be on an as-needed basis. Staff will also continue current practices to prevent the spread of swallow-wort outside the park. This includes minimizing the use of the park's maintenance equipment at other state parks. In general, the equipment at the park is used exclusively at Robert G. Wehle State Park and does not

move from park to park. If any equipment is borrowed by other parks, it is thoroughly cleaned to insure that swallow-wort seeds or plant material are not inadvertently transported out of the park. Also, staff vehicles are inspected and washed as necessary during the seed season before leaving the park. Staff will also use the boot cleaning/seed check station before leaving the park during the seed season.

## ***Safety and Security***

The safety and security of park staff and visitors is maintained by permanent and seasonal staff with support from Park Police. Recommendations concerning safety and security are described below.

- Signage will be erected on kiosks and at key locations in the park with language warning of potential risks and providing emergency contact information. Since some trails are adjacent to steep descents and cliffs, extreme caution must be exercised in all areas.
- Brochures and kiosk panels with maps will provide information on trails to assist with visitor orientation. Emergency contact information will be provided on brochures and maps.
- The rental compound is fenced and has a lockable gated entrance that enhances patron safety and security. While this fence and gate were initially constructed to keep deer out of the area, it now serves to separate the rental compound from the rest of the park, keeping it secure from potential vandalism.
- Park staff will continue to remove hazardous trees near roadways, trails and other use areas as per the OPRHP Tree Removal Policy to protect patrons and staff. Patrons are encouraged to report hazardous or overhanging trees.
- All buildings, petroleum storage and water systems will continue to be maintained in accordance with current New York State and Federal laws, standards and inspections.
- Vehicular access will remain in the current configuration, which will minimize potential vandalism and traffic incidents throughout the park.

## ***Land Acquisition***

OPRHP will evaluate and consider acquisition of fee title or easement of adjacent properties or existing in-holdings for purposes of recreation and resource protection, as they become available.

## ***Implementation***

### **Timeline**

The master plan sets forth OPRHP's vision for capital improvements and operational enhancements to the park. The pace and sequencing of recommended actions will be determined by the availability of funding either through OPRHP or through the Robert G. Wehle Charitable Trust.

The master plan presents a vision for the rehabilitation, protection and construction of improvements to the park. The following items will be considered during the implementation of the master plan.

- The plan components shall be incorporated into the annual operating plans and budgets for the park.
- The plan will be reviewed annually to identify projects that will be considered for implementation and to assess the progress of plan implementation.

The implementation of the master plan for the park is divided into two priority phases, as well as ongoing actions. The activities identified in the table below are conceptual and subject to reorganization based on available funding for specific components in any given group.

**Table 3 - Implementation Priority List**

Priority 1	Description/Development Component
	<ul style="list-style-type: none"> <li>Relocate a portion of the Bobolink Trail to minimize damage to the pavement barrens and close the duplicate path of the Dancing Dog Trail through a wetland in accordance with OPRHP Trail Standards. Implement other trail improvements per Figure 15 and Appendix C.</li> </ul>
	<ul style="list-style-type: none"> <li>Construct a new picnic area and improve the scenic vista.</li> </ul>
	<ul style="list-style-type: none"> <li>Construct group camping area.</li> </ul>
	<ul style="list-style-type: none"> <li>Improve the trail and interpretive signage throughout the park.</li> </ul>
	<ul style="list-style-type: none"> <li>Upgrade the rental house compound sewage system upgrades and provide accessibility improvements to the game room.</li> </ul>
	<ul style="list-style-type: none"> <li>Develop the log cabin for inclusion in the compound rental availability. This includes the construction of a restroom, electrical upgrades, road access improvements and re-alignment of the Snakefoot Trail.</li> </ul>
Priority 2	
	<ul style="list-style-type: none"> <li>Implement interpretive improvements in the firing range area. Remove vegetation, provide interpretive panels and mow the range field, including the slope up the wall.</li> </ul>
	<ul style="list-style-type: none"> <li>Construct a covered picnic shelter.</li> </ul>
On-Going	
	<ul style="list-style-type: none"> <li>Implement the Invasive Species Management Plan.</li> </ul>
	<ul style="list-style-type: none"> <li>Implement the Swallow-wort Interpretation Plan.</li> </ul>

### **Actions Proposed Outside the Park**

Development actions outside of the park boundary that are proposed within the viewshed of the park, including but not limited to wind farms and associated transmission lines, may have an impact on the park’s resources and park patron’s experience. Such actions are of interest to the agency but such proposals are not considered within the scope of this master plan. The agency will, however, monitor projects that could impact the park and will participate in their environmental review as appropriate.

### ***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 within the park.

- Parking Lots and Roadways – The secondary parking lots and the roadway to the Rental House Compound will remain gravel to reduce runoff and improve infiltration.
- 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 maintenance needs and erosion from water run off.
- Waste disposal – The Carry in/Carry out Policy will remain in place. Visitors will continue to be educated on the policy and be encouraged to participate in solid waste reduction and recycling programs. Signage will be considered to encourage visitors to recycle. Park staff will continue recycling in the park office.
- 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 pit toilets. The outdated water treatment systems will be upgraded to improve wastewater treatment.
- Vegetation - Grass mowing will remain a significant swallow-wort management strategy in the park until other acceptable solutions are found. Upon the replacement of mowers and grass trimming equipment, sustainable or alternate fuel equipment will be considered. If plantings are needed, native species will be used to reduce water and maintenance requirements.
- Education – Staff will educate visitors on the park’s sustainable features. Sustainability will be a component of the interpretive plan for the park. Interpretive panels and displays will be added 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. Integrated Pest Management (IPM) and organic pest control methods will be utilized.
- 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.

## ***Relationship to Other Programs***

OPRHP continues to be committed to partnering with groups that are interested in furthering the mission of the park. The park staff is interested in working with other outside planning groups to further the park’s contribution to and participation in the recreation resources of the area.

Partnerships with local groups such as Boy/Girl Scouts will continue to provide maintenance assistance and improvements to the park.

The park, through the regional office, continues to reach out to the larger service area to encourage individuals, groups and other federal and state agencies to contribute to the park.

OPRHP will continue to work with New York DEC on management issues common to the park and the adjacent Henderson Shores Unique Area. It will also continue swallow-wort research partnerships with the U.S. Department of Agriculture (USDA) and Cornell University.

## **Robert G. Wehle Trust**

As stated in Chapter 3, Robert G. Wehle State Park receives funding support, on an annual basis, from distributions from the Robert G. Wehle Charitable Trust. The relationship with the Trust will remain an important aspect in supporting the park and in creating an environment for park patrons' enjoyment.





## **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. This chapter focuses on the environmental impacts and mitigation of adverse effects; however, for the purposes of SEQR 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 SEQR. The environmental setting of Robert G. Wehle State Park is discussed in Chapter 3 and Appendix A (Analysis and Alternatives).

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 Appendix A, 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 and facility management practices would continue. Additional recreational opportunities would not be provided and the park would continue to operate under short range initiatives with respect to operations and resource management and protection. Any improvements would be assessed on a case by case basis.

### **Preferred Alternative and the Final Master Plan**

The preferred alternative is the compilation of the preferred recreation activity, development and resource stewardship options identified during the Analysis and Alternatives process summarized in Chapter 5. The compilation at the end of Appendix A and within Chapter 6 was subject to a final evaluation (or synthesis) to assure that there was consistency among the various alternatives. The master plan, described in Chapter 6, 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 measures. Impacts and mitigation, in addition to information provided in 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 change traffic patterns or access to the park. After analysis of the roads, access and parking capacity it was determined that these facilities are in good condition and function effectively in their current configuration. The parking facilities are currently sized to accommodate existing and proposed activities.

### **Recreation**

The implementation of the master plan will have a positive impact on recreational opportunities at the park. An additional picnic area will be constructed that will have several benefits. First, it will provide a scenic picnic area with dramatic vistas of Lake Ontario that will be easily accessible from the main parking area, as opposed to the current picnicking area which is 1.5 miles from the parking lot. Second, it will be compliant with the American Disabilities Act which is also not available at the current picnic area. Third, it will provide a new picnic shelter to protect park visitors from inclement weather.

Another recreational opportunity that will be enhanced is group camping. An area for group camping by special permit is proposed to be developed. At present, groups using the park under special permit informally use the mowed areas around the park office. The new location will provide a more formal designated area with several fire rings and will still be convenient to the main parking lot and the existing restrooms.

Another improvement will be the new availability of the log cabin for public use as an optional amenity to the rental compound. The cabin will receive some upgrades to accommodate this new use.

The park's trail system will be modified somewhat to provide a more clearly defined circulation pattern with less duplication of trails. Improved signage will also be provided to clarify routes and will be designed in accordance with OPRHP's trail signage guidelines (OPRHP, 2010). Trail closures and rerouted sections will be done in accordance with the agency's trail design guidelines and trail closure guidelines.

The Master Plan provides improved interpretive opportunities for both natural and cultural resources. This will include interpretation of the park's geology and former land uses including its military history. Some new interpretive signage will be developed in conjunction with seed check/boot cleaning stations. These stations will educate park users in how they can assist in preventing the spread of swallow-wort seed beyond the park.

### **Water Resources**

The implementation of the master plan will have minimal impact to water resources. The park has a significant shoreline along Lake Ontario and also contains wetland areas. The master plan calls for a protection of the buffer vegetation along the park's shoreline to prevent erosion and runoff from impacting Lake Ontario water quality. Recognition of the importance of protecting the shoreline buffer vegetation will be applied to both ongoing park vista maintenance procedures as well as in the design of the new shoreline picnic area. No new development is proposed within state or federal wetlands within the park. There are, however, several trails that cross small federal wetland areas. These sections will be further evaluated to determine the best means of managing these areas to

minimize impacts to these wetlands (e.g. re-routing around the wetlands or construction of boardwalks over them.) Any applicable wetland permits will be obtained as needed.

The current septic system at the rental compound will be upgraded to better accommodate existing wastewater treatment needs. This will better protect groundwater quality.

## **Biological Resources/Ecology**

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 significant ecological communities at the park as well as better management of swallow-wort, which is pervasive throughout the park. These strategies reflect the recommendations of the Natural Heritage Program scientists in the "Rare Species and Ecological Communities of Robert G. Wehle State Park" (Lundgren and Smith, 2008).

### ***Significant Ecological Communities***

The adoption of the Invasive Species Management Plan will provide guidance for management of invasive species within the significant pavement barrens and calcareous shoreline outcrop communities. Invasive species, primarily swallow-wort, will be removed from these sensitive areas and replaced with native species where possible and appropriate.

The shoreline outcrop community will also be further protected through the plan's recognition of the importance of the vegetative buffer along the shoreline. Park maintenance procedures will insure that vista maintenance includes protection of the buffer vegetation. Shoreline areas will be monitored for overuse and trampling of this vegetation. The construction of the new picnic area will incorporate buffer vegetation into the design.

### ***Rare Species***

In order to protect rare species at the park such as the Cork elm (*Ulmus thomasi*), areas which will be developed, such as the new picnic area, the new group camping area and the trail relocation area, will be surveyed for this species as well as other rare plants. If the cork elm or other rare plant species are found then the design and construction plans will be modified to avoid them.

### ***Invasive species***

The adoption of an Invasive Plant Management Plan as part of the master plan will provide needed guidance and a planning framework to prioritize control efforts so that control of invasive plants can be done in the most effective manner from both an ecological and economic perspective. Due to the severe infestation of swallow-wort at the park, this plan places an emphasis on its removal and control. The plan also includes information on the identification and control of other invasive species known to exist at the park. Near term activities that will be implemented under this plan include installation of swallow-wort seed check/boot cleaning stations and experimental swallow-wort control plots where swallow-wort will be tilled and removed and replaced with native vegetation. The experimental plots impact vegetation and soils in four separate areas totaling one acre. This disturbance will be mitigated through the careful restoration of these sites with native vegetation and invasive-free soil and will hopefully yield vital information into the use of a new technique for managing this pernicious invasive species.

### ***Public Education***

Further public education about the significant ecological communities at the park will add to the public's appreciation of the park's natural resources. The master plan also calls for additional efforts to educate the public about swallow-wort such as new signage and seed check/boot cleaning stations.

These efforts will provide additional information about the plant itself, the impact it has on the park's ecosystem, the park's operations, and most importantly how to help control its spread beyond the park.

## **Cultural/Archeological Resources**

The master plan recognizes and protects the historic and cultural resources within the park. OPRHP's Division for Historic Preservation Field Services Bureau has reviewed the master plan and determined that it will have No Adverse Impacts on historic resources either listed or determined eligible for listing on the National Register of Historic Places, provided certain conditions and processes are followed, which are outlined in their review letter (Appendix E).

Archaeological artifacts have been located within the park including objects from military activities, previous farmstead settlements and Native American settlements. A Phase 1a Archeological Sensitivity Assessment for the park was completed 2004. A Phase 1B archeological survey was conducted prior to the park entrance roadway construction. To assure there are no adverse impacts to archeological resources, additional Phase 1B surveys may be required before any future sub-surface work is undertaken within the park.

OPRHP's Historic Preservation Field Services Bureau has reviewed all of the buildings, structures and landscapes at the park and determined that several of these features including the rifle range landscape, the "Watch Stations," several foundations and a former water pumping building are considered contributing to the historic significance of the park. All work near or on these features other than normal maintenance and repair will be submitted to the Historic Preservation Field Services Bureau for review.

## **Scenic Resources**

Implementation of the master plan will not result in any significant adverse impacts on scenic resources in the park. The park's three mile shoreline along Lake Ontario is a significant scenic resource. The new picnic area on the shoreline will be relatively small and will be designed, using appropriate setback and materials, to blend into the wooded shoreline to minimize visual impacts from the lake.

## **Public Health and Safety**

OPRHP places a strong emphasis on both visitor and staff safety. The primary safety hazard at the park is the steep shoreline along Lake Ontario. As part of the design of the new picnic area, consideration will be given to the protection of park patrons in this area. This will also be considered as part of the renovations that will occur at the cabin. There is a safety warning given with the rental compound agreement regarding the steep cliffs in this area.

OPRHP will continue to operate drinking water and wastewater facilities at the park in accordance with all Department of Health and DEC standards. Trail maintenance will continue to address roots and rock fissures in some areas of the park which can be tripping hazards.

## **Impact on Growth and Character of Community and Neighborhood**

Implementation of the master plan is not expected to significantly increase the use of the park. The new picnic area and group camping facilities will attract some additional visitors. As word continues to spread about the spectacular scenery at the rental compound for use as a backdrop for weddings or other gatherings, the demand may increase. The limited number of possible time slots will likely continue to keep the compound facility fully rented throughout the spring, summer and fall. This use is not expected to exceed the carrying capacity of the park's facilities.

## **Unavoidable Adverse Effects**

The proposed master plan will result in minor unavoidable adverse impacts. There will be some short term aesthetic impacts due to construction of the new picnic area, the ADA accessible pathway and the group camping area. These new facilities will require removal of approximately 2 acres of some shrubs and trees. The preservation and restoration of the firing range and firing wall will require removal of approximately 3 acres of trees and shrubs. Surveys will be conducted prior to removal to insure that no rare plants are affected.

## **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 long term operation and maintenance costs of the park, although much of these costs are subsidized through the Robert G. Wehle Charitable Trust.

## **Supplemental Environmental Review**

Portions of this Final Master Plan/EIS are somewhat general or conceptual. 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, the development of the new picnic facility will require additional review for potential archeological impacts. 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 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 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***

### **Ecosystem-Based Management**

This plan has incorporated the agency's sustainability initiatives and goals as well as an ecosystem-based management (EBM) approach to planning. This was discussed in the sustainability section of Chapter 6. Overall the master plan is designed to limit impacts to the environment and provides modest improvements to respond to the needs of park users. These improvements are expected to be within the carrying capacity of the park, as well as the adjacent areas.

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 regional/park staff will reach out to park partners, and also strive to foster connections with the park's neighbors 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.

### **Coastal Zone Management Program Consistency**

Robert G. Wehle State Park is located within New York's coastal area, specifically the Great Lakes. In accordance with the NY Waterfront Revitalization and Coastal Resources Act (Executive Law Article 42) state agency actions within the coastal area must be evaluated for their consistency with the State's coastal policies. The overall objective of this program is to assure a balance between development and preservation of the State's coastal areas.

Robert G. Wehle State Park is not located within an area that has a Local Waterfront Revitalization Plan (LWRP); thus the Agency has evaluated consistency with State Coastal Policies. If a LWRP is developed for the area encompassing Robert G. Wehle State Park, any action beyond that identified in the plan will need to be consistent with the LWRP.

A Coastal Assessment Form (CAF) was completed to assist in the identification of applicable policies. After a review of all the coastal management policies (NYCRR Title 19, Part 600.5) OPRHP has determined which policies are applicable to the Robert G. Wehle State Park Master Plan. The CAF and discussion of those policies are provided in Appendix F. Policies applicable to the plan include those related to water dependent uses and facilities, natural protective features such as bluffs, access to public water related recreation, water-dependent and water-enhanced recreation, significant historic and cultural resources, scenic quality, best management practices, and protection of wetlands..

### **Summary**

Based on the coastal policy discussion contained in Appendix F, it is OPRHP's determination that the action will not substantially hinder the achievement of any of the policies and purposes of the State Coastal Policies as described in the New York Coastal Management Program.

## 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 Robert G. Wehle State Park. The Draft Master Plan/DEIS was issued July 21, 2010. A Public Hearing was held on August 10, 2010 at the park. The comment period ended September 3, 2010.

During the Public Hearing, six people spoke and their comments were recorded. During the comment period for the Draft Master Plan/DEIS, the Agency received an additional six written 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 Robert G. Wehle State Park have invested in their review and comments on the Draft Master Plan/DIES 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***

The following section contains a detailed list of comments received from the public during the comment period and public hearings and the responses. The comments are organized by category. Following each category heading, there is a summarized comment. Following each summarized comment is the Agency's response.

---

### ***Designations***

#### ***Comment: Bird Conservation Area (BCA)***

The park offers unique opportunities for birders to observe waterfowl and bird migration on Lake Ontario. Wehle should be designated as a BCA.

#### ***Response:***

The criteria for BCA designation was reviewed as part of the master planning process and it was concluded that not enough is known about the birds of this park to warrant designation at this time. OPRHP will work with Onondaga Audubon and others to gather additional information on the park's bird population. New data will be reviewed and evaluated to determine if they support one or more criteria that would make the site eligible for BCA designation. The text in Chapter 6 has been modified to reflect this change.

---

### ***Development***

#### ***Comment: Dogs/Off Leash Area***

An off leash area for dogs should be constructed at Robert G. Wehle State Park as a tribute to Mr. Wehle. It will separate dogs from potentially rabid animals and protect other park patrons from

unwanted interaction with dogs. The off leash area should include two areas; one for dogs over thirty pounds and one for dogs under thirty pounds. Please continue to keep the park dog friendly.

**Response:**

This concept has been reviewed. OPRHP determined that the park is not close enough to a large population to warrant the costs associated with the development and maintenance of an off leash area. The park currently provides a small off leash area adjacent to the volleyball court. Dogs are allowed on leash throughout the park.

---

**Comment: Camping**

Campsites in the area have seen a large volume of litter and under age drinking. To keep the park pristine, camping should not be considered at this park.

**Response:**

The group camping area will be reserved for groups through the park office by permit only. Individuals wishing to reserve an individual campsite in the area must use other local camping facilities.

---

## **Wildlife**

**Comment: Bird Watching**

Consider including an enclosed picnic shelter in place of the proposed open shelter so bird watchers are able to watch waterfowl and migratory birds in December on the shore while staying out of the cold wind.

**Response:**

OPRHP will work with the Onondaga Audubon Society and other interested birders regarding suggestions for design and placement of a shelter/viewing blind that would enhance bird observation while offering shelter from the weather. The recommendations will be considered in the context of meeting the needs of birders and non-birding park users. The text in Chapter 6 has been modified to reflect this change.

---

**Comment: Waterfowl Disruption**

The Snakefoot trail should be moved away from the bluff in some areas to minimize disturbance of waterfowl.

**Response:**

Upon receipt of additional relevant information, OPRHP would be willing to work with interested parties to identify areas where minor trail realignment might benefit waterfowl.

---

## **Trails**

**Comment: Trail Signage**

Improve trail signage to reduce the quantity of people getting lost.

**Response:**

Trail signage improvements are proposed in the plan.



***Comment: Quantity of Trails***

There are too many trails. OPRHP should continue to reduce trails.

***Response:***

Trails are the main activity in the park. The master plan assessed the trail system and proposed modifications, including some re-routes and elimination of trails considered duplicative. This resulted in a net reduction in the total miles of trails. The trail system is very popular and the proposed system is considered to be appropriate.

---

***Comment: DEC Henderson Shores Unique Area Connections***

OPRHP should promote greater cooperation with DEC regarding the management of both properties. A loop trail system should be constructed across both properties.

***Response:***

A trail connection does exist between the park and the Henderson Shores Unique Area. OPRHP currently coordinates with DEC regarding management of both properties. OPRHP would entertain additional trail connections proposed by DEC.

---

***Health and Safety***

***Comment: Barriers along cliffs***

Install barriers along the cliffs to improve safety.

***Response:***

Signage is provided at trailhead locations advising patrons of the potential risks associated with hiking adjacent to cliffs in the park. Barriers or fencing will not be installed, in general, along the cliff's edge, unless a hidden danger is identified. Cliffside fencing may be installed at designated gathering points.

---

***Comment: Deer Ticks***

There are many deer located in the park, please consider educating patrons on ticks and Lyme disease to prevent possible health issues.

***Response:***

OPRHP will provide educational information concerning ticks and Lyme disease.

---

***Swallow-wort Management***

***Comment: Management and Control***

The priority for this park should be to control the spread of swallow-wort.

***Response:***

Swallow-wort management in the park is a very high priority for OPRHP. Reducing the spread of swallow-wort is the focus of current management such as extensive mowing and future management actions described in the Invasive Species Management Plan (Appendix B). The Swallow-wort Interpretive Plan for Robert G. Wehle State Park also recommends educating park employees and patrons about the plant and how they can reduce spreading swallow-wort. Both of these plans were

developed in conjunction with the Master Plan and the implementation of each of these plans is identified as an ongoing action in Table 1 – Implementation Priority Table.

---

***Comment: Spread of Seeds***

OPRHP should reconsider allowing mountain bikes in the park as swallow-wort can get stuck on them and then be transported out of the park.

***Response:***

The spread of swallow-wort seeds beyond park boundaries is of great concern to OPRHP. The possibility of swallow-wort seeds being spread beyond the park by patrons is a very real possibility, no matter what their activity. One of the top priorities of the Invasive Species Management Plan is to install seed check stations where patrons will be taught how and encouraged to check that seed or other plant parts are not inadvertently stuck to their clothing, boots, dogs, bikes or cars. Additional education about swallow-wort at other locations in the park is also proposed and will aid in this effort as well.

---

***Comment: Pesticide Use***

Please reconsider the OPRHP herbicide policy. Herbicide should be used on the swallow-wort in the park. OPRHP inherited the swallow-wort on the property and, given the nature of the plant, should be allowed to use herbicides on it. Insecticides, which are used by OPRHP are far more dangerous than herbicides.

***Response:***

The use of herbicides and insecticides for control of invasive species is allowed under the OPRHP Pesticide Reduction Policy (<http://www.nysparks.state.ny.us/inside-our-agency/public-documents.aspx>). However, the swallow-wort infestation in the park covers almost 1000 acres. The use of herbicide on such a large scale could have deleterious environmental and human health effects. Biological control agents and mechanical removal methods are being researched with the hope of finding an alternative to the use of herbicide. During implementation of the Invasive Species Management Plan, herbicide use may be warranted in certain circumstances, such as protecting significant ecological communities.

---

***Education and Interpretation***

***Comment: Expansion of military interpretation***

The interpretation of the military history at the park should be expanded. OPRHP should talk with the local veterans who were stationed at the Stony Point Rifle Range.

***Response:***

The interpretation of the park's military history will be expanded. OPRHP has conducted one oral history interview with a local veteran. OPRHP is interested in speaking with any individual with information concerning the history of Robert G. Wehle State Park. The text in Chapter 6 has been modified to reflect this change.

---

***Lake Access***

***Comment: Lake Access***

The plan should clarify if boats and swimming access is allowed.

**Response:**

Swimming and boating access to Lake Ontario will not be provided at Robert G. Wehle State Park because the shoreline conditions are not suitable. Swimming and boating access sites are available at other near by parks.

**Persons/Organizations Who Provided Comments**

Name	Title	Organization
Bonanno, Sandy	Resident	
Cook, Tim	Resident	
Glovey, Margaret	Resident	
Griggs, Janis	Resident	
McGowan, Jim	Trustee	Robert G. Wehle Charitable Trust
Root, Amanda	Resident	
Shupe, Scott	Director	Oneida Lake Association
Smith, Gerald	President	Onondaga Audubon Society
Tiano, Karen	Resident	
Whiteman, Robert	Resident	



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- Veverka, John. 2010. Swallow-wort Interpretive Plan for Robert G. Wehle State Park

## Personal Communication

Julian Adams, OPRHP

Amos (Andy) Cambron – Stationed at Stony Point Rifle Range

Ella Shultz – Former caretaker of the Wehle property



## **Appendix A: Analysis and Alternatives Considered**





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## ***Introduction***

This appendix contains the results of discussions on natural resource protection, recreation resource development and operations proposed for the park. Each proposal is analyzed using the inventory information (Chapters 2 and 3), park goals, and other factors. The analysis results in considerations as to the appropriateness of each alternative for the park. Findings from this analysis are used in identifying preferred alternatives for each of the resource categories. The status quo, alternatives, considerations and preferred alternative for individual issues are described in tabular form.

A complete description of the park master plan that results from these preferred alternatives is found in Chapter 6 of this document.

## ***Resource Analysis and Alternatives***

### ***Natural Resource Protection Strategies/Management***

Protection of natural resources is an important part of OPRHP's mission. There are significant natural communities within the park as well as significant invasive plant threats to those communities. According to the NY Natural Heritage Report for the park (Lundgren and Smith, 2008), while the park contains few rare species or high quality natural communities, it is still a valuable natural area that contributes to the long-term biodiversity of the region. The following assessment of the park's natural resources provides the basis for the development and examination of alternatives.

Natural resource protection and management strategies are needed to provide guidance and direction for the management of significant natural communities, water resources, flora and fauna and invasive species. These management strategies must also consider potential future impacts to the park, including different user groups and changing environmental conditions. The following is an analysis of several natural resource protection and management alternative strategies and the rationale for the preferred alternative.

## ***Designations***

### ***Park Preserve/Park Preservation Areas/Natural Heritage Areas (NHA)***

Article 20 of the Parks, Recreation and Historic Preservation Law outlines the process for designation of entire parks or portions of parks as part of a statewide park preserve system. Portions of parks may be designated as Park Preservation Areas (PPAs).

The goal of the Natural Heritage Area Program is to provide state land managers with a tool to recognize and assist in the protection of rare animals, rare plants, and significant natural communities on state-owned land. The New York Natural Heritage Areas Program (NHA) was established in 2002 in amendments to the Environmental Conservation Law (§11-0539.7).

OPRHP staff has assessed the park for significant ecological communities and significant/rare species. While there are significant communities, such as calcareous pavement barrens and calcareous shoreline outcroppings, these specific communities have been impacted and do not possess the qualities necessary to warrant the designation of the park as a Park Preserve, Park Preservation Areas or as a Natural Heritage Area.

### ***Bird Conservation Area (BCA)***

OPRHP staff has not analyzed or recommended a Bird Conservation Area (BCA) designation for the park due to a lack of information regarding the park’s bird community. The New York State Breeding Bird Atlas (2000-2005) identified 90 bird species as possibly nesting in the Stony Point area. Furthermore, the park and adjacent lands on Stony Point are likely to host good concentrations of migrant land birds, particularly as birds make their way north along the shoreline during spring migration. BCA designation may be considered in the future if site surveys indicate that the park does meet BCA criteria.

### **Wetlands**

There are approximately 98 acres of wetland habitat at the park. Wetland habitat not only contributes to the biodiversity of the park by supporting a variety of flora and fauna, but also serves other important functions such as flood or storm water runoff storage, groundwater recharge, and can function as a natural filter, by storing nutrients, sediments and pollutants before water is released to surface water or groundwater. Wetlands should be protected as well as buffered to insure that these functions are not compromised.

### **Rare Species**

#### **Background for Analysis**

The NY Natural Heritage Program survey discovered one rare plant species, the cork elm (*Ulmus thomasi*), at the park. Based on a review of the Natural Heritage database and record reviews at the New York State Museum several rare plant species are known in the vicinity of the park. These other rare plant species were not found during the 2008 surveys, however, as with any such data, absence of data is not proof of absence. Additional surveys would need to be completed in order to ensure that these species are not present somewhere within the park.

No rare animals were discovered at the park. Preliminary searches of the Natural Heritage database and other records revealed no known or historical occurrences of rare animals within the park or within one mile of the park boundary. There is, however, some potential for the federally endangered Indiana bat to occur within the park based on records of Indiana bats found elsewhere in Jefferson County.

#### **Preferred Alternative**

The NY Natural Heritage Report (Lundgren and Smith, 2008) and the planning team recommends that additional survey work for rare species be undertaken prior to any management actions such as creating trails or clearing of new areas for development.

### **Significant Natural Communities Management**

#### ***Protect Calcareous Pavement Barrens***

#### **Background for Analysis**

The calcareous pavement barrens found within the park and the neighboring Henderson Shores Unique Area represent a globally rare ecological community with very few examples in New York

State. In order to maintain biodiversity, it is important to manage the threats to this community type. Another threat to this community type can be over-use by recreational pursuits which can result in trampling of delicate plants and compaction of soils. Currently, some of the trails in the park traverse through this sensitive habitat.

Alternatives	Considerations
1. Status Quo –Existing trails remain in existing locations	<ul style="list-style-type: none"> <li>• There are sections of trails which currently cross through the pavement barren community.</li> <li>• The impacts from existing trails have already taken place.</li> </ul>
2. Relocate trails to minimize damage to Pavement Barrens  Move/eliminate portions of trails that cross sensitive habitat	<ul style="list-style-type: none"> <li>• Moving trails would avoid trampling impacts to this sensitive community.</li> <li>• Closure and relocation of trails can present challenges given the dense character of the forest at the park.</li> </ul>
3. Build boardwalks to span sensitive habitat	<ul style="list-style-type: none"> <li>• Boardwalk construction will impact trail maintenance (e.g. how mowing equipment cross boardwalks or go around them)</li> <li>• Could be considered where trail relocation is not feasible</li> <li>• Boardwalk would offer park visitors a more interesting interpretive opportunity</li> <li>• Impact of boardwalk on pavement barren community must be assessed.</li> </ul>

**Preferred Alternative: 2**

Minimizing the trail network through the barrens will promote a balance between recreation and conservation of this rare habitat. In lieu of boardwalk construction, trails within the barrens will be evaluated on a case by case basis for relocation away from or around the most sensitive barren areas.

***Manage the Calcareous Pavement Barrens***

**Background for Analysis**

The Natural Heritage Program’s Conservation Guide for calcareous pavement barrens (located in an appendix to the NHP Report) suggests reclaiming the barrens through tree removals and shrub buffer plantings as well as implementing a prescribed burn plan. These are general recommendations for calcareous pavement barren habitat. Without management, this significant habitat area may be lost over time. While other examples of this community type in the state are threatened by development, the major threat to the calcareous pavement barrens at Robert G. Wehle State Park is the presence of the non-native invasive species pale swallow-wort.

Alternatives	Considerations
1. Status Quo – allow natural processes to maintain size of the barrens	<ul style="list-style-type: none"> <li>• No additional resources would be required</li> <li>• Non- native species are affecting this significant ecological community.</li> </ul>

<p>2. Conduct invasive species management within the barrens. This will include both removal of invasive species and planting of a native species.</p>	<ul style="list-style-type: none"> <li>• Robert G. Wehle State Park has a high diversity of native tree species that are native to the barrens habitat</li> <li>• Native shrub plantings along the edges could contain the spread of non-native species into the barrens</li> </ul>
<p>3. Design and implement a prescribed burn plan in order to imitate a natural fire regime, maintaining the barrens habitat</p>	<ul style="list-style-type: none"> <li>• Would require outside partnership for planning, coordination, and expertise</li> <li>• Further research would be needed to determine if this site has a history of wildfires that maintained the barrens and how wildfire would affect swallow-wort.</li> </ul>

**Preferred Alternative: 2**

Without knowing more about the natural history of this site, the manual removal of invasive plants followed by the restoration of native species as recommended by the Invasive Species Management Plan is the most appropriate course of action at this time. This action will maintain the current extent of the barrens and allow for the adaptive management of future plans to consider more aggressive site goals such as maintenance and expansion through the use of prescribed burning.

***Calcareous Shoreline Outcrops***

**Background for Analysis**

While not as rare as calcareous pavement barrens, high quality calcareous shoreline outcrops such as those found at Robert G. Wehle State Park, are rare. These shorelines, characterized by large, flat protrusions of calcareous bedrock, are one of the most striking features of the park. These areas can be impacted by erosion, trampling, invasive species, and pollution and sediments carried by storm water runoff. This community at the park was found to be in good condition with relatively few invasive species and limited human disturbance or impacts (Lundgren and Smith, 2008).

Currently, much of the shoreline is buffered from on-shore disturbances by dense vegetation. There is, however, a desire to provide additional scenic overlooks at the park which have the potential to impact this buffer.

<b>Alternatives</b>	<b>Considerations</b>
<p>1. Status Quo – Vegetative buffer is present along entire park shoreline with the exception of minimal buffer along the rental compound and the picnic area shoreline areas.</p>	<ul style="list-style-type: none"> <li>• Scenic vistas of the lake from the park’s shoreline are an important feature of this park</li> <li>• Maintenance of existing vegetative buffers at rental compound and picnic area need to be protected in order to protect shoreline</li> <li>• Buffer maintenance also needs to consider scenic vistas from these popular areas.</li> </ul>
<p>2. Insure that vegetative buffers are maintained at existing developed areas and are incorporated into new shoreline access areas.</p>	<ul style="list-style-type: none"> <li>• Vegetative buffer needs to be incorporated into the design plans for new shoreline public use areas</li> </ul>

3. Develop shoreline without vegetative buffers	<ul style="list-style-type: none"><li>• Lack of vegetative buffer could result in impacts to the significant outcrop community.</li></ul>
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**Preferred Alternative: 2**

Some development of the shoreline near this habitat type is desirable to provide additional recreational opportunities, but it must be done in such a way as to incorporate the important vegetative buffer that currently protects the shoreline into the design. Park maintenance procedures should insure that maintenance of the important vista areas include protection of the vegetative buffer. Shoreline areas should be monitored for overuse, trampling and invasive species.

**Invasive Species Management**

The control of invasive species is a key element of the agency’s priority initiative of natural resources stewardship. In establishing priorities for invasive species control, OPRHP considers the degree of threat to biodiversity, including ecological communities and rare and other native species, as well as operational and health concerns.

An invasive species control program has been established in OPRHP, with the overall goal to preserve biodiversity and reduce the threat of invasive species to the quality of the natural, recreational, cultural and interpretive resources within State parkland. OPRHP has developed a statewide strategy for management of invasive species, in concert with multi-agency state and regional partnership efforts. An invasive species management plan template (O’Brien and Cady-Sawyer 2008) has been developed that can be used to prepare site specific plans for state park lands. In general an invasive species management plan contains information and tools needed to prioritize and implement control efforts.

The NY Natural Heritage report (Lundgren and Smith, 2008) recommends the following regarding an approach to management of invasives species at the park:

“Management plans for the park should provide details on which invasive species are present, whether or not actions are warranted, and why those decisions are made. It is likely infeasible to remove all invasives from the park, so maintaining a record of those decisions can help guide current and future land managers. When new invasive species are detected within previously uninfested areas, quick action to remove these pests may prevent long-term ecological impacts and reduce potential costs associated with invasive species control.”

**Background for Analysis:**

The exotic species that currently poses greatest threat to the natural areas of the park is pale swallow-wort (Lundgren and Smith, 2008). Other non-native invasive species occur at the park and could be a threat as well, but the threat they pose is less urgent that that of swallow-wort. Buckthorn, multiflora rose, purple loosestrife, and phragmites are all known from the site. Also the invasive zebra mussel, now common throughout Lake Ontario is also present.

Control of invasive species, especially pale swallow-wort, is a high priority for Robert G. Wehle State Park.

Alternatives	Considerations
1. Status Quo – continue current control practices without a plan	<ul style="list-style-type: none"> <li>• Currently no defined, measurable goals or ways to measure effectiveness</li> </ul>
2. Prepare an invasive species management plan	<ul style="list-style-type: none"> <li>• This plan will identify a process to follow to manage and control invasive species in the park.</li> <li>• Limited resources can be better directed.</li> <li>• Plan will ensure that the best available science, best management practices, and adaptive management are utilized.</li> <li>• Plan will prioritize control based on a park and regional framework.</li> </ul>
3. Undertake broader management actions without a park-specific invasive species management plan	<ul style="list-style-type: none"> <li>• Difficult to set priorities for management without a plan</li> <li>• Control may not be based on the best management practices</li> </ul>

**Preferred Alternative: 2**

The extent and severity of the swallow-wort infestation at the park presents an extremely challenging invasive control scenario. Preparation of an invasive species management plan will provide needed guidance and priorities so that control efforts are undertaken in the most cost effective means possible.

**Vista Management**

**Background for Analysis:**

The park consists of approximately three miles of undeveloped shoreline, a rarity along Lake Ontario. Boaters on the lake have a nearly unobstructed view of a large portion of the park.

Alternatives	Considerations
1. Status Quo	<ul style="list-style-type: none"> <li>• Development along the shoreline and bluff top is limited to the existing trails, picnic area, log cabin, and rental compound structures.</li> </ul>
2.	<ul style="list-style-type: none"> <li>• Additional shoreline development has the potential to impact the viewshed of those utilizing Lake Ontario.</li> <li>• Facilities should be designed and located to minimize visual impacts.</li> <li>• Use appropriate materials, designs and setbacks to minimize impacts.</li> </ul>

**Preferred Alternative: 2**

It is recognized that additional park infrastructure and facilities are in demand and will be added as funds allow, however, impacts of development within the park as viewed from the Lake Ontario will be considered within the design of all facilities.

**Wildlife Resources and Nuisance Wildlife**

**Background for Analysis**

Approximately 84% of the 330,000 acre State Park System is considered natural habitat. As a general rule State Parks will follow a “passive management” approach, allowing natural processes to maintain wildlife populations. However, there are times when a more active management approach will become necessary in an effort to reach ecological balance.

OPRHP, through an integrated approach, will actively manage wildlife on lands and waters under its jurisdiction 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. Wildlife management generally begins at the facility level with an evaluation of the need for a management activity by the facility manager and staff. Management activities will be conducted in consultation with the Regional Office, the Environmental Management Bureau (EMB), and DEC. In addition, OPRHP partners with the DEC and the Natural Heritage Program (NHP) to identify and monitor populations and occurrences of endangered, threatened and other species at risk within state park facilities. In the case of federally endangered and threatened species, and migratory birds, the US Fish and Wildlife Service (USFWS) will also be consulted.

There are particular protocols for dealing with nuisance wildlife on a species by species basis.

**Preferred Alternative:**

The recommendation is to continue the park policies concerning wildlife. Current policies and programs dealing with wildlife resources at the park are adequate and effective. The park should continue its relationship with OPRHP partners as a part of these policies, including nuisance wildlife on a case by case basis.



## ***Recreation Resource Development/Management***

The recreation resource development alternatives primarily focus on the recreation use areas of the park. These areas currently constitute approximately 7 percent of the park. They also include roads, and trails. This section of the chapter also includes other forms of recreation including such activities as hunting, fishing, and wildlife observation. Each recreation and support element is discussed individually. There is a brief discussion of the existing condition and the alternatives considered. This is followed by a description of the preferred direction.

### **Trails**

#### **Background for Analysis:**

The trail system was developed to provide access to areas of the park. Several trails are undesignated and unmarked. A trail assessment (See Figure 13 – Trail Assessment Map) was conducted to identify areas that were moist, had erosion taking place or missing signage.

<b>Alternatives</b>	<b>Considerations</b>
1. Status Quo	<ul style="list-style-type: none"> <li>• Main trails are named and have trail blazes.</li> <li>• Some trails are undesignated (unnamed and unblazed) and maintained.</li> </ul>
2. Enhance trail signage	<ul style="list-style-type: none"> <li>• Trails will be named, designated and trail blazes placed along trails and at intersections.</li> <li>• Key intersections should have a small trail map identifying that specific location.</li> <li>• Trail signage could be included within interpretive/educational panels.</li> </ul>
3. Modify the existing trail system.	<ul style="list-style-type: none"> <li>• Close certain undesignated trails</li> <li>• Name and provide signage for all designated trails.</li> <li>• Remove a portion of the Dancing Dog Trail from a wetland area.</li> <li>• Reroute a portion of the Bobolink Trail around calcareous pavement barren habitat.</li> <li>• Reroute a small section of the Midge Trail. The portion of the Snakefoot Trail that connects to Parking Lot B will then be renamed the Midge Trail.</li> <li>• Reroute a portion of the Huckleberry Trail to an existing unnamed trail. The unnamed trail will then be designated as Huckleberry Trail</li> <li>• Reroute a small portion of the Snakefoot Trail around the log cabin area.</li> <li>• All trail closures will take place per OPRHP Trail Standards – Trail Closure Guidelines.</li> </ul>

**Preferred Alternative: 2 and 3**

These alternatives will provide a more clearly defined circulation pattern for park patrons, protect the natural resources and continue to provide a high quality trail experience. All unnamed trails will be named, blazed and signage provided at all intersections.

**Hiking**

The park allows hiking on all trails. Hiking is a significant use within the park and it will remain as an activity acceptable on all trails. The park has 16 miles of mowed trail which is deemed a suitable quantity. Some minor changes will be considered to protect resources. No significant expansion or reduction is recommended.

**Mountain Biking**

As with hiking, mountain biking is allowed on all trails. Mountain biking is also a significant use within the park and it will remain as an activity acceptable on all trails. The park has 16 miles of mowed trail which is deemed a suitable quantity. Some minor changes will be considered to protect resources. No significant expansion or reduction is recommended.

**Cross Country Skiing and Snowshoeing**

The park currently allows cross country skiing and snowshoeing on all trails. Park staff groom four miles of trails. The current quantity of groomed trails is considered suitable. No expansion or reduction is recommended.

**Primitive Camping**

**Background for Analysis:**

Primitive camping (a cleared area to set up a tent with a fire ring) was identified in the five year development plan for the park but never constructed

<b>Alternatives</b>	<b>Considerations</b>
1. Status Quo	<ul style="list-style-type: none"> <li>• Groups are allowed to camp in the park during special events.</li> <li>• The general public is not allowed to camp in the park.</li> <li>• A camping area is not currently developed.</li> </ul>
2. Develop a primitive walk-in camping area.	<ul style="list-style-type: none"> <li>• Would require a minimal increase in infrastructure if sized appropriately and located near existing facilities.</li> <li>• Would increase the quantity of overnight users.</li> <li>• Would provide an opportunity not currently available at the park.</li> <li>• Should be located near an existing restroom and off the trail system.</li> </ul>

**Preferred Alternative: 1**

Developed campgrounds are located nearby at Westcott Beach and Southwick State Parks. Primitive camping opportunities are not recommended for the park. The main focus will remain as a day-use park.

**Fishing**

**Background for Analysis:**

Current lake access areas for fishing are located a considerable distance from the main parking lot due to the vertical or steep shoreline topography. The most convenient access point is from the existing picnic area, 1.5 miles from the main parking lot.

<b>Alternatives</b>	<b>Considerations</b>
1. Status Quo	<ul style="list-style-type: none"> <li>• Fishing is allowed on the lake shore.</li> <li>• Fishing structures are not provided.</li> <li>• Access to fishing locations is through existing trails.</li> <li>• Specific fishing locations are not promoted.</li> </ul>
2. Fishing access is enhanced without additional structures.	<ul style="list-style-type: none"> <li>• Additional trails to the lake are created.</li> <li>• Access points to the lake are more feasible on the west side of the park.</li> <li>• The closest access point deemed reasonable for lake access is 1.5 miles from the main parking lot.</li> </ul>
3. Fishing access is enhanced through the construction of a cliff-side stairway down to the water.	<ul style="list-style-type: none"> <li>• Considerable cost would be associated with the construction of a stairway to the lake.</li> <li>• Long term maintenance and upkeep of the structure would require regular funding.</li> <li>• Does not provide a convenient means to provide access for disabled individuals.</li> </ul>

**Preferred Alternative: 1**

The shoreline at the park does not lend itself to convenient and safe access to the water. Informal access to Lake Ontario may be achieved through the existing picnic area and at the southwest portion of the park.

## Swimming

### Background for Analysis:

The park has points along the shore which allow for lake access. However, swimming is not allowed. A natural beach is not provided and the wave action is very unpredictable.

Alternatives	Considerations
1. Status Quo	Swimming is not allowed.  Swimming opportunities are provided at nearby parks along the lake.
2. Allow swimming at the park	A designated lifeguard-operated swimming area would be required. Shoreline is rocky and contains high cliffs which pose major safety hazards.

### Preferred Alternative: 1

Safer and more suitable swimming opportunities are provided in designated areas at other regional State Parks along Lake Ontario. The shoreline of Robert G. Wehle State Park does not have suitable locations/conditions for swimming opportunities.

## Snowmobiling

### Background for Analysis:

This is currently not an activity provided in the park.

Alternatives	Considerations
1. Status Quo	<ul style="list-style-type: none"> <li>• Snowmobiles are not allowed in the park.</li> </ul>
2. Provide snowmobiling opportunities.	<ul style="list-style-type: none"> <li>• Would provide an opportunity not currently available at the park.</li> <li>• Would increase the potential for user conflict.</li> <li>• Would change the visitor experience for those who enjoy a quiet experience</li> <li>• There are no statewide snowmobile trails adjacent to the park to provide connectivity.</li> </ul>

### Preferred Alternative: 1

Snowmobiling will not be allowed within the park.

## All-Terrain Vehicle (ATV) Access

ATV access was suggested during the public comment period. ATV use by the general public is illegal on state park lands as per OPRHP Rules and Regulations. ATV use will continue to be a prohibited activity.

## Group Camping

### Background for Analysis:

Groups currently use the park for various outdoor educational programming. They presently are allowed to camp overnight in tents in the mowed areas around the park office and firing range by special permit only. See Figure 14 Group Camping and Day Use Area Alternatives for locations.

Alternatives	Considerations
1. Status Quo	<ul style="list-style-type: none"> <li>• Restrooms are nearby.</li> <li>• Minimal trees are located in the area.</li> <li>• The group camping area is within an actively used portion of the park.</li> </ul>
2. Option A group camping area is constructed behind the maintenance area (see map)	<ul style="list-style-type: none"> <li>• Would require minimal clearing of vegetation.</li> <li>• Is located away from existing restrooms. The constructing of a new restroom facility is required.</li> <li>• Roadway and parking improvements would be needed.</li> </ul>
3. Option B group camping area is constructed behind the maintenance area (see map)	<ul style="list-style-type: none"> <li>• Would require slightly more clearing of vegetation than Option A.</li> <li>• Is located closer to the existing restrooms which can serve the area if constructed. Additional restrooms would not be needed.</li> <li>• The existing parking lot and walkway can be used. No new roadway or parking is required.</li> </ul>
4. Option C group camping area is constructed adjacent to the firing range.	<ul style="list-style-type: none"> <li>• Would require minimal clearing of vegetation.</li> <li>• Is farther away from the parking lot than other options.</li> <li>• Water and restroom facilities are required.</li> </ul>

### Preferred Alternative: 3

The location of this alternative makes it the most suitable choice. It is located within convenient walking distance from the parking lot and uses an existing restroom located within 500' of the site. The group camping site will consist of areas to pitch a tent, several fire rings.

## Hunting

### Background for Analysis:

Currently the park allows hunting for all types of game during regulated seasons in accordance with State rules and regulations. Designated no hunting zones exist within the park.

Alternatives	Considerations
1. Status Quo	Existing opportunities are maintained.
2. A non-hunting zone is created from an area east of North Schoolhouse Road.	Not a heavily hunted area. Is separated from the main park by North Schoolhouse Road. Is not a significant impact to the hunting area.

### Preferred Alternative: 2

A small section of park property will be removed from the designated hunting area. This small area is separated from the rest of the park by a road and not considered a popular hunting area. All other designated hunting areas will remain open for hunting in accordance with all State hunting rules and regulations. See Figure 9 – Hunting Map.

## ***Cultural Resource Protection Strategies/Management***

### **Archaeological Resources**

Archaeological artifacts have been located within the park including objects from the military activities, previous farmstead settlements and Native American occupation. A Phase 1a Archeological Sensitivity Assessment for the park was completed 2004. A Phase 1A. A Phase 1B archeological survey was conducted before the entrance roadway construction. Any new development will require a Phase 1B to identify any archaeological artifacts before development begins. It is recommended that additional Phase 1B surveys be conducted in undisturbed areas prior to any future sub-surface work is undertaken within the park.

### **Historic Resources**

An interim assessment of structures within the park was conducted by OPRHP’s Historic Preservation Field Services Bureau (FSB) to determine if they were eligible for listing on the State and National Registers of Historic Places. The military components at the park including the firing range and infrastructure which made up the Stony Point Firing Range were considered to be significant historic features. The structures constructed during the ownership of the Wehle family are not National Register eligible and, while there are no historical requirements or limitations associated with these structures, they do continue the legacy of Robert G. Wehle. Alternatives for historically significant structures are identified in the tables below.

### **Firing Range**

#### **Background for Analysis:**

The firing range and wall are significant cultural resources. Currently, trees and shrubs are growing on the firing range wall and are scattered throughout the firing range. The area, including the associated berms are mowed to control swallow-wort and to keep the range open. Very little interpretation is provided at the park for the firing range

<b>Alternatives</b>	<b>Considerations</b>
1. Status Quo - The firing range and wall are not interpreted and structures remain unprotected.	<ul style="list-style-type: none"> <li>● The firing range wall is covered in vegetation and the root systems are adversely impacting the structure.</li> <li>● Educational panels are not provided at the wall or firing range and berms.</li> <li>● Field and berms are mowed.</li> </ul>
2. The firing range features are protected and interpreted as a cultural feature.	<ul style="list-style-type: none"> <li>● Vegetation is removed to protect the firing wall.</li> <li>● Educational panels are provided to educate patrons about its significance.</li> <li>● The firing range field and berms continue to be mowed.</li> <li>● Trees are removed from the firing range to enhance interpretation opportunities.</li> </ul>

#### **Preferred Alternative: 2**

As register eligible features, the firing range and wall will be interpreted as a significant cultural feature within the park. The firing wall will be cleared of vegetation and the berms and firing range will remain mowed. Select trees will be removed from the firing range to enhance the visual connection with the firing range. Panels will be installed to educate patrons on the significant military activities.

## Watch Stations and Foundations

### Background for Analysis:

The park has several concrete watch stations and foundations on the property that are significant cultural features.

Alternatives	Considerations
1. Status Quo - Watch stations are not interpreted and foundations are unmaintained and unprotected.	<ul style="list-style-type: none"><li>• Watch stations located on the shoreline are impacted by the erosional forces of the lake.</li><li>• Other watch stations and foundations located away from the shoreline are in relatively good condition.</li></ul>
2. Protect and preserve watch stations	<ul style="list-style-type: none"><li>• Follow guidance from OPRHP’s Division for Historic Preservation regarding the protection of these structures including conducting an analysis of their condition and repair or reconstruction as needed.</li><li>• A consolidant would be applied to the surface to protect structures.</li><li>• Vegetation located near watch stations may be removed to facilitate viewing by patrons.</li></ul>

### Preferred Alternative: 2

As register eligible features of the park these watch stations and foundations will be interpreted as a means to inform visitors of their importance and to help protect them. The watch stations will be inventoried and their condition further evaluated. These structures will be left in their current condition. Protection, repair or reconstruction will be conducted as deemed necessary in accordance with OPRHP standards.

## Wehle Structures

Robert Wehle had many structures constructed on the property. These structures include the former Wehle residence, including the guest house, “game house”, log cabin, garages, barns, statuary and bird/dog enclosures. These buildings were determined to be not eligible for listing on the National Register. The structures do provide historical context related to the Wehle history and the operation and management of the property before State acquisition. Any proposed repair or maintenance work at these features or their grounds will not need to be reviewed by the Historic Preservation Field Services Bureau.



## **Scenic Resource Protection**

### **Viewshed from Lake Ontario**

#### **Background for Analysis:**

The park consists of approximately three miles of undeveloped shoreline, a rarity along Lake Ontario. Boaters on the lake have a nearly unobstructed view of a large portion of the park.

<b>Alternatives</b>	<b>Considerations</b>
1. Status Quo	<ul style="list-style-type: none"><li>• Development along the shoreline and bluff top is limited to the existing trails, picnic area, log cabin, and rental compound structures.</li></ul>
2. Develop additional facilities along the shoreline	<ul style="list-style-type: none"><li>• Additional shoreline development has the potential to impact the viewshed of those utilizing Lake Ontario.</li><li>• Facilities should be designed and located to minimize visual impacts.</li><li>• Use appropriate materials, designs and setbacks to minimize impacts.</li></ul>

#### **Preferred Alternative: 2**

It is recognized that additional park infrastructure and facilities are in demand and will be added as funds allow, however, impacts of development within the park as viewed from the Lake Ontario will be considered within the design of all facilities.

## **Infrastructure Development**

An analysis of the infrastructure options was conducted to determine the needs of the park. The maintenance shop and park office were constructed in 2007. An existing structure was rehabilitated into a visitor center in 2008. These structures are in good condition. However, their septic systems will soon undergo improvements. The rental compound has seen significant improvements in 2008 and does not need any structural improvements. Smaller improvements to enhance the park patron experience will be considered. The septic system has been assessed by OPRHP Regional staff and will require a new system to meet the current demands on the compound.

Roadways do not require any significant modifications. The main entrance road to the park and the main parking lot are asphalt. The secondary roadways which serve park staff and/or the rental house compound are single lane gravel roadways. Operational or physical demands on these roadways do not warrant improvements.

Public restroom facilities are located in the picnic area, inside the visitor center and adjacent to the tennis courts. The demand on these facilities does not warrant improvements. Additional development, depending on the location may require additional restroom facilities.

Infrastructure alternatives were assessed and options provided to determine the appropriate and preferred uses within the park. The analysis and assessment of the alternatives for the key infrastructure components is presented below in tabular form.

## **Log Cabin**

### **Background for Analysis:**

A log cabin within the park is not open for public access but is in good condition.

<b>Alternatives</b>	<b>Considerations</b>
1. Status Quo	<ul style="list-style-type: none"> <li>• The log cabin is located on a bluff along the edge of Lake Ontario near the Rental Compound.</li> </ul>
2. Allow for the opportunity to rent the log cabin as an additional amenity to the rental compound	<ul style="list-style-type: none"> <li>• Would provide a rustic experience for up to four additional people using the rental house compound.</li> <li>• Is located near a bluff and safety considerations would need to be addressed.</li> <li>• The structure would need upgrades and repair before being available for public use.</li> <li>• Would need a nearby restroom facility.</li> <li>• Could provide electric to the cabin.</li> <li>• A gravel drive would need to be constructed.</li> <li>• The Snakefoot Trail would need rerouting around the cabin.</li> <li>• No use currently exists for the structure.</li> </ul>
3. The log cabin is a rented to patrons as a separate facility to the rental compound.	<ul style="list-style-type: none"> <li>• All considerations for Alternative 2 except for the first one would be considered for Alternative 3.</li> <li>• The log cabin would provide a unique</li> </ul>

lodging experience for patrons.

- Rental fees would be less than the rental compound.
- Would serve only groups up to four.
- Potential noise impacts exist between large groups at the rental house compound and the log cabin.

**Preferred Alternative: 2 and 3**

The log cabin will be an optional amenity provided for an additional fee with the reservation of the Rental House Compound. The cabin will need enhancements before it becomes available for public use. Based upon usage trends and public desires, the long term goals for the log cabin may be for a stand alone rental structure, separate from the Rental House Compound.

**Storage Barns**

**Background for Analysis:**

Two barns are located in the park and could have multiple uses.

Alternatives	Considerations
1. Status Quo	<ul style="list-style-type: none"> <li>• Barns are used for storage.</li> </ul>
2. Develop the barns into a public use facility.	<ul style="list-style-type: none"> <li>• Could be used as a group shelter or other facility for public use.</li> </ul>

**Preferred Alternative: 1**

The barns currently are used for storage of materials. As the park expands and operational and maintenance needs increase, the barns will provide additional storage space and serve operational needs.

**Rental House Compound**

**Background for Analysis:**

The rental house compound is rented to both large and small groups. Large groups have significantly higher impact on the house and grounds surrounding it. Groups as large as 200 can use the house and grounds with additional fees and sanitary services provided by the renter. Due to the impact to the area and additional demands placed upon park staff.

Alternatives	Considerations
1. Status Quo	<ul style="list-style-type: none"> <li>• Is rented to both large and small groups/individuals.</li> <li>• Large groups provide portable toilets to supplement the flush toilets within the structures.</li> </ul>

	<ul style="list-style-type: none"> <li>• Sanitary system improvements will be provided to meet the designed capacity for the compound.</li> <li>• Improvements to the structure will continue including; the installation of a treatment system for potable water, an ADA accessible walkway to the game room and a gas fire place insert.</li> <li>• Gatherings over the occupancy of eight are coordinated with the park staff.</li> </ul>
2. Rental house compound is only used for small groups	<ul style="list-style-type: none"> <li>• Large groups would not be allowed access to the rental compound.</li> <li>• Impacts to the facility would be reduced.</li> <li>• Operational and maintenance demands would be reduced.</li> <li>• The game room is made ADA accessible.</li> </ul>
3. Rental compound area is enhanced to better accommodate larger groups.	<ul style="list-style-type: none"> <li>• Fencing moved to accommodate portable tents.</li> <li>• Sewer system enhancements designed to meet large group capacities.</li> <li>• The roadway to the rental house compound is widened and hard surfacing provided.</li> <li>• The impacts to the compound remain.</li> <li>• Operational and maintenance demands would remain the same.</li> <li>• The game room is made ADA accessible.</li> </ul>

**Preferred Alternative: 1**

The rental compound will serve both large and small groups. Operational and maintenance demands are increased when large groups use the rental compound and impacts to the structure are increased. However, the rental of this facility for both large and small groups provides unique, high quality experiences for a variety of patron uses.

**Boat Docks**

**Background for Analysis:**

Boat docks are not currently provided at the park for access from Lake Ontario. People wishing to access the park from the lake do not have a convenient access

<b>Alternatives</b>	<b>Considerations</b>
1. Status Quo	<ul style="list-style-type: none"> <li>• No boat docks are provided.</li> </ul>
2. Boat docks are constructed on the shore of the lake for access to the park.	<ul style="list-style-type: none"> <li>• Would provide an opportunity for boaters to access the park.</li> <li>• Significant wave action would damage docks on a regular basis.</li> </ul>

- Docks would need to be removed during winter.
- Docks would require significant time from maintenance staff.
- Safety issues exist with dock usage.
- Topography makes access extremely difficult.
- Other boat access areas exist within the surrounding area.

**Preferred Alternative: 1**

This alternative recognizes the fact that the park shoreline is not conducive to the installation of boat docks. Significant time and effort would be required to maintain and repair a dock in this unprotected location. Convenient boat access to Lake Ontario is provided at the Town of Henderson Boat Launch and Westcott Beach State Park. Boat docks will not be provided at the park.

**Picnic Area**

**Background for Analysis:**

The park currently has one small picnic area located approximately 1.5 miles from the main parking lot along a wide gravel pathway/service road.

<b>Alternatives</b>	<b>Considerations</b>
1. Status Quo	<ul style="list-style-type: none"> <li>• The picnic area is not expanded</li> <li>• The access remains limited with patrons walking 1.5 miles to get to the designated picnic area.</li> </ul>
2. Construct a new picnic area on the lake shore. (Option B on the Development Map)	<ul style="list-style-type: none"> <li>• Provides lakeside access to the water.</li> <li>• Is easily accessible from the parking lot.</li> <li>• To make area compliant with the American Disabilities Act (ADA), construction costs and land disturbance would be significantly greater than at alternate locations.</li> <li>• Provides scenic vistas to the lake.</li> <li>• In close proximity to cultural features which could be interpreted.</li> </ul>
3. Construct a new picnic area at the top of the bluff. (Option A on the Development Map)	<ul style="list-style-type: none"> <li>• Is easily accessible from the parking lot.</li> <li>• Can be made ADA compliant.</li> <li>• Provides dramatic scenic vistas of Lake Ontario.</li> <li>• Is located atop a cliff.</li> <li>• Is located along the trail system.</li> <li>• Can be expandable as needed.</li> </ul>

**Preferred Alternative: 3**

The proximity to the main parking lot and scenic vistas make this the preferred alternative. A small picnic area can be easily constructed on this site with a portion of the Snakefoot trail enhanced to meet ADA requirements.

**Picnic Shelter**

**Background for Analysis:**

The park does not currently have a covered picnic shelter for group functions. The addition of a picnic shelter would serve many people and groups.

Alternatives	Considerations
1. Status Quo	<ul style="list-style-type: none"> <li>• Picnicking remains in the picnic area. No shelter is provided.</li> <li>• The rental house compound serves large group functions.</li> </ul>
2. Construct a new picnic shelter adjacent to the proposed picnic area	<ul style="list-style-type: none"> <li>• Is easily accessible from the parking lot.</li> <li>• The area will be ADA compliant and conveniently located.</li> <li>• Allows for scenic vistas of Lake Ontario.</li> <li>• Is located along the trail system.</li> </ul>

**Preferred Alternative: 2**

Providing a small group shelter for public use adjacent to the proposed picnic area allows for groups to have easy access to a picnic shelter in a very scenic location. The Snakefoot trail will be enhanced between the parking lot and the picnic shelter to meet ADA requirements.

**Observation Tower**

**Background for Analysis:**

An observation tower would provide a unique view of the park, Lake Ontario and the surrounding landscape.

Alternatives	Considerations
1. Status Quo	<ul style="list-style-type: none"> <li>• Cannot view the expanse of park lands from a high vantage point.</li> </ul>
2. Construct an observation tower.	<ul style="list-style-type: none"> <li>• Would provide scenic vistas the park and Lake Ontario.</li> <li>• ADA considerations would need to be implemented into the design to provide access to all users.</li> <li>• Long term maintenance costs.</li> </ul>

**Preferred Alternative: 1**

An observation tower would provide a unique opportunity to view the flora, fauna and the lake. However, the extensive construction considerations and costs combined with the existing scenic opportunities at ground level and the minimal demand for an observation tower make the status quo alternative preferable.

**Overlook**

**Background for Analysis:**

The park has many opportunities for scenic lakeside vistas. There is a desire to create a scenic vista location which is easily accessible from the main parking lot.

<b>Alternatives</b>	<b>Considerations</b>
1. Status Quo	<ul style="list-style-type: none"> <li>• Informal scenic vistas are provided along the Snakefoot Trail, the picnic area and at other locations.</li> </ul>
2. Create a new scenic vista location near the main parking lot. See Figure 14 - Group Camping and Day Use Alternatives Map	<ul style="list-style-type: none"> <li>• The area is easily accessible from the parking lot and can be made ADA compliant through the construction of a gravel pathway.</li> <li>• The area is in a very suitable location on a bluff top.</li> <li>• Lake access would not be provided.</li> <li>• The proposed site location would minimally impact the land.</li> <li>• Location would serve the proposed picnic area users and other patrons.</li> <li>• People using the lake would see more people and possibly a fence.</li> <li>• The area could be incorporated into the interpretive programming.</li> </ul>

**Preferred Alternative: 2**

This alternative provides a suitable location for a scenic vista for all users. It will enhance an area that is already very scenic and will be used by many patrons upon the construction of the picnic area. Visual impacts from the lake will be considered during the design of the area and minimized to the greatest extent possible. Informal scenic vistas will remain along the Snakefoot Trail.

## Cabin Colony

### Background for Analysis:

A cabin colony would expand the overnight facilities currently available and provide a new type of camping experience at the park.

Alternatives	Considerations
1. Status Quo	<ul style="list-style-type: none"> <li>• A cabin colony is not provided at the park.</li> <li>• A log cabin is located in the park but is not rented to patrons.</li> <li>• The rental compound provides overnight rental opportunities for park patrons.</li> </ul>
2. Construct Cabin Colony with individual restroom and showers or shared bathhouse	<ul style="list-style-type: none"> <li>• Would provide a new opportunity at the park.</li> <li>• Would be very popular with some patrons.</li> <li>• Requires significant infrastructure.</li> <li>• The shallow soils limit the development of the infrastructure.</li> </ul>

### Preferred Alternative: 1

The primary focus of the park will continue to be day-use. Other supporting facilities such as a swimming beach and boating facilities will not be provided at the park.

## Roads and Parking

### Background for Analysis:

The roads and parking are in good condition. The main parking lot is asphalt while the smaller trailhead parking lots are gravel. The roadway to the rental compound is a single lane gravel road. During large group events, this roadway is heavily used. The majority of traffic enters at the same time and exits at the same time with some conflict in between. The shoulders have been extended by moving the split rail fence away from the road to allow vehicles to pass and pedestrians to walk on the grass.

Alternatives	Considerations
1. Status Quo	<ul style="list-style-type: none"> <li>• The entrance road and main parking lot remain asphalt</li> <li>• The access road to the rental house compound remains gravel surfacing.</li> <li>• Trailhead parking lots remain gravel.</li> <li>• Parking capacity is not expanded.</li> </ul>
2. Pave and widen road to the rental compound	<ul style="list-style-type: none"> <li>• Meets the needs of larger groups having access to the rental compound</li> <li>• No need to re-grade the road.</li> <li>• Vehicles speeds would increase on the widened roadway.</li> </ul>



**Preferred Alternative: 1**

The current roadway and parking layout is preferred. The current parking lots meet the capacity needed for park use. The asphalt roadway and parking is in very good condition and the gravel roadway to the rental compound will remain as a single lane gravel road. While the gravel roadway does involve more labor, it fits with the character of the park and keeps traffic moving slower than if it were asphalt. The fences have been moved away from the roadway and allow substantial room for two vehicles to pass.

### **Comparison of Status Quo and Preferred Master Plan Alternative**

<b>Element/Topic</b>	<b>Status Quo Alternative</b>	<b>Preferred Master Plan Alternative</b>
Park office	The park office was constructed in 2007 and is located within the maintenance area.	No changes are recommended for this building.
Maintenance area	The maintenance area consists of several buildings. A new shop was constructed in 2007 and is located in the same structure as the park office.	No changes are recommended for these buildings.
Visitor Center	The Visitor Center was opened in 2008 and will receive minor changes to enhance visitor satisfaction.	No significant changes are recommended for this building.
Picnicking	A picnic area is provided one and a half miles from the parking lot on the shore of Lake Ontario.	A second picnic area is constructed one quarter mile from the parking lot and will include ten picnic tables in the short term. In the long term, a picnic shelter will be constructed.
Fishing	Fishing is allowed from the shoreline. The park does not have a designated fishing access location.	No changes are recommended. Informal access to Lake Ontario may be achieved through the existing picnic area and at the southwest portion of the park.
Trail activities	Hiking, mountain biking, cross country skiing and snowshoeing are allowed on all 16 miles of trail. In the winter, four miles of trail are groomed.	Hiking, mountain biking, cross country skiing and snowshoeing are allowed on all trails. Minor improvements will be made to the trail system.
Rental Compound	The rental compound is used by both large and small groups.	The rental compound will continue to be used by both large and small groups. The septic system will be replaced and minor improvements will be made to enhance the experience of the park patrons.
Log Cabin	The log cabin is not open for public use. The cabin continues to deteriorate.	The log cabin will be available for public rental as an optional rental feature for patrons renting the compound. Upon demand, the long term goals for this structure may include having it as a stand alone rental cabin including

<b>Element/Topic</b>	<b>Status Quo Alternative</b>	<b>Preferred Master Plan Alternative</b>
		restroom facilities, electric, roadway improvements and the realignment of the Snakefoot Trail.
Barns	The barns are in good condition and used for storage.	The barns will continue to store materials and equipment.
Roadways	The main roadway and parking lot are asphalt. Secondary roadways and parking lots are gravel. The secondary roadway to the rental compound is single lane.	No changes are recommended for any roadways.
Bird Conservation Area	The park is not designated as a Bird Conservation Area (BCA).	Little is known about the potential for bird habitat at the park. Designation may be considered when more detailed information is known about birds within the park.
Cultural Resources	Cultural resources from the military era are unprotected. Ground disturbing projects receive an archeological review.	The military features including the firing range, gun wall and the spotter stations will be managed to protect the features. The firing range will have some vegetative management and the firing wall will be cleared of vegetation. Ground disturbing projects are subject to an archeological review.
Interpretive and Education Programs	Interpretation and educational opportunities are provided at four kiosks and within the visitor center. A swallow-wort interpretation plan has been developed.	Interpretation and educational opportunities are expanded to include additional topics such as the military activities. The swallow-wort interpretation plan will be implemented to educate patrons.
Invasive Species Management	Invasive species are controlled through mowing. Studies are underway to determine effective methods of control.	An Invasive Species Management Plan is developed and provided as Appendix B of the master plan. Various methods of control will be implemented and studied. Mowing will remain a significant method of controlling swallow-wort



## **Appendix B: Invasive Species Management Plan**



# **DRAFT**

# **Robert G. Wehle State Park**

# **Invasive Species Management Plan**



**By: Robert O'Brien, Casey Holzworth, Pam Otis, and Edwina Belding**

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**July 2, 2010**

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## **Executive Summary**

### ***Introduction***

This Draft Invasive Species Management Plan for Robert G. Wehle State Park (Wehle State Park) has been prepared, in conjunction with the park's Master Plan, by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) to provide guidance and a planning framework for invasive species control efforts at the park. It is included as Appendix B to the master plan and is included within the master plan's environmental review under SEQR, including its availability for public review and comment. The Commissioner of OPRHP will simultaneously adopt this plan at the same time the master plan is adopted.

This plan provides background information about the park and its invasive species issues, and outlines a process through which invasive species management can be implemented. This involves a series of goals and objectives that are adaptable to changing conditions. The plan also provides an overview of ongoing invasive species control efforts at the park and near-term control project plans. The overall vision of this plan is to promote and restore native biodiversity to the greatest extent possible.

Due to the severe infestation of the invasive plant, pale swallow-wort (*Cynanchum rossicum* syn. *Vincetoxicum rossicum*) at the park, this plan places an emphasis on its removal and control. The plan also includes information on the identification and control of other invasive species known to exist within the park. The severity of the pale swallow-wort infestation in the park has led OPRHP to the decision that an invasive species management plan is especially needed for this park so that control efforts can be planned and implemented in the most effective manner possible from both an ecological and economical perspective.

### ***Background***

Wehle State Park occupies 1,067 acres and is located in the Town of Henderson in Jefferson County (Figure 1). The park has three miles of Lake Ontario shoreline. Its southern boundary is adjacent to the Henderson Shores Unique Area managed by DEC. The park was established in 2003 and recreational activities and facilities offered in the park include hiking, mountain biking, picnicking, tennis courts, volleyball, and hunting. A house and associated outbuildings are also available for rent. Park visitation has been rising and was nearly 40,000 in 2009.

The New York Natural Heritage Program conducted a survey of the park and identified eleven ecological community types. Of these eleven, calcareous pavement barrens and calcareous shoreline outcrop are identified as significant natural communities (Lundgren and Smith, 2008). These calcium-rich bedrock outcrops are one of the most prominent features of the park.

The flora of the park is characteristic of limestone areas of northern and western New York, where shallow limestone bedrock affects everything from soil depth and drainage to soil chemistry and susceptibility to erosion. Most of the park contains second growth forest comprised of a diverse assemblage of young and mature trees, shrub and herbaceous plant species. The Natural Heritage survey also identified several specimens of the rare plant, cork elm (*Ulmus thomasi*) within the park. The park's wildlife is typical of the region and the rural setting.

### ***Invasive Species at the Park***

Wehle State Park contains an extensive infestation of the invasive plant pale swallow-wort. This is an aggressive invasive species from the milkweed family. It can form dense patches that crowd out

native plant species and impact wildlife habitat. In addition to being a long-lived perennial, pale swallow-wort is a prolific seed producer and produces allelochemicals that inhibit the development of neighboring plants. Studies within the park are ongoing, with partners such as the United States Department of Agriculture (USDA) and Cornell University, to learn about and control pale swallow-wort. This plant is not only a serious problem for biodiversity at the park but also presents challenges for maintenance and enjoyment of the park's trails. The primary control method used at the park is mowing, yet seeds continue to disperse from plants surrounding the mowed areas.

## ***Invasive Species Management Goals and Implementation***

This plan sets forth the goals, objectives and actions for the management of invasive species. The goals/planning steps presented in the plan include:

1. Inventory and Map – Collect and map data on invasive species within the park.
2. Rank and Prioritize – Rank invasive species according to the feasibility of control and significance of impact on the environment.
3. Control/Remove – Select control methods and develop removal plans.
4. Restoration – Restore treatment sites to a native ecological state following the removal of invasive species.
5. Maintain Native Ecological Systems – Monitor sites to prevent re-invasion and to identify and maintain areas free of invasive species.
6. Promote Stewardship – Train, educate, and provide outreach to staff and the public in order to provide support for successful invasive species control efforts.

## ***Roles and Responsibilities for Implementation***

The implementation of this plan involves working through each of the objectives and actions provided within each goal. The plan calls for adaptive management to account for new information. OPRHP will work with other important partners such as the NY Department of Environmental Conservation (DEC), the St. Lawrence Eastern Lake Ontario (SLELO) Partnership for Regional Invasive Species Management (PRISM), the USDA and Cornell University to achieve the goals of this plan.

## Introduction

Wehle State Park is located in the Town of Henderson in Jefferson County. The park is located on the eastern side of Lake Ontario on Stony Point, approximately eight miles south of Sackets Harbor (Figure 1).

The mission of OPRHP calls for responsible stewardship of natural resources while providing appropriate recreational and interpretive opportunities to the public. Relevant natural resource goals of the master plan are to “Protect, manage and maintain areas important as habitat for rare, threatened, endangered or protected plant and animal species and community types” and to “Maintain, restore and/or enhance the natural environment to improve the quality of natural resources and support biodiversity of plant and animal species.”

The park is located in a part of New York dominated by agricultural land use, and homes and cottages are the predominant development along the shores of Lake Ontario. The 1,067 acres of Wehle State Park, no longer in agricultural production and almost entirely undeveloped with nearly three miles of natural shoreline, is an important natural resource area. Surrounded by “working landscapes” and shorelines in private ownership, the park provides easy access to natural areas for the recreating public. Thus, there is clearly a need to provide careful stewardship to manage invasive species and protect important natural communities. This Invasive Species Management Plan is consistent with OPRHP’s mission of providing responsible stewardship of natural resources.

Invasive species are defined as species (e.g. plants or animals) non-native to the ecosystem that cause or are likely to cause economic or environmental harm or harm to human health. Invasive species can develop extremely large populations, usually due to a lack of competition or predation, thereby causing adverse effects such as a loss of wildlife habitat and impacts to landscapes and ecosystems. The basic steps involved in managing invasive species are inventory, control, and monitoring. The vision of this plan is to promote and restore native biodiversity to the greatest extent possible. This plan describes the goals, objectives and actions needed to achieve this vision.

## **State Park Overview**

Wehle State Park is located in Jefferson County, New York in OPRHP's Thousand Islands Region on the eastern shore of Lake Ontario. The park is just 30 miles southwest of Watertown, NY. The southern boundary of the park connects to the Henderson Shores Unique Area, administered by the NYDEC.

### ***Establishment of the Park***

The use of the property has evolved since permanent European settlement of the county in the early 19th century. Between 1895 and 1947, the U.S. military used the property for training purposes in preparation for warfare. The area was known as the Stony Point Rifle Range and housed soldiers for several days at a time as they trained for land, oversea and air combat. In 1963, the Army sold the land to Louis Wehle and Thomas Nagle of Rochester. Mr. Wehle and his son Robert Wehle maintained the property as a cattle farm, game preserve and rural retreat until 1990 when Robert sold the property to the NY DEC. The Wehle Family occupied the property until a year after Mr. Wehle's death in 2002. At the end of the following year, DEC transferred ownership of the tract, not including the Henderson Shores State Unique Area, to OPRHP for management as both a recreational facility and a facility that focuses on conservation. Following this transfer, Wehle State Park was created in 2003 to provide a place for patrons to enjoy scenic views of Lake Ontario, the recreational trail system and park facilities.

### ***Previous Planning Efforts***

OPRHP completed an Interim Management Guide for Wehle State Park in April 2004 in which existing patron use, facilities, and features of the park were documented. The NYS Historic Preservation Office conducted a Phase 1A cultural report for the park, which identified culturally significant aspects in the park. Following this review, the office conducted a more detailed Phase 1B cultural survey in 2008 for the main entrance roadway project. Based on these surveys OPRHP developed a five-year capital improvement plan to guide the initial development of the park. Regional staff have implemented the majority of this plan. Cultural and natural resource analysis has been ongoing for inclusion within the master plan.

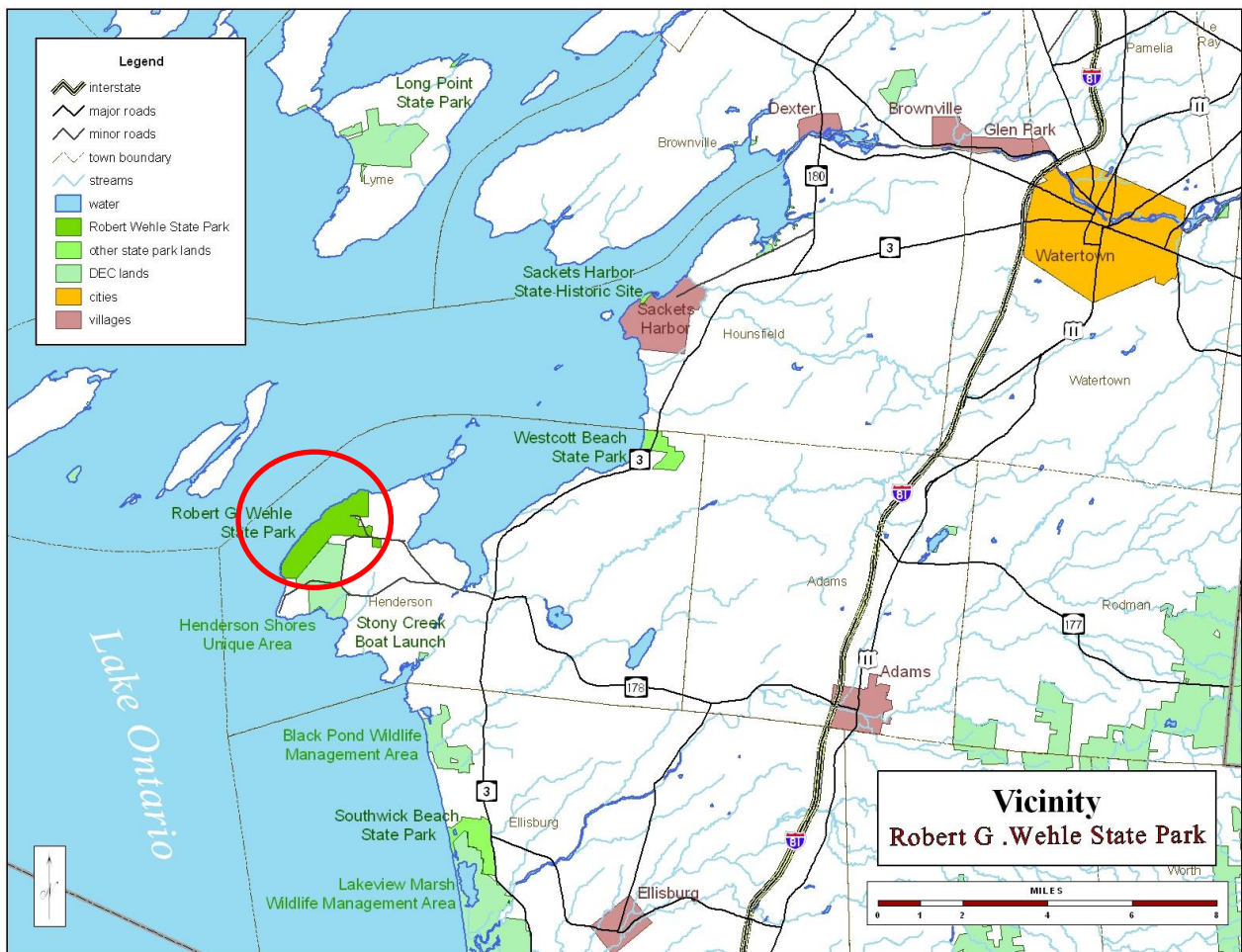


Figure 1 - Wehle State Park Location Map

### ***The Robert G. Wehle Charitable Trust***

The park receives funding support, on an annual basis, through distributions from the Robert G. Wehle Charitable Trust. Income and principal from the Trust is distributed in support of the properties under the terms of the Trust instrument. Distributions totaling in excess of \$1.1 million have supported Wehle State Park since its establishment in 2003.

### ***Recreational Resources/Activities***

Park visitation has been rising and was nearly 40,000 in 2009. The park offers picnic areas, tennis and volleyball courts, interpretive exhibits and over 14 miles of trails for hiking, biking, cross-country skiing and snowshoeing. Portions of the park are also open to hunting. The park has a cottage and outbuildings that are available for rent by the week. There is also rental of a park cabin and group camping proposed under the master plan. The park is also accessible from the Great Lakes Seaway Trail.

### ***Geology, Topography and Soils***

The park is underlain by Ordovician Rocks, which include the Lorraine Trenton Black River Group. The Black River and Trenton groups are shallow water carbonates composed mostly of limestone and some dolostone.

The property gradually slopes downward from northeast to southwest. Based on the International Great Lakes Datum (IGLD) the property's highest point sits along the northern edge of the property at an approximate elevation of 332 ft. IGLD. This results in 60 ft. to 85 ft. high escarpments, a defining feature of the park, along the western shoreline. These cliffs represent the highest such escarpments of Eastern Lake Ontario. The land surface slopes downward from this point to near lake level (high water) of 246 ft. IGLD at the far southwestern end.

The entire Stony Point geographical area is noted for very shallow soils, with depths to bedrock from 0-20". The soils at Wehle State Park are no exception, with bedrock outcroppings common in the fields and forests of the park.

## Natural Resources

### Ecological Communities

The New York Natural Heritage Program survey identified eleven ecological community types at Wehle State Park (Figure 2), including calcareous cliff community, calcareous pavement barren, calcareous talus slope woodland, limestone woodland, successional old-field woodland, successional red cedar woodland, calcareous shoreline outcrop, cobble shore, shallow emergent marsh, silver maple-ash swamp and sinkhole wetland (*Ibid*). Although not included as a natural community type, large areas of the park are mowed lawn. Ecologically, the mowed areas of the park help to reduce the spread of pale swallow-wort seeds.



Figure 2 - Ecological Communities Map



Of the eleven natural community types identified in the park, calcareous pavement barrens and calcareous shoreline outcrop are significant natural communities. Calcareous pavement barrens are landforms that originated from sedimentary deposits in a vast, shallow inland sea that covered much of New York approximately 450 million years ago. Also known as alvar, these areas support grassland vegetation in a permanent early successional state. These areas often harbor rare species of plants and animals.

Calcareous shoreline outcrops occur along almost the entire Lake Ontario shoreline within the park. These outcrops of calcium-rich bedrock, such as limestone, are one of the most prominent features of the park. There are several hundred occurrences statewide of varying quality. This community type is limited to the calcareous regions of the state. The communities at Wehle State Park are good quality examples.

## Flora

The flora of the park is characteristic of limestone areas of northern and western New York, where shallow limestone bedrock affects everything from soil depth and drainage to soil chemistry and susceptibility to erosion. Most of the park consists of second growth forest interspersed with alvar and successional old field habitats. The forests are comprised of a diverse assemblage of young and mature trees and shrub and herbaceous plant species.

## Rare Plants

The NHP survey identified several specimens of *Ulmus thomasii* within the park (*Ibid*). Known as "cork elm" for the distinctive corky ridges on its twigs and branches, this species is listed as threatened by New York State, but is not identified federally on the "Endangered and Threatened Wildlife and Plants" list published by the U.S. Fish and Wildlife Service. This species has a limited range in New York State consisting mostly of the areas along Lake Ontario and the Finger Lakes. Primary threats to cork elm are logging of larger trees and Dutch elm disease.

## Fauna

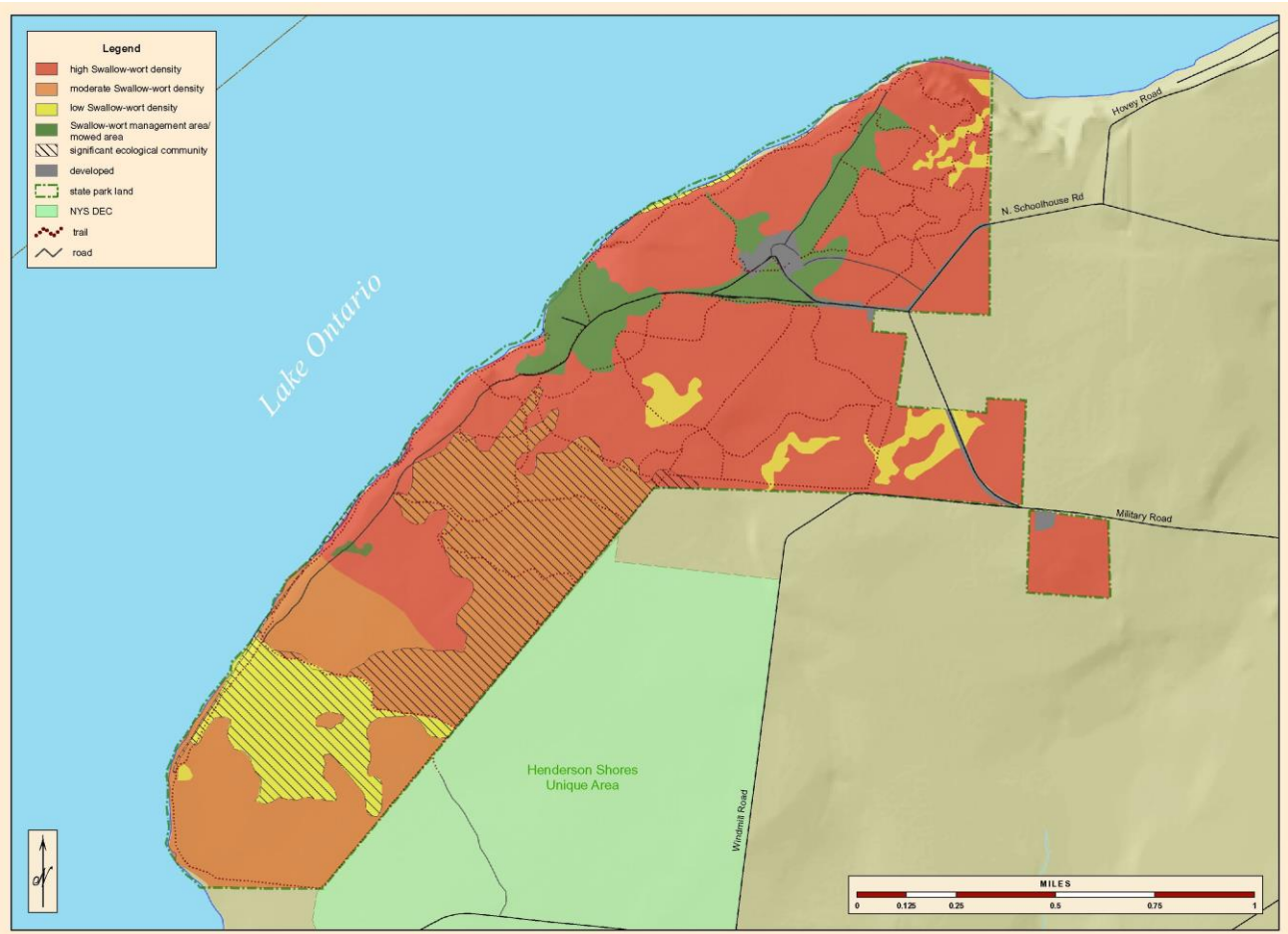
The park's wildlife is typical of the region and the rural setting. The park supports a wide diversity of mammals, birds, fish, amphibian, reptile and insect species that are common to the northeastern United States.

## Endangered, Threatened and Rare Animal Species

According to the New York State Breeding Bird Atlas, Stony Point provides potential habitat for 90 total bird species, three of which the State of New York has designated as species of special concern: Cooper's hawk (*Accipiter cooperii*), Sharp-shinned Hawk (*Accipiter striatus*) and Whip-poor-will (*Caprimulgus vociferus*).

## Invasive Species at the Park

One of the most significant threats to the natural areas of Wehle State Park is invasive species (*Ibid*). While multiple species of invasive plants have been identified as being present at the park, the invasion of one specific plant was the impetus for the creation of this plan – pale swallow-wort (*Cynanchum rossicum*). Although no formal surveys have been conducted to determine the true extent of the pale swallow-wort infestation at the park, anecdotal evidence from park staff, visitors, and local researchers suggest that almost all available habitat in the park has been invaded to some degree. Figure 3 shows the estimated abundance of the pale swallow-wort infestation based on non-scientific field observations. The first goal of this management plan is to create a more accurate map of the pale swallow-wort infestation.



**Figure 3 - Approximate Pale Swallow-wort Densities at Robert G. Wehle State Park**

Native to southwestern Europe, pale swallow-wort was likely introduced for ornamental purposes in the late 1800's (Plant Conservation Alliance's Alien Plant Working Group, 2006). Pale swallow-wort can form dense patches that crowd out native plant species, which can lead to impacts to wildlife. In addition to being long-lived, pale swallow-wort is also a prolific seed producer. Pale swallow-wort produces large quantities of windborne seeds, which are widely dispersed. As pale swallow-wort densities increase, the above and below-ground ecology of these areas are altered, due partly to the plant's ability to produce allelochemicals, chemicals that inhibit the development of neighboring plants (Lawlor, 2006). The heavy rootstocks provide an energy and water storage mechanism that facilitates rapid early season growth and allows for survival in habitats that have

wide seasonal cycles of water availability (DiTommaso et al., 2005). This combination of adaptations allows pale swallow-wort to almost completely take over habitats in both sunny old fields and shaded woodlands. According to Edinger (2002), pale swallow-wort’s aggressive spread is specifically threatening the globally rare alvar communities, such as those within Wehle State Park.

Recent studies have shown how these changes affect bird and insect assemblages in infested areas. In one laboratory study, monarch butterfly adults were offered black swallow-wort (*C. louiseae*) and common milkweed (*Asclepias syriaca*) in choice tests. Adults that fed on black swallow-wort laid some eggs, but none of the first larval instars survived (Haribal and Renwick 1998). A preliminary study of a habitat managed for grassland birds in Jefferson County NY, showed a significant negative correlation between pale swallow-wort cover and the number of breeding grassland birds (Central and Western NY Chapter - The Nature Conservancy, unpublished data).

This plan recommends that identifying the best options for management of pale swallow-wort control at Wehle State Park, especially within the significant communities, should be a high management priority. Decreasing pale swallow-wort populations will have a positive effect on the natural communities and native species that depend on suitable uninvaded habitats. OPRHP staff, with the assistance of many partners, has identified several other invasive plants within the boundaries of the park and surrounding the park, with pale swallow-wort representing the major threat. Table 1 lists the invasive species found within or adjacent to the boundaries of the park. Table 2 lists the invasive species that pose a threat to the park, based on their presence on nearby lands.

**Table - 1. Known Invasive Species Found within or adjacent to Robert G. Wehle State Park**

Common Name	Scientific Name
Bush Honeysuckles	<i>Lonicora morrowii &amp; L. tartarica</i>
Common Reed	<i>Phragmites australis</i>
Garlic Mustard	<i>Alliaria petiolata</i>
Glossy Buckthorn	<i>Rhamnus cathartica</i>
Pale Swallow-wort	<i>Cynanchum rossicum</i>
Periwinkle	<i>Vinca minor</i>
Purple Loosestrife	<i>Lythrum salicaria</i>

**Table - 2. Watch List of Invasive Plant Species for Robert G. Wehle State Park**

Common Name	Scientific Name
Burning Bush	<i>Euonymus alatus</i>
Canada thistle	<i>Cirsium arvense</i>
Dame's Rocket	<i>Hesperis matronalis</i>
Giant Hogweed	<i>Heracleum mantagazzinum</i>
Goutweed	<i>Aegopodium podagraria</i>
Japanese Barberry	<i>Berberis thunbergii</i>
Japanese Knotweed	<i>Polygonum cuspidatum</i>

## ***A History of Invasive Plants in Robert G. Wehle State Park***

### **Control Efforts to Date**

Anecdotal accounts document that several of Mr. Wehle's actions may have impacted the spread of pale swallow-wort. Mr. Wehle used the property to graze beef cattle. The presence of these animals in large numbers could have suppressed the invasion of pale swallow-wort through grazing and trampling of plants. Mr. Wehle also utilized fire management to maintain some fields as grazing lands and pasture. This too may have had an impact. However, documentation that he later used herbicides in an attempt to control pale swallow-wort suggests that, like scientific studies conducted on pale swallow-wort, Mr. Wehle found that grazing and burning were not effective control techniques.

Once the land became a state park, grazing, burning, and chemical treatments were no longer conducted. Instead, park staff mow the areas surrounding the entrance, maintenance shop, parking lots, rental compound, and trails frequently to maintain recreational facilities and contain seedpod production. This effort has been effective at controlling seedpod production in the maintained areas. However, it has not resulted in the eradication of pale swallowwort in those areas and seeds continue to disperse from plants surrounding the mowed areas. Pale swallow-wort is not only a serious problem for biodiversity at the park but also presents challenges for maintenance as well as enjoyment of the park's trails (Lundgren and Smith 2008).

Research by the U.S. Department of Agriculture into the control of pale swallow-wort is currently being conducted in the park. There is currently educational information about pale swallow-wort at park kiosks.

### ***Invasive Species Management Model***

The decision to develop an invasive species management plan for Wehle State Park came about due to an identified need for a more formalized and streamlined approach to the invasive species control process.

OPRHP Environmental Management Bureau (EMB) formulated this invasive species management plan based on work that has been occurring at Minnewaska State Park Preserve under Bob O'Brien, Invasive Species Control Field Director. This plan provides more than a basic look at invasive species management and control, and can serve as a resource for other parks. To supplement the information provided in this plan, other references that can be utilized to gain further understanding and knowledge have been included.

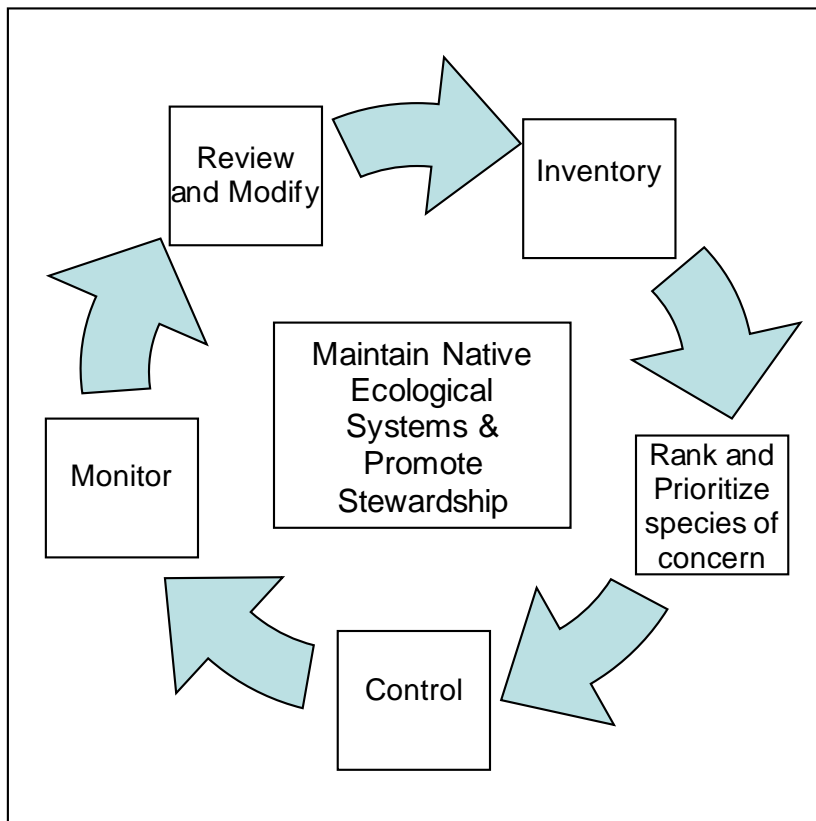
This Plan explains the process by which invasive species control efforts should be implemented. This process is broken into the following six overall goals:

1. Inventory and Map Invasive Species
2. Rank and Prioritize Invasive Species
3. Control Invasive Species
4. Restore Native Ecological State
5. Maintain Native Ecological State
6. Promote Stewardship

Each goal is further broken down by objectives and then actions or steps, which when completed, achieve the goals and guide invasive species management, so important native biodiversity is protected.

This invasive species management plan is to be implemented in an adaptive management approach. Adaptive management is a systematic approach for improving management by learning from past mistakes. Since this plan is adaptive, each year a manager/ coordinator should look at what has worked and what has not, and make changes accordingly. It is expected that changes will occur year to year as best management practices are refined.

This plan is also adaptive in its approach, because all the goals of invasive species management are tied together, as demonstrated in the adaptive management approach schematic diagram below:



**Figure 4 - Approach to Invasive Species Management**

This circular diagram indicates that the goals occur in cycles which can begin at any point depending on resource availability. Noted that after the first invasive control season passes, the process of controlling invasive species becomes dynamic. All the goals have certain parts occurring at the same time and thus have to be managed at the same time. There exists a continual cycle of planning, implementing, reviewing and improving the invasive management process and actions. Deciding which goals to work on at any particular time depends on many factors including but not limited to availability of personnel, time, conservation goals, and the season.

This plan is consistent with the findings and recommendations of the NY Invasive Species Task Force along with other plans developed by organizations involved in invasive species management. Using this type of approach to formulate the plan is beneficial as it maximizes efficiency of efforts

and prevents duplication of work, while being able to relate the plan specifically to Wehle State Park.

## ***Invasive Species Management Plan - Goals and Implementation***

This section of the plan describes each goal and the objectives and actions that are involved in meeting that goal. As invasive species control is already an ongoing process at the park, each goal section also contains a summary of the current work being done and plans for future control work (“Current and Planned Controls”). Control includes the entire set of activities associated with managing invasive species: training, prevention, survey and data collection, early detection, removal or treatment, monitoring/follow-up, education and outreach.

### **Goal 1: Inventory and Map Invasive Species**

#### ***Objective 1 - Collect and Store Data on Invasive Species and Locations***

Knowing what and where invasive species are in the park is essential to begin to address potential threats. A standardized method of collecting and storing data on invasive species has been developed. The collection of complete inventory data is an ongoing process, therefore control can begin before the entire park is inventoried and mapped. In general, this objective consists of the following four steps:

##### ***Action 1a. Become Knowledgeable on Invasive Plant Species***

Formal training on identification of species, both invasive and threatened, will be given to staff and volunteers.

##### ***Action 1b. Utilize Field Data Collection Form***

Refer to Appendix 1 for OPRHP’s “Field Data Collection Form”.

##### ***Action 1c. Plan Data Collection***

The data collection will begin in areas where there are known invasive species, working from more undisturbed areas toward disturbed areas, including trails.

##### ***Action 1d. Perform Data Collection***

New initial assessment data will be collected continuously (weather permitting) until the entire park has been assessed and mapped. When performing data collection, care will be taken not to disturb sensitive areas. The field data collection will be curtailed during seed dispersal, insect movement cycle or time of pathogen propagule or spore dispersal.

##### ***Action 1e. Enter Data into Database and File Original Collection Form***

The data collected will be entered into the OPRHP Statewide Invasive Species database. Access to this information can be obtained through the OPRHP Environmental Management Bureau. Original collection forms will be retained in an office file so they can be used for reference in the future. Referencing the comments and sketches on these paper forms has proven useful elsewhere for relocating plots.

#### ***Objective 2. Create Maps Linked to Inventory Data***

##### ***Action 2a. The GIS Unit within the OPRHP Planning Bureau Converts Data Tables***

The data entered in the OPRHP Statewide Invasive Species database will periodically be entered into the Agency's GIS database. The data will be shared with other agencies and organizations per approved request or agreement.

### ***Action 2b. GIS Unit Prepares Maps***

Periodically or by special request, maps will be created using GIS software to show the inventory data graphically. These maps will present a to-scale representation of invasive species locations and display the information regarding the specific plots, including species and size of infestation, which is viewable and printable via the Invasives drive. Users will need to install ArcReader application on computers used to view maps.

### ***Current and Planned Controls***

The NY Natural Heritage Program Report for Wehle State Park confirmed park-wide heavy infestation with pale swallow-wort. Formalized data collection was not needed to determine this fact. Figure 2 represents a preliminary effort to show levels of abundance. Several ¼-acre plots have been delineated and mapped for exploring experimental controls. Future data collection will include accurate mapping of pale swallow-wort infestation throughout the park. Collection of data and locations of all invasive species will occur over time.

## **Goal 2: Rank and Prioritize Invasive Species for Control**

### ***Objective 1. Create List of Invasive Species for Control Based on Rankings***

This step will use the inventory data to create a ranking based on feasibility of control, significance of impact and resources available. The value in ranking park-specific invasions is to prioritize control efforts according to the most effective manner to produce the best possible outcome.

#### ***Action 1a. Review Invasiveness Ranking for Each Invasive Species Present***

The New York Invasive Species Council (ISC) has developed a standardized list of known invasive species in New York and their statewide invasiveness rankings. This list is contained within the New York Invasive Species Council Final Report, A Regulatory System for Non-Native Species (ISC, 2010). The Nature Conservancy in New York and the Brooklyn Botanic Garden developed the ranking system, designed to assess the invasive nature of non-native plant species, in 2008. The ISC, in consultation with the Invasive Species Advisory Committee, adopted the plant ranking system for use statewide in 2009. State Parks will consider any species listed as prohibited or regulated through this process as an invasive species if present at or threatening the park.

#### ***Action 1b. Perform Local PRISM Ranking for Each Invasive Species***

Following review of the statewide ranking listing, each species will then be ranked based on its local invasiveness. This will be done using regional information available, and if possible, through evaluation by the applicable Partnership for Regional Invasive Species Management (PRISM), in the case of Wehle, the St. Lawrence-Eastern Lake Ontario (SLELO) PRISM. A current PRISM Invasive Plant Ranking Form is contained in Appendix 2.

### ***Objective 2: Prioritize controls based on rankings and resources available***

#### ***Action 2a. Determine Resources and Job Hours for Control***

In addition to rankings of invasiveness and feasibility on a state/region wide scale, controls will also consider local/park aspects such as funding, available staff, and timing. Small-scale removal, early

detection and post removal controls, as well as landscape scale controls, will be planned in accordance with regional and park priorities.

**Current and Planned Controls**

The state ranking system will be applied to the invasive species present in the park, and it is expected that pale swallow-wort will be identified as the most invasive plant present at the park. Most other invasive plants occur within pale swallow-wort infestations. Due to the pervasive nature of pale swallow-wort, its control is a priority at all scales. Invasive species found within pale swallow-wort control plots will be removed concurrent with removal of pale swallow-wort.

**Goal 3: Control/ Remove Invasive Species**

**Objective 1. Select Management Options/Control Methods**

Invasives will be controlled based on the ranking and available resources. Several different methods or combination of methods may be employed including manual, mechanical, cultural and, at times, chemical.

**Action 1a. Based Priority and Constraints, Select Species to be Controlled**

All invasive species will be considered for control. Species presenting the highest threat and/or greatest feasibility of control will be addressed first.

**Action 1b. Determine Method of Control/Removal to be Used**

OPRHP has been developing fact sheets on some of the primary invasive species that occur in New York State Parks. These contain information about both the biology as well as current control methods of each species. Staff will use these fact sheets during exploration into different options available for control. Staff will also consult additional fact sheets developed by various agencies and organizations as available. National Park Service fact sheets for numerous invasive plants found in New York State are available at <http://www.nps.gov/plants/alien/fact.htm>. Staff will also utilize OPRHP’s “Control Recommendations Matrix” (Reid, 2010, unpublished) to review and guide control method decisions. The pale swallow-wort fact sheet is included in Appendix 3.

**Objective 2. Develop Removal Schedule and Removal Plan(s) for Season**

A removal schedule will be prepared annually for each invasive control project using a Removal Schedule Form (Appendix 4). The fields on this form are explained in Table 3,

Removal plans may be generated automatically based on data collected on a site-by-site basis. Staff will be trained as appropriate by OPRHP invasive species staff on the use of this database. Information may also be submitted to EMB for development of site removal plans.

**Table - 3. - Explanation of Removal Schedule Fields**

Date(s) of Removal	Based on when removal is most efficiently performed for each plant.
Site Location	Descriptive location of the invasive species to be removed
Type of Disturbance	From the data collection form
Target Species	The species common name you are addressing.
Method of Removal	This is determined in Objective 1 of this goal.



Ranking	Based on results from Goal 2.
Description of Threat/ Conservation target	What the invasive is threatening or what you are working to conserve or improve by removing invasive species.
# of days planned for removal	Based on size of infestation, personnel and equipment, and difficulty of removal technique.
# of Persons	How many people are going to be working? This is important for preparation of removal project, gathering tools etc.
# of hours	The expected number of hours needed to perform work
Job Hours	# of expected hours; X # of people.
Participants	Note who is going to be involved in removal.
Disposal Method	Different species have different disposal methods and these will be determined before the project begins.
Ownership of Property	Region
Restoration	Describe the restoration plans.
Monitoring Date	Identify your next monitoring date to see results.

**Objective 3. Obtain approvals for planned removals**

**Action 3a. Submit Removal Schedule for approval to agency staff**

Removal plans will be submitted for agency review and will include the following information:

1. Number of plots and methods of control for each species
2. A restoration plan
3. A map for each removal plan with topography and soil disturbance

Additional environmental and historic review may be required.

OPRHP has adopted a pesticide policy, limiting use of pesticides at NY State Parks. In the case of invasive controls, pesticides can be used where invasive species pose a significant threat to natural or recreational resources, and where manual, mechanical and biological controls are ineffective. Any proposed use for treatment of invasive species in New York State Parks must be approved by EMB (518.391.3953 or 518.474.0409). Chemical treatments must be performed by a NYSDEC Certified Pesticide Applicator.

**Objective 4. Removals and/or Controls**

**Action 4a. Perform Removals as Prescribed in Removal Plans**

Prior to any control or removal, an inventory of tools and other items must be taken before issuance and after the removal is performed. Staff needs to check that all items are returned. Performing removals and controls with a focus on safety is imperative. It is always a good idea to include some

education, interpretation, and recreation for the participants after a hard day's work. Always thank volunteers and groups in writing by e-mail or a letter.

***Objective 5. Report on the Results of Removal /Control.***

Removal Report information will be collected using the OPRHP Site Monitoring Form (SMF) in the field and then entered into the database. Images (post removal) will be taken and sent with the reports.

***Current and Planned Controls***

Pale swallow-wort has been controlled primarily through mowing in high use areas since the park was acquired. A 2008-09 assessment led to plans to undertake an experimental control technique. Some preparations, including the delineation of four ¼-acre plots, have occurred and OPRHP intends to move ahead with this control project in 2010. This project is discussed in more detail at the end of Goal 6 and in Appendix 4. The results of these experiments will lead to a best management strategy for the park on a landscape scale. Removal and control of pale swallow-wort leading to restored native ecology is the primary goal.

**Goal 4: Restore Site to Native Ecological State**

The goal of removing invasive species is restoration of native natural communities. This preserves the natural landscape and resources of the park and prevents further changing/degrading ecological communities that may contain rare and sensitive species.

***Objective 1. Plan Site-specific Restoration, Including Native Replacement Species to be Used***

Disturbed soils present an opportunity for re-invasion. Taking an informed approach to restoration is important because in many cases post-removal invasions are more problematic than the original invasion. There are three general restoration strategies, all of which play a role in the overall invasive species management plan:

- 1) Allow for natural re-growth of native vegetation
- 2) Fully restore removal plots using native plants immediately after removal
- 3) Restore removal plot(s) in stages (involves multiple removals/restorations)

Site-specific restoration plans for re-establishing native vegetation will be developed. Local nurseries and others will be sought out to supply native grass seeds and other plants. The park may also be a good source for collecting and storing native seed. The development of a park-specific native grass seed mix may be a future action.

***Action 1a. Prepare Restoration Plan***

If a control site is bounded by an abundance of native vegetation and the threat of re-establishment by invasive species is low, sites may be allowed to restore naturally through native plant recruitment. In this strategy, the site is prepared and allowed to re-vegetate while being monitored to ensure that no invasive species return.

In many cases, actions such as planting and controlling erosion are needed to restore the site effectively. Examples of such sites are those that are susceptible to erosion or re-invasion by invasive species or sites that do not have a good source of nearby native vegetation that can provide new growth.

In other cases, a series of control activities are required to achieve success. In these situations, reaching final restoration will not be viable or prudent after the first time control is performed. Performing a full restoration, only to disturb that restoration a short time later, would be a waste of effort. In these cases, restoring an area to its native condition is often reached in stages. This type of restoration plan has multiple removal and restoration cycles. If there are multiple phases in removal or control, interim restoration will be considered the best management practice. Interim restoration will involve spreading native annual grass seeds. Spreading of seed and laying down a retaining mesh is a relatively easy interim restoration and is effective erosion control.

All options will be explored and researched, and a plan will be in place, prior to conducting removals or controls. The plan will describe how removal/control and then subsequently restoration of a site to its native condition will occur. Figure 5 outlines the restoration process and clarifies the different techniques or combination of restoration techniques that can be utilized.

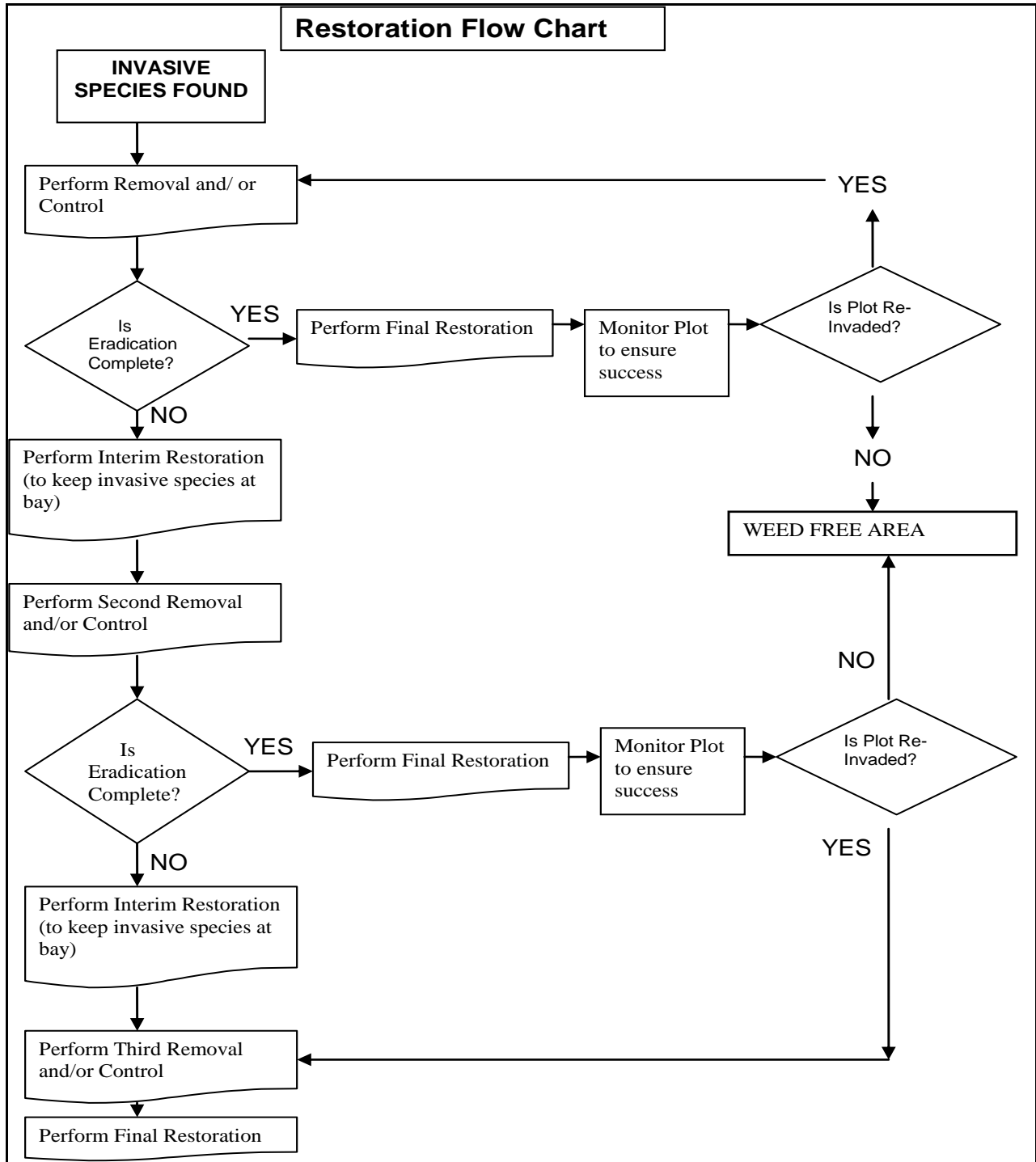


Figure 5 - Restoration Flow Chart

***Action 1b. Select Native Species to be Used in Restoration***

Restoration of site(s) to a native condition will utilize species native to the specific ecosystem so that non-native plants which could be problematic are not inadvertently introduced. When making decisions, transplants from within the park itself should be strongly considered.

***Objective 2. Restore Removal/Control Plots to Native State***

Successful restorative planting will fend off future invasions and reaching this final step is an integral part of this invasive species management plan. Follow-up monitoring and removal of invasive regeneration within removal/control plots are important for allowing the restoration efforts to take hold and will be discussed in the next goal, Monitoring.

***Action 2a. Obtaining Native Plants***

One option is the cultivation of natives. Though this is a viable option, the costs and time involved may be prohibitive because plants need to be nurtured into maturity before transplanting. Transplanting natives (another option for obtaining native plants) from other locations, possibly within the park, is a low cost approach to native restoration. This option can be effective provided a sufficient quantity of native plants exist and transplanting does not cause further ecological shifts.

Native plants can also be purchased from reputable nurseries. Care must be taken, however, to ensure that the plants are truly native. Native plants that originated from as close to the site as possible should be utilized. Plants native to a site but grown from stock that originated from an area far away may contain genetic material that may alter local genetic pools and slight physical adaptations that may not make them ideal candidates for restoration at a given site.

***Action 2b. Perform Restorative Planting***

A briefing on safety and the restoration, including how the plants will be distributed along with planting requirements such as depth and watering, will occur on site.

A site visit will be performed to assess the success of the replanting a month or so following the work. A second planting may be necessary if planting more than one species or if seasonality plays a role in plant availability or growth requirements.

Planning for the eventual replanting of grasses, shrubs or tree saplings once eradication is complete will be a part of the overall site specific removal plan.

***Current and Planned Controls***

To date, no restoration efforts have taken place at the park because no formal removal projects have occurred. The proposed experimental control project will include the goal of reestablishment of the native grassland community. Restoration will include sterilization of soils using high heat, followed by reseeded with a native grass mix. Fast-growing annual grasses will be seeded to protect the site from non-native re-infestation while the native grassland community develops.

**Goal 5: Maintain Native Ecological Systems**

Maintaining native ecological systems will be achieved by preventing re-introductions of invasive species in areas where removal/control has taken place, and stopping new invasions of invasive species as they occur through an Early Detection and Rapid Response program.

***Objective 1. Monitor Control Locations Post-Removal***

After removal/control is performed, further monitoring is needed in order to reassess actions performed and to determine what control methods and restoration practices may need to be adapted.

A Site Monitoring Form (SMF) will be completed for each monitoring action and then, if needed, on the spot treatment of regenerating invasions can be performed.

***Action 1a. Monitoring Schedule***

A planned schedule of plot monitoring will be developed when planning the removals for a season. All sites where removal/control projects have taken place will be reassessed at least annually. Monitoring dates for each new removal plot will be scheduled in conjunction with the Removal Schedule for that season.

A Monitoring Schedule will include the previous year(s) removal plots and their monitoring dates, as well as updating the schedule with the monitoring dates for this year's removal/control plots. A quick site check several weeks post-removal will be done to gauge the frequency at which monitoring will be planned in subsequent years and to assess the plot for reinvasion of the same or possibly additional invasive species. This site visit will also be used to assess erosion at the site and native plant re-growth.

***Action 1b. Collect Data on Removal/Control Plots***

The SMF contains fields of information pertaining to each removal/control plot including: plot ID, species controlled, date of first control, date of last control, and space to note if a subsequent onsite removal was necessary. New, dated photographic images will be taken when returning to the removal/control plot for monitoring. The data collected during monitoring will be entered in the OPRHP Statewide Invasive Species database.

***Action 1c. Perform on the Spot Treatment of Regenerating Invasive Plants***

OPRHP's best management practice for monitoring recommends that a team of two perform monitoring activities. The team will have all the tools necessary for plot maintenance and control of any regrowth of invasives along with the Post Removal Report for the plot(s). If removal of invasive species (due to regeneration) is necessary, it will be performed on the spot and images will be taken pre and post removal for the next monitoring cycle. Any treatment performed during the site monitoring visit will be noted on the SMF.

***Objective 2: Setup and Monitor Invasive Free Prevention Zones***

Collecting data, mapping and delineating zones where invasions have not occurred will ensure conservation targets are protected. It also aids rapid response to new invasions.

***Action 2a. Development and Implementation of Invasive Free Zone Mapping Strategy***

There are a few different strategies for setting up invasive free zones. The first option uses a map of the park, and sets up invasive free zones based on knowledge of the park. This includes consideration of sensitive conservation targets, and areas likely to be free of invasives based on location and characteristic vegetation and landscape.

An invasive-free protection zone mapping strategy will be based on "what we already know." All known ecologically sensitive or significant communities will be surveyed and delineated on the map, followed by areas likely to be invasive-free based on knowledge of park vegetation, and/or ortho-images or satellite images which show the landscape, vegetation, slope, aspect, and ecological communities. Natural Heritage reports as well as the NYS GIS Clearinghouse website and the DEC website of breeding bird areas will be used in determining where sensitive areas are located.

No samples of flora or fauna will be collected. If invasive species are found while delineating what was thought to be an invasive free zone, rapid action is immediately required to remove the species. Control/ removal will occur as soon as possible.

Invasive-free protection zone mapping is part of the overall mapping and data collection strategy for the whole park. This is necessary information that allows for proactive efforts in order to preclude invasions, not just respond to known infestations. Additionally, mapping invasive-free zones allows buffer zones to be established around conservation targets.

### ***Action 2b. Set up Prevention Zones***

As invasive-free areas are established, the next step is to set these areas up as prevention zones. An Invasive Species Prevention Zone (ISPZ) is a natural area that is dominated by desired native species and natural communities, which is monitored and protected from non-native invasive species introductions. A buffer area, large enough to be certain of early detection and rapid response to new invasion, will surround the invasive free conservation targets.

As ISPZs and conservation targets are designated, annual or semi-annual monitoring will take place and become part of the monitoring schedule in subsequent years following the initial survey.

### ***Action 2c. Early Detection and Rapid Response (EDRR)***

To promote a successful rapid response program, it is important to identify species that pose a high risk to the region in general and to be prepared to act quickly if an invasive free or prevention zone is invaded. Early detection species and areas take precedence over any other removal projects.

Rapid response includes immediate data collection and planning of eradication and control. All of the steps outlined in this management plan will begin immediately including making additions to the Removal Schedule for the current field season whenever possible. Early detection and rapid response is the best management practice for overall invasive species prevention and eradication.

### ***Current and Planned Controls***

As experimental and landscape scale control progresses, protection areas and prevention zones will be designated, monitored and maintained as weed free to the greatest extent possible. Special attention will be paid to early detection and rapid response.

## **Goal 6: Promote Stewardship**

### ***Objective 1: Institute Training Programs***

Volunteers, well suited to time and labor intensive objectives that tax park workforces, will be used during all steps of management. To make the most of volunteer effort, training programs must be developed so that the volunteers, partners, and staff that become involved in invasive species management have at least a basic background on invasive species and safety protocols. Training programs that have been created for other parks will be used whenever possible.

### ***Action 1a. Develop Training Programs***

All volunteers will be trained on identification, control, and safety. The completion of each goal of the plan requires both a basic training and more advanced training program. The park will offer and deliver various types of training. The basic training program is for volunteers who are there for one day to perform one aspect of invasive management, such as removal and control or restoration planting. This type of training program will include:

- Welcome and Introduction (if a group)

- Overview of the problem (invasive species) and goal for the day
- Safety lecture
- Plan of the day (i.e., conduct and order of activities)
- Question and Answer Session

Advanced training programs focus on particular interests of the volunteers. An advanced training program is detailed in nature and will be focused on one or more goals of the plan.

A PowerPoint program on matching volunteers, “Playing the Match Game” (available upon request), is a valuable resource in learning how to match people and activities so that both the park and volunteers feel they have benefited from being involved in stewardship.

### ***Action 1b. Perform Outreach***

Getting the word out about the need for volunteers and partners can be done through the use of local newspaper calendars of events, environmental publications and newsletters, farmers markets, college campus informational boards and municipal kiosks.

### ***Action 1c. Train Volunteers/Partners/Staff***

Volunteer training will occur as often as possible and on a variety of days and times throughout the field season.

Partners will likely schedule training as an outcome of meetings on the group goals. The outcome of partnership training will be scheduled removals and controls.

In addition to training outside groups and the public, it is necessary to have staff training. This will occur in spring or early summer and will be specific to the roles staff can play in overall invasive species management. Field-based staff will receive training on species identification and data collection. This is an excellent way to gather data and initiate early detection and rapid response. It should be noted that the field staff at a park can be the most valuable resource a coordinator has for constant monitoring of the park.

### ***Objective 2: Educate***

Education programs, as separate from training programs, with an emphasis on the threats invasive species pose to native biodiversity, economics, aesthetics, and human health, have been developed for students at K-12 and college levels, and the public in order to promote stewardship values and ethics. These programs can be re-designed to apply more directly to a park or region with an emphasis on field involvement.

### ***Action 2a. Research and Design Education Programs***

Educational program development has, for the most part, been done by others. There are several K-12 programs available for free over the internet. An example of a primary school curriculum, from California State University Monterey Bay and Bureau of Land Management, is located on the web at: <http://watershed.csumb.edu/ron/roncor/cor/index.htm>. Programs such as this can be used in part, whole, or tailored to meet specific educator needs. The basic training program is well suited as an educational tool for general public programs delivered at nature centers and other venues and events such as Earth Day or Invasive Species Awareness Weeks.

### ***Action 2b. Coordinate School-Based Programs***

Ideally, coordinating with school based-programs will be a part of this overall education program. Classroom and field activities will include actual removals wherever possible. Traveling offsite to



deliver education programs in late winter prior to the field season is a possible activity if resources are available.

### ***Action 2c. Develop Public Information Campaign***

Information about invasive species should be included in park kiosk panels, brochures, flyers, and newsletters to raise the overall level of awareness and promote participation and stewardship. The distribution of information on early detection is especially important. The sooner a new infestation of an invasive species is reported the less time and effort is needed to control and eradicate. When a citizen locates a new infestation it will be suggested that images rather than voucher specimens be taken of the suspect invasive, as often times species are misidentified and the possibility that a rare species is mistakenly collected needs to be avoided.

### ***Objective 3: Develop Working Partnerships***

Acting locally in partnerships is especially valuable and ad hoc groups involved in environmental issues will be sought out or created. Environmental commissions, friends groups, university environmental science and natural resource departments, and watershed organizations are other such groups to collaborate with in invasive species management.

### ***Action 3a. Assist With Community and Private Landowner Actions***

Disseminating information to surrounding private landowners and encouraging them to restore native species on their land is essential to the success of any invasive control program over the long term. Private lands are the largest segment of the state with invasive species to manage. Educating the private land owner in public forums and cooperative demonstration projects is a step toward statewide early detection, rapid response, and eradication of existing invasive species.

### ***Objective 4: Research and Experimentation***

Often volunteers, partners, and academic institutions will have interest and skill in the natural sciences. These valuable persons and organizations can aid in development and augmentation of best management practices and help carry out experimentation. Qualitative and quantitative data analysis can lead to better understanding and new methods of control and eradication. The measurement of failure and success of management practices over time aids in achieving the best cost-benefit ratio in invasive species management.

### ***Action 4a. Conduct Research on Best Management Practices***

OPRHP is open to testing new and innovative control strategies that adhere to the resource management guidelines established for the statewide park system. Whether conducted by park staff or by outside researchers, this type of research will help determine the efficacy and feasibility of new control strategies.

### ***Current and Planned Controls***

OPRHP has been involved in a number of invasive species stewardship efforts since acquiring Wehle State Park. These include expanded mowing of high use areas and fields and trails, the publication of kiosk information and brochures on pale swallow-wort, and participation in the SLELO PRISM. In addition, OPRHP has cooperated with USDA and Cornell University for a long-term experiment to examine the ecology of pale swallow-wort and its invasion of the park. . This research is in support of the development of a future bio-control for pale swallow-wort.

Recently OPRHP hired an environmental education consultant to prepare the document “Swallow-wort Interpretive Plan for Robert G. Wehle State Park” (Veverka, 2010). This plan was funded

through the Robert G. Wehle Trust and will be implemented as part of the Master Plan to further raise public awareness about pale swallow-wort at the park. Some of the recommended actions that will be undertaken in the near term include the installation of seed check/boot brush stations, and additional signage. The goal is to provide additional information about the plant and the control measures that are being taken at the park, and to engage the public to assist in preventing its spread beyond park boundaries.

A list of potential groups that OPRHP has worked with in the past, and plans to work with in the future, is below. This list gives an idea of the variety of groups and people who can be utilized to advance invasive species management and the promotion of stewardship within a park. Of particular note is the SLELO PRISM. The agency is involved with this group and strives to become a more involved partner.

**Table - 4. Groups Utilized in Stewardship and Invasive Species Control**

General Public	Friends groups
Girl/Boy Scout troops	Student Conservation Association
High Schools	Jefferson County Alternative Sentencing
BOCES Jefferson County	SLELO
Town or County environmental commissions	NY Department of Corrections
NY Department of Transportation	Community groups (senior citizens, 4-H, others, campus groups, environmental groups)
Town of Henderson Highway Department	

Finally, work will be advanced on the experimental test plots for pale swallow-wort removal this summer. A full description of this project is contained in Appendix 5. This project will undertake mechanized pale swallow-wort plant material removal in both field and forest communities. In four separate test plots, pale swallow-wort plant material will be excavated and removed from the soil using Bobcat brand tractors with special tilling and sifting attachments. Once sifted, the site will be restored using native plantings.

## **Roles and Responsibilities for Implementation**

This plan provides a framework for the management of invasive species at Wehle State Park. Implementation will involve coordination between OPRHP staff at the park, the regional office and the EMB in the Albany office. Representatives from each of these levels should meet annually to discuss implementation of the management plan and specific actions that will be taken during the year. Some actions will be on-going activities while some will be specific projects or events. Results of the previous year's experiences and progress should also be evaluated at this meeting. Staff who will attend this meeting will include the Park Manager, General Park Manager or other regional representatives, the Saratoga/Thousand Islands Regional Natural Resource Steward (Biologist) and the Invasives Species Control Field Director.

The actual staff responsible for the implementation of each of the goals and objectives outlined in the plan will vary. For example, staff will implement some tasks that are day-to-day oriented, such as early detection and rapid response, on the park level. Other activities, such as the training and use of volunteers, will involve coordination between park staff and the Natural Resource Steward as well as others. Primarily the Invasive Species Control Director and the Natural Resource Steward will coordinate larger projects such as the implementation of the experimental plots. Close communication between these parties will be the key to insuring that invasive controls are effectively implemented. In general, responsibility for implementation of the different parts of the plan will be reviewed and discussed as part of the annual planning meeting.

Continued participation in the SLELO PRISM is an important role for the agency. The Park Manager and the Natural Resource Steward will continue to attend these meetings and find ways that the agency can fully participate in its activities.

Coordination with USDA and Cornell University regarding the ongoing research will also continue and will be done primarily through the Park Manager in close consultation with the Regional Office and the Natural Resource Steward. The same applies to coordination with DEC regarding management of the adjacent Unique Area, particularly in terms of opportunities for funding and staffing for pale swallow-wort control. For example, the opportunity to fund an "invasive species steward" position similar to the Dune Steward program on the Eastern Lake Ontario shoreline should be explored. This position could be shared among the Lake Ontario State Parks and possibly DEC properties, and the person could advance public education about impacts and prevention of pale swallow-wort, as well as coordinate site-specific control and monitoring efforts.

Changes and adaptations may occur to specific steps involved in this plan because of new information, improvements in technologies and methodologies, and because of the evolving nature of invasive species management. The need to remain flexible is especially necessary when performing natural resource related management projects because of changing or unexpected environmental conditions. Thus, this needs to be kept in mind as invasive species management is implemented.

Invasive species management is not done in a void. It is performed in the context of the park, its neighbors and the surrounding land. There are many groups actively working on invasive species issues who could become involved with the implementation of this plan. It is sometimes a best use of resources to take advantage of these groups as they offer expertise, people hours and may be on the forefront of new ways to best manage invasive species.

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## **Appendix 1: Inventory Form**





# NY State Invasive Plant Survey Report Form



At a minimum, please fill out all fields in **bold type**. Fill out all observer information the first time you complete one of these forms.

Site Location Information	
<b>Town:</b>	
<b>County:</b>	<b>State:</b> New York
<b>Directions to Site:</b>	
Property Organization:	
Property Contact Person:	
Contact Information (Phone, Email, and/or Address):	

Observer Information
<b>Observation Date:</b>
<b>Name(s):</b>
Organization:
Telephone:
Email:
Address:
GPS Unit Model:

**GPS Coordinates:** UTM E: \_\_\_\_\_ UTM N: \_\_\_\_\_ Receiving WAAS Signal?  Yes  No

Set your GPS Coordinate system to **UTM**, Map Datum to **NAD83**, **Zone 18N**. Coordinates are ideally taken from the center of the infestation. Please note if otherwise.

If GPS coordinates are not available, please include a map (USGS topographic preferred) with the site location marked.

Property Ownership:	
<input type="checkbox"/> Private	<input type="checkbox"/> County
<input type="checkbox"/> Village	<input type="checkbox"/> State
<input type="checkbox"/> Town	<input type="checkbox"/> Federal
<input type="checkbox"/> NGO (Non Gov't. Org.)	
<input type="checkbox"/> Other _____	

Current Land Use:	
<input type="checkbox"/> Roadside	<input type="checkbox"/> Backcountry
<input type="checkbox"/> Powerline	<input type="checkbox"/> Trailside
<input type="checkbox"/> RR Tracks	<input type="checkbox"/> Logging Road
<input type="checkbox"/> Farm Field	<input type="checkbox"/> Yard/Garden
<input type="checkbox"/> Recreation Area (i.e. ball parks)	
<input type="checkbox"/> Other _____	

Historical Disturbance:	
<input type="checkbox"/> None	<input type="checkbox"/> Construction (General)
<input type="checkbox"/> Cultivation	<input type="checkbox"/> Construction (Road/Trail)
<input type="checkbox"/> Dumped Debris	<input type="checkbox"/> Flood
<input type="checkbox"/> Fire	<input type="checkbox"/> Former Homestead
<input type="checkbox"/> Fire Break	<input type="checkbox"/> Tree Harvesting
<input type="checkbox"/> Other _____	

Habitat:
<input type="checkbox"/> Aquatic
<input type="checkbox"/> Nonforested Wetland
<input type="checkbox"/> Forested Wetland
<input type="checkbox"/> Field
<input type="checkbox"/> Forest/Upland
<input type="checkbox"/> Rock Outcrop
<input type="checkbox"/> Other _____

Site ID: Use > date\_speciescode\_dailyid# (example > 20080303BETH03)





## **Appendix 2: PRISM Ranking Form**



# PRISM

(New York Partnerships for Regional Invasive Species Management)

## NON-NATIVE PLANT INVASIVENESS RANKING FORM

PRISM:

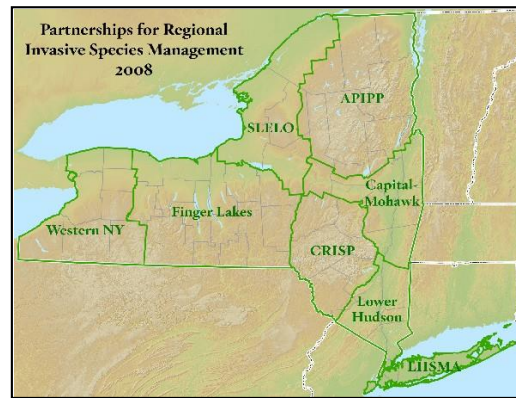
Scientific name: \_\_\_\_\_ USDA Plants Code: \_\_\_\_\_  
Common names: \_\_\_\_\_  
Native Distribution: \_\_\_\_\_  
Date Assessed: \_\_\_\_\_  
PRISM Assessors: \_\_\_\_\_  
PRISM Reviewers: \_\_\_\_\_  
Date Approved: \_\_\_\_\_ Form version date: 13 April 2009  
New York Relative Maximum score: \_\_\_\_\_ Date NY assessment approved: \_\_\_\_\_  
New York State Invasive Rank: \_\_\_\_\_

### SUMMARY OF PRISM RANKING RESULTS:

Distribution:

Estimated number of infested sites:

PRISM Invasiveness Rank<sup>§</sup>:



### A. DISTRIBUTION AND ABUNDANCE (KNOWN/POTENTIAL):

1. What is the species distribution and abundance in the PRISM?
- |  |             |
|--|-------------|
| A. Not present   | Not Present |
| B. Occurs in three or fewer natural areas (locations that are at least ¼ mile apart) with no infested area* >1 acre or containing >100 individuals | Restricted  |
| C. Present in 4–10 natural areas, or with one occupied location >1 acre or containing >100 individuals   | Common      |
| D. Present in >10 minimally managed areas  | Widespread  |
| U. Unknown   | Unknown     |

Answer:

Describe distribution:

Sources of information:

<sup>§</sup>Not Assessable: not persistent in the PRISM, or not found outside of cultivation.

\*Definition of “infested area” is the “...actual or percentage of land occupied by [canopy cover of] weed plants” NAWMA (North American Weed Management Association) 2002. North American Invasive Plant Mapping Standards (see <http://www.nawma.org/>).

# PRISM

(New York Partnerships for Regional Invasive Species Management)

## NON-NATIVE PLANT INVASIVENESS RANKING FORM

2. What is the likelihood the species will occur (if not yet present) or expand its distribution and abundance (if already present) in the PRISM?

Answer:

Documentation (e.g.: history of establishment in PRISM, suitability of habitats and climate, distribution models, literature, expert opinions):

Sources of information:

### B. INVASIVENESS RANK IN THE PRISM:

Is the species distribution Widespread or Common?

Yes: Go to column A in table below.

No: What is the likelihood of species occurrence or expansion? Answer:

Very Likely: Use column A below  
Moderately likely: Use column B below  
Unlikely: Use column C below  
Zero likelihood Invasive potential Insignificant  
Unknown Invasive potential Unknown  
Not assessed Invasive potential not assessed

Assign a PRISM invasiveness rank to the species based on its New York Relative Maximum Score, using the designated column in the table below.

New York Relative Maximum Score	New York Invasiveness Rank	A	B	C
> 80.00	Very High	VH	H	M
70.00–80.00	High	H	M	L
50.00–69.99	Moderate	M	L	Ins
40.00–49.99	Low	L	Ins	Ins
<40.00	Insignificant	Ins	Ins	Ins

Column used: \_\_ (Insert PRISM Invasiveness Rank on page 1)

### References for species assessment:

**Citation:** This ranking form for regions within NYS may be cited as: Jordan, M.J., G. Moore and T.W. Weldy. 2008. Invasiveness ranking system for non-native plants of New York. Unpublished. The Nature Conservancy, Cold Spring Harbor, NY; Brooklyn Botanic Garden, Brooklyn, NY; The Nature Conservancy, Albany, NY. Note that the order of authorship is alphabetical; all three authors contributed substantially to the development of this protocol.

**Acknowledgments:** Valuable contributions by members of the Long Island Invasive Species Management Area's Scientific Review Committee were incorporated in revisions of this form.

## **Appendix 3: Pale Swallow-Wort Fact Sheet**



## FACT SHEET

# Pale Swallow-wort *Cynanchum rossicum*

Milkweed Family - Asclepiadaceae  
USDA PLANT CODE: CYLO8



Tom Hughes



Tom Hughes

Pale swallow-wort stem with seed pods (top) and in bloom (bottom).

**Description** – Herbaceous perennial vine, climbing 1-2 m. Stems climb on other plants or twine together forming ropes. Similar in appearance and habit to black swallow-wort (*Cynanchum nigrum*), but with pale pink colored flowers.

**Leaves** - Oval shaped, pointed at tip, opposite positions on stem, 5-10 cm long. Leaves larger at mid-stem, smaller and narrower at tip. Dark green, shiny, smooth and hairless. Turn golden yellow in late summer.

**Fruit & Seeds** - Narrow, pointed pods, 4-7 cm long, often in pairs. Pods first appear in early June, turning from green to light brown as they ripen for approximately 6 weeks.<sup>1</sup> Seed dispersal is late July to September, occurring first in sunny, open locations, and later in shade.<sup>1</sup> Pods open lengthwise releasing wind-borne, milkweed type seeds attached to tufts of long, soft, white hairs. Up to 2000 seeds per m<sup>2</sup> in open sun and few to no flowers or seeds in dense shade.<sup>7</sup> Pods remain on dried vines.

**Flowers** - Open mid-May to July, peaking in early June, continuing into early August in shade.<sup>4</sup> Small at 5-7 mm wide. Clusters of 5-20 flowers arise from a single stem at the junction of leaf and stem. Five long and narrow triangular petals form a 5 pointed star shape. Color is pale pink to reddish brown. Petals hairless, often twisted. Five small, thick lobes in center. Flowers smell of rotting fruit. Insect and self-pollinated.

**Roots** - Pale, thick, and fibrous. Rootstalk is woody. Root crown buds form dense mats and produce many shoots below ground.

**Habitat & Ecological Impacts** – Native to Ukraine and southwestern Russia. First recorded in North America in Toronto Junction, Ontario in 1889.<sup>5</sup> First recorded in New York in 1897 in Monroe and Naussau Counties.<sup>7</sup>

**Current Distribution** - Known to occur in 12 states across the northeastern and mid-western United States, from New Hampshire southwest to Missouri. Reported in Ontario and Quebec. NY State populations from central NY north to St. Lawrence County, and also in Suffolk County and Kings County. Some distribution overlap with black swallow-wort which has darker, purple-black flowers; specific identification should be made.

**Habitat** - Grows in fields, woodlands, shrub habitat, river banks, transportation corridors, disturbed areas, fence rows, in shallow soils over limestone bedrock, on talus slopes, and is usually found in calcareous soils. Adapted to a wide range of light and moisture. Greater population densities occur in open, sunny areas.

**Ecosystem Impacts** - Populations out-compete native plants, have higher reproductive rates in dense stands, and reduce plant and animal biodiversity. Swallow-wort changes soil ecology which displaces other plants, reducing insect diversity.<sup>2</sup> Monarch butterflies lay eggs on swallow-wort, but larvae do not survive, and native monarch host plants are crowded out.<sup>5</sup> Grassland bird breeding decreases in infested areas and is completely absent in dense stands.<sup>1</sup> Black swallow-wort has similar potential to degrade habitat. Toxic to livestock and wildlife.<sup>5</sup> Sensitive ecosystems and habitats that support rare plants, birds, and invertebrates are being invaded.<sup>2</sup> Movement of infested hay crop can spread swallow-wort to new areas.<sup>6</sup>

**Management Overview** – An integrated management approach with follow-up monitoring is most effective in control of both pale and black swallow-wort. Early detection and removal of small patches is advised to prevent establishment and spread. Larger infestations require a multi-year control plan and revegetation. Can take up to 5 years to deplete seed bank.<sup>7</sup> Where eradication methods are not possible, containment of infestation can be achieved. Avoid areas during seed dispersal, clean all equipment, clothing, and shoes when leaving infested areas.<sup>5</sup> If feasible, restrict public access during seed dispersal. Dispose of plants by bagging and placing in landfill as waste, or by burning.<sup>7</sup>

**Manual** - Manual control can be effective on a small scale and must be thorough. To eradicate, dig out and destroy complete root crowns before pods ripen.<sup>7</sup> If digging is not possible, manual suppression of seed crop is advised.<sup>1</sup> Cut just below lowest pod in early to mid-July, before seed pods mature. Do not cut before flowering, as plants will regrow in time to produce mature fruits.<sup>7</sup> Cutting of vines to keep from climbing and hand removal of seed pods will minimize spread.<sup>1</sup> Hand pulling aboveground cover will cause resprouting and is not recommended.



Casey Holzworth  
Pale swallow-wort shoots.

**Mechanical** - Where impact mitigation and restoration are possible, complete grubbing of all plant parts (including root crowns) using heavy equipment is effective. Mowing will not eradicate the plant, but will prevent seed crop in larger areas if well-timed.<sup>1</sup> Mow early to mid-July after flowering when pods are small and immature. Monitor and mow a second time later in season before more pods mature.<sup>6,7</sup>

**Chemical** - The Office of Parks, Recreation and Historic Preservation has adopted a pesticide free policy, with one of few exceptions being treatment of invasive species. Pesticides will be used only as a last resort, where invasive species pose a significant threat to natural or recreational resources, and where manual, mechanical and biological controls are ineffective. Any proposed use for treatment of invasive species in NY State Parks must be approved by the Environmental Management Bureau (518.391.3953 or 518.474.0409). Chemical treatments must be performed by a NYSDEC Certified Pesticide Applicator. Foliar herbicide application should be conducted prior to fruiting, to ensure mature pods do not release viable seeds. If plants have pods, cut below lowest pod, bag, and treat regrowth in August or early September. For cut stem method, cut and immediately apply herbicide to cut surface.<sup>7</sup>

**Cultural** - Pale and black swallow-wort contain toxic substances and may be poisonous to some livestock. Deer do not browse, preferring native vegetation.<sup>5</sup>

**Biological Control** - Biological control for swallow-wort is being developed but is not available at this time.

**Restoration** – Plowing large stands and planting an annual crop for several years will deplete the seed bank and help to control large infestations.<sup>7</sup> Revegetation is needed in controlling large areas of swallow-wort.<sup>4</sup>

Site Condition	Control Method					
	Manual	Hand Pull	Cut/Mow	Mechanical	Chemical	Cultural
Less than 20 plants	1	3	3	1	2	Poisonous
Open field greater than 20 plants	3	3	2	1	2	Poisonous
Woods/slopes/rocky areas > 20	3	3	3	2	1	Poisonous

Control methods recommended according to site condition are not one-size-fits-all. There may be exceptions to the preferred approaches listed in the table. For more information or guidance, please contact NYS OPRHP Environmental Management Bureau (518.391.3953 or 518.474.0409).

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2. Di Tommasso, A. & S. Greipsson. 2006. Invasive Non-Native Plants Alter the Occurrence of Arbuscular Mycorrhizal Fungi and Benefit from This Association. Ecological Restoration. 24(4):236-241.
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6. Lawlor, F. 2003. Swallow-wort Management Suggestions for Jefferson County, N.Y. TNC, Tug Hill / Eastern Lake Ontario, Project Office, Pulaski, N.Y.
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Casey Holzworth  
Pale swallow-wort vines climbing trees and other vegetation.

PHOTOS PROPERTY OF NEW YORK STATE - OPRHP



## **Appendix 4: Removal Schedule Form**











## **Appendix 5: Experimental Control Project**





## **State Parks Natural Resource Project Proposal**

**Descriptive Title of Project:** Conduct and evaluation of mechanical eradication techniques for pale swallow-wort (*Cynanchum rossicum*) on four test plots.

**Region:** Thousand Islands

**Park/Site:** Robert G. Wehle State Park

**Date:** June 17, 2009 (modified 11-4-2009)

**Lead Contact Information:**

**Name:** Casey Holzworth

**Title:** Natural Resource Stewardship Biologist

**Address and Phone Number:** Saratoga Spa State Park  
19 Roosevelt Dr.  
Saratoga Springs, NY 12866  
(518)-584-2000

**E-mail address:** casey.holzworth@oprhp.state.ny.us

**Project Abstract:** Wehle State Park is highly infested with pale swallow-wort (*Cynanchum rossicum*). OPRHP is concerned about the impacts this dominance may be having on the ecology of the park as well as this population's role in the spread of pale swallow-wort in the region and along the Lake Ontario shoreline. This proposal is to test several approaches to suppression and eradication in order to determine the best approach to management of this species in the habitat and communities represented within the park. This project is focused on manual and cultural tilling as a means of eradication over time. The proposal would include contract tilling and hand removal of exposed root crowns over several acres over several years to determine the effectiveness of this control method. Costs are estimated to be \$12,000.00 per year for a period of 3 years.

### **1. Project Background**

Pale swallow-wort (*Cynanchum rossicum*) is a long-lived perennial, twining herbaceous vine in the milkweed family. According to the Plant Conservation Alliance ([www.nps.gov](http://www.nps.gov)), "Pale swallow-wort was likely introduced for ornamental purposes and was first collected in Monroe and Nassau counties in New York State in 1897."

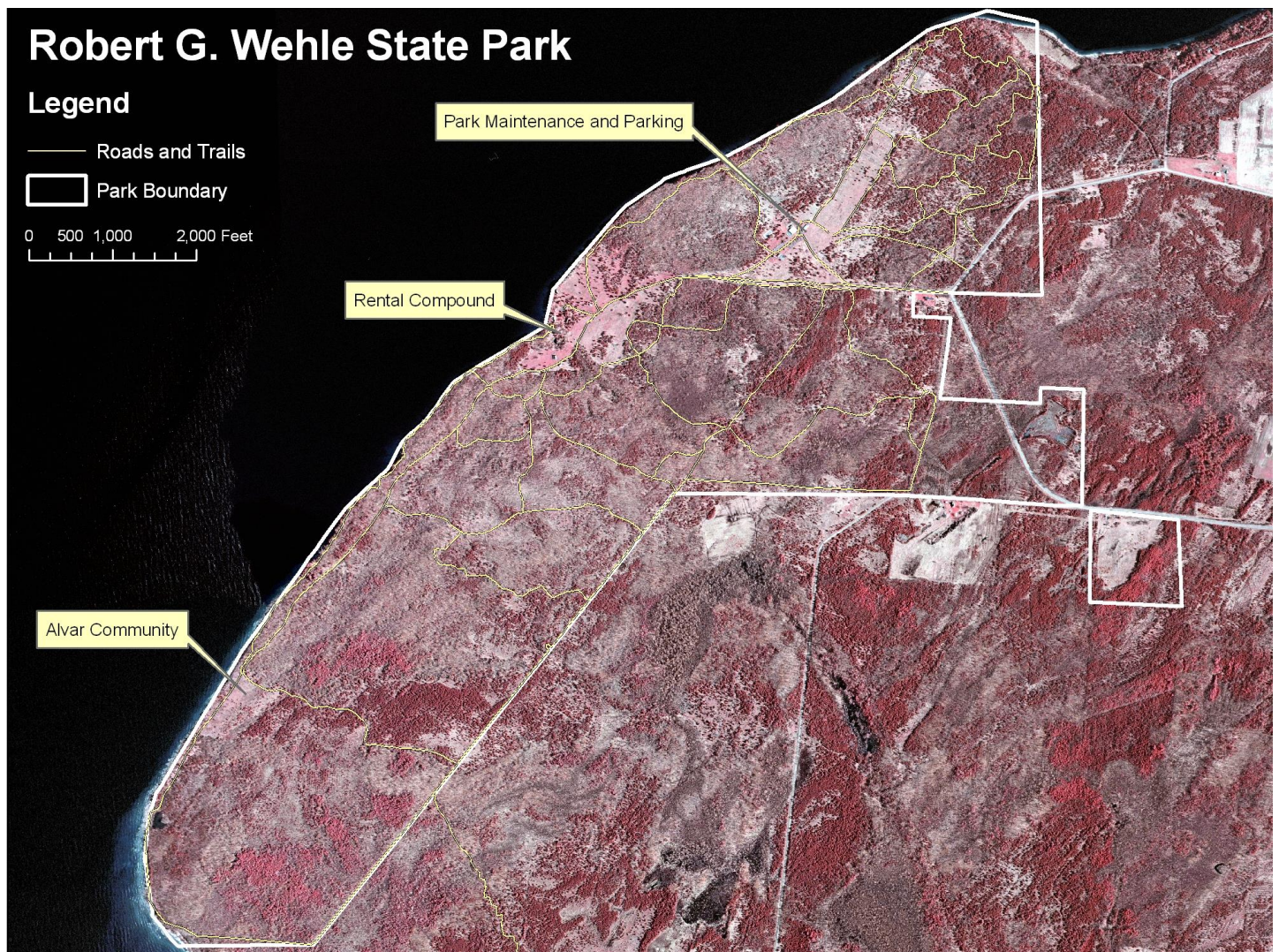
Native to southwestern Europe, pale swallow-wort can form dense patches that crowd out native plant species, which can lead to impacts to wildlife. In addition to being long-lived, pale swallow-wort is also a prolific seed producer and produces allelochemicals, which inhibit the development of neighboring plants. This combination of adaptations likely plays a strong role in pale swallow-wort's ability to nearly completely take over habitats in both sunny old-fields and shaded woodlands. As pale swallow-wort densities increase, the physical and chemical ecology of these areas is altered. Studies are beginning to show how these changes affect bird and insect assemblages in infested areas. Pale swallow-wort's aggressive spread also threatens rare plant species such as the federally listed Hart's tongue fern (*Asplenium scolopendrium*) and globally rare alvar habitats.

Control of pale swallow-wort has proven difficult. Arguably, the most heavily used and effective method of control to date has been herbicidal treatments utilizing glyphosate. This systemic herbicide is absorbed by the plants, which transport the chemical to the root system, killing the plant. This has been proven effective, however, concerns over the possibility of chemical drift onto desirable species as well as the potential long-term impacts that herbicides may have on the environment should give

pause to the use of this strategy. Additionally, recent Parks policy dictates that other non-chemical methods be utilized wherever applicable. As a result, the efficacy and feasibility of mechanical techniques must be examined.

## 2. Environmental Setting/Existing Conditions

Wehle State Park (Wehle S.P.) is a roughly 1,100 acre park situated along the shores of Stony Point, a peninsula jutting out into eastern Lake Ontario. The site has a history of use as grazing land and military training. Since that time, most of the land has developed into successional woodlands, with the exception of the area around the park entrance and a former summer home in the north-central and northwest portions of the park and an area containing a globally rare alvar community in the southwestern portion of the park (see Figure 1).



Wehle S.P., like much of the local area, is situated on shallow soils atop limestone bedrock. Anecdotally, these soil conditions appear to be very favorable to the growth of pale swallow-wort. Although no formal survey of the extent of pale swallow-wort has been conducted, information from park workers and others suggest that most of the park is infested to some degree. Currently, the only areas known not to contain large quantities of pale swallow-wort are the wetland and alvar areas of the park.

### 3. Project Goals

The goal of this project is to test the efficacy and feasibility of manual/mechanical control and eradication of pale swallow-wort in the open field and forested areas of the park. The results of these test plots will be used to compare the effectiveness of these manual/mechanical methods to that of current chemical and future experimental biological controls. The results of these comparisons will inform future management activities for the control of pale swallow-wort in the park. This project will also test the efficacy of repeated mowings over many years.

### 4. Project Description

Field work from Canada ([www.ofnc.ca/fletcher.php](http://www.ofnc.ca/fletcher.php)) has demonstrated successful partial eradication of pale swallow-wort with the use of a modified tilling technique. In the documented cases, areas infested with pale swallow-wort were tilled. Afterward, volunteers sifted through the loosened soil, removing pale swallow-wort roots and root nodes. Collected material was then properly disposed and the tilled area planted with a native seed mix. Some pale swallow-wort plants did grow in the controlled area; however, the density of pale swallow-wort plants was greatly diminished. It is believed that these individuals represent new plants that sprouted from seeds that remained in the soil. Without the addition of new seeds, spot treatments of the remaining plants should lead to long-term eradication of pale swallow-wort at this site.

The concept of utilizing heavy equipment to replicate this procedure on a large scale was the subject of a meeting of swallow-wort experts held at OPRHP's Albany headquarters as well as on-line on May 12<sup>th</sup>, 2009. At this meeting, experts from US Department of Agriculture, Cornell University, and The Nature Conservancy agreed with OPRHP natural resources staff that this approach has promise, but needs to be experimentally tested. Testing would be used to determine the efficacy and feasibility of utilizing this tilling methodology on a large scale to control pale swallow-wort across Wehle S.P.

In order to test this methodology we propose the establishment of four, 1/4 acre test plots at the site. Since unlike the Canadian field plots, pale swallow-wort at Wehle S.P. grows in open fields as well as closed canopy woodlands, these plots will be equally divided between forest and field conditions. Additionally, mowing has been shown to be unsuccessful as a control for pale swallow-wort. However, studies researching the effectiveness of mowing have been relatively short term in nature. Areas of Wehle S.P. that have been repeatedly mowed for a number of years provide an excellent opportunity to test whether longer-term mowing is a successful control strategy. In order to test this, two test plots will be established in areas of lawn that have been mowed for over 10 years. Mowing in these plots will be discontinued, allowing plants to grow. The plant species composition in these plots will be measured in order to determine the effect of long-term mowing on pale swallow-wort density (See Figure 2).



Figure 2. Pale Swallow-wort Control Test Plot Locations.

A landscaping company will be hired to conduct the removal following the basic protocol outlined in successful Canadian mechanical control projects ([www.ofnc.ca/fletcher.php](http://www.ofnc.ca/fletcher.php)). In accordance with these projects, infested field and forest sites at Wehle S.P. will be tilled and pale swallow-wort plant material sifted from the soil. This will be accomplished through the use of three Bobcat® (or similar) attachments. The tiller attachment is a larger version of a conventional roto-tiller made to attach to the Bobcat® tractor (See Figure 3). This tool will be used to expedite the process of turning over the soil and digging up pale swallow-wort plant material from the old field test plots. The second attachment is a soil conditioner. With better maneuverability and a more adjustable depth control, the soil conditioner should provide the added versatility to expose pale swallow-wort plant material in the forested study plots (See Figure 4) while doing as little damage as possible to nearby trees and their root systems. The third attachment, a power rake (Figure 5), will be used to rake up the soil and shake out the loose dirt.

Once broken up, workers will sift through the soil and remove all pale swallow-wort plant material. This plant material will be placed in plastic bags which will be placed in a corner of the parking lot. Water will be added to the bags then allowed to decompose for one month before being taken to a nearby landfill for disposal by park staff.



Figure 3. Tiller



Figure 4. Soil Conditioner



Figure 5. Power Rake

Pale swallow-wort roots are very thick and tend to tightly hold a large volume of soil. With most other plant removals of this sort, soil can be thoroughly shaken out of the root system. However, in the case of pale swallow-wort there is a concern that this activity could result in lost plant material, leading to regrowth. Therefore, only light sifting of the root masses is recommended. The inability to reclaim this material will likely result in the loss of a substantial quantity of soil from the sites. It is proposed that sifted soil devoid of pale swallow-wort plant material from a nearby site be purchased to replace lost soil in the test plots. Once all pale swallow-wort plant material is removed and the site is re-graded, a mixture of annual rye erosion control grass seed and native grass seed mix will be planted on the site and mulched with straw. Park staff will place all sifted plant material into a silage bag for on-site composting.

The Regional Natural Resource Steward will survey the plots monthly during the growing season throughout the remainder of the year and once every two months throughout the growing season for the remaining two years. A preliminary analysis of the plots will be conducted based on the results of the May 2010 vegetation survey to determine the next step in management. If May 2010 surveys show an 85% or greater decline in pale swallow-wort density, mechanical removal of remaining plants will be conducted followed by the planting of a native, perennial seed mix. If May 2010 surveys show a decline in pale swallow-wort densities less than 85% the site will be re-tilled and sifted again using the same protocol as in the original treatment. If additional tilling is required, surveys conducted in May 2011 will determine the need for additional treatment.

### 5. Budget: Season 1

Item	Per Unit Price	Quantity	Total
Bobcat® Tiller Rental	\$500/Week	1	\$500.00
Bobcat® Conditioner Rental	\$500/Week	1	\$500.00
Bobcat® Power Rake Rental	\$500/Week	1	\$500.00
Sifted Soil	\$7/yd <sup>3</sup>	200	\$1,400.00
Annual Rye and Native Grass Seed	\$50/25lb	8	\$400.00
<b>Total</b>			<b>\$3,300.00</b>

## **6. Potential Environmental Impacts and Mitigation**

Negative environmental impacts are possible from two aspects of this project; 1) the unintended damage of native plants and 2) erosion of soil at the treatment plots. The first impact is being minimized with the soil conditioner attachment as opposed to the tiller attachment. As stated above, the soil conditioner attachment has better maneuverability and a more adjustable depth control, which will enable the operator to adjust the mechanical action in response to changing soil and root density conditions. Although some damage to tree roots is inevitable, this piece of equipment will minimize that damage in an effort to do a little damage as possible to trees.

The potential erosion and loss of soil at the study sites is an issue as the soil is broken up and becomes exposed to the elements. As the sites are almost flat, soil erosion by rain is only a minor problem when compared to the potential erosion by wind. This is being addressed through the planting of erosion control seed mix and mulching with straw. These will act to hold the soil in place until more robust vegetation can be re-established.

If successful, this project will have several positive environmental benefits. This evaluation will hopefully lead to a management strategy for pale swallow-wort eradication throughout Wehle S.P. If areas now dominated by pale swallow-wort can be restored with native field and forest plant species, negative impacts to bird and insect populations observed due to pale swallow-wort infestations could be reversed. In turn, pale swallow-wort control within the park could make the job of controlling pale swallow-wort beyond the park a more successful proposition.

## **7. References**

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## **Appendix C: OPRHP Trail Standards**





## **Introduction**

A primary goal for all State Park Trails Systems is to develop sustainable trails that have minimal impacts on the environment, require little maintenance, and meet the needs of the users. Standards and guidelines are provided here for design, development, and maintenance techniques that help ensure a sustainable trail system, including guidelines for signage, accessibility, trail monitoring, and trail closure.

### ***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 the *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.

### ***Design***

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 resource and specific needs.

**Table 1 - Trail development standards**

Trail Type	Vertical Clearance	Corridor Clearance	Treadway Width	Surfacing Materials	Trail Length	Sight Distance	Slope	Turning Radius	Users/ Mile
Biking Class 1 (Path)	8-10 feet	5-6 ft. (1 lane) 8-10 ft. (2 lane)	2-3 ft. (1 lane) 6-8 ft. (2 lane)	Smooth pavement, asphalt, concrete, crushed stone, clay or stabilized earth.	Min. – 5 mi. loop (1.5-2 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. (1lane) 7-8 ft. (2lane) 8-10 ft. (up and down 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.	0.3 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

## **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, OPRHP 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.
- 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

## ***Maintenance***

Maintenance of the trails will be 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
- Using established trail construction and maintenance techniques to control water flow and stabilize trail surfaces.

These activities should be coordinated with the park manager. Activities that go beyond normal maintenance will require the approval of the park manager. Park staff will 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>

## **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. 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.

The *OPRHP Guidelines for Closing Trails* provides the detailed process to be taken to close trails in state parks.

## ***Evaluation, Assessment and Monitoring***

The following guidelines will be utilized in the review and approval process for new trails or the re-alignment of existing trails and implementation of a monitoring system.

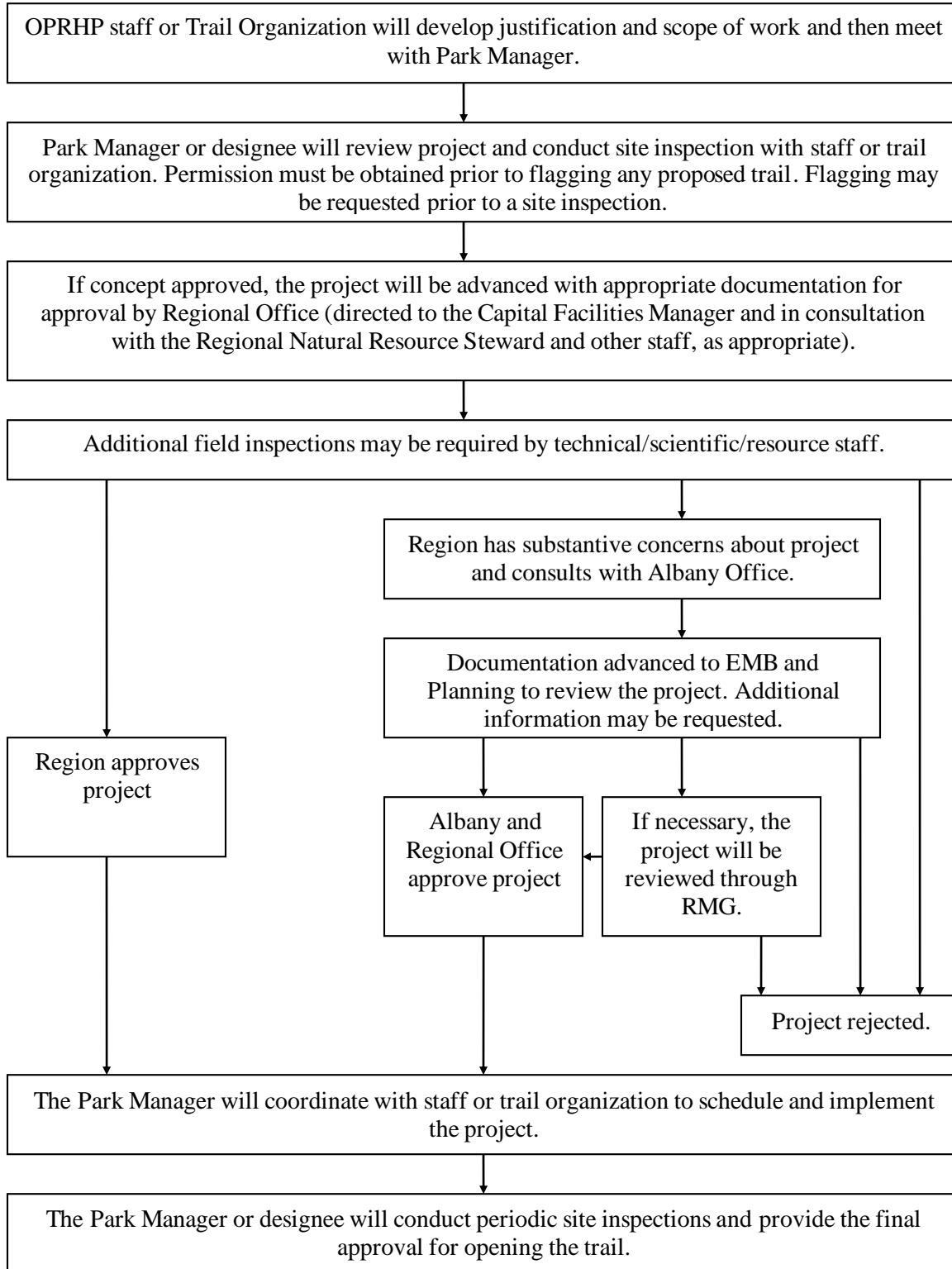
### **New Trails and Re-alignment of Existing Trails**

There is a specific procedure for the reroute and development of trails and the annual maintenance of trails. Chart 1 outlines procedures to follow for the reroute of existing trails and the development of new trails. The scope and associated impacts of the proposed project will determine the extent of the review process. Larger proposals that may have an impact on environmental or cultural resources will require the review of the Agency's Resource Management Group (RMG). A SEQR determination will be made to determine if an Environmental Assessment would be required.

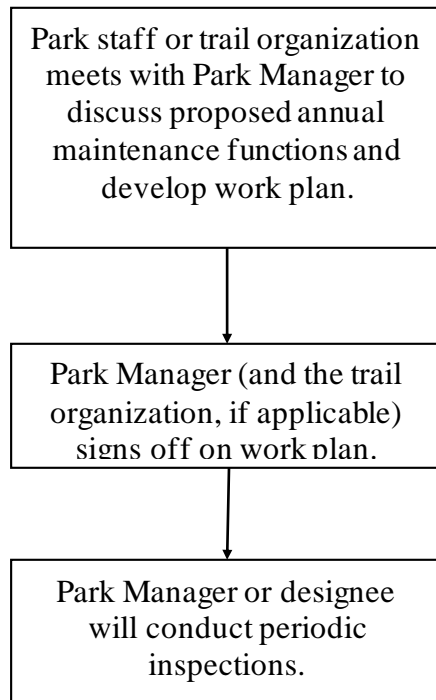
Annual maintenance encompasses routine functions, such as minor drainage control, trimming, and treadway maintenance. In most cases, this is reviewed and approved at the Park level (Chart 2).

For some trails, State Parks partners with trail organization(s) for development and/or maintenance. It is important that clear lines of communication are maintained among all involved parties. This will ensure that the work that is performed has gone through the review process and is under the direction of the park manager.

**Chart 6: Procedures for Reroute / Relocation / New Trail Project**



## Chart 7: Approval for Trail Maintenance



## 2. Monitoring Program

A monitoring program should be utilized 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.



# **Appendix D: Trail Assessment**



To: Wehle Core Team Members  
From: Casey Holzworth  
Re: Trail Assessment Site Visit – Wehle State Park

A field evaluation of the Robert G. Wehle State Park trail system was conducted on April 20, 2010 by OPRHP staff members Casey Holzworth, Dan Heneka, John Shultz and Bob Smolka. During this evaluation, staff walked sections of the trails that were under evaluation for closure or relocation and assessed the need to re-route or close trails. In addition, sections of trails that had been identified as “wet areas,” or as being located in NWI wetlands, were field-checked.

This report includes photos of each problem area, a brief overview of the field evaluation and a recommendation for action. Photos are numbered and keyed to the attached site location map. An arrow indicates the direction of the photo.

During the survey, OPRHP field staff agreed to the following actions:

- The portion of the Dancing Dog trail adjacent to the property line fence (1) and the trail noted as the “Jungle cutoff” (10) would both be removed from use due to their duplicative nature and wetland considerations.
- A small loop of the Jungle trail that crosses the Marksman trail twice will be removed. The remaining trail will be named both Jungle and Marksman (2).

The following trail sections will need future evaluation to monitor for trail surface issues or possible removal from the trail system:

- The north-south unnamed trail located between Dancing Dog and the access road along the firing range. This trail is narrow and rugged and seemed to pose a maintenance problem. Both Dancing Dog and the access road accomplish a very similar trail connectivity goal. However, this trail may be favored by mountain bikers for its more difficult terrain (3).
- The unnamed trail south of the rental compound, which connects the north-south unnamed trail from Huckleberry to Marksman to the access road (4).
- The two areas of the Jungle trail on either side of the intersection with the Snakefoot that intersect with the mapped boundary of NWI wetlands (5). Both areas are wet but passable at this time.

The trail sections 1, 6, 8, 10, 11 and 14 appear to be located within federal wetland areas and, if not re-routed around the wetland, the next steps to address these areas may be subject to federal regulation. The U.S. Army Corps of Engineers (COE) Nationwide Permit 42 allows for the discharge of fill into “waters of the U.S.” (i.e. federal wetlands) for the purpose of recreational activities including hiking trails. This permit could be used but the total fill area of all proposed improvements would have to be below a one-half acre threshold. These permits can be obtained but a more detailed survey would be required to demonstrate that no feasible alternatives exist to avoid the wetlands. Construction of a boardwalk over these areas would not require a permit, however, the possible minimal depth to bedrock and our use of large mowing equipment for management could make boardwalks problematic.

1. Dancing Dog – Field inspection found a roughly 50' wetland crossing with areas of the trail completely submerged. This trail is recommended for closure due to trail planning considerations (two trails, same name and destination). The presence of this wetland crossing supports that decision.

Regulated by: Army Corps

Recommended action: Trail removal



6. Knickerbocker – This site was confirmed as a wetland crossing. The crossing is narrow (15-20') and there did not appear to be an easy re-route around the wetland. The trail was still passable in the middle.

Regulated by: Army Corps

Recommended action: Boardwalk



7. Dancing Dog – The area marked as wet at the northern limits of the trail was not very wet upon inspection. Clay-based soils may eventually become wetland but plant community did not show full wetland characteristics. Area was soft but no surface water was present.

Regulated by: None

Recommended action: None



8. Marksmen – The location of a wet spot indicates an area of compaction and rutting that has caused relatively deep pools of standing water (approx. 40 ft. long), however, the trail in this area passes through approximately 150 ft. of wetlands that are currently passable.

Regulated by: Army Corps

Recommended action: Multiple Boardwalks or re-route



9. Jungle Cut-off – A culvert to the right of this picture, under the north-south portion of the Jungle Trail, connects this wetland area to the large wetland complex extending across military road and beyond the park boundary. This wet area, measuring approximately 60 feet, is only passable in the driest of times.

Regulated by: Army Corps and DEC

Recommended action: Trail removal



10. Snakefoot – 1000 feet south of the intersection with Marksman/Park Road field inspection found approximately 30 feet of impounded wet area through larger wetland crossing.

Regulated by: Army Corps

Recommended action: Boardwalk or Trail re-route



11. Bobolink – Approximately 40 ft. wetland crossing with an approximately 20 ft. surface water crossing. Wetland does not extend far to the north.

Regulated by: Army Corps

Recommended action: Boardwalk or Trail re-route



12. Bobolink – Portion of trail through sensitive alvar area. Alvar does not extend far to the north (left) (25') but does extend far to the south (right) (450'+). This trail appears to be on the edge of the alvar area. Moving the trail any further out of the area would not provide the educational opportunity that this crossing provides. The current location does a reasonably good job of limiting travel to the outskirts of the area.

Recommendation: No re-route



12. Bobolink – Photo shows close-up of trail through sensitive alvar area. Although there is certainly some damage to the alvar within the path of the trail, the trail is not devoid of alvar vegetation and has not been severely eroded.

Recommendation: Placement of large stones as a border to provide for a more clearly defined trail to keep visitors and equipment from unnecessarily leaving the trail.



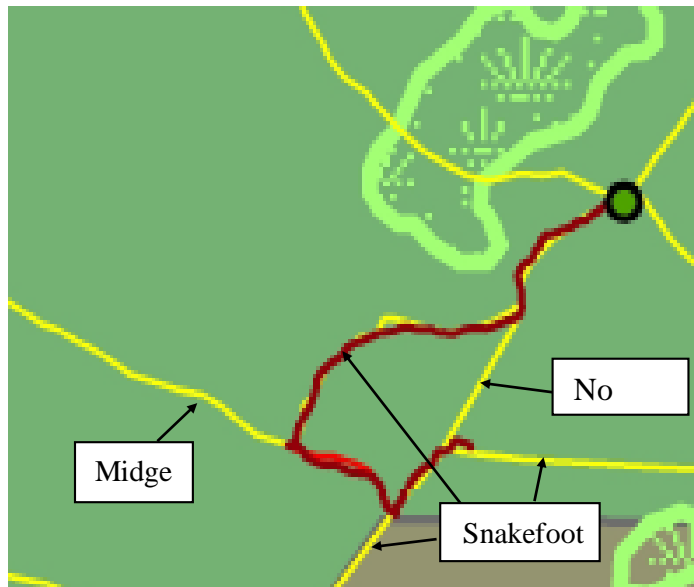
13. Huckleberry – Photo shows an area of trail through pavement barrens just east of intersection with un-named trail headed south. Un-named trail to the south (14) was planned to become the new alignment of Huckleberry and this portion of Huckleberry was to be closed. The un-named trail (14) appears to travel along a relatively clear edge of the pavement barrens, which extends to the north of the trail while Huckleberry appears to traverse directly through the barrens, each providing a different experience of the barrens. Recommendation: Further evaluation



15. Un-named trail headed north from Huckleberry Trail. This trail, too, goes through the middle of pavement barrens. The trail also crosses a wetland just south of the intersection with the other un-named trail that connects to the utility access road. No wetlands were identified on the second un-named trail (4) or the nearby Midge trail suggesting that the wetland may be small in nature and that a re-route may be possible to avoid wetlands. Regulated by: Army Corps Recommended action: Boardwalk or Trail re-route



16. Snakefoot/Midge – This section of trail was very confusing. The section of Snakefoot that continues north from the intersection does not exist. The trail to the west is the start of a cut-around to avoid a difficult area and is considered to be part of Snakefoot. On the ground, Midge starts where the yellow line extends to the west. The completion of the Snakefoot trail heading north and the re-alignment of the Midge trail to cross the Snakefoot trail where the Snakefoot trail splits and traverses to the east is planned and recommended. Once this re-alignment is complete, the current cut-around should be removed.



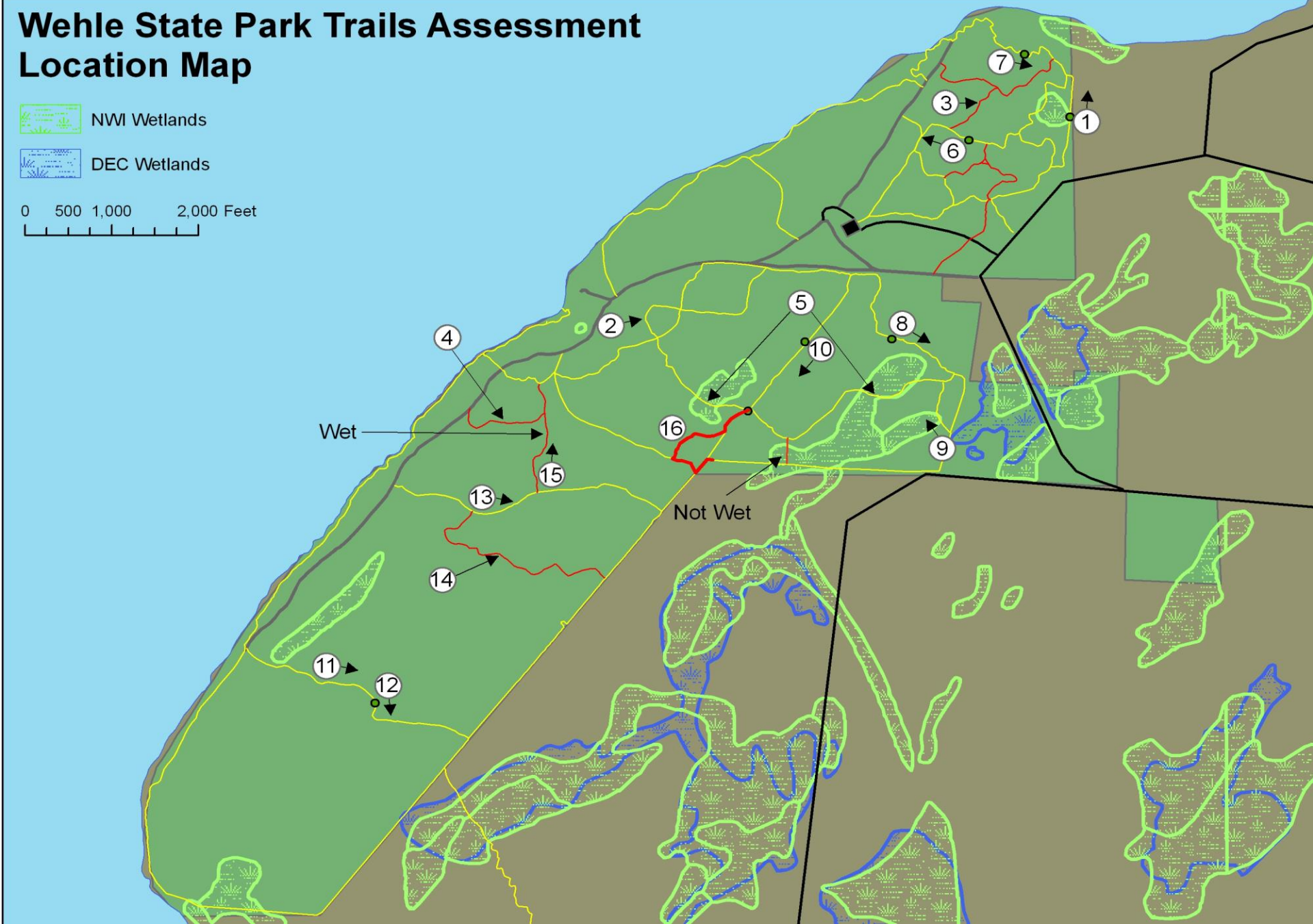



# Wehle State Park Trails Assessment Location Map

 NWI Wetlands

 DEC Wetlands

0 500 1,000 2,000 Feet





## **Appendix E: Cultural Resources Letter**





**David A. Paterson**  
Governor

**Carol Ash**  
Commissioner

## New York State Office of Parks, Recreation and Historic Preservation

Historic Preservation Field Services Bureau • Peebles Island, PO Box 189, Waterford, New York 12188-0189  
518-237-8643  
www.nysparks.com

To: Mark Hohengasser, Planning, OPRHP

CC: Edwina Belding, EMB, OPRHP

From: Julian W. Adams

Re: Robert G. Wehle State Park  
Master Planning  
Cultural Resources Recommendations

Date: 4/10/10

Thank you for requesting the comments of the Historic Preservation Field Services Bureau for the Master Plan being developed for Robert G. Wehle State Park. At this point, I am familiar with both the park and the planning effort underway, and am prepared to offer the opinion of this office under the provisions of Section 14.09 of the New York State Parks, Recreation, and Historic Preservation Act of 1980.

The Master Plan will have No Adverse Impacts on historic resources either listed on determined eligible for listing on the National Register of Historic Places if the following information, conditions, and processes noted below are incorporated into the final Plan document.

The following buildings, structures, landscapes and/or sites are considered contributing to the historic significance of Robert G. Wehle State Park. All work other than normal maintenance and repair for these resources should be submitted to and reviewed by the Historic Preservation Field Services Bureau. Information about existing conditions, projects, or planned projects for Park buildings at the time of inspection (September 23 and 24, 2009) are addressed in the comments for the specific resources.

1. Rifle Range Landscape Features: The series of low earthen berms running northwest by southwest and the earthen, concrete and stone target "hill" at the termination of the berms are together an important physical feature remaining from the period that this was the rifle training range for Fort Drum. These features should be maintained within the landscape. Any tree or brush removal should be undertaken as simply as possible, without any disturbance to the land features: for example if trees or brush are cut, this should be done as close to the ground as possible, without disturbing or removing root systems. Stump grinding would be

appropriate to achieve a mowable surface.

2. “Watch stations”: The series of small concrete watch stations (also known as pillboxes) along the shore line and also farther inland are contributing historic features to Robert G. Wehle State Park. However, it is evident that there is a greatly varying level of conditions from feature to feature. At least one watch station is severely deteriorated due to wave action and natural deterioration exacerbated by wind blown water and ice. Others have a small amount of concrete deterioration, while still others are in overall good repair. The appropriate treatment options at the watch stations are as follows:
  - a. Allowing the stations to remain, without treatment or repair. If this treatment is chosen, recordation of the stations should be undertaken, with photographs and measurements, with the photographs keyed to a map as to location and direction of view.
  - b. Undertaking an analysis of the material conditions, and determining the best course of action. For example where concrete deterioration is minor, either removing loose material down to a sound layer and replacing it in kind, or using a proprietary stone or concrete consolidant to rebind the concrete. Where concrete deterioration is severe, making a decision to either provide a base level of treatment (such as consolidant application to surfaces), or a higher level of repair which could involve rebuilding those stations in the worst condition, retaining and reusing as much historic material as possible.
3. Foundations: There are several foundations of buildings that should be retained and protected. This includes the foundations of the “Officer’s Quarters”, those of the water treatment plant, and the footers of the former building visible near the visitor’s center. All these foundations appear to be in good condition, and at this time it does not appear that they need any treatment. Any moving, tree removal or brush removal should be undertaken with care not to damage these features. If any concrete treatment is deemed necessary, it would be appropriate to use the approach outlined in #2 above.
4. Former Water Pumping Building: This small concrete building near the water’s edge at the northern part of the Park is a contributing feature from the rifle range/target training period(s) of the property’s use. At present it lacks a roof, but is in fair to good condition overall, with equipment fairly intact. The concrete of this structure should be treated in accordance with the proposed approach for the watch station in #2 above. It would be best to limit access to this interior of this structure for the safety of the resource as well as the public. Installing some form of metal bars or tamper resistant screening in the door and window openings would be an appropriate treatment.
5. Archeology: A Phase 1a Archeological Sensitivity Assessment for Robert G. Wehle State Park was completed September 10<sup>th</sup> 2004. This report recommends that a Phase 1b survey be done in undisturbed portions prior to any future sub-surface work undertaken within the Park.
6. Former Wehle Residential Compound Structures: This includes all buildings at and around the former Wehle residence, including the guest house, “game house”, cabin, garages, stables, barns, etc. These buildings are all outside the “period of significance” for Robert G. Wehle State Park, and therefore are not eligible for listing on the National Register. Any

work at or near at these features will not need to be reviewed by the Historic Preservation Field Services Bureau.

7. Former Wehle Game Bird and Dog resources: This includes all remaining kennel features, bird enclosures, statuary, graves, etc. These features are outside the period of significance for Robert G. Wehle State Park, and therefore are not of the “historic” character of the Park. Any work at or near these features will not need to be reviewed by the Historic Preservation Field Services Bureau.





## **Appendix F: Coastal Zone Management Program Consistency**



NEW YORK STATE DEPARTMENT OF STATE  
COASTAL MANAGEMENT PROGRAM

Consistency Assessment Form

A. INSTRUCTIONS (Please print or type all answers)

1. State agencies shall complete this CAF for proposed actions which are subject to Part 600 of Title 19 of the NYCRR. This assessment is intended to supplement other information used by a state agency in making a determination of significance pursuant to the State Environmental Quality Review Act (see 6 NYCRR, Part 617). If it is determined that a proposed action will not have a significant effect on the environment, this assessment is intended to assist a state agency in complying with the certification requirements of 19 NYCRR Section 600.4.
2. If any question in Section C on this form is answered "yes", then the proposed action may affect the achievement of the coastal policies contained in Article 42 of the Executive Law. Thus, the action should be analyzed in more detail and, if necessary, modified prior to either (a) making a certification of consistency pursuant to 19 NYCRR Part 600 or, (b) making the findings required under SEQRA, 6 NYCRR, Section 617.11, if the action is one for which an environmental impact statement is being prepared. If an action cannot be certified as consistent with the coastal policies, it shall not be undertaken.
3. Before answering the questions in Section C, the preparer of this form should review the coastal policies contained in 19 NYCRR Section 600.5. A proposed action should be evaluated as to its significant beneficial and adverse effects upon the coastal area.

B. DESCRIPTION OF PROPOSED ACTION

1. Type of state agency action (check appropriate response):
  - (a) Directly undertaken (e.g. capital construction, planning activity, agency regulation, land transaction)
  - (b) Financial assistance (e.g., grant, loan, subsidy)
  - (c) Permit, license, certification
2. Describe the nature and extent of action: The action is the adoption and implementation of a Master Plan for Robert G. Wehle State Park.
3. Location of action:
 

<u>Jefferson</u>	<u>Town of Henderson</u>	<u>5502 Military Road</u>
County	City, Town or Village	Street or Site Description
4. If an application for the proposed action has been filed with the state agency, the following information shall be provided:
  - (a) Name of applicant: Office of Parks, Recreation and Historic Preservation
  - (b) Mailing address: Agency Building #1, Empire State Plaza, Albany, NY 12238
  - (c) Telephone Number: Area Code ( 518 ) 474-0409
  - (d) State agency application number: \_\_\_\_\_
5. Will the action be directly undertaken, require funding, or approval by a federal agency?  
Yes  No  If yes, which federal agency? \_\_\_\_\_

C. COASTAL ASSESSMENT (Check either "YES" or "NO" for each of the following questions.)

1. Will the proposed activity be located in, or contiguous to, or have a significant effect upon any of the resource areas identified on the coastal area map:
 

	YES	NO
(a) Significant fish or wildlife habitats?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Scenic resources of statewide significance:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Important agricultural lands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Will the proposed activity have a significant effect upon:

Robert G. Wehle State Park Master Plan: Appendix

- |     |  |                                     |                                     |
|-----|--|-------------------------------------|-------------------------------------|
| (a) | Commercial or recreational use of fish and wildlife resources?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| (b) | Scenic quality of the coastal environment?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| (c) | Development of future, or existing water dependent uses?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| (d) | Operation of the State's major ports?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| (e) | Land and water uses within the State's small harbors?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| (f) | Existing or potential public recreation opportunities?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| (g) | Structures, sites or districts of historic, archeological or cultural significance to the State or nation? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
3. Will the proposed activity involve or result in any of the following:
- |     |   |                          |                                     |
|-----|---|--------------------------|-------------------------------------|
| (a) | Physical alteration of two (2) acres or more of land along the shoreline, land under water or coastal waters?               | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| (b) | Physical alteration of five (5) acres or more of land located elsewhere in the coastal area?                                | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| (c) | Expansion of existing public services of infrastructure in undeveloped or low density areas of the coastal area?            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| (d) | Energy facility not subject to Article VII or VIII of the Public Service Law?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| (e) | Mining, excavation, filling or dredging in coastal waters?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| (f) | Reduction of existing or potential public access to or along the shore?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| (g) | Sale or change in use of state-owned lands located on the shoreline or under water?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| (h) | Development within a designated flood or erosion hazard area?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| (i) | Development on a beach, dune, barrier island or other natural feature that provides protection against flooding or erosion? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
4. Will the proposed action be located in or have a significant effect upon an area included in an approved Local Waterfront Revitalization Program?
- |  |  |                          |                                     |
|--|--|--------------------------|-------------------------------------|
|  |  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--|--------------------------|-------------------------------------|

**D. SUBMISSION REQUIREMENTS**

If any question in Section C is answered "Yes", AND either of the following two conditions is met:

Section B.1(a) or B.1(b) is checked; or  
 Section B.1(c) is checked AND B.5 is answered "Yes",

THEN one copy of the Completed Coastal Assessment Form shall be submitted to:

New York State Department of State  
 Division of Coastal Resources  
 41 State Street, 8<sup>th</sup> Floor  
 Albany, New York 12231

If assistance or further information is needed to complete this form, please call the Department of State at (518) 474-6000.

**E. REMARKS OR ADDITIONAL INFORMATION**

The master plan includes a summary discussion of coastal consistency with in Chapter 7 - Environmental Review. A full discussion of applicable policies is included on the following pages of this Appendix.

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**Coastal Assessment Form Addendum: Coastal Policy Discussion**

New York State coastal policies are organized under major headings. Those policy areas and specific policies applicable to the master plan are listed. Following each applicable policy is a brief discussion on the extent of consistency of the master plan with the policy.

Refer to Chapter 7, Environmental Impacts and Mitigation under Relationship to Other Programs, for an explanation of general applicability of the coastal program to state agency actions, as well as OPRHP's certification of consistency with State coastal policies.

***Development Policies***

***Policy 2 – Facilitate the siting of water dependent uses and facilities on or adjacent to coastal waters.***

The master plan does not propose development of any recreational uses that are directly dependent on the water. The park does provide important access to the lake for wildlife/ scenic and aesthetic enjoyments and uses. The plan proposes the development of a new picnic area along the lake shore and will maintain continued visual access to the lake from existing facilities.

***Flooding and Erosion Hazards Policies***

***Policy 12 – Activities or development in the coastal area will be undertaken so as to minimize damage to natural resources and property from flooding and erosion by protecting natural protective features including beaches, dunes, barrier islands and bluffs.***

Robert G. Wehle State Park is not located in a Flood Hazard Area as designated on the Flood Insurance Rate Maps (1992). The master plan will be consistent with this policy as it calls for the protection of the park's shoreline bluffs and preservation and enhancement of shoreline vegetation.

***Public Access Policies***

***Policy 19 – Protect, maintain and increase the level and types of access to public water related recreation resources and facilities.***

Robert G. Wehle State Park provides significant public access to over three miles of shoreline on Lake Ontario. The master plan is consistent with this policy because existing public shoreline access will be maintained and enhanced.

***Recreation Policies***

***Policy 21 – Water-dependent and water-enhanced recreation will be encouraged and facilitated, and will be given priority over non-water-related uses along the coast.***

Robert G. Wehle State Park provides water-enhanced activities along approximately 3 miles of undeveloped Lake Ontario shoreline. Trails, picnic areas, shoreline fishing and scenic views of the lake are all activities that can be enjoyed at the park and will be continued under the master plan.

### ***Historic and Scenic Resources Policies***

***Policy 23 – Protect, enhance and restore structures, districts, areas or sites that are of significance in the history, architecture, archaeology or culture of the state, its communities or the nation.***

OPRHP's Field Services Bureau conducted an interim assessment of structures within the park and determined that the military components of the park, including the firing range, and infrastructure related to the Stony Point firing range such as the watch stations and foundations found in various locations throughout the property are considered historic features that are eligible for State and National Historic designation. The master plan proposes that these significant cultural features be protected and interpreted. Vegetation will be cleared from the firing wall, and berms and the range will continue to be mowed. The watch stations will be further evaluated and protection, repair or reconstruction will be conducted as deemed necessary according to OPRHP historic structures guidelines. Interpretive signage about the park's military history will be developed. Additional archeological surveys may be required prior to any development requiring ground disturbance to insure that potential cultural resources are documented and protected. All of these proposed actions will protect, restore and interpret these important cultural and historic features found at Robert G. Wehle State park.

***Policy 25 – Protect, restore or enhance natural and man-made resources which are not identified as being of statewide significance, but which contribute to the overall scenic quality of the coastal area.***

Robert G. Wehle State Park is classified by OPRHP as a Scenic Park in recognition of its significant scenic value and its contribution to the overall scenic quality of the Lake Ontario shoreline in this area. The master plan calls for protection of scenic views from both the lake and from the park. No modifications of natural landforms that could impair scenic quality from either the lake or on-shore are proposed. The master plan calls for enhancement of visual access to the shoreline of Lake Ontario at several points along trails. Enhancements to the picnic and viewing areas which are proposed will take into account appropriate setbacks as well as utilization of appropriate materials and designs to minimize impacts.

### ***Water and Air Resources Policies***

***Policy 37 – Best management practices will be utilized to minimize the non-point discharge of excess nutrients, organics and eroded soils into coastal waters.***

Best management practices will include soil erosion control practices and surface drainage control techniques. No activity currently proposed in the master plan would cause excessive disturbance of the ground or application of nutrients/fertilizers. Any work related to the Invasive Species Management Plan for control of Swallowwort and other invasive plant species will ensure that disturbed areas are appropriately restored with native vegetation and that significant ground disturbance utilizes practices that conserves soil cover and minimizes erosion. Trails which are located along the shoreline will be maintained with buffer vegetation which will help control erosion.

***Wetlands Policies***

***Policy 44 – Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas.***

No new development is proposed within state or federal wetlands within the park. There are, however, several trails that cross small federal wetland areas. These sections will be further evaluated to determine the best means of managing these areas to minimize impacts to these wetlands (e.g. re-routing around the wetlands or construction of boardwalks).

