

A Concept Plan for the

ROBERT W. NICHOL NATURE PRESERVE & SCIENCE CENTER



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EXECUTIVE SUMMARY

This concept plan discusses the proposed development of the Robert W. Nichol Nature Preserve and Science Center in the village of Hancock, NY. The purpose of the nature preserve is to enhance the science-based learning experiences of students in the Hancock School District by providing an outdoor classroom for interacting with the environment. The facility would also offer local families, other residents, and out-of-town visitors a chance to enjoy the diverse plants and wildlife of this unique area within the village.

Major benefits of the proposed project include:

- Enhanced science-based educational opportunities for Hancock students and students of neighboring communities.
- Recreational and educational opportunities in a natural setting for local residents and other visitors.
- Expanded collaboration between organizations and businesses throughout the community.
- Economic benefits to the community.

The proposed facility (at the higher level of development included in this plan) includes the following:

- A nature preserve building comprised of a state-of-the-art classroom, exhibit space, restrooms, a staff office, and a gift shop.
- A boardwalk-style nature trail with interpretive signs.
- A small, human-made pond.
- A small parking area located on Main Street.

The site design for the facility can be found on page 54.

Interpretive programs offered at the nature preserve will focus on the different habitats on the site (e.g., pond, wetlands, and meadows); plant life (native and invasive plants) and wildlife will also be the focus of educational efforts.

Within this plan you will find a site assessment as well as recommendations for educational programs, building and trail design, organization and business collaboration, marketing and promotions, and site monitoring.

This plan can also be accessed online at "www.esf.edu/for/kuehn/documents/NNPSCreport.pdf".

We hope you enjoy reading our concept plan for the Nichol's Nature Preserve and Science Center!

-- *SUNY ESF's 2009 Ecotourism and Nature Tourism class*

INTRODUCTION

Hancock, N.Y. is located in the Catskill region of New York, roughly 40 miles southeast of Binghamton and 140 miles northeast of New York City. It is located at the confluence of the east and west branches of the Delaware River, the longest free-flowing river in the east. Within this small community lies a 4.1 acre wetland area that has the potential to become a center for educating students within the Hancock School District, as well as families living in and around Hancock about natural resources.

This plan presents a concept and development plan for the Robert W. Nichol Nature Preserve and Science Center (named in appreciation of the land donor). This planning effort is a class project undertaken by students at the SUNY College of Environmental Science and Forestry. An assessment of the site and recommendations for development are included. It is recommended that professional consultants and government officials (zoning officer, building architect, landscape architect, and environmental consultant) be consulted prior to implementing the recommendations included herein.

SITE-SPECIFIC CONCERNS

1. Programmatic and facility limitations due to the size of the nature preserve property.
2. Visitor safety concerns.
3. Impacts of surrounding areas (McDonald's and highway) on nature preserve property.
4. Enhancing connections between the nature preserve and other attractions.
5. Trash/Litter.
6. Parking limitations.
7. Impacts on traffic flow on Main St.
8. Atypical setting for a nature preserve (implications for marketing, promotion, & management).
9. Liability.
10. Maintaining a buffer so as to prevent impacts on adjacent residents.
11. Student transportation to the facility.
12. Maintaining a healthy ecosystem on the property (invasive species).
13. Potential for run-off onto site or flooding of site.

VISION

By 2020, we envision the Nature preserve to be a place that:

- Offers environmental education programs, both on and off site, that increase student and visitor appreciation for natural resources and encourage environmental stewardship.
- Provides a venue for student education, service, and accomplishment.
- Offers recreational opportunities for local residents and visitors.
- Brings Hancock residents together through community involvement in nature preserve and volunteer service efforts.
- Provides visitors with information about local and regional natural resources.
- Enhances the local economy by attracting visitors to Hancock.

GOALS

Goal 1: To provide access for students, residents, and visitors to the natural resources on the nature preserve property through programming and facilities by 2013.

Goal 2: To develop an environmental education program by 2012 that increases student and visitor appreciation for natural resources and encourages environmental stewardship

Goal 3: To establish and nurture a strong volunteer network within the Hancock community (an ongoing process to begin immediately).

Goal 4: To develop and implement a promotional and marketing strategy that attracts visitors to the nature preserve and enhances the local economy (to be developed immediately with ongoing implementation).

Goal 5: To create and enhance regional and local connections between the nature preserve and surrounding attractions, businesses, organizations, and communities (an ongoing process to begin immediately).

BRAND

The brand of an attraction expresses the experience that visitors will receive during a visit and should be incorporated into all promotional efforts by the nature preserve. The brand for Nichol's Nature Preserve is:

Wetland nature experience within a village.

This brand reflects the unique location of the preserve (rarely are nature preserves located within village boundaries), as well as the resources found on site.

THEME

The theme of the nature preserve should be used by staff to unify the educational messages presented to the public. The theme should be reflected in all guidebooks, exhibits, and interpretive (i.e., educational) programs. The theme is:

The ecologically rich setting of the NICHOL'S NATURE PRESERVE provides a unique, hands-on experience with nature right on Main Street.

NATURE PRESERVE ASSESSMENT

Introduction

The physical development of the Nichol's Nature Preserve will be strongly influenced by the current site conditions. This assessment will identify and describe access, views, utilities, natural resources, and developable portions of the site. Low, medium, and high levels of development are being considered for the Nature preserve, each of which will have different space requirements dictating placement of a nature center building. Zoning regulations and permitting will also be described to facilitate decision-making.

Vegetation on site

The majority of the site is covered by herbaceous vegetation associated with the wetland habitat that dominates the lower elevations on the interior of the Nichol's Nature Preserve property. Moving from the interior of the property to higher ground on the northern and eastern edges of the property, the vegetation transitions into early succession edge habitat comprised of a variety of woody shrub and tree species. Continuing to move up in elevation toward the St. Paul's Church property, the vegetation moves rapidly into a mixed coniferous and deciduous woodland habitat. The rest of the site, including the southern portion of the site along West Main Street and the western edges adjacent to the McDonald's and Family Dollar properties, is mostly made up of manicured lawn and ornamental plantings.

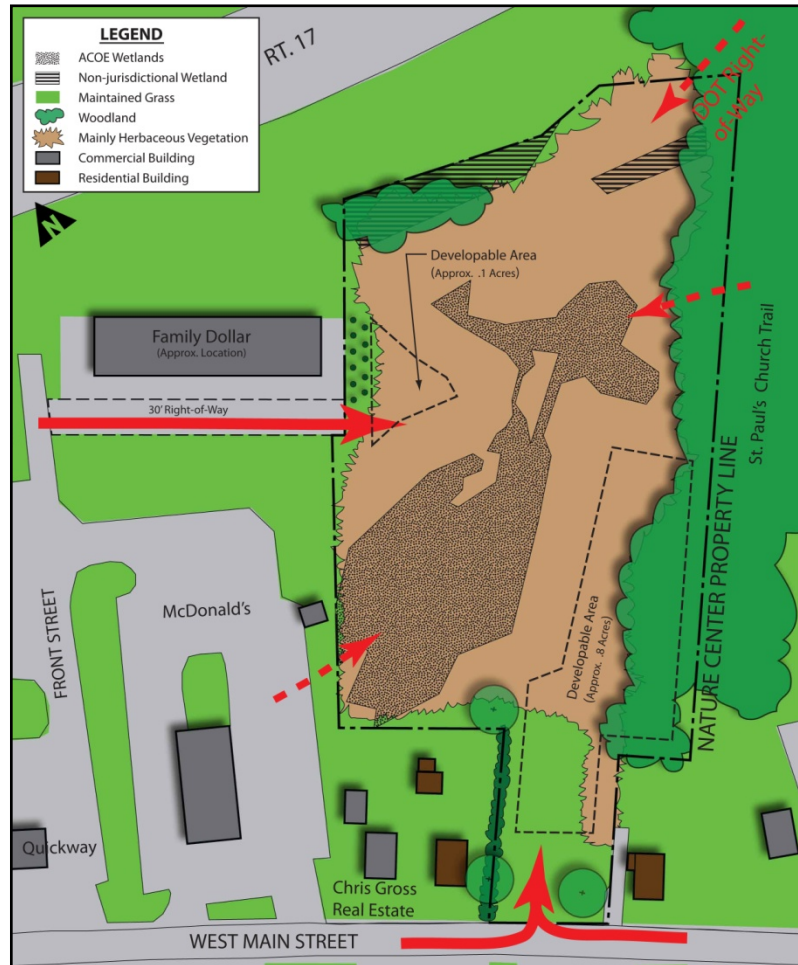


Figure 1. Plan Showing Existing Site Conditions

Access to site

There are several potential access points on the site for vehicles and pedestrians, most of which would require collaborating with adjacent property owner. There are two potential access points for vehicular traffic. First, the southern edge of the site that borders West Main Street is the most visible portion of the site and will likely serve as the main access to the site for both vehicular and pedestrian traffic. The potential secondary access for vehicular traffic is through the thirty-foot right-of-way to the south of the

Family Dollar building on the west side of the property. This location may serve as an important access point for buses as the turn around space at the southern access point will be extremely tight for larger vehicles. Additionally, there are potential access points for pedestrians from the McDonald's property, from the trail on the St. Paul's Church property, and through a right-of-way from the New York State Department of Transportation for the northeast corner of the site (this would allow a more direct connection to the Hancock Elementary School for students walking to the nature preserve). All of these additional access points would require coordination with adjacent property owners and careful considerations for visitor management.

Views on site



Figure 2. View of West Main Street.



Figure 3. View of residence to west.



Figure 4. View of McDonald's to west.



Figure 5. View of screening by Family Dollar.



Figure 6. View of woodland to east.



Figure 7. View of residence to east.

Considering views of and from the site is critical in the successful development of the property. Starting with the southernmost point of the site and moving clockwise there is an open view on to and from the site to West Main Street on the south side of the property (see Figure 2). Treatment of this view is important to the branding and themes of the Nichol's Nature Preserve and in connecting to the rest of the town. This view is also important in that it will be the vantage point that most passersby will have of the nature preserve; its treatment will be important in marketing and promoting the site. The view to the residence on the west side of the property is filtered by several mature trees and ornamental plantings (see Figure 3). The view between the site and McDonald's is completely open (see Figure 4). There is a vegetated screen of evergreens planted between the Family Dollar Store and the site (see Figure 5). These trees are currently between five- and six-foot tall, but eventually this screen will be tall and thick enough to completely block the view of the store. The view to State Route 17 is filtered by spotty trees and woody vegetation. There is a thick, woodland screen to the east between the site and the St. Paul's Church property (see Figure 6). The view between the residence to

the east and the site is mostly open with the exception of a single mature deciduous tree (see Figure 7).

Developable portion of the site

Several factors were taken into consideration to determine the portions of the site to be considered for the development of the nature preserve building. The areas inside the dashed lines are potential locations for the construction of the nature preserve (see Figure 1). These areas were determined by taking a combination of property setbacks, respecting the designated wetland areas with a fifty-foot buffer, and avoiding mature trees as much as possible. The most likely area for the nature preserve to be built is in the 0.8-acre area on the southeastern corner of the site. This portion of the site has the largest contiguous area that is not wetland, has easy vehicular and pedestrian access, is the most visible to passing traffic, and has the best connection to the rest of Hancock. However, the 0.1-acre developable area directly east of the Family Dollar Store may be needed to develop a drop off area for school buses.

Zoning regulations

The Village of Hancock does not have any zoning regulations written expressly for nature preserves, but any building plans will need to be approved by the Village of Hancock planning board. It will be important to work with zoning officials throughout the planning process. Michael Salvatore, the Code Enforcement Officer in Hancock, was willing to help resolve any possible issues and was helpful in obtaining zoning information for this site. The first step in the zoning process is to follow the site plan review checklist when planning for development on the site. This checklist (available from Mr. Salvatore) covers all of the important issues that must be considered including: risks of natural hazards, drainage and watercourses, drinking/waste water, utilities, parking, fencing/screening signs, lighting and aesthetics. This list also includes local, state and federal officials that should be contacted during the planning phase to ensure that all procedures are being followed. Plans for the nature preserve would have to be submitted to the planning board for approval. Although it is a unique case, the design should follow standards such as road setbacks of 50' for non-residential and 20' for residential land use types and side setbacks of 10'. There are no zoning regulations in regards to parking needed for nature preserves of this type. Mr. Salvatore stated that the only real concern on this site would be possible impact on the wetlands, which would not be an issue given the purpose and development level of this project (Personal communication with Michael Salvatore, 10/09). Zoning for the nature preserve should be a relatively easy process if planning and design is done while communicating with the Hancock planning board. Designing with appropriate measures such as fences, plant screening, and setbacks will be necessary to minimize impacts on neighbors.

Utility access

Utilities such as water, gas, and sewer systems are located underneath the roadways. Connecting to these utilities requires that a curb cut be made at the street, allowing access for piping to be run onto the property. Curb cuts require large construction equipment and permitting through the planning board with an approximate cost of \$2500. Possible access points to these systems are directly off of W. Main St. and W. Front St. (via the right-of-way next to the Family Dollar). The property adjacent to Main St. would be a less expensive site for utility connections due to the smaller amount of piping and labor that would be needed. Connections to natural gas systems would also require contacting the natural gas company and incurring additional costs.



Figure 8. Utility paths and access points.

The first step to getting electricity within the nature preserve is hiring an electrician to install a service box and circuit breaker. The electric company would then have to install the meter and make the connection to elevated power lines along the roads. The electric line running from the nature preserve building to Main Street should be underground; while this underground placement will incur an added expense, the scenery of the site will not be harmed by the appearance of overhead power lines. On both W. Front St. and W. Main St., the electrical lines are located on the opposite side of the street from the nature preserve property. There is a telephone pole located directly across the street on Main St. Its location should allow for a wire connection to be made without interfering with the trees along the street, most notably the elm. There is also a telephone pole on the opposite side of Front St. that could be accessed through the right-of-way. Overhead electrical connections require a telephone pole every 80 feet and the need for additional poles raises the cost of construction. An electrical whip less than 80 feet would only be possible off of Main St. Considering that the road is approximately 20' wide, there is only a 10' buffer zone between the required road setback and the 80' maximum electrical whip. The addition of overhead wires from either possible entry point is important to consider when choosing planting types and locations. If possible, it is best to plant trees that will not interfere with the lines.



Figure 9. Electric line map and connection points.



Figure 10. View towards telephone pole on W. Main St.



Figure 11. View towards telephone poles on W. Front St.

Wetlands permitting

Of the 4.1 acres that make up the Nichol's Nature Preserve site, approximately 1.1 acres have been delineated as wetland by the U.S. Army Corps of Engineers (ACOE). While the wetlands are the site's single biggest asset in terms of developing a nature preserve, they are one of the most significant constraints as well.

Development on wetlands in general is regulated by both New York State and the US Army Corps of Engineers (ACOE). Under New York's Freshwater Wetlands Act of 1975, wetlands are protected if they are 12.4 acres in size or greater, or are of unusual local importance (DEC Website). The wetlands on the Nature preserve Site do not meet either of these criteria and are therefore not regulated by New York State. The ACOE, however, regulates wetlands of any size; thus the Nichol's Nature Preserve is required to apply for a permit from them before beginning any construction.

Hancock, NY falls under the purview of the Philadelphia District of the ACOE. It is this office that the nature preserve development team needs to contact regarding the specific permitting needs for the project. The wetland permitting process can be quite complex, and varies according to the parameters of the individual project. In the case of the Nichol's Nature Preserve, the work will be small-scale, and impacts to the wetlands are expected to be minimal. For this reason it is expected that the permitting process with the ACOE will be fairly simple in that the project team will be able to apply for a Nationwide Permit. Nationwide permits have been developed by the ACOE to simplify the permitting process projects that fall beneath certain thresholds of scale or impact.

It seems likely that the permit the Nichol's Nature Preserve will require is NWP #42 for Recreational Facilities. This permit authorizes recreation development of the type planned for the Nature preserve, as long as the total wetlands impacted do not exceed ½ acre. Impacts on the wetlands that the ACOE will take under consideration include the construction of boardwalks or hardening of trail surfaces, construction of utility lines, and the dredge and/or fill or wetland soils (ACOE website). Nationwide Permits, though streamlined, still have to be applied for, and it is important that the Nature preserve project team contact the Philadelphia ACOE office as soon as possible in the site planning process.

Wildlife and vegetation

As mentioned above, the Nichol's Nature Preserve site has a fairly diverse collection of species present for such a small site. At least a working knowledge of this diversity will be an invaluable asset for both the physical design and programming of the Nature preserve, especially for the trail component. For this reason, Appendices 1 and 2 list the animal and plant species that are currently believed to be present on the site, per a survey conducted by Barb Reuter, Environmental Consultant. Species of particular note, either for their protected status or their invasive tendencies, are noted in the last column of the appendices. These species should be researched in depth as early as possible in the site design process.

Assessment Summary

The qualities that make the site of the Nichol's Nature Preserve unique are the same ones that make it a challenge to design. First, it is a very small property located on a major road on the edge of a village core. This location brings with it issues of zoning, screening from neighboring properties, and visitor management. Therefore a series of options for different levels of development will be presented to put in perspective the challenges and possible limitations on the site. The wetlands on site, while a major resource, bring with them a host of both permitting and ecological management issues. Careful consideration of all these issues is crucial to the success of the Nichol's Nature Preserve project.

TRAIL DESIGN & CONSTRUCTION ASSESSMENT

Considerations for trail design and construction

Several aspects of the property proposed for the Nichol's Nature Preserve require consideration before trail design and construction begins. The most important of these aspects is the location of the wetland on the property. By definition, a wetland has wet soils the majority of the year. On the Nichol's Nature Preserve property, the existence of the wetland will affect building and trail construction. The northern boundary of the property is bordered by a steep hill leading to Route 17; water runoff from this highway is likely to keep the northern part of the property relatively wet. Near the southern border is a culvert which channels water under Main Street and into the wetland. An eight-foot drop in elevation between the proposed preserve parking area and the center of the wetland ensures that water stays in the wetland.

The wet soils on the site will make a raised trail necessary in order to prevent damage to wetland plants and keep the feet of visitors dry. The rate of ground water recharge and discharge for the wetland will need to be monitored during seasons of high water prior to trail construction. This information will become useful when ultimately deciding on the height of the trail to be constructed. Because the wetland area is relatively flat, the actual construction of the trail and any necessary trail structures (e.g. platforms, lookouts, benches, etc.) should be relatively straight forward.

The construction of a pond on the property is proposed and will determine the location of the trail. In order to accelerate obtaining the wetland permits required for preserve development, the pond is proposed for a site adjacent to the existing federally-designated wetland. Placement of the pond will enhance views of the property from the proposed nature center building, and influence the ecology of the site (in particular, the ecology of the adjacent federally-designated wetland). In addition, creating a pond could alter the natural water flow patterns of the wetland.

The biodiversity of the site will also determine the design of the trail. In order to create an effective interpretation program along the trail, routing the trail through or near different types of habitat (e.g., wetland, pond, meadow) will be important. In addition, the area includes many native and non-native invasive plant species which can be incorporated into the educational programs of the nature preserve. The locations of several endangered plant species on the nature preserve property need to be flagged prior to the determination of trail location so that these species can be avoided during trail construction.

The size of the property offers a challenge for trail development: designing a trail that engages visitors for a sufficient amount of time. Most interpretive trails are between 0.3 and 1 mile long; the trail on the Nichols Preserve will fall at the lower end of this range.

Considerations for integrating education with trail use

The theme for the Nichol's Nature Preserve is: the ecologically rich setting of the Nichol's Nature Preserve provides a unique, hands-on experience with nature right on Main Street. In order to be consistent with this theme, the nature trail experience needs to be "hands on" for visitors. The hands on experience can be provided in several ways. First, the wide variety of wild life present on the property will make it possible to convey information about wildlife to trail users. Visitors should be encouraged to look for signs of wildlife such as tracks, and scat. Next, the live collection of insects for temporary viewing could increase the appreciation of visitors for insect life. If a pond is developed, having visitors collect water samples and view aquatic life under a stereoscope could be fascinating. Next, identification guides could be developed for users to use while walking the trail. Signs could be used to

highlight different types of habitat along the trail (e.g., wetland, pond, meadow, forest). A kiosk at the beginning of the trail could be used to give an overview of what visitors will see along the trail and why the area is important to the village of Hancock (e.g., flood control). Wildlife habitat enhancement projects could be undertaken in order to attract more wildlife to the site from surrounding areas and enhance wildlife viewing. Some potential enhancements could include nesting boxes for birds, and adding the pond to attract water fowl and amphibians. Finally, since invasive species make up a large part of the species composition of the property, engaging visitors and school groups in invasive species elimination efforts could be a valuable learning experience. Delineating special “work” zones (where eradication efforts are focused) could identify areas of high concentration of these invasives for visitors.

Topics to be considered for interpretation along the trail

The ecology of the nature preserve site is important to emphasize along the trail. One of the most important aspects of the ecology of this site is the presence of federally-protected wetlands. Delineating the area around the wetland with some type of marker may help emphasize the importance of protecting wetlands. Also, it is important to highlight the ecological differences between the rest of the site and the jurisdictional wetlands. Along the border of the property closest to Route 17, it may be helpful to point out the impact that people have on the plants and animals on the site (e.g., water runoff, salt use during the winter). Near Main Street is a large drainage pipe that eventually leads into the Delaware River. This would be a good site to inform trail users about the ecological functions of wetlands such as flood control and water filtration. Due to the sensitivity of vegetation along the trail, it will also be important to communicate to users the importance of staying on the hardened surface of the trail. This can be accomplished through the use of small signs and railings.

INTERPRETIVE PROGRAMMING: SCHOOL GROUPS, FAMILIES, AND VISITORS

Suitable Topics for Interpretive Programs: All groups

Wetland ecology. Wetlands are often considered one of the most diverse ecosystems. They are composed of a variety of species including those that live within aquatic and terrestrial habitats. Within the inland freshwater wetland located in the community of Hancock is a diverse ecosystem including wetland grasses, shrubs, and trees, as well as a forest-edge community important to wildlife. Wetlands are considered wonderful breeding and feeding grounds for many different insect, mammalian and avian species. However, even though wetland ecosystems are incredibly diverse, they are also very fragile. Wetlands are subject to a variety of impacts from humans, as well as biological impacts such as invasive species (Houlahan and Findlay, 2004). Small wetlands, such as the wetland located in Hancock, are also important for the persistence of local populations of wetland-associated animals (Gibbs, 1993). Since wetland ecology is little understood by the general public and is so diverse, many interpretive programs suitable for the wetland within Hancock become available.

Wetland research. Wetland research is a growing and specific field within the biological community. Since wetland ecosystems are so diverse, specialists in multiple fields are needed to understand them and multiple techniques are used to research them. Some of these techniques (species identification, pH, soil samples, etc.) require little high-tech equipment and are suitable for visitors to learn. These techniques make unique, hands-on experiences for people of a variety of ages.

Human impacts on the environment. The location of Nichol's Nature Preserve within a village can be used to illustrate the positive and negative affects of human actions on wetlands. Interpretive programs that discuss recycling, pollution, invasive species identification, recycling, site history, and habitat management can be presented through educational signs, exhibits, and hands-on activities.

Interpretive programs for school groups

Potential use of Nichol's Nature Preserve by school groups. Within the Hancock community, the Hancock School District houses grades pre-k to 12, supporting roughly 480 students of all ages (City Data, 2009). The Nichol's Nature Preserve offers the School District the unique opportunity of enhancing its existing science curriculum with an in-depth, science-based student experience in a natural setting. Since the ages of students range from 3 to 18, a wide variety of programming and exhibits need to be not only informative, but also comprehensible to children of all ages. In order to achieve comprehensibility yet portray the same messages to students from pre-k to high school, modification of each interpretive program based on grade needs to occur.

Teachers are also a learning body within the school. There is a potential to set up programs for teachers concerning environmental stewardship that they could then bring back to the classroom to their students. Teaching modules could also be created by the nature preserve staff for use by teachers in the classroom.

Location of programs. Working with school groups provides a unique situation in which interpretive programs can be conducted in a variety of locations. Since the school could obtain transportation to offsite locations (e.g., access sites along the Delaware River, etc.), school groups can obtain an in-depth experience with the Nichol's Nature Preserve, both on and off the nature preserve property. Table 1 lists the locations that can be utilized both on the nature preserve property and off. With the variety of sites available to utilize, interpretive programs can be held year around, no matter the weather.

Table 1. Potential programming locations.

Site	On or Off Nichol's Nature Preserve	Season of Operation	Potential of Programming
Nature preserve classroom	On	Year Around	If the development of the nature preserve property includes a classroom, school groups would have an on-site classroom to participate in class-like lecture, discussion, or instruction of hands-on activities. The group could then proceed to the trail within the wetlands to implement what they learned in the classroom. Large groups might be hard to facilitate.
School	Off	Fall, Spring, Winter	Since the groups involved are school groups, there is a potential for the nature preserve staff to conduct interpretive programs at the school, both inside and outside.
Nichol's Nature Preserve trail	On	Spring, Summer, Fall	Programs involving guided walks around the trails provide a close up look at the wetland ecosystem. However, limited space would be available on the trail so large groups would be harder to facilitate.
Various Delaware River access sites	Off	Spring, Summer, Fall	Instead of having one class visit the nature preserve at a time, entire grades could go to access sites along the river to learn about river ecology and biology. One such site, the Fireman's Field, has a large, wide-open space that would be useful for large events.

School group programming implementation considerations

Several limitations exist with implementing interpretive programs for school groups. First, there is a limitation in the number of presentations and displays the nature preserve educators can conduct and maintain. Implementing offsite interpretation programs at local schools and other areas can put greater time constraints on nature preserve staff.

Next, since the nature preserve property itself is small, it cannot sustainably hold an influx of dozens of students at the same time as outside visitors and families. Limiting the number of school groups present onsite at one time will have to be considered.

Off-site programming on grounds other than the nature preserve and the schools could pose problems in liability. Since the Fireman's field is adjacent to the Delaware River, proper precautions will have to be in place before hosting events within that location. The area, however, is perfect for holding large events, can accommodate multiple age groups at one time, and provides access to natural resources that differ from the wetland ecosystem found within the nature preserve's borders.

Interpretive Programs for Families

Potential use of the Nichol's Nature Preserve by families. Approximately 126 households in the village have children under the age of 18 living in the house (Wiki 2009) while the schools have about 480 students ranging in ages of pre kindergarten to high school seniors (City Data 2009). Furthermore, the most common employment industry for men and women in Hancock is in educational services (City-Data 2009). This type of employment may lend itself well to interpretation because the parents are already familiar with an educational setting and may be more willing to bring their children to an event at the nature preserve. Due to the variety in age ranges for school children, interpretation programs and signs will have to be informative and comprehensible at multiple age classes. This will require modifying programs to fit the educational needs of the participants when applicable.

Locations for program implementation. Sites both on and off the nature preserve property can be used for interpretive programs for families. These sites are shown in Table 2.

Table 2. Assessment of potential areas to implement interpretive programs.

Location	Implementation Potential	Season of Use	Reasoning
Nature preserve	Yes	Spring, summer, fall, winter	Families will be able to visit the nature preserve during every season. If there is an indoor classroom, interpretation may continue inside during the winter as well as on the outdoor trail.
School	Possible	Spring, fall, winter	Schools can be excellent facilities to gather local families, most likely during special events held at the school.
Various Delaware River Access sites	Yes	Spring, summer, fall	Various access sites along the river offer different settings in which interpretive programs can be carried out. During winter, access to these areas may be restricted if plowing is not done consistently. Fireman's field offers a large open area where a variety of family events can be held.

Implementation assessment for families. Several challenges arise when planning interpretive programs for families, including finding suitable areas to accommodate families and being able to engage children as well as parents. The nature preserve will be suitable for accommodating families, especially if further accommodations such as a pond and classroom are built. A unique location, a variety of interesting plants, and the potential to attract more animals with proper management of the wetlands allows for captivating interpretive stops. To take advantage of the anthropogenic surroundings of the nature preserve, a variety of interpretive topics should include human disturbance and influences to wetland ecosystems such as pollution, recycling and wetland management. A variety of other topics ranging from invasive species, insect and tree identification and wetland ecology will allow parents to potentially teach *and* learn with their children, keeping both groups engaged.

Fireman's field and the Delaware River adjacent to it will be important areas for family engagement. Due to its size, proximity to the village of Hancock and accessibility, Fireman's field could facilitate

large gatherings of families for “field days” and other community events in which the Nichol’s Nature Preserve could participate. The River will allow for a variety of interpretive programs that otherwise would not be feasible such as fishing, river ecology and functions, and potential D-netting/seine netting near the shore. Access to the field needs to be better organized through talks with the property owner.

Interpretive Center Programs for visitors passing through Hancock

Potential use of Nichol’s Nature Preserve by visitors passing through. The Catskill Region offers natural, cultural and historic resources and attractions to attract thousands of visitors annually. In addition, Route 17 is an important travel route between western and central New York State and New York City. Both the Catdkill Region and Route 17 provide an important potential market group for the nature preserve: visitors passing through the area. It is necessary to design promotional strategies that engage visitors that are already interested in the region to visit the Nature preserve, as well as people who are not aware of the range of possibilities offered and just happen to stop in Hancock for the services it provides.

The tendency toward increased participation in outdoor recreation activities over the past several decades indicates the potential interest of Americans in this kind of entertainment. Table 3 shows percentages of the U. S. population and number of participants in four outdoor recreation activities. Participants in years 1982-1983 are 12 or older, while participants in subsequent years are ages 16 or older (Cordell et al., 2009). The tendency to engage in activities related to nature is a positive factor that can be used as an incentive to encourage people to visit the nature preserve and experience the interpretive programs.

Considerations for use by visitors passing through. Due to the size of the wetland, it is necessary to design low impact outdoor programs for visitors that encourage visitors to stay on the trail. Because some visitors who pass through Hancock may be visiting when nature preserve staff are not on duty, it will be essential that the “stay on the trail” message is communicated via signage. Minimizing the number of people per group that enter the wetland at the same time may be necessary during times of high use such as weekends during the summer. It will also be necessary to install adequate garbage removal facilities or to implement a “carry-in/carry-out” program since visitors may likely be stopping by the visitor center with meals from adjacent fast food restaurants.

Table 3. Trends in percentage of population and number participating in outdoor recreation activities by activity and period in the U.S. Participation numbers and percentages reflect the population numbers estimated by the Bureau of Census for the years shown. (Source: National Survey on Recreation and the Environment.)

Activity	1982-1983		1994-1995		1999-2001		2005-2009		Trend	
	Percent of population participating	Total participants (millions)	Percent participation	Total participants (millions)	Percent participation	Total participants (millions)	Percent participation	Total participants (millions)	Percent change in participants, 1982-1983 to 2005-2009	Change in number of participants (millions), '82-'83 to '05-'09
Walk for pleasure	53.0	91.9	68.8	138.5	82.4	176.4	84.1	194.2	111.3	102.3
View/photograph birds	12.0	20.8	27.0	54.3	31.8	68.0	34.9	80.5	287.0	59.7
Day hiking	14.0	24.3	26.6	53.6	32.4	69.3	32.6	75.3	209.9	51.0
Visit Nature preserves, etc.	50.0	86.7	55.1	110.9	56.7	121.3	55.1	127.2	46.7	40.5

MARKETING THE NATURE PRESERVE

Introduction

The marketing assessment is to assess existing and potential visitor markets for the area's local natural resources, attractions and activities; and assess existing and potential visitor demographics for the local residents.

Location

Hancock is situated at the convergence of the East and West Branch of the Delaware River bordering Pennsylvania, approximately 40 miles east of Binghamton, New York with easy access via New York State Route 17. Hancock is part of the Catskills region and is located adjacent to New York's Southern Tier.



Figure 12. Map showing the location of Hancock, NY.

Present and Potential Market Demographics

Students. Within the Hancock community, schools house grades from pre-k to 12th grade, supporting roughly 480 students of all ages (City Data, 2009). In addition, school districts surrounding the Hancock area are an additional market for students. Students should be considered the primary market for this facility.

Local residents. As of the census of 2000, there were 1,189 people, 505 households, and 311 families residing in the village. The population density was 755.4 people per square mile (292.4/km²). There were 594 housing units at an average density of 377.4/sq mi (146.1/km²). The racial makeup of the village was 96.89% White, 0.42% Black or African American, 0.42% Native American, 0.17% Asian, 0.42% from other races, and 1.68% from two or more races; Hispanic or Latino of any race comprised 3.28% of the population.(United States Census Bureau, 2000)

The local Hancock market includes approximately 15,000 persons who live within 15 miles of the village center. This breaks down into a primary market of about 3,000 people within 5 miles, a secondary market of about 4,000 people within 5-10 miles, and a fringe market of about 8,000 people within 10-15 miles (Hancock Partners, 2004; Figure 13).

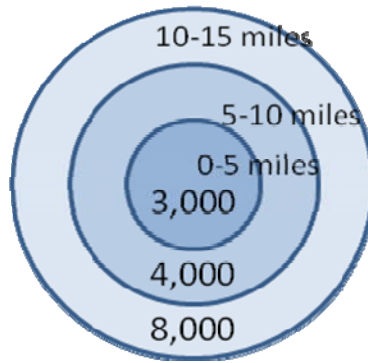


Figure 13. Population distribution surrounding Hancock, NY.

There were 505 households, 25% of which had children under the age of 18; 46% had married couples, 11% had a female householder with no husband present, and 38% were non-families. About 20% had someone living alone who was 65 years of age or older. The average number of individuals in each household was 2.35 and the average family size was 2.95 (United States Census Bureau, 2000).

In the village the population was spread out with 22% under the age of 18, 6% from 18 to 24, 23% from 25 to 44, 24% from 45 to 64, and 24% 65 years of age or older. The median age was 44 years. For every 100 females there were 88 males (United States Census Bureau, 2000).

The median income for a household in the village was \$27,419, and the median income for a family was \$36,083. Males had a median income of \$27,455 versus \$17,188 for females. The per capita income for the village was \$16,616. About 8% of families and 16% of the population were below the poverty line, including 24% of those under age 18 and 16% of those aged 65 or over (United States Census Bureau, 2000).

Second home owners and buyers. Approximately 3,900 second homes exist within 15 miles of Hancock. When occupied, these homes add nearly 12,000 persons to the local market. During a peak summer vacation season, up to 4,700 persons on average annually come to Hancock (Hancock Partners, 2004).

Each of Hancock's neighborhoods contain deteriorating housing units; homeownership in the village is declining – down to 60% of all housing units according to the 2000 Census data. In 2000, 5% or 30 dwelling units, were described as "seasonal dwelling units" (the Hancock economic & community development plan).

Visitors. The data for visitors and recreationists is unavailable, but we can assess the area's potential. Hancock is located on the Delaware River which attracted 31,390 anglers for 265,970 days fishing in 1996. Angler expenditures resulted in a total of \$7.25 million in local revenues. For fly fisherpersons, the majority are married (83%) and college educated (90%).

Marketing considerations

Positive marketing considerations for the nature preserve include easy access to local residents and the community, easy access to and from Route 17, proximity to the Catskill part and Binghamton, and a relatively large population of residents under 18 and families. On the negative side, additional facilities

and services will be needed to better connect the nature preserve with the community of Hancock and attractions within the Catskill Region, there is currently no main visitor attraction in Hancock to put Hancock on the map (literally) of the I Love NY state tourism program, and further revitalization is needed in the village to encourage return visits by visitors.

Table 4. Existing, growth, and potential markets for Hancock, NY.

Market Group	Existing	Growth	Potential
Anglers	X		
Kayakers		X	
Canoeists		X	
Rafters		X	
Hikers			X
Wildlife viewers: eagles			X
History enthusiasts			X
Scenery/ foliage/ byway tours		X	
Shoppers			X

PROMOTIONAL ASSESSMENT

Linkages with existing promotions

Hancock, NY has some existing tools that will benefit the nature preserve. The most prominent of these is the Hancock Area Chamber of Commerce and its website. This site has a nice layout that is easy to navigate and offers helpful information to residents and visitors alike. The two areas the Nichol's Nature Preserve should utilize the most are the "News & Events" section and the "Area Guide & Member Directory" (Hancock, 2005). In the "News & Events" section, the chamber posts annual festivals and weekly activities. Prior to opening, the nature preserve should announce its opening to gain recognition. Nature preserve activities and programs should also be listed on this website under the "Area Guide & Member Directory" section. The Nichol's Nature Preserve should be added and noted as a Not-for Profit 501(c) 3 organization to further promotion.

This same strategy can be applied to the Delaware County Chamber of Commerce. This site is much more geared towards business and not community ties, but can still act as a good promotional technique in the greater Catskill area. Connections with "www.hancocknewyork.com" should also be made as this site is another community-based webpage.

Another important tool for promotion of the nature preserve will be program announcements distributed through the Hancock School District. Located within walking distance, the pre-school, and elementary and high schools offer many possibilities for promoting the nature preserve to its primary audience: school children and their families. In 2006 Hancock Elementary had 168 students enrolled full time, providing a solid market for the nature preserve (Hancock Elementary, 2006).

Another website on which the nature center should be promoted is that of the Delaware Scenic Byway. Found at www.upperdelawarescenicbyway.org. This website offers photos and information of the sites and attractions along the scenic byway. Once completed, the Nichol's Nature Preserve should request a link on this website to its own website.

Finally, the nature preserve should be promoted through the state I Love NY program, both on its website (www.iloveny.com/home.aspx) and in its promotional materials. At present, the lack of tourist attractions in Hancock has kept Hancock off the Catskill Region map in the state guidebook. The opening of the nature preserve could remedy this problem. Similar inclusion should be considered for the tourism website of the Catskill Region (www.visitthecatskills.com).

Potential internal promotions

Nature preserve website. This tool will be the focal point of promoting the nature preserve. All other promotion materials (e.g., brochures and school fliers) will direct visitors to the website, offering more information and a more in depth look at Nichol's Nature Preserve and its overall goals. On-site events, activities and programs at Nichol's Nature Preserve will be posted, letting community members become aware of all the center has to offer. The site can also act as an interpretive tool that brings experiences in the field into the home or classroom. The site must be connected to popular search engines so that it can be easily located upon a general search. The title for the site should be concise and easy to remember to avoid confusion. A simple URL such www.nicholnaturepreserve.com or www.NicholsNaturePreserve.com would work effectively. The site should also include pictures and audio guided tours to allow potential visitors a glimpse of the center.

Nature preserve brochure. A brochure should be created for mass distribution in the community, at Catskill Region attractions, and at popular events. This should consist of a pamphlet with general information that visitors may need: hours of operation, on-site activities, contact information, upcoming events, pictures and donation/membership information.

Newspaper news releases. A small notice in the local community newspaper is another possible promotion technique to communicate with local families. News releases should focus on upcoming programs and fundraising events for the nature preserve.

Nichol's Nature Preserve Newsletter. This newsletter will consist of information on upcoming events, fundraising efforts, and articles on nature preserve volunteers. It should be distributed monthly (via e-mail) to nature center members. This can be also be used as an interpretive tool with puzzles for children, nature walk activities, and science-related activities.

Adopt-A-Highway. With route 17 residing on one border of Nichol's Nature Preserve, connections with an adopt-a-highway program can be a good way to receive free advertising and promote a positive public image of the nature preserve. The section(s) of road selected will host a sign stating that Nichol's Nature Preserve cleans that particular portion of the road.

Possible Event Connections

Bluestone Festival and Firemen Field Days. Held annually at the Firemen's Field, this event is a great opportunity for community interaction and word-of-mouth promotion. Nichol's Nature Preserve could set up a booth offering information and hands-on activities for children. Possible shuttle bus connections to the nature preserve on that day could be used to bring visitors to the nature preserve. The event is usually held in late July (Hancock, 2005).

Little Victory Players. This theatre group offers a series of plays during the summer. Offering an outdoor stage opportunity could provide this theater group with an alternative setting for its productions.

Local children's camps. Numerous children's camps are found throughout the area which offer educational programs during the summer. One possible connection with these camps could be wetland day visits coordinated by Nichol's Nature Preserve staff in order to get campers to the site. Establishing connections with camp leaders is crucial.

TRANSPORTATION CONSIDERATIONS

Introduction

Nichol's Nature Preserve is located at the western boundary of the Catskills, south of Oneonta, and west of Binghamton. It is nestled in the northwest corner of the village of Hancock, just north of the Delaware River. The site is adjacent to a number of major transportation routes including route 17, the Delaware River Scenic Byway (Route 97), and Hancock's Main Street.

Transportation conditions and opportunities

Travel by airplane. The Nichol's Nature Preserve lies within 50 miles of the Binghamton Regional Airport. Those coming from the airport would reach the nature preserve by driving on route 17 towards the Catskills. It is likely that the nature preserve would not be the primary destination for visitors traveling through the area; however, it may be an important stopping place for those visitors who stop in Hancock for other facilities and services.

Travel by automobile. Automobile is the most widely used source of transportation in Hancock by residents, visitors and those passing through. Route 17 will be the main travel route to the nature preserve for visitors from outside the village. This highway is in excellent condition. Future upgrades to become part of the I-86 extension are within a five year plan. With this upgrade comes added traffic past Hancock, possible effects to the existing economy of the Village of Hancock, potential direct effects to the wetland site at the Nature Preserve, and additional services to supplement the improvements along Route 17. Concerns regarding Route 17 and the upgrade include reconstruction impacts to the wetland site, existing and potential salt and sand runoff into the site during the winter, and positive or negative effects to the Village of Hancock economically. For those driving to the site, Main Street will likely be used. There is no existing parking directly at the site, and so parking along Main Street and in conjunction with the McDonalds and Family Dollar may be a possibility.

Travel by rail road. The railroad is not in use as a passenger system, and is rarely used for freight; however it may be possible to develop a viable scenic rail ride in the spring, summer, and fall.

Travel by bus. There is no local bus system, although Greyhound or Coach USA buses do stop in front of the family restaurant at 96 West Main Street. The school bus system is used solely for the elementary, middle and high schools, located approximately one mile east of the nature preserve. The school bus system will likely play a part in transportation from the schools, and so parking for buses should be identified either onsite or in nearby parking areas.

Travel by bicycle. Biking offers some opportunities for local residents and visitors interested in traveling the scenic byway. While there is no existing bike path throughout the Village of Hancock or near the site, Main Street does have a wide shoulder and is in adequate condition to support a designated lane for bikes.

Pedestrian travel. Walking is an important means of travel for locals when going to the village or the schools. Sidewalk conditions to and from the schools and the village are spotty. There are sections that appear to have just been repaired, while some sections are dangerous for all ages and some sections do not exist at all (Figures 14 and 15). A distinct path from the schools to the nature preserve would be necessary to enable walking from the schools to the nature preserve. The safest and most direct route from the schools to the site would west on Vestal Ave., turning left and south onto Pennsylvania Ave., and then right onto Main Street where students would approach the site. This route

moves through a neighborhood district with little traffic, and offers adequate tree canopy coverage to tie in with the program of the Nature Preserve. An additional trail system may be developed within the DOT right-of-way along route 17; this would connect the northern terminus of Vestal Ave. with the north eastern corner of the nature preserve property. This would allow the Nature Preserve, which is already somewhat small, to integrate the walking portion of the students' trip into its interpretive program.

Summary

Major routes in the area (i.e., the scenic byway and route 17) are currently used by visitors coming from outside the area, while Main Street is commonly used by local residents. Road conditions are sufficient, although parking for the nature preserve needs to be addressed and the potential for a bike lane needs to be further researched. Sidewalks are not adequate for safe pedestrian use, particularly along the school route. The potential for a trail linkage between the site and the schools should be further researched.



Figure 14. Sidewalk conditions.



Figure 15. Sidewalk Condition

REGIONAL CONNECTIONS

Introduction

Hancock, New York is located in the southwestern corner of the Catskill Region. The Catskill Region is rich with summer camps, state camps, museums, and festivals, as well as home to a section of the Delaware Scenic Byway. Connecting the nature preserve to other attractions in the Catskill Region is important for the success of the nature preserve.

Attractions with potential regional connections were evaluated in a 25-, 50-, and 100-mile radius from the nature preserve. The 25-mile radius consists of mostly local attractions, festivals and schools. The 50-mile radius includes camps of varying purposes and other museums. Lastly, the 100-mile radius involves connections with other environmental centers and outreach programs. Only attractions related to nature and outdoor recreation are included, as these attractions would be the easiest to develop connections with.

Attractions in Hancock

Major attractions in Hancock include the Delaware River and Scenic Byway. In Hancock, is the junction of the two branches of the Delaware River, an ideal place for trout fishing. Anglers from all over New York and outside the state come to Hancock to fish.

The Delaware Scenic Byway, specifically the upper portion of the byway, runs through Hancock, NY. The Scenic Byway is well known for its beautiful views and rambling route through the rolling terrain through the Catskills. The western entry point for the scenic byway is located in Hancock.

Directly next to the Nature Preserve, within an eighth of a mile radius, you'll find the Capra Cinema, Bluestone Grill and the McDonald's. Surrounding the site, attractions include the Hancock Golf Course, the schools, the Hancock Historical Society, and the shops and businesses located in downtown Hancock

Nearby attractions

Table 5 illustrates the attractions within 25 miles (approximately a 20 to 30 minute drive) of the center. The Catskill Fly Fishing Center and Museum is designed to educate visitors about fly-fishing and its history. The center provides hands-on instruction on how to fly fish. Delaware-Otsego Audubon Society is dedicated to the education of birding and the history of birding in the Catskills.

Table 5. Attractions within a 25-mile range.

Attraction	Contact Information	Experience Provided
Catskill Fly Fishing Center and Museum	1031 Old Route 17 • Livingston Manor, NY 12758 P: 845-439-4810	Fly fishing education, fly tying, education of history of fly fishing
Delaware-Otsego Audubon Society	Franklin Mountain Grange Hall Road • Franklin, NY 13775	Education and our-reach programs involving birding in the Catskills

Attractions within a one-hour drive

Table 6 shows the most beneficial connections offered within 50 miles (approximately a one-hour trip) from the nature preserve. This distance renders the most attractions with the best connections for the center. The Catskill Outdoor Education Center at SUNY Delhi provides direct environmental interpretation out-reach programs through their Ameri-Corps students. The Hanford Mills Museum educates visitors about both the natural resources and socio-economic history of the Catskills Region. Mongaup Pond State Campground is a facility that provides recreational and educational opportunities for families and weekend travelers to the region. NYSDEC Camp DeBruce is an environmental education summer camp that facilitates the opportunity for middle school students from the Catskill region and the New York City area to travel to the Catskills to learn about the environment through hands-on activities.

Table 6. Attractions within a 50-mile range.

Attraction	Contact Information	Experience Provided
Catskill Outdoor Education Center	State Highway 28 • Delhi, NY 13753 P: 607-746-4112	Out- reach environmental education programs, interpretation
Hanford Mills Museum	Routes 10 and 12 • East Meredith, NY 13757 P: 607-278-5744	Social and environmental interpretation of Catskill region
Mongaup Pond State Campground	231 Mongaup Pond Road•Livingston Manor, NY 12758 P:(845)439-4233	State camp ground, recreation in the Catskills
Camp DeBruce (NYSDEC summer camp)	307 Mongaup Road • Livingston Manor, NY 12758	Environmental Education Summer camp

Attractions within a two-hour drive

Table 7 illustrates the farthest regional connections the center could make: 100 miles or approximately 2 hours from the center. The Justus Asthalther Maple Syrup Inc. offers the opportunity for visitors to experience maple production in the Catskills with sampling and various other engaging activities. Butterfly Botanicals is a center that focuses on the rich butterfly population influx that the Catskills experiences during butterfly migration in New York.

Table 7. Attractions within a 100-mile range.

Attraction	Contact Information	Experience Provided
Justus Asthalther Maple Syrup Inc.	865 Aden Rd. Parkville, NY 12768	Tours of maple sugar factory, learn about maple production in the Catskills
Butterfly Botanicals	363 Petticoat Ln. Bloomingburg, NY 12721	Hands-on education, butterfly fly exhibits

WORKING WITH LOCAL BUSINESSES

Introduction

The Village and Town of Hancock are comprised of local and regional businesses that would be ideal for collaboration with the Nichol's Nature Preserve. While recreation-related businesses would be the primary collaborators, Hancock's array of businesses would allow the nature preserve to expand its collaborative efforts.

The businesses most likely to collaborate on events, festivals and educational programs fall into three categories: recreation-related, nature and outdoors, and other businesses. Recreation-related businesses are those that are associated with indoor and outdoor recreation activities and retail. Nature and outdoor businesses are those associated with conservation, preservation, design, and sales. Other businesses are those that have no connection to recreation or nature, but could provide financial support, marketing and promotional efforts for the Nature preserve.

The resources used to select appropriate businesses to collaborate with the Nature preserve were derived from The Town of Hancock- Merchants and Services website, Delaware County Chamber of Commerce, Village of Hancock Chamber of Commerce and The Tourism Plan for Hancock, NY. Using these resources, approximately twenty businesses were initially identified as possible collaborators. However, it should be noted that many other businesses exist in the area as well which could also potentially collaborate with the nature preserve; Tables 8 through 10 are not intended to be exclusive, but rather to provide an idea of the types of collaborations that could occur.

Recreation Businesses

Table 8 below identifies some of the recreation-related businesses that could collaborate with the nature preserve. As recreation businesses, these involve the children and families on whom the nature preserve is focused. Many of the businesses offer education and resources pertaining to a particular service such as canoeing and boating, fishing, or other recreation activities. Recreation businesses can collaborate on events and festivals, and also partner on summer activities for families. Recreation businesses that sell outdoor merchandise would be able to sponsor or donate materials needed for educational purposes (e.g. butterfly nets, gardening material).

Table 8. Outdoor recreation businesses.

Business	Address/Contact	Services
Border Water Outfitters	159 E. Front Street	Retail; latest river & hatch information; equipment; guide school; guided river trips; Steelhead camp; waterfowl hunting
Delaware River Club Fly Fishing Resort	HC 1 Box 1290 Starlight, PA 18461	Private access water for fly-fishing; guided wade and float-trip options; fly-fishing schools; full-service fly shop
French Woods Golf & Country Club	100 Taylor Lane	Recreation; 18-hole golf course;
The Hancock Golf Course	522 Golf Course Road	Recreation- Golf; extensive history that dates back to 1936; pro shop and restaurant
Fox Bowling Center	24723 State Highway 97	Recreation- bowling
Camp Hilltop	7825 County Highway 67	Private Children's Summer Camp
Marinos Outdoor World	95 E. Front Street	Retail- sporting goods store; canoe and boat rentals

Nature and outdoor-related businesses

There are many nature-related businesses in both the Village and Town of Hancock. These businesses are primarily private firms that could collaborate with the Nature preserve by providing educational programs, workshops and additional facilities. Table 9 lists some of these businesses and the services they provide. Other businesses at the county level, including family-owned farms, may also be willing to collaborate with the Nature Preserve.

Table 9. Nature and outdoor-related businesses

Business	Address/Contact	Services
Hancock Permaculture Center	372 W. Front Street	Permaculture Education
Jim and Gina's Greenhouse	39 East Main Street	Greenhouse/plant provider
Starlight Forests, LLC	P.O. Box 87 Lakewood, PA 18439	Forestry Consultants
Red House Design, LLC	116 E. Front Street	Sustainable Architects
Stone and Garden	Hancock, New York 13783	Services include design and installation of stonework (including ponds), as well as plantings, fencing and other garden components

Other businesses

Other businesses include those that might be able to provide both financial support and sponsorship to the nature preserve. These businesses are often identified as being regionally-based or part of a corporate franchise. Although they are not directly related to the environmental mission of the nature preserve, they could play a vital role in helping the preserve develop and build a strong foundation in the community. Some of these businesses are identified in Table 10.

This category also includes businesses that could collaborate with the nature preserve to promote events and activities. Businesses such as the grocery store, Hancock Herald, and medical center can aide in distributing fliers, pamphlets and hang posters to advertise for events and educational opportunities.

Table 10. Other businesses.

Business	Address/Contact	Services
McDonalds of Hancock	450 W. Main Street	Restaurant- Fast Food
Family Dollar		Retail- dollar items
NBT Bank	11 E. Main Street	Financial- bank
Hancock House Hotel	Front Street	Hotel, Restaurant, Bar
Hancock Family Practice	Main St.	Community health
Subway of Hancock	494 W. Main Street	Restaurant- Fast Food
The Hancock Herald	161 E. Front Street	Local Newspaper

WORKING WITH LOCAL ORGANIZATIONS

Introduction

The Hancock area is full of organizations that support a wide range of causes from community education to international poverty assistance. Local organizations would see benefits economically, socially, and environmentally from the creation of the proposed Nichol's Nature Preserve. Organizational support already exists for the nature preserve through both the Hancock Partners and the Hancock Educational Foundation. However, because of the large number of organizations present in the area, other collaborations could be created as well. In order to assess organizations, they were divided into three main categories: community improvement organizations, youth focused organizations, and other organizations.

Community improvement organizations

Community improvement organizations show the desire to enhance the local culture and landscape to make it more appealing to both visitors and the citizens of Hancock. These organizations wish to stabilize the decreasing population of the village by offering economic, educational, cultural, and recreational opportunities to local residents. Table 11 shows current community improvement organizations that can be found in the Hancock area that would be vital for the development of the proposed Hancock community nature preserve.

Table 11. Community improvement organizations.

Organization	Description	Contact Information
Hancock Partners, LLC	Partnership interested in promoting industry, tourism and the beautification of Hancock, NY	E-mail: jerrydab@hancock.net Phone: (607) 637-5453 87 E Front St., Hancock, NY 13783 http://www.hancocknewyork.com/hancock_partners.htm
Hancock Community Education Foundation	501(c)(3) organization dedicated to providing quality educational opportunities to Hancock residents through scholarships and programs for all students (birth through college graduation)	Email: lindao@hancock.net Phone: (607) 637-5262 PO Box 819, Hancock, New York 13783 http://hancockeducationfoundation.com/
Delaware Highlands Conservancy	Land trust dedicated to preserving natural and cultural heritage of the Upper Delaware River watershed	Email: info@delawarehighlands.org Phone: (845) 807-0535 P.O. Box 219, Narrowsburg, NY 12764 http://www.delawarehighlands.org/

Youth organizations

Youth-focused organizations are organizations whose member base includes school-aged children (ages 5-17) and those that work with children. The Hancock area has three summer camps and the Hancock Central School. All of these organizations are seasonal, with the camps' community involvement taking place primarily during June through August and the school's involvement from August to June. High school volunteers from Hancock Central School's Honor Society may be needed during times of high visitation to supply a large number of volunteers to accommodate nature preserve visitation by other organizations. Table 12 shows some of the Hancock area youth focused organizations along with a description of each.

Table 12. Youth-focused organizations.

Organization	Description	Contact Information
Camp Hilltop	Private, co-ed residential summer camp for children ages 6-16 with a wide range of activities such as arts and crafts, hiking, and canoeing	Phone: (607) 637-5201 7825 County Highway 67 Hancock, NY 13783 http://www.camphilltop.com/
French Woods Performing Arts Camp	Co-ed residential summer camp for children ages 7-17 with a focus on the arts (dance, theater, etc) with traditional camp options available	Email: admin@frenchwoods.com Phone: (800)634-1703 350 Bouchoux Brook Road Hancock, NY 13783 http://www.frenchwoods.com
Camp Starlight	Co-ed, residential summer camp for children ages 7-15 offering traditional camp activities (arts and crafts, athletics, outdoor adventure, etc); Jewish religious services are held, but all religions are welcome to attend camp	Email: info@campstarlight.com Phone: (570)798-2525 151 Starlight Lake Rd Starlight, PA http://www.campstarlight.com/
Hancock Central School National Honor Society	Students achieve high standards of academic success as well as community involvement, service, and leadership	Phone: (607) 637-5211 67 Education Lane Hancock, NY 13783 http://hancock.stier.org/welcome/website/
Boy Scouts	Scout groups often provide volunteer assistance with community-based projects.	Otschodela Council PO Box 1356 Oneonta, NY 13820 Phone: 607) 432-6491 http://www.otschodela.org/
Girl Scouts	Scout groups often provide volunteer assistance with community-based projects.	Girl Scouts of NYPENN Pathways, Inc. Cicero, NY 13039 Phone: (315) 698-9400 (800) 943-4414 - Local Toll Free Email: info@gsnypenn.org http://gsnypenn.org/

Other community organizations

Other organizations that would be useful for collaboration with the nature preserve are described in Table 13. Both the American Legion and Rotary Club are community service based, meaning that they might be able to provide volunteer assistance. The Hancock-Cochecton Historical Association is a cultural and education based organization. Local church groups, parent-teacher organizations, and fire departments (not listed in Table 13) could also be important collaborators. All of these organizations could serve important functions within the structure of the nature preserve.

Table 13. Other community organizations

Organization	Description	Contact Information
American Legion	Not-for-profit veterans organization based on community service, veterans affairs, and patriotism	Phone: (607) 637-3461 210 Penn Ave. Hancock, NY 13783 http://www.legion.org/
Hancock Rotary International Club	Community service based organization that supports many different causes such as poverty, education, and health; motto: "Service over self"	Phone:(607) 798-0835 4504 Mansfield Rd Vestal, NY 13850 http://www.clubrunner.ca/CPrg/Home/homeD.asp?cid=1994
Hancock-Cochecton Historical Association	Provides information and knowledge of local culture to residents of Hancock	199 Vestal Ave. Hancock, NY 13783
Louise Adelia Read Memorial Library	The library contains many resources about the Hancock area, including an exhibit on local history.	Phone: (607) 637-2519 12 Read Street Hancock, NY 13783 http://www.librarytechnology.org/lwc-displaylibrary.pl?RC=6852
Little Victory Players	A local theater company which provides productions about the history of the village of Hancock.	http://www.hancockareachamber.com/lilvic/

Summary

The number of organizations currently present in the Hancock area allow for diverse community involvement options. Many of these organizations would be able to directly collaborate with the nature preserve in a variety of ways (volunteer staff, fundraising, events, etc.). The decreasing population of the Hancock area, however, threatens to decrease the membership of these local organizations. This will be the biggest obstacle to overcome in fostering organizational support of the center. Thankfully, the nature preserve already has the support of two major community improvement organizations (Hancock Partners and the Hancock Education Foundation) which are currently working to turn this idea into a reality. Also, the close proximity to numerous camps and other youth focused organizations allows for a large nature preserve market group.

NATURE PRESERVE ORGANIZATION AND STAFF

Introduction

For the assessment of the nature preserve organization and staffing, two local nature centers were examined: the Beaver Lake Nature Center in Baldwinsville, NY and Baltimore Woods Nature Center in Marcellus, NY. The director of each nature preserve was contacted and interviewed. Patty Weisse is the Executive Director of the Baltimore Woods Nature Center. Bruce Stebbins is the Executive Director of the Beaver Lake Nature Center. Through a series of questions, a substantial amount of information was obtained about how their respective nature preserves are organized and staffed. This information will be crucial in designing the Nichol's Nature Preserve's organizational structure and staffing.

Baltimore Woods

The Baltimore Woods land is owned by the Central NY Land Trust (CNYLT; a 501(c)(3) organization), while the John A. Weeks Interpretive Center (located adjacent to the CNYLT property) is owned by the organization known as Baltimore Woods Nature Center. Many of the programs held by this organization are done offsite at parks and schools throughout Central New York (personal communication with Patty Weisse, 2009).

Baltimore Woods is headed by Executive Director Patty Weisse, who makes the vast majority of the strategic decisions that affect the nature center. Business Manager Linda Bonnell is another decision maker at the site. While Patty handles the quality assurance and control decisions, Linda is responsible for the day-to-day type decisions. The remainder of the staff reports to either one or both of these managers, and is made up of a database and volunteer coordinator, marketing/executive assistant, two environmental educators, a camp director, a program manager, and a land manager. In addition to these nine employees, Baltimore Woods contracts with outside businesses (such as performers, entertainers, and educators; Personal communication with Patty Weisse, 2009).

The staff of the Baltimore Woods Nature Center is rather small, mostly due to the nature center's small budget. A result of having a small staff is that staff members may be overworked. However, one of their greatest strengths is that the center is run by a small, independent organization. This allows the nature center to have more control over the decisions it makes and to be more responsive to the needs of its customers and visitors.

Beaver Lake

The Beaver Lake Nature Center is managed by two different governing groups: the Onondaga County Parks Department (a government entity) and the Friends of the Beaver Lake Nature Center (a 501(c)(3) organization). On the county side of operations, Bruce Stebbins is the executive director, who reports to the commissioner of parks, who in turn reports to the county executive. Under the executive director is a senior naturalist who is responsible for a permanent naturalist and two part time naturalists. There is also a graphic artist, office manager, visitor center attendant, and a maintenance chief who heads up a maintenance crew (personal communications with Bruce Stebbins, 2009).

The Friends of the Beaver Lake Nature Center organization has a business manager, gift shop manager, and volunteer coordinator who report to the organization's board of directors. Additionally, the organizations contracts with some staff such as graphic artists, arborers, carpet cleaners, and roofers (personal communications with Bruce Stebbins, 2009).

The biggest strength of the Beaver Lake Nature Center's organizational structure is its source of funding. Being government-owned and operated allows it to tap into a large pool of resources. The Friends of Beaver Lake also contribute a staggering amount of money. Currently, they contribute about \$350,000 into the budget (Stebbins 2009).

Staffing

The full time staff for both organizations include positions such as business/office manager or volunteer coordinator. Basically these are positions that require a person for the job year-round, and a substantial amount of training and skill.

Part time positions are for positions such as maintenance crew, naturalists, or educators. These types of positions are not needed all the time since they are often used for certain seasons when demand or nature center use is at its peak.

The third and final type of employment used was contracted help. These positions ranged from work that enhances the promotion of the nature center such as graphic artists, to work necessary for the nature center facility itself such as roofers.

Summary

While the larger budget of a government-managed facility offers important benefits, this type of management structure would likely not be the best system for the Nichol's Nature Preserve. Having government backing, although financially helpful, creates the need for more bureaucracy and could lead to less flexibility in programming and site management.

As far as staffing goes, a combination of full time, part time, and contracted help seems like it would be the most advantageous for the Nichol's Nature Preserve. Both Beaver Lake and Baltimore Woods used a combination of these three staffing types, and neither director had any negative comments to make about them. The challenge for the Nichol's Nature Preserve will be to identify the correct balance between full time, part-time, and contracted staff, in order to run the facility efficiently while keeping within a limited budget.

VOLUNTEERS AND TRAINING

Introduction

Information from two nature preserves – Beaver Lake Nature Center and Baltimore Woods Nature Center – was used for this of volunteer support and training.

Volunteer assistance

Both nature centers have a paid volunteer coordinator on staff. Beaver Lake has a full-time coordinator, while Baltimore Woods only has a part-time coordinator. This difference is mostly due to the size of the nature preserves (Beaver Lake is larger facility with more events, while Baltimore Woods is slightly smaller with fewer events). The responsibilities of the volunteer coordinators at both sites are similar. Some responsibilities include: advertising to get volunteers to assist the nature centers, organization of volunteers for various jobs and events, planning of events, and recording volunteer hours.

Benefits of volunteers

There are many benefits of having volunteers to work at a nature center as opposed to having paid staff in all positions. The most obvious benefit is the fact that volunteers are free labor. They willingly give their time to complete various tasks. Another benefit that was frequently mentioned is that volunteers have extremely varied skills. This allows many different positions to be filled by the volunteers that come to the nature centers. The third benefit that was mentioned was the volunteers' enthusiasm for the responsibilities they are given. Volunteers generally volunteer at a facility they feel a strong connection to, and they are subsequently enthusiastic about helping it succeed.

Problems with volunteers

Two main problems were identified with involving volunteers in nature center activities. The first is unreliability. Since volunteers are not paid, they sometimes don't treat their position as they would a paid position. Volunteers at times may not show up, forget to call, or simply be unprepared for the responsibility they are given.

The second problem is unsuitability for the responsibility they are given. In some instances, the volunteers' personality clashed with the task they were supposed to accomplish. One example that was given was a temperamental woman who was assigned to answer phones and sign families up for programs and events. While the woman did her assigned task, her personality wasn't the friendly one the nature center had hoped the volunteer answering the phones would have.

Volunteer training offered

Beaver Lake has extensive training for volunteers available. One training program provided for volunteers is a trail guide program. This program gives volunteers the necessary information to take school groups on nature tours on the trails of the nature preserve. The nature center also supplies volunteers with training for various events that are held throughout the year. One event they provide training for is their annual 'Sugar Bush', which is a maple sugaring demonstration with seven different volunteer stations. The training is provided by the volunteer coordinator, on-staff naturalists, and sometimes by experienced volunteers.

Baltimore Woods offers less volunteer training due to its size. The only training it has in place is simple instructions on how to operate equipment, how to run the gift shop, and other procedural type tasks.

Volunteer responsibilities

Volunteers can take on many responsibilities in a nature center setting. Some responsibilities include:

- Trail maintenance
- Receptionist/office work
- Mailings (newsletters, promotions items)
- Special events
- Garbage pickup
- Trail guides
- Naturalists
- Gift shop
- Baking
- Data entry
- Fundraisers

Acquiring volunteers

The volunteer coordinators from both nature preserves described many different ways to go about acquiring volunteers. The four main ways were through member newsletters, advertisements at the nature center, the nature center website, and through local universities. It is important to match the skills of volunteers with volunteer positions, and to make sure volunteers understand their responsibilities and rights as a volunteer (i.e., with regard to safety and ending their volunteer assignment) before they begin.

Keeping volunteers

Although the volunteer coordinators didn't mention it specifically, volunteer turnover is generally considered a problem for most sites that use volunteers. In order to keep their volunteers coming back, both nature preserves employed three main strategies. The first was to keep the volunteer tasks fun; people are more likely to come back if they are actually enjoying the responsibility they are given. The second was to hold some type of volunteer appreciation lunch or dinner to simply give back to the volunteers who have given the nature preserves so much of their time. The third was to have some type of awards program that rewarded volunteers for volunteering a certain number of hours. The awards ranged from gift baskets to a simple name tag with the number of hours each volunteer had given engraved in it.

EMERGENCY CONSIDERATIONS

Introduction

Emergencies can happen anywhere, and Nichol's Nature Preserve will be no exception. Even if the nature preserve is small and the possibility of an emergency is low, it is important to be aware of potential risks to visitor health and safety. In this section, first possible emergencies in and around Nichol's Nature Preserve are listed, and then proper facilities in terms of each emergency are introduced. Lastly, the need for a first-aid station and trained staff for emergencies within the Nichol's Nature Preserve are discussed.

Possible Emergencies

Possible emergencies in and around Nichol's Nature Preserve are:

- Fires
- Injuries
- Illness
- Floods
- Crimes
- Vehicle accidents

To deal with these emergencies, Nichol's Nature Preserve must have strong connections with the facilities below:

- Fire departments
- Hospitals and medical clinics
- Police
- Vehicle repairs

Fire department

In the case of fire or other health emergency, the Nichol's Nature Preserve would contact the Hancock Fire Department. The Hancock Fire Department is run by members of the local community, and serves the town of Hancock and nearby townships in Pennsylvania. Funding for the fire department is provided by the State of New York. The department owns two ladder trucks, one equipment truck and three ambulances.

Hancock Fire Department

85 E Front St
Hancock, NY 13783-2264
(607) 637-3431

Hospitals and medical clinics

Only small medical facilities are available in the town of Hancock. The major local clinic is Delaware Valley Hospital Family Health which does not provide ambulances and has limited emergency service facilities (patients with major emergencies are often taken to Lourdes Hospital or Wilson Memorial Hospital). In addition, Lourdes Hospital is currently building a clinic on Main Street in Hancock. If an ambulance is needed, the nature preserve must call the Hancock Fire Department. In order to receive

full medical services, patients must go to Lourdes Hospital, Wilson Memorial Hospital, or Binghamton General Hospital in the Binghamton area.

Hancock Family Practice

116 E Front St
Hancock, NY 13783
(607) 637-5700

Lourdes Hospital

169 Riverside Drive
Binghamton, NY 13905
(607) 798-5111

Wilson Memorial Hospital

33-57 Harrison St.
Johnson City, NY 13790
(607) 763-6033

Binghamton General Hospital

27 Park Ave.
Binghamton, NY 13903
(607) 762-2005

Police

Police service within the town of Hancock is provided by the New York State Police; additional service is provided by the Hancock Village Police Department and the Delaware County Sheriff's Office. While 911 service is available in the village of Hancock, there are no 911 operators in the town of Hancock and 911 calls from the area are routed to operators in Delhi, NY. It is best to make contacts with both 911 and the NYS Police if police services are needed.

New York State Police

25 Leonard Way
Deposit, NY 13754
(607) 467-3215

Hancock Village Police Department

85 East Front Street, #8
Hancock, NY 13783
(607) 637-3432

Delaware County Sheriff's Office

280 Phoebe Lane – Suite 1
Delhi, NY 13753
(607) 746-2336

Vehicle Repairs

Several vehicle repair services are available in the town of Hancock.

Dabrescia Motors, Inc.

250 E Front St
Hancock, NY 13783
(607) 637-3541

Don Oralls Garage AAA Truck & Auto Repair

205 Park St
Hancock, NY 13783
(607) 637-3326

Kaplan Chevrolet-Buick, Inc.

125 East Main St.
Hancock, NY 13783
(607) 637-4531

Napa Auto Parts

87 W Main St
Hancock, NY 13783
(607) 637-3430

Past Auto

West Main St.
Hancock, NY 13783
(607) 637-4418

Need of First-Aid Station and Staff Trained in Emergency Services

Some emergency situations at the Nichol's Nature Preserve will require the immediate attention by nature preserve staff. The Nichol's Nature Preserve will need its own first-aid station and staff trained in first aid. Because of the center's small size, keeping trained staff may be difficult. Having nature preserve staff go through Red Cross First Aide and CPR training will be necessary.

Summary

In this section, emergency services providers are listed with their addresses and telephone numbers. Appropriate emergency services are available in the town and village of Hancock, but a time delay may be experienced for medical emergencies requiring patient transportation to Binghamton. A first-aid station and staff trained in first aid and CPR will be needed to provide emergency assistance as quickly as possible to visitors.

MONITORING AND EVALUATION

Introduction

Monitoring and evaluation is necessary in order to observe the progress of the nature preserve goals and development. By utilizing a monitoring protocol, the success or failure of plan implementation can be identified and changes can be made as needed. Monitoring and evaluation should occur over scheduled timeframes (e.g., daily, weekly, yearly) determined by the monitoring information needed.

Mt. Lorreto Unique Area

Mt. Lorreto is located in Staten Island, NY and is one of the NYS Department of Environmental Conservation's (DEC) regional properties on the island. There currently is no nature center on the property but one is planned for the future. Although there is no nature center on the property, there are many programs and events that attract visitors and volunteers. The site is made up of a few interpretive trails which ultimately lead up to a beach that overlooks the ocean. Guided tours are not offered, but along the trail are signs that allow visitors to read information about the history and wildlife of the site.

The interpretive trail is monitored by the forest technician who walks the trail, looking for garbage or debris left by visitors or safety hazards, every other day. Monitoring the trail keeps it garbage free, lowering the possibility of visitor complaint. The cost of monitoring the trails is mainly for staff time.

One project was the planting of one-thousand trees which attracted fifty or more volunteers (ages ranged from 8-65) from the island. The involvement by volunteers was monitored through a volunteer sign-in sheet which was signed before planting. It included columns for the name, age, and emails of volunteers. This sheet was used to create an email listserv which was then used to email people about future events. The regional forester and assistant forester were in charge of monitoring the success of the plantings. Maintenance (i.e., weeding and replanting some of the seedlings) was needed by the forest technician following the planting. The technician also took notes on the progress of plant growth and relayed it back to the regional forester. Monitoring was conducted every few weeks until the seedlings were established.

The number of visitors who visit Mt. Loretto is estimated for those who sign the trail registry. The registry asks visitors to provide: name, age, number in group, email, phone number and comments. Those who sign in are entered into an email listserv; information about programs and events is emailed to them. The trail registry sheets are collected once a week by a forestry technician and taken to the regional forester. Monitoring guest's comments and providing them with program/event notices helps to improve the site and increase visitor attendance. Minimal costs are attributed to the registry.

Newcomb Visitor Interpretive Center (VIC)

The Newcomb Visitor Interpretive Center is located in the heart of the Adirondacks in Newcomb, NY. The Adirondack Park Agency owns the center; funding is provided by New York State. Because of the budget cut backs at the state level, the VIC, which once employed seven staff members, is now down to three full time employees: maintenance, environmental educator, and director. During the summer, two to three interns are hired to assist the full time employees. Since the state owns the nature center, prisoners from the local minimum security prison are sometimes utilized for construction of projects such as bridges or roads.

Since this nature center is already an established institution, it performs little monitoring related to visitor management. During the summer, more programs and events take place at the VIC and there is

a constant influx of visitors. One monitoring technique that is used is to identify where visitors come from. The staff at the front desk check license plates and ask visitors for this information. There is also a guest book used by visitors to sign in. According to the director, about 95% of the visitors who pass through the nature center sign in. The guest book is specifically designed to collect contact information so that visitors can be informed through email of guest speakers, programs, and events. Monitoring where visitors are coming from and the guest book allows the director to know how far people are traveling to get to the center and increases visitor attendance. The cost of monitoring this is the time and effort spent.

Although there are no formal visitor surveys conducted at the center, college students from around New York State have come to the visitor center to perform surveys on visitors and often share this information with the center. The visitor center in its early years did perform an extensive formal questionnaire survey to the general public; their incentive to the public for completing the survey was a chance to win a gift basket. Conducting this questionnaire after the opening of the center provided a wealth of information for the director so that she could improve the visitor center and the programs and events provided. This survey required staff time, mailing expenses, and the expense of the incentive in order for visitors to participate.

FUNDING OPPORTUNITIES

Introduction

The purpose of this report is to assess possible financial assistance for the development and future operations of the Nichol’s Nature Preserve. Several organizations are discussed, followed by descriptions of pertinent grants. The contact information for these organizations and grant sources is listed in two tables below their respective descriptions.

Government Agency Support

The NYS Office of Parks, Recreation and Historic Preservation (OPRHP) has several programs that could be used for the Nichols Nature Preserve. First, through OPRHP’s Parks Program, funds can be acquired to develop or restore natural areas for use as parks. Second, a Community grant Program that provides funding for a diversity or recreation-related projects throughout New York State. Trail and facility development projects can be funded through this program. Matching funds are permitted. Third, the Zoos, Botanical Gardens, and Aquariums Program could be used to fund wildlife collections or interpretive efforts at the Nature Preserve.

The US Department of Transportation also offers grants through its Recreational Trails Program. This program is designed specifically to enhance facilities and trails that are open to the public and part of existing or proposed trail routes. Since the Nichols Nature Preserve is located along the Delaware Scenic Byway, it would likely qualify for this type of grant. Details of this grant can be found through the website listed in Table 14.

The State Administered Community Development Block Grant Program (CDBG) (through the U.S. Department of Housing and Urban Development; Table 14) provides funding that can be used for the acquisition and construction of public facilities, including recreation facilities. Public facilities using this grant in particular have to show that the facility will enhance the suitable living environment for people of low to moderate incomes.

Table 14. Government agencies.

Agency Name	Website
NYS Office of Parks, Recreation and Historic Preservation	http://nysparks.state.ny.us/grants/state-funded-programs.aspx
US Department of Transportation	http://nysparks.state.ny.us/grants/recreational-trails/default.aspx
US Department of Housing and Urban Development	http://www.hud.gov/offices/cpd/communitydevelopment/programs/stateadmin/

NGO and Foundation Assistance

The Nichols Nature Preserve could also receive support through the Americorps Program (Table 15). Through the State and National program, the preserve would need to put a heavy focus on education and interpretation. The Americorps VISTA is a grant system where-by an Americorps member would be brought on staff at the Center to assist in education, interpretation, or community outreach.

The Norcross Wildlife Foundation provides grants for land protection, program-related equipment, and public education materials. Grant requests can be no more than \$10,000.

Parks & Trails New York is a statewide organization that seeks to support the development of trails and parks in New York through its Capacity Building Grants Program. Grants of up to \$3,000 are given.

The Toshiba America Foundation provides grants to schools seeking to enhance science classrooms. These grants would be useful for obtaining the science lab equipment needed for the classroom area of the science center.

The Captain Planet Foundation offers small grants (\$250-\$2,500) for the development of hands-on programs for children and teens. This grant could also be used to buy equipment that will be used by children.

Table 15. Foundations and NGOs.

Agency Name	Website
Americorps State and National	http://www.americorps.gov/for_individuals/choose/state_national.asp
Americorps VISTA	http://www.americorps.gov/for_individuals/choose/vista.asp
Norcross Wildlife Foundation	http://www.norcrossws.org/Foundmain.html
Parks & Trails New York	http://foundationcenter.org/pnd/rfp/rfp_item.jhtml?id=227200038
Toshiba America Foundation	http://www.toshiba.com/taf/about.jsp
Captain Planet Foundation	http://www.captainplanetfdn.org/grants.html

Summary

Several organizations and agencies show great promise as sources of funds for the Nichols Nature Preserve. Other grant opportunities may become available as future programs efforts at the Nichols Nature Preserve become more clearly defined.

NATURE PRESERVE RECOMMENDATIONS

Introduction

The Nichol's Nature Preserve should be a place where local school children and families can learn about nature through hands-on activities, exhibits, and programs. One goal of this plan is to provide access for residents and visitors to the natural resources on the nature preserve property through programming and facilities by 2013. In order to accomplish this goal, a phased development for the nature preserve is recommended.

Phase 1: Getting started.

- Establish the nature preserve's organizational structure (i.e., as a subgroup) within the Hancock Community Educational Foundation.
- Leaders of the Educational Foundation will need to organize volunteers to help with fundraising. Fundraising will be needed for hiring a director and trail construction. Consider sponsorship, donations, and grants in fundraising efforts.
- Create a promotional campaign to generate community support and create a promotional and interactive website.
- Hire nature preserve director.
- Begin monitoring the site (e.g., water levels during flood times, invasive species).
- Obtain a permit from the ACOE for trail construction.
- Create a proposed budget for nature preserve program operations.

Timeline: Year 1

Phase 2: Initiate programming.

- Examine liability considerations and obtain suitable insurance coverage prior to conducting programs; have emergency/risk plan in place.
- Increase volunteer participation and train volunteers to conduct programs and continue monitoring of the site.
- Create programs for use in the schools and promote them in Hancock and surrounding schools. Conduct programs in schools and on other sites.
- Construct the nature trail. Use water level monitoring information to establish the needed height of the trail surface.
- Have the village install a "slow for children" sign on Main St. in front of the site.
- Conduct programs on the nature preserve site after trail construction is complete.

Timeline: Year 2

Phase 3: Building design.

- Work with an architect on nature preserve building design. Consider incorporating underground electrical service into plans, as well as permeable paving materials for parking.
- Consult with the village planning board on zoning and building permits, ACOE for wetland permits, and DOT for trail use on the right-of-way.
- Continue fundraising for nature preserve building. Seek grants and other state aid (e.g., legislator line items) for building expenses.
- Monitor and maintain trail through volunteer assistance.

Timeline: Year 2-3

Phase 4: Building construction

- Begin building construction.
- Begin exhibit fundraising and design. Consider sponsorship from local businesses and organizations.
- Once the building classroom and restrooms are complete, begin inside programming.
- Hire a seasonal educator to increase onsite programming.
- Promote use of nature preserve building for other community events.

Timeline: Year 4-5

Phase 5: Ongoing monitoring, maintenance, and fundraising

- Continue fundraising to support maintenance and programs.
- Assess visitor use, programs, budget needs, facilities, and staff.
- Continue with volunteer recruitment and training.

Timeline: Ongoing

ALTERNATIVES FOR BUILDING DEVELOPMENT

Introduction

In order to better assist the Hancock Community Educational Foundation with its decision on the type of nature preserve building to construct, three alternatives are presented below according to level of development (i.e., low, moderate, and high). Recommendations for the trail system are presented separately. All levels of development include locating the nature preserve building so that it will be screened from Main Street and allow a view of the nature preserve property from inside. All levels also recommend locating the building in the southeast quadrant of the property, tucked into the wooded area, behind the residence to the east. Locating the building here will block it from view of neighbors, create a pleasant entry experience by allowing a line of site to the more biologically diverse portion of the site, and will take advantage of passive cooling of the building (reducing energy consumption) by the shade created by the wooded area to the east. Building the science center on stilts is also suggested to reduce long-term impacts on vegetation and prevent the possibility of flooding.

“Green” building practices should be used whenever possible for the Nature preserve building. Designing this nature preserve using sustainable practices would create an additional educational opportunity to teach people about environmentally friendly construction. Construction of the trail and other site features affecting the wetland area will have to be low-impact in order to meet Army Corps of Engineers standards. The parking and building areas should be constructed using materials and construction methods that minimize environmental impacts. Permeable paving for the parking and sidewalks, and reclaimed timbers for the building are just two techniques that could be highlighted for visitors and provide a teaching opportunity. Constructing the classroom building on a raised platform or stilts would reduce long-term impacts on the vegetation on the site and reduce the potential for flooding of the building.

Water use and water quality issues should be a major theme in the construction of the nature preserve given its focus on wetlands. A green roof would help filter rain water running off of the roof while also helping the building become one with its surrounding environment. Water running off the parking lot should be held in rain gardens to allow for natural infiltration. These gardens could be part of the screening planting used along the road and between the parking lot and nature preserve. This would help people see the aesthetic value of rain gardens while also educating on the importance of letting water infiltrate onsite. On site water infiltration helps to filter water while also preventing flash flooding during storm events, something that has historically been a problem in Hancock. Teaching people how to construct a rain garden and what plants to use could help increase the use of this valuable technique. This idea could spread given the town’s flooding history and dependence on the Delaware River for water, recreation opportunities and tourist income.

Composting toilets are rarely used in town settings such as Hancock, but their use in the nature preserve could help remove the stigma against this form of waste disposal while also saving money on initial construction costs. Solar-powered composting toilets would provide a state-of-the art look at waste disposal for visitors. If composting toilets were deemed unsuitable for this location, the use of rainwater catchments for flushing water would be another method of minimizing environmental impacts.

1. Low Level of Development

The low level of development includes a wooden pavilion that would serve as the outdoor classroom (Figure 1). A hexagonal wooden structure with sides of 20’ in length would provide shelter for five or six picnic tables depending on configuration and could serve as an outdoor classroom space for groups of

up to 30 children. A small restroom building adjacent to the pavilion will be needed. The pavilion and restrooms should be constructed just north of the area currently maintained as mown lawn. This location will have the important benefit of buffering the pavilion from both the traffic of Main Street and the neighboring residential properties, allowing more of an “immersed” experience in the natural setting. Figure 16 shows a potential bus parking location near Main St.; bus drop off could occur at the right-of-way for the Family Dollar store instead, with bus parking in an adjacent parking area (permission of the parking lot’s owner would be necessary). Two parking spaces for people with disabilities would be provided in the parking area adjacent to Main St. This site plan also calls for an information kiosk to be constructed at the northern end of the parking area, at the trailhead (Figure 17).



Figure 16. Site plan for a low level of development.

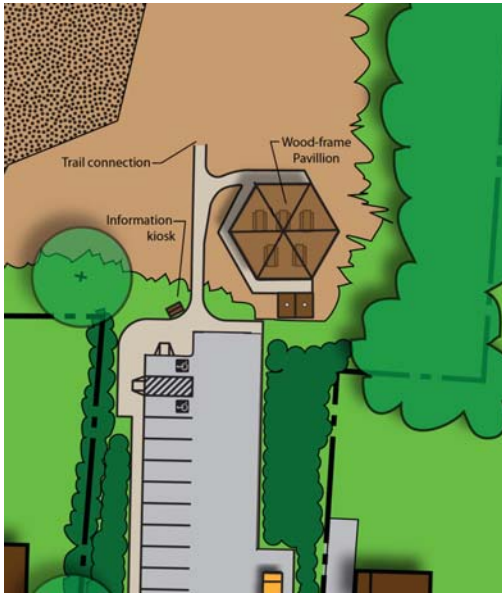


Figure 17. Placement of trailhead kiosk.

2. Moderate level of development

The moderate development level of the Robert W. Nichol Nature Preserve and Science Center would provide a comfortable indoor educational building with as little environmental impact as possible. In order to minimize environmental damage while maximizing accessibility, the nature preserve building should be placed as shown in Figure 3 with parking adjacent to Main St. The building and parking must be located at least 10 feet away from the side property lines according to local zoning ordinances. Ten parking spots could fit on the site, but removing some parking spots in favor of screening the lot from the road is also a possibility.

Setting the nature preserve back from the road would help visually remove it from the surrounding development, maximizing the feeling of immersion that visitors would have and improving the nature experience. Planting trees and shrubbery around the building would also enhance the “natural” feeling

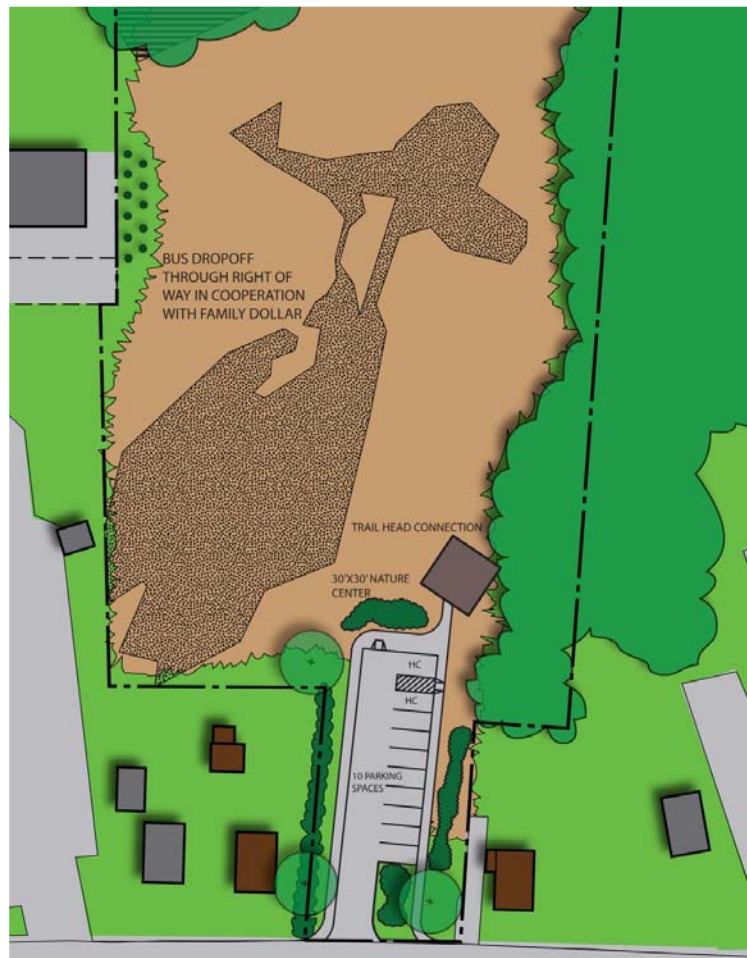


Figure 18. Site plan for a moderate level of development.

of the site. The building itself should reflect the wetland resources onsite and the historic architecture of other adjacent buildings on Main Street. Using local materials such as a bluestone façade and local timber would be a good way of creating an aesthetic appropriate for Hancock while also involving local industry. The inclusion of a green roof would help the building blend into the surrounding environment while also being an environmentally friendly addition.

The sidewalk from the parking lot should gently curve to obstruct views of the street. The south side of the building should have large enough windows to maximize day lighting. Since most visitors will be arriving during the day, utilizing day lighting would help minimize electrical use. Windows along the north side of the building would also help take advantage of the setback location by creating educational opportunities. A direct visual connection to the wetlands would work well in conjunction with verbal lessons and interpretive displays located within the center.

The footprint and layout of the building can be relatively simple to create a functional nature preserve at a moderate level of development. A one-room classroom with bathroom facilities would be sufficient to meet the needs of this center. A building with a 30x30 footprint would allow enough space for educational facilities while still housing a closet for storage and two handicap accessible bathrooms.

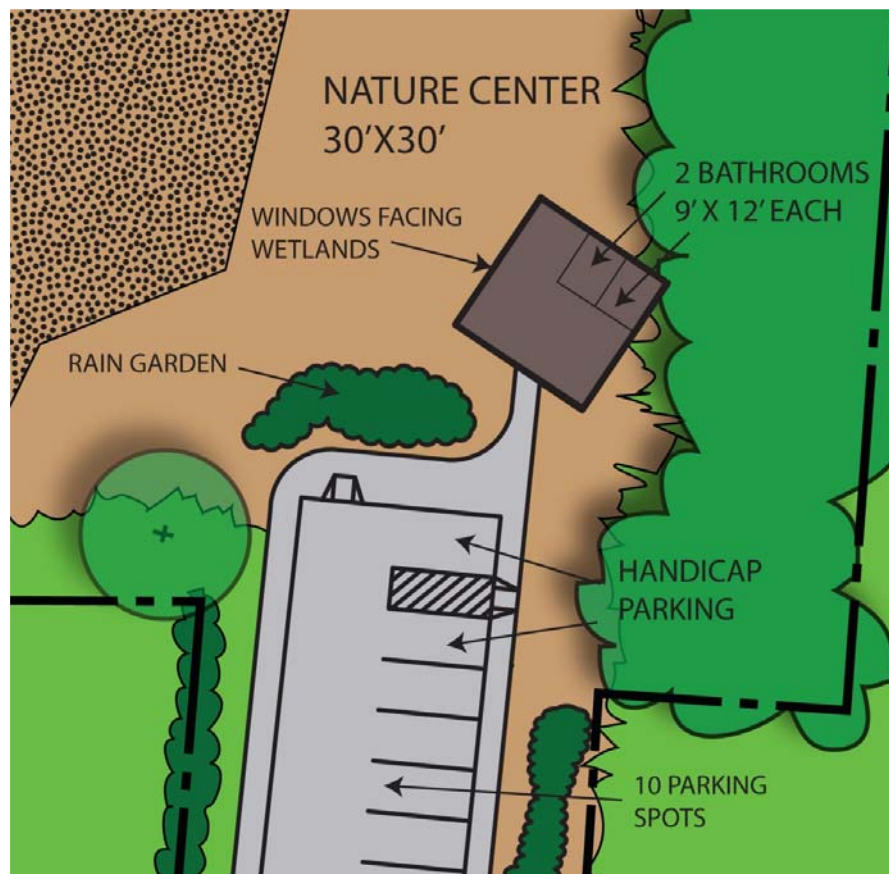


Figure 18. Building detail

3. High level of development

Developing a simple building layout will allow easy navigation through all rooms and space, accommodating an average class size of 25 students. The exhibit space should be the first room visitors enter to create the most exciting and interactive experience for all visitors. This space should include a small science library (i.e., one or two book shelves) containing field guides and other information that would be useful to both students and visitors. A brochure rack containing information about other local natural areas and historic sites would also be useful here. The exhibit space and classroom should take advantage of the best views onto the property. These areas could also be decorated with for-sale artwork by local artisans.

The classroom should either have a direct exit to the outside or an easily accessible exit for easy movement of equipment and specimens between the outdoors and the classroom. There should be a minimum of two exterior doors to allow for emergency egress from the building.

The office should be located near the entry of the building to allow nature preserve staff to easily receive visitors. A gift shop, located adjacent to the office, could be used to sell local wildlife- and nature-related artwork and crafts, benefitting local artisans. The men's and women's restrooms should be large enough to accommodate at least two stalls each, one of which will be handicap accessible (a minimum of 5' x 5' with a 34-inch wide door).

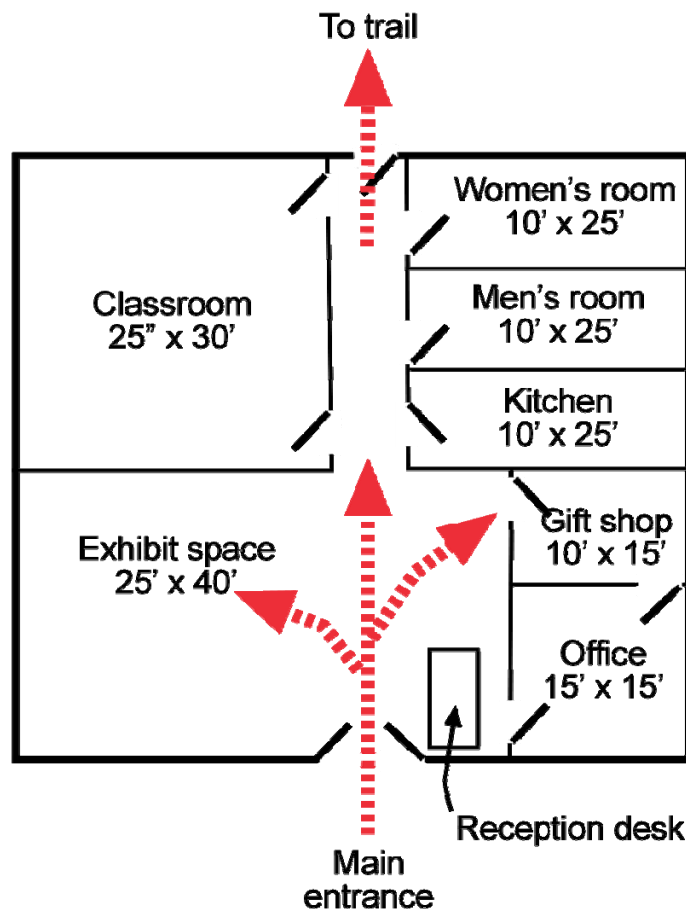


Figure 19. Recommended nature preserve building layout for high level of development. The red dashed arrows indicate visitor circulation through the building.

RECOMMENDATIONS FOR SITE ENTRANCE AND PARKING

Create a single entrance to the Nature preserve property off West Main St. The property is small, and a more coherent experience will be provided by directing visitors through a single “gateway” onto the site. This will make monitoring of the site easier and will help to define the nature preserve as a special place. School group access may be needed from the Family Dollar parking lot, but the official entrance should be on West Main St. An entrance sign should be placed near Main Street that clearly identifies the entrance to the Nichol’s Nature Preserve.

Locate all parking off West Main St. The portion of the site off West Main Street that is currently maintained as mown lawn is the most logical place to locate parking for the Nature preserve. This area can accommodate up to ten spaces for cars. At least one of these spaces should be handicap-accessible. This parking area is also important for emergency and maintenance vehicle access. The parking lot should be paved with an appropriate permeable material, and graded so that any runoff is directed into a filter strip adjacent to the small vegetated swale on the southeast corner of the property. Routing electrical lines underground during the construction process would help remove them from view on approach to the nature preserve.

Incorporate sustainable strategies into the parking area. Consider the use of permeable paving materials for the parking area. The use of permeable paving materials will reduce the amount of stormwater runoff generated from the parking area and will allow runoff to be cleansed as it filters down through the soil and recharges groundwater supplies. However, permeable paving materials generally have lower load bearing capacities and may not be suitable for areas that will receive higher amounts of vehicle traffic or have to support the weight of large vehicles such as school buses (an engineer or architect should be consulted when considering options for paving materials). In addition to using permeable paving, other methods for collecting and filtering rainwater should be used near the parking areas. These methods could include filter strips, rain gardens, bio-detention areas, or swales.

Develop a wheelchair accessible route between the parking and nature preserve building. The Americans with Disabilities Act requires a fully accessible (36 inch wide) route between public parking areas and buildings. Given that the proposed building site is approximately 6 to 8 feet below the level of the parking area, the design of this route will depend on whether the building is raised on stilts as recommended or is level with the ground. If it is raised on stilts, a raised boardwalk connecting the parking area to the building is suggested. If the building is not on stilts, a ramp will be needed to bring visitors down to the building level. Constructing the ramp of wood would help it blend in with the setting.

Use vegetation to screen views between the Nature preserve and neighboring properties. While part of the unique character of the nature preserve is its location within the village, it is desirable to provide some screening between the property and its surroundings. This is primarily to enhance the experience for the nature preserve visitor, but also out of consideration to nearby residents. It is particularly desirable to screen the restroom facility and parking area to the greatest extent possible, ideally with native plant material. For safety reasons, care should be taken to maintain clear views at the entrance to the parking area.

Bus drop-off. Three options for bus drop-off and parking should be considered. Creating a bus drop off with parking near Main St. would require a large amount of room, entailing a negative visual impact but being the most convenient for visitors (Figure 20a). This will allow buses and other vehicles to drop-off passengers at the nature preserve entrance. A downside to this option is that a large area of

paved surface would be necessary. The next option is to create a T-shaped turnaround for buses east of the Family Dollar building (Figure 20b). This option will require less paved area, but visitors will have to walk through the trail system to get to the nature preserve from this drop-off point. The third option is to collaborate with Family Dollar to allow passengers in busses to be dropped off in the Family Dollar parking area (Figure 20c). This option will greatly reduce the amount paved area necessary, but visitors would need to walk through the trail system to get to the nature preserve. For any parking configuration, the recommended amount of parking stalls for standard passenger vehicles is ten, with two of them being designated as handicapped spots (1 accessible site for every 25 regular spots is required by law). Space should be left in case more parking spaces become necessary at a later time. Any entry drive or parking area should be blocked from the view of neighboring properties with the use of vegetated screens.

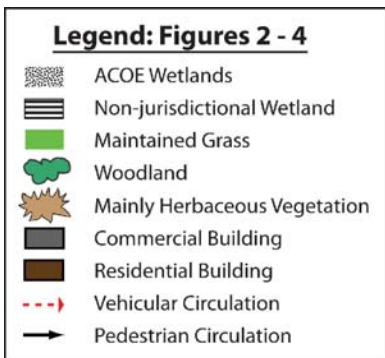


Figure 20a, b, and c. Possible designs for bus drop-off locations.

TRAIL DEVELOPMENT

A single loop trail with two spur extensions (i.e., along the DOT right-of-way and connecting the main loop trail with the right-of-way in the Dollar General parking lot) and a cross-over section (splitting the loop into two parts) is recommended for this site (Figure 21). Because some areas of the property retain water throughout the year, two possible trail surface types are possible: the turnpike and the boardwalk.

The turnpike type of trail elevates the trail using fill so that it sits higher than the surrounding water table. Gravel is used to fill between two 6"x6" timbers or logs, raising the trail surface above the ground and enabling drainage. Geotextiles or geoweb (essentially a biodegradable fabric) are often used in these types of trails to separate the soil from the gravel. This mesh keeps the fill from sinking into the soil and ensures a longer life and less maintenance for the trail. To ensure the base of the trail remains durable and can support handicapped visitors, using fine gravel as the fill for the top layer of gravel is recommended.

The second type of trail surface is the boardwalk. This design can be built up high enough so it will not restrict the flow of water during seasonal flooding and vegetation is still able to grow beneath it. While this type of trail would be more expensive to construct than the turnpike style, it would also have a lower impact on vegetation on the site, especially if the boardwalk is raised. This design also permits accessibility to all visitors. Due to the sensitive nature of this wetland, only untreated wood (e.g., cedar) or plastic wood should be used for a boardwalk; chemically-treated woods can leach harmful contaminants into the wetland.

A potential design for the trail is shown in Figure 21. The boardwalk style is preferred because of the potential for flooding on the site and the reduced impact on vegetation; however, a combination of boardwalk and mudsill could be used. Areas under low threat of flooding on the southeast side of the property could use a mud sill, but only if further observation of this area indicates no flooding threat. To permit access to all visitors, the width of the trail surface (i.e., tread width) should be no less than 36 inches. If 6"x6" lumber is used for edging (it is recommended), the overall trail width will need to be widened to 48" to maintain a tread width of 36 inches.

Three wide observation areas are recommended along the trail loop as shown in Figure 21. At these three locations, the trail should be expanded into a rectangular platform (a minimum of 15 feet wide by 20 feet long in size is recommended) to enable a passing area for wheelchair use and for class discussions.

Visitor safety along the trail is essential. Place signage along the trail and in other locations on the property to alert visitors of potential risks. A boardwalk railing will be needed if the height of the trail surface is greater than 24" above the ground, or as local ordinances dictate.

Wildlife habitat enhancements should be pursued for this site. A pond is recommended for construction on the site. A variety of programs could be developed based on this feature for school groups including water sampling, and aquatic insect collecting and identification. Nesting boxes, wildlife blinds, and native plantings should all be utilized in order to attract different forms of wildlife. With the assistance of school groups, invasive species should be gradually removed from the site in order for native plants to recover.

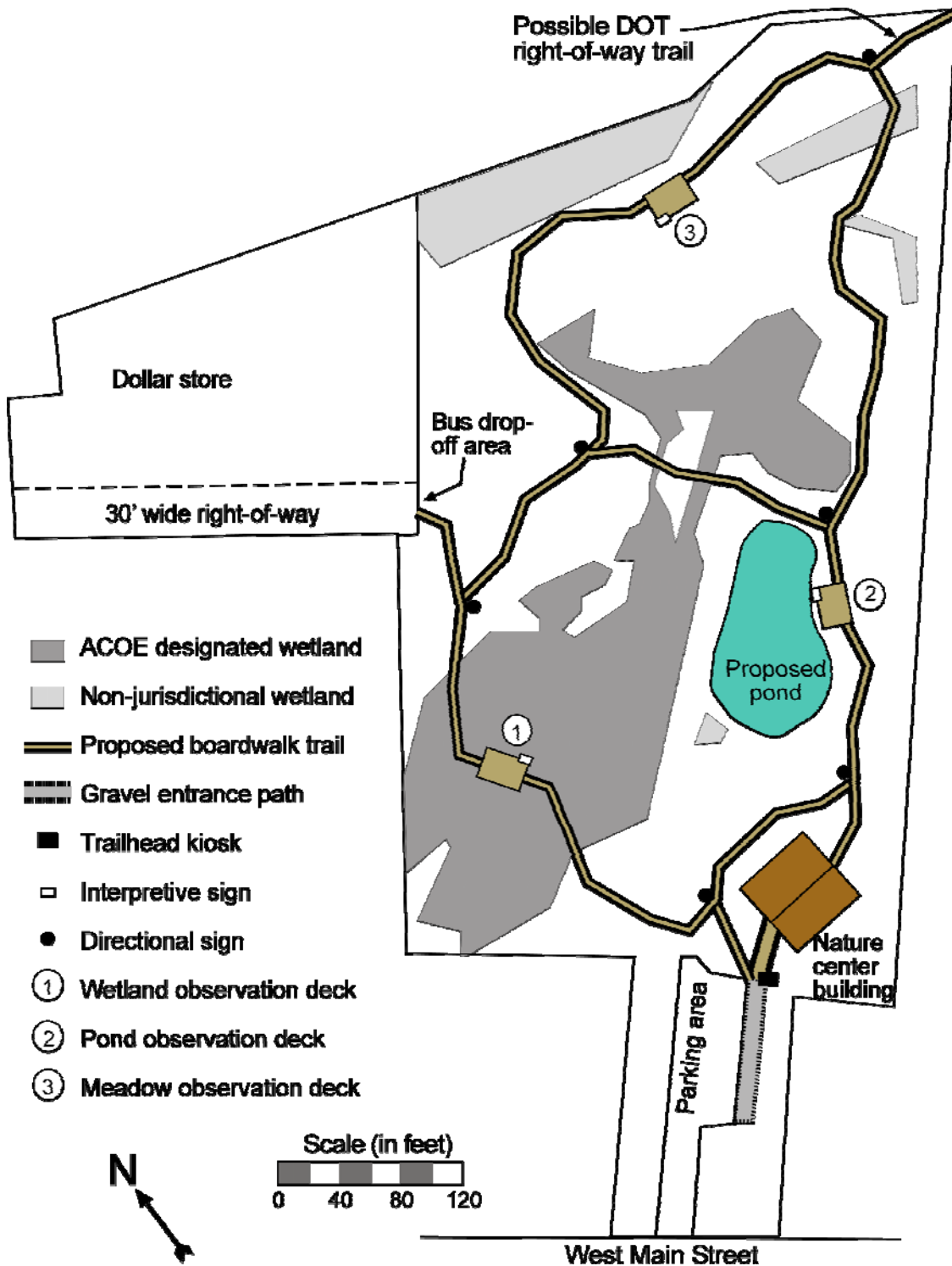


Figure 21. Recommended trail route and site design. "ACOE jurisdictional wetland" refers to a federally designated wetland on which any changes are regulated by the Army Corps of Engineers (ACOE). Non-jurisdictional wetlands are not regulated by the ACOE.

The estimated trail length is approximately 1700 feet; the trail route should be flagged and measured to obtain the exact length in order to better estimate construction costs. If red cedar is used for the trail's boardwalk and the boardwalk is raised not more than two feet above the ground, the estimated cost is high at \$70,000 (not including labor or design by a civil engineer; Figure 22). The use of local timber products could help to greatly reduce this cost, but may not have the durability of red cedar. Using a mud sill (Figure 23) rather than a raised boardwalk could also help reduce lumber costs by about \$6,000, but may not elevate the trail enough during times of high water levels. Monitoring the water levels on-site (especially in the spring) will be necessary in order to determine if a mud sill style boardwalk can be used. A turnpike style trail could be used for drier sections of the trail to further reduce costs, but will not blend in with the natural setting as well as a boardwalk. Using volunteer labor will be necessary to keep construction costs low.

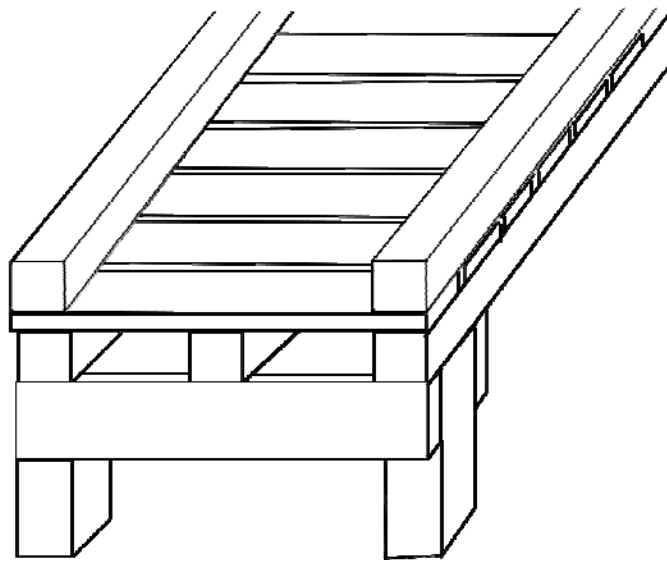


Figure 22. Traditional boardwalk style trail construction.

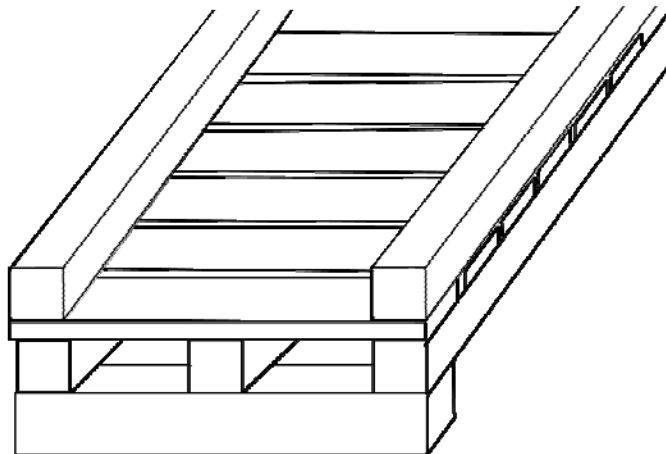


Figure 23. Mud sill boardwalk.

ORGANIZATIONAL AND STAFFING RECOMMENDATIONS

Organize the nature preserve within the Hancock Community Educational Foundation. The Hancock Community Education Foundation is already a well established organization in the community of Hancock. Having this 501(c)(3) organization act as the parent organization for the Robert W. Nichol Nature Preserve and Science Center would reduce the amount of time and money involved in creating a separate organization, and would be highly advantageous in terms of financial and community support. In addition, the volunteer base that the HCEF could provide will be essential for the early phases of nature preserve development. In the future, creating a separate 501(c)(3) organization for running the nature preserve may be needed as nature preserve programming needs increase.

Hire a director. The Robert W. Nichol Nature Preserve and Science Center will need a person in charge early in the development process. This person will make the majority of decisions and will represent the nature preserve in both the community and the Hancock Community Education Foundation. Therefore, this person must be a knowledgeable member of the community, willing to work through uncertainty, be able to work on a part-time and seasonal basis, and have a substantial understanding of the administrative and educational needs of a nature preserve.

Hire maintenance employee(s). Having a staff member assigned to maintenance is necessary, and should not be the responsibility of volunteers. Either a part time or contracted employee should be hired for this position.

Hire educator(s). As visitation to the Robert W. Nichol Nature Preserve and Science Center increases, it will become necessary to have a staff person on hand that has experience in conducting educational programs. Well trained volunteers may be acceptable substitutes in the early phases of nature preserve operations; however, when funds become available, it is highly recommended that at least one part time educator is hired. This person will be qualified to answer any questions that visitors may have, offer guided visits, and conduct programs in local schools.

Staff training. Train staff of the Nichol's Nature Preserve so that they can properly act in emergency situations. Staff training in first aid and CPR will be needed.

First-aid kit and AED. A first-aid kit should be available onsite in the case of small injuries and illnesses. The majority of Nichol's Nature Preserve visitors are school students, who get injured easily. Preparation of a first-aid kit and a sign indicating the location of a first aid station is an easy and effective way to cope with these cases.

In addition, the nature preserve should be equipped with an AED (Automated External Defibrillator) in the case of heart attack. The location of this equipment should also be well marked in the nature preserve building and staff should be trained in its use. One AED costs approximately \$1,245.

Staff guidelines in emergency situations. Nature preserve guidelines for emergency services and emergency contact information should be compiled in one binder. The binder should contain the phone numbers of emergency services, the location and proper usage of emergency equipment, and guidelines for what to do and how to act in emergencies.

VOLUNTEER RECOMMENDATIONS

Acquire a volunteer coordinator. Finding a good volunteer coordinator during the early stages of the nature preserve development will be critical. Due to a low budget, volunteers will be a necessary asset for the nature preserve. The volunteer coordinator's responsibilities should include: recruitment of volunteers, development of volunteer responsibilities, and organization of volunteers during events and activities, as well as recording total volunteer hours. It may be necessary to set aside a portion of the budget to pay a part-time volunteer coordinator during the early stages. However, it may also be possible to find a suitable volunteer for the position as well (this would be the most ideal situation for the nature preserve). Suitable volunteer coordinators should have strong organizational skills as well as public relations skills. One potential resource for finding a non-salary volunteer coordinator is to partner with Americorps to find a student who would be available to give his/her time in the summer months to develop the volunteer program. After that point, it may be possible to have a permanent volunteer take over the position once the volunteer responsibilities listed above are established.

Actively pursue volunteers. Promotion of the nature preserve and volunteer opportunities at the nature preserve will be necessary for the success of the volunteer program. Using different forms of media is important since different demographics respond to different forms of media. Information and volunteer sign-up forms should be provided in the member newsletter and local newspapers, at the nature preserve, on the preserve's website, and at local universities, schools, and events. The promotion of these volunteer opportunities will have to be persistent, as volunteer levels will fluctuate.

Develop training and guidelines. Once a volunteer coordinator is in place, guidelines and training programs should be developed. The training programs will depend on what type of programs the nature preserve wants to have, but tour guide and emergency/first aid training should be provided at the very least. Simple volunteer guidelines should also be established and documented. Things to include in these guidelines include: how to answer the phone, how to sign up volunteers, how to enroll people in programs, how to clean the facility, how to input data, how to lock the building, and how to evaluate programs, among other things that will come up as the nature preserve progresses.

Develop strategies to keep volunteers. One of the main problems for organizations dependent on volunteers is volunteer "burn-out" which occurs when volunteers are overworked and underappreciated. It will be important for the volunteer coordinator to make sure that volunteers feel appreciated and are also having fun doing the tasks they are assigned. Volunteers should be matched to tasks that suit their skills, and also matched with something they enjoy doing. The nature preserve should also plan events that are aimed at showing appreciation for the work of the volunteers. Volunteer appreciation lunches and dinners are a great way to accomplish this. The nature preserve could also set up a reward program based on the amount of hours that volunteers give at the nature preserve. Rewards could be something simple like a t-shirt or bumper sticker, or simply a name tag with the volunteer's name and the number of hours they have volunteered at the center. This will instill pride in the nature preserve by the volunteers.

Assistance from local scouting organizations: Assistance in building and maintaining facilities could be acquired from these organizations. Certain criteria must be met for scout awards (specifically projects with extensive community service components). By getting these groups involved, work could be done that would benefit both the nature preserve and the scouts themselves.

EDUCATIONAL PROGRAM RECOMMENDATIONS

Establish Age-Based Programs. Children of younger ages can grasp topics presented to older children if simplified in a way that appeals to the knowledge level of the audience. Educational materials developed for the nature center should be adapted to meet the educational needs and interests of students of different age and ability levels. By rewording demonstrations and incorporating simplified hands-on activities, younger school children would be able to have equally rewarding experiences as middle and high school students. Below in Table 16 are five examples of programs geared towards specific age groups, yet covering similar topics.

Table 16. Sample programs for different age groups.

Age Group	Program
Pre-Kindergarten	<i>Sniff, See and Hear the Wetland:</i> Using our five senses, we learn about our wetland! Listen to frog calls and bird songs and explore the wetland for colorful flowers and leaves. Don't forget to smell the flowers!
Kindergarten – 2 nd Grade	<i>Winter Wetlands:</i> Do you know what wetland animals do when snow falls and the water freezes in the winter? Ever wonder where the birds go when it is cold? Embark on a journey out in the snow looking for animal signs. Join us inside our center and learn what frogs and turtles do to stay warm, and learn about hibernation and migration from some very talkative guests.
3 rd – 5 th Grade	<i>Wetlands Next Door:</i> Ever wonder what is so special about a wetland? Explore the edges of the water and within the wetlands, collect animals and learn how they can live their lives in the water and discover why wetlands are not only important to wildlife, but people as well.
6 th – 8 th Grade	<i>Wetland Succession:</i> Investigate the edge of the wetland, surveying plant and animal communities. Notice a difference between the wetland and the forest? Identify pioneer, intermediate and climax species and learn how to recognize examples of primary and secondary succession.
9 th – 12 th Grade	<i>Discover Our Wetland:</i> Do you know how scientists study and classify wetlands? Identify the wetland boundaries by taking plant and soil samples, learn how to assess water quality by looking at macroinvertebrates and sample the water for pH levels and dissolved oxygen.

Establish in-school programs. The building of a nature preserve does not occur until later phases of development within the property plan; however, interpretive programs held in and outside local schools can be developed within year one. After nature preserve development, the nature preserve building will likely only have space for 20 – 30 students at a time. With a program developed for use in the schools, nature preserve educators can provide instruction to larger numbers of students. If the low development plan is established for the nature preserve, an indoor classroom would not be instructed, leaving only an outdoor classroom (not be a reliable year-around site for educators to use). Schools could provide year-around sites for interpretive programs.

Establish the nature preserve facility as a “science center.” Besides being an important location for nature observation, the Nichol’s Nature Preserve should provide indoor facilities that can be used for simple laboratory experiments. Basic equipment such as digital stereoscopic and compound microscopes that can be connected to a computer and classroom projection system will be needed. Other equipment includes a lab-style sink and lab tables (preferably ones that can be moved to the edge of the classroom when classroom style seating is needed). A smart board for class discussions is also recommended. Using the outdoor environment as lab space is also recommended. Equipment such as dip nets, insect nets, and field guides will help students learn from the environment. Insect jars (for live capture only) and aquariums (for temporarily housing amphibians or reptiles) will be needed for closer study of animals.

Create exhibits in nature preserve building. Including exhibits in the nature preserve facility will be important at both the moderate and high levels of nature preserve development. For the moderate level of development, exhibits will be placed around the perimeter of the classroom space; a separate exhibit room is recommended for the higher level of development. It is important to create exhibits in and outside of the nature preserve building that are interesting to both children and parents and that encourages return visits. Some exhibit ideas include:

- ***Sound domes.*** Installing sound domes inside the building, to project the sounds of native species. This will allow visitors who are not walking the trail to have a close experience to what is really seen and heard in the wetland.
- ***Mural.*** Have interpretive graphics painted on the walls, displaying images of plants and animals that are found in the wetland. Clear exhibit boxes should be installed onto the mural to provide a three-dimensional view of wildlife and vegetation.
- ***Interactive displays.*** Standing, interactive displays with facts about the wildlife and plants found in the wetland, meadows, and pond of the nature preserve should be installed throughout the exhibit space. A panel giving visitors information about the nature preserve’s guidelines should be placed inside the entrance to the building.
- ***Live animals and plants.*** During the summer months, nature center staff should consider maintaining native plants and live animals inside the nature preserve building for use in programs.
- ***Teaching Station.*** This station, consisting of a demonstration table, would provide space for experts to teach visitors about the wetland’s features and functions using charts, cards, worksheets, demonstrations, and other teaching materials. Take-home materials and projects should be made available when possible.
- ***Scale diorama (interpretation of wetland).*** A three-dimensional scale model of the nature preserve property would show the wetland’s functions, biodiversity, and wildlife habitat. The dioramas would be useful for visitors who are really interested in learning visually but do not have much time to walk the interpretive trail.
- ***Compost/vermicompost (i.e., worm composting) structure.*** Having this type of structure at the nature preserve is interactive, educational, and supports a theme of sustainability.

Furthermore, constructing and maintaining these structures would require little investment and energy on the part of the staff, but would be useful for engaging the public in a sustainable activity.

- **Information station.** A corner of the exhibit area of the nature preserve building should be dedicated to educating the public about local and regional natural areas and resources. A touch-screen computer with a map of the Catskill Region would be useful for visitors wishing to tour other natural areas.

Invitations to surrounding school districts. Once the Hancock school programs are developed, invitations to outside school districts would attract more children to the wetland nature preserve. Not only would children be able to take field trips to the nature preserve, educators could transfer their in-school programs developed in Hancock to other school districts, providing a hands-on experience to children not only in Hancock, but in surrounding school districts.

Establish a "field days" program. A yearly "Environmental Field Days" program would allow students to explore the environmental, biological and physical sciences of the Hancock area. For a few days a year, invitations would be sent out to Hancock schools and surrounding school districts to join the nature preserve staff for the event. Nature preserve and volunteer educators would then set up a series of stations that students would visit for a set amount of time, immersing the students in a variety of topics ranging from recycling to invasive species to wildlife, as well as other topics. The field days program could be based at a large local park such as the Firemen's Field. To view an example of an "Environmental Field Days," view the program ran by Green Lakes State Park at http://www.ocswcd.org/index_files/efd_07_informational_brochure.pdf.

Utilize off-site locations for large events when possible. Nature preserve staff should explore the possibility of using off-site locations (such as Firemen's Field) for public events and programs. The field offers access to the Delaware River, providing a new environment to which the nature preserve can bring students and families for activities and education. Potential uses for this area include: Field Days (see description above); Astronomy Night where a nature preserve volunteer speaks about the night sky (i.e. planets, constellations, solar systems, etc.); and interactive programs about the biology and wildlife of river ecosystems. To keep participants and their families engaged, programs will need to have different levels of detail, critical thinking, humor, etc. to maintain the interest of school children of all ages and their parents.

Create a week-long day camp for school-aged children. A summer-time day camp for children at the nature preserve could provide important learning experiences for the children of Hancock as well as an alternative to day care for parents. A different activity should be provided for each day, and a different theme for each week is recommended. Additional part-time staff (including a registered nurse) would be required for this activity. Permits (e.g., Health department) may also be required. This type of camp would work best with the moderate and high levels of development at the nature preserve.

Develop a trail guidebook. A trail guidebook should be developed, primarily for use by families visiting the nature preserve site. A numbered trail marker system could be correlated with information in the trail guide to interpret information about the wildlife and vegetation along the trail at different points of interest. A guidebook subtheme of "The wetlands, meadows, woodlands, and pond of the Nichol's Nature Preserve benefit both people and wildlife."

Little Victory Players environmental education plays. The Little Victory Players are focused on the performing arts. Allowing them the opportunity to perform an environmentally focused play at the nature preserve could be a potential fundraiser for both the nature preserve and the players. This type of event would also draw in a number of people that may not ordinarily come to the nature preserve.

Educational collaboration with nearby summer camps. The Department of Environmental Conservation runs an environmental education summer camp in Livingston Manor, NY called Camp DeBruce. The camp facilitates environmental education interpretation and education during 10 one-week summer camps. The Nichol's Nature Preserve can serve as a destination for the expansion of the camp's interpretation program through collaborations for day trips, and campers' participation in field day events. Through activities at the nature preserve, campers can better grasp the "big" picture of natural resources by experiencing resources outside the camp.

Promoting through nearby state parks. Targeting specific state campgrounds to collaborate trips to the nature preserve, as a part of a program offered at the state park, will be the best connection to make. This ensures consistent visitation for both the campground and the nature preserve. Some specific state parks that could be most beneficial to both the campground and the nature preserve are Beaverkill, Mongaup, Woodland valley, Bear Spring Mountain, Little Pond. Collaborations that benefit both parties are Family field days, and interpretative programming educating the campground visitors about nature they can identify and interact within the Catskills.

Collaborate with area museums and other environmental centers. Several local environmentally-focused organizations could provide important assistance to the Nichol's Nature Preserve:

- **The Catskill Fly Fishing Center and Museum** could provide programs in conjunction with the nature preserve on topics such as how to tie flies and fly fish. In exchange for volunteers coming to the center to teach, the nature preserve could distribute information about the museum in its information station.
- The **Hansford Mills Museum** educates visitors on both the natural history of resources in the Catskill region as well as the social history of the region. Through a collaboration with this museum, the nature preserve could host workshops on the social and ethno-botanical history of the Catskills. The nature preserve will be more focused on the natural history of the Catskills but this connection will further the educational opportunities offered through the nature preserve.
- The **Delaware-Otsego Audubon Society** offers educational programs on birding and the history of birding. The Nature preserve should invite the Audubon interpreters to the center to offer workshops on birding in the Catskills.
- The **Catskill Outdoor Education Center** of SUNY Delhi offers a nature center setting with trails and programs. The Ameri-corps students located at this center teach outdoor education programs, lead hikes, and assist with the maintenance and development of nature center facilities. These students should be invited to give workshops at the Nichol's Nature Preserve.
- The **Roberson Museum and Science Center** in Binghamton, NY, is currently an important destination for Hancock School District science fieldtrips and would be an important source of information and collaboration for the Nichols Nature Preserve.

RECOMMENDATIONS FOR PROMOTIONS AND MARKETING

Establish connections with Hancock schools and other nearby school districts. Because the primary target markets for the nature preserve are school children and families, strong connections to the local schools should be made. Promotion of nature preserve programs through school announcements and fliers distributed to school children should be considered. Possible opportunities may exist through existing science clubs or programs at the school to encourage student participation in programs at the Nichol's Nature Preserve.

Establish linkages with environmentally-based organizations for school-aged children. Creating a new "junior" environmental organization based in the local schools could provide a mechanism for getting students involved in the nature preserve. Existing organizations (e.g., Boy Scouts, Girl Scout, 4-H) could also provide this important link.

Electronic media-based campaign. The main focus the nature preserve's promotions should be an in-depth website. Other forms of promotion (e.g., guidebooks, news releases) should direct potential visitors to the website for additional information. The website should include important information (e.g., directions to the nature preserve, hours of operation, event calendar, contacts, mission statement) as well as interactive, interpretive information (e.g., a virtual tour of the trail). Other electronic media that can be potentially utilized include twitter accounts, social networks such as Facebook, staff blogs, and links in other websites like I Love NY and the Delaware County Chamber of Commerce. Other forms of print media should be provided for visitor markets that are not computer savvy.

Create a promotional flier. A full, color two-sided, 4" x 8.5" flier should be created for promotional and fundraising purposes. The flier should be placed in the brochure racks of local attractions, businesses, and chambers of commerce.

Kickoff event celebrating the opening of Nichol's Nature Preserve. To create an initial "Buzz" about the nature preserve, a kickoff event either at the Bluestone Festival and Firemen Field Days event in late July or at another designated time should be established. As the largest public event in Hancock, the Bluestone Festival has the most potential for exposure and promotion, as well as opportunities to distribute materials and interact with the community. This could be a great way to tell community members about the Nichol's Nature Preserve and how it functions.

Create a partnership with the Upper Delaware Scenic Byway. One gateway to this byway is Hancock, NY. Integrating the Nichol's Nature Preserve into the Upper Delaware Scenic Byway is necessary through the byway's website and promotional brochures. The nature preserve can be listed on the UDSB's website as a point of interest to those traveling along it. Currently, there are only two places mentioned in the UDSB brochure about Hancock: the railroad bridge and where the UDSB is located in Hancock.

Become an Adopt-A-Highway sponsor. To maintain the health of the nature preserve, raise environmental awareness through community efforts with the sponsorship of the Adopt-A-Highway program. This sponsorship will help keep the roads clean as it promotes the nature preserve. members of the nature preserve would be involved in the clean-up efforts.

RECOMMENDATIONS FOR COLLABORATION AND FUNDRAISING

Establish levels of sponsorship to acknowledge the contributions of sponsors.

Acknowledgement of the generosity of sponsors will be essential to the success of the nature preserve's fundraising campaign. Sponsorship levels should be identified early in the fundraising process. Sponsors should be recognized through a contributor list posted in the nature preserve building and on its website (contributors should be given the opportunity to remain anonymous if desired). Exhibit sponsors should have their name displayed on the exhibit they have supported.

Establish a membership base for the nature preserve. A small membership fee should be charged (e.g., \$20/year for an individual; \$35/year for a family). Members should receive special discounts for programs and gift shop purchases (higher level of development only), as well as an e-mail newsletter.

Apply for grants and legislator line items. As grants and awards will be a major source of revenue for the Nichol's Nature Preserve, staff time will need for writing grant proposals. The nature preserve will likely be eligible for federal and state grants, as well as those provided by not-for-profit foundations.

Organize fundraisers. If the Nichol's Nature Preserve is able to participate in community activities and facilitate active strategies such as fundraisers in order to generate income, it should be able to achieve financial success. A large fundraising effort will be needed during the first year to obtain adequate funds for constructing the nature preserve building and trail. Fundraising events will be needed after this first year to cover operating expenses. Fund raising activities centered in the local schools should be considered to encourage family and student involvement.

Create a Nichols Endowment. Fundraising could be used to create an endowment for future nature preserve operational costs. In periods of good economic growth, interest from the endowment could provide an important and steady stream of income for nature center staff salaries and maintenance, both of which are often difficult to fund through grants.

Collaborate with local organizations. Many organizations and businesses within the area would be excellent collaborators for programs and exhibits. The Rotary International Club and American Legion both have relatively large volunteer bases. The Hancock Community Education Foundation could provide some educational assistance such as bringing exhibits to the schools, getting teachers involved in planning trips to the nature preserve, and volunteering some time educating the public at the center. The Hancock Historical Society could sponsor an exhibit discussing the natural history of the area and its resources that have been harvested over the years, particularly timber and bluestone. The Delaware Highlands Conservancy could provide conservation exhibits discussing the importance of the area on a more regional level. It is important that all collaborative efforts benefit both the nature preserve and the other organization.

Collaborate with local businesses and organizations for the development of indoor and outdoor exhibits. Developing the nature preserve depends upon the instillation of both indoor exhibits and outdoor facilities. These exhibits and facilities will consist of structures including the trail/boardwalk and building, teaching stations, sound systems, and boardwalk trail. Start-up promotions and media coverage will be key in developing community awareness of the center. Businesses including McDonalds, The Hancock Herald, and NBT Bank should be asked to assist with initial promotion and media exposure due to their large customer base. Private businesses such as Starlight Forests, LLC and Red House Design, LLC should be consulted for the development of outdoor landscaping and

exhibits. They can provide sustainable alternatives and design assistance that will enhance the aesthetics of the space and be a key educational component of the center. When seeking assistance for exhibits and programs, businesses in the community could provide support through funding, donations, or advertisement.

Collaborate with corporate businesses. Collaborating with local businesses will allow the nature preserve to gain exposure in and around the community. Local businesses can provide donations and funding opportunities specifically devoted to the support of the nature preserve. In addition, businesses can collaborate with the nature preserve on promotion and advertising through posters, newspaper, brochures, websites and other publications. All collaborative opportunities should provide benefit to both the businesses and the nature center (e.g., the names of exhibit sponsors should be identified on exhibits). Examples of businesses to be considered include:

- Promotion and marketing:
 - The Hancock Herald
- Sponsorship:
 - McDonalds
 - The Hancock House
- Food donations for programs and events:
 - Grand Union Grocery Store

Partner with environmental experts from private businesses for educational programs. Develop a working relationship with experts in the fields of sustainability, forestry, urban forestry, design, permaculture, and agriculture. Businesses and their respective services include:

- The Hancock Permaculture Center
 - Permaculture principles to food production, home design, construction, energy conservation and generation
 - Sustainable agriculture
 - Potential for collaboration on education and outreach workshops
- Starlight Forests, LLC
 - Founded by Bruce Edwards, research forester
 - Additionally owns a private tree farming business
 - Owns 11,000 acres of high-quality timberlands
 - Potential for collaboration on resource management workshops and programs
- Red House Design, LLC
 - Architecture and design/construction firm
 - Emphasis on sustainable building and energy efficiency
 - Landscape and site design services
 - Potential for collaboration on sustainable facilities on the nature preserve site

Partner with recreation and outfitter businesses for events and festivals. Events such as the Blue Stone Festival and Fireman Field Days are important events in the community. These events can provide opportunities for recreation-related businesses to promote their business and integrate the nature preserve into their marketing agenda. Outdoor businesses can provide services (e.g., boat rentals and classes) that allow children and families to explore natural areas near the community (e.g. Delaware River). Businesses to be considered could include Border Water Outfitters and Marino's Outdoors.

TRANSPORTATION RECOMMENDATIONS

Consider the impact of future enhancement of the Route 17 corridor. According to the DOT website, "Route 17 will be improved to FHWA's standards in preparation as designation as I-86. This project includes local access roads, interchange(s), mainline reconstruction, and stormwater management. This project will replace both structures carrying Route 97 over Pea Brook and improve the alignment in the town of Hancock." The plan for the upgrade, which will run the length of Route 17, is "to improve New York's transportation systems and enhance access to numerous businesses and municipalities along the corridor, and provide tremendous opportunities for economic development in the Southern Tier. It will put this area of New York state 'on the map for business investors and tourists within New York and nationally" (NYSDOT, 2009). It may be an ideal time to request particular infrastructure improvements needed in the town to attract tourists and business investors. Also, with a potential of influx in traffic on the interstate and through Hancock, consider advertising opportunities, particularly with the Scenic Byway, along the new interstate, and in town. Be sure to address potential negative effects of increased traffic to the nature preserve as well (for example, salt run-off, litter, and higher visitor use of the site).

Implement bike lanes where possible. Promoting biking to the nature preserve is a healthy alternative to walking or driving. Bike lanes would be valuable not only to the nature preserve, but also to the village of Hancock. The village already has wide shoulders along Main Street and, therefore, could easily create bike lanes. Bike lanes could connect the nature preserve with the Scenic Byway (which is a popular bike route already). In addition to improving travel by visitors to and from the nature preserve site, the bike lane could potentially provide the nature preserve with a connection to nearby mountain bike trails or road routes. Bike racks should be installed at the nature preserve.

Consider bus-loading options. Main Street's wide shoulder provides opportunity for a bus pull-off in front of the nature preserve, minimizing the on-site parking needed for a bus. Another alternative for unloading buses is the right-of-way area in the Family Dollar parking lot. Both options for unloading buses would enable the use of permeable pavers for the nature preserve's parking area, as the parking area would not need to hold the load of a bus.

Improve sidewalks where necessary. A clear and accessible sidewalk route, both from local schools and downtown, is necessary. Currently the sidewalk conditions are spotty. Some stretches are new and others are in clear disrepair. Safe and accessible sidewalks are needed along Vestal Avenue, Pennsylvania Avenue, and Main Street.

Create a connector trail. A connector trail could run from the north end of Pennsylvania Ave. (along the northern DOT easement and fence line) to the nature preserve. This trail would provide an alternative route for students walking from the schools to the nature center.

Install signage to advertise the nature preserve. In the downtown area of Hancock, there are a slew of signs that compete with one another. Organizing these signs could make a huge impact in the attractiveness of the village, benefitting the places the signs are advertising. Including a sign for the nature preserve would be a viable option. Signage on the interstate, Scenic Byway, and other roadsides can help advertise the nature preserve as well.

Address salt run-off on Route 17 – Interstate 86. The nature preserve is a minor part of the Delaware watershed, which eventually runs into the New York City Croton Watershed and drinking water. It is important to help keep this watershed clean, by considering run-off from the interstate, eliminating litter, and minimizing impacts on the nature preserve's wetlands. Alternatives to salting and salt-reduction areas along Route 17 should be considered. Working with the DOT prior to the I-86 upgrade should be considered to designate a portion of the interstate that runs above the Nature Preserve as a "Salt Reduction Area." Alternatives to salting, including CMAs and KAs, should be investigated, although these may be costly.

MONITORING NATURE PRESERVE EFFORTS

Monitoring prior to site development. Monitoring of flooding levels on-site is needed prior to constructing the boardwalk trail and the nature preserve building. Monitoring for *at least* one year prior to construction is recommended. Simple water level monitoring is suggested. The height of the boardwalk and use of stilts for the building will depend on the results of this monitoring. In addition, run-off into the wetland from Route 17 requires further study, as does drainage from the wetland area. Possible contamination sources from adjacent parking lots and highway run-off should be analyzed.

Site monitoring. Monitoring is needed to maintain a safe environment for visitors while protecting the natural resources base. Monitoring by an AmeriCorps employee, volunteer (i.e., or Student Conservation Association intern), or an employee of the nature preserve is needed. Questions to be answered through daily observations include:

- Is the parking lot size sufficient for holding the influx of visitors visiting the nature preserve?
- Is the bus drop-off method working correctly and safely?
- Are all buffer plantings healthy?
- Are all facilities in good repair? (Walking the trail on a daily basis will be needed to identify any potential risks and structural concerns.)
- Is any litter on the ground?
- Are there any seasonal concerns that require attention (e.g., icy steps)?
- Is any loss of vegetation due to trampling noted?

If any problems are encountered, they should be fixed immediately.

Monitoring visitation to the nature center building. A visitor registry (see Appendix 3) is recommended for the visitor center. In order to ensure that all visitors sign the registry, staff should ask all visitors to sign in upon entry. Attendance should be tallied each year to identify numbers of visitors, trends in use over the years, and periods of high/low visitation. Staff time will be required. If monitoring of trail use is desired, infra-red trail counters can be used. However, this type of equipment is costly (about \$500 per unit) and may not be cost-effective.

Monitoring interpretative brochures and exhibits. A great deal of staff time will be needed to produce high quality brochures and interpretive exhibits. Visitor surveys, handed out at the end of visits, will be used to monitor the effectiveness of the interpretive experiences. Another alternative to conducting surveys on-site would be to obtain contact information from visitors and use this to conduct an online survey (a very inexpensive means of conducting surveys). Information collected by survey should include: location of visitor residence, group size and type (i.e., school group, family, club, couple, etc...), gender, age, how they heard about the nature preserve, why they came, amount of money spent in the community (optional), suggestions, and questions designed to identify what they learned from the interpretation on-site. The cost of this type of survey is minimal. If an online survey is used, staff time for data entry won't be needed.

Interpretive programs. The number and type of visitors (e.g., school groups, families) that participate in programs at the nature preserve will need to be monitored. Participants should be asked how they found out about the program. Monitoring would be done by the program leader who will be given an evaluation form to complete at the end of his/her program. The evaluation sheet will have a place for all participants to sign their name, city of residence, and how they found out about the program. Each sheet will also have space for the program leader to identify total number of participants, title of

program, date, and type of group participating. Counting the number of visitors for events will help staff identify program topics that are popular, in the long run benefitting the nature preserve with more visitors. Over time, a "Have you participated in one of our programs before?" column should be added to the evaluation forms. All evaluations should be tallied at the end of each year to identify the total number of program participants. The cost of this evaluation is time spent. A separate evaluation form may be needed to identify visitors' comments on the success of programs.

Marketing and Promotion. The main goal for marketing and promotion is to get an accurate count of visitors who visited the nature preserve through the advertisements and other promotional efforts (e.g., websites, guidebooks). The visitor survey and program evaluations described above both request information from visitors about how they heard about the nature preserve (e.g., local attraction, local business, website, etc...). Staff should also carefully keep track of the expense incurred by each type of advertising so that the most cost-effective types of promotions can be identified. The benefit of monitoring promotions is that it allows the nature preserve director to change advertisements as needed. The cost of this monitoring is minimal.

Nature preserve organization and staff. Staff at the nature preserve will need to go through a formal review by the nature center director (or, in the case of the director, by the board of directors of the Hancock Community Educational Foundation) on an annual basis. The effectiveness of the employees as well as any problems the employees might be encountering should be noted. The benefits to monitoring nature preserve staff is that it may show some of the strengths or weaknesses of the staff and would identify if additional staff are needed. The cost of this evaluation is staff time only.

Volunteers and training. An evaluation of volunteers should be conducted on an annual basis. In particular, volunteers should be asked to complete an assessment form to identify what they like/dislike about their volunteer positions and mechanisms for improving their volunteer experience. A simple paper survey is suggested for this evaluation. This evaluation could be done by the volunteer coordinator. In addition, time spent by volunteers should be carefully tracked since it may be useful on grant applications that seek "in-kind" contributions. The cost of performing this monitoring is time spent.

Budget. The main goal of budget is for the nature preserve's income to equal or exceed the costs. To accomplish this goal, monitoring the outflow and inflow of nature preserve funds will be needed. The director, with oversight from the Board of Directors of the Hancock Community Educational Foundation, should be in charge of monitoring the budget. An excel spreadsheet can be used to keep track of income and expenditures. The costs of monitoring the budget is time spent by the director.

Emergency Considerations. Training the staff and volunteers for emergency situations is essential for the nature preserve. Monitoring staff reactions to emergency drills and actual emergencies is needed. The director would be responsible for monitoring and evaluating the staff/volunteers when these tests occur, and should record the results of all drills and emergency events. The cost of monitoring is staff time.

PROPOSED BUDGET

Start-up expenses. In order to identify the potential cost of developing and managing the Nichol's Nature Preserve, it is important to formulate an in-depth description of the main budget components, including potential start-up costs, so that fundraising goals can be set. Possible costs (shown in Table 17 and 18) do not include the salary for a nature preserve director, the cost for an architect, or the cost for constructing a pond. The costs below are estimates; estimates from contractors should be obtained prior to setting fundraising goals. The use of donated materials and volunteer labor could help reduce costs.

Table 17. Possible start-up expenses for site construction.

Component	Estimated cost
Nature preserve building (moderate level of development)	\$200,000
Bathroom	\$20,000
Parking area (pavement/permeable pavers)	\$15,000
Picnic tables (3 at \$300 each)	\$900
Bicycle rack	\$500
Water fountain	\$300
Trail (boardwalk style)	\$70,000
Trailhead kiosk	\$1,500
Three observation point interpretive signs	\$3,000
Directional signs at trail intersections (6 silk-screened aluminum)	\$300
Handicap accessible ramp and boardwalk/path connecting parking to building	\$3,000
Sewer connection	\$15,000
Water hookup	\$5,000
Electrical hookup	\$5,000
TOTAL potential construction costs	\$ 339,500

Table 18. Possible start-up expenses for classroom supplies and equipment.

Component	Estimated cost
Furniture (chairs, lab tables, desks, etc.)	\$15,000
Office supplies (pens, paper, computer, first aid kit, AED, etc.)	\$5,000
Classroom (books, smart board, classroom computer, projector, projection screen, etc)	\$8,000
Educational supplies (1 compound and 1 stereo digital microscope with USB connection to computer for projection)	\$2,000
Trash/recycling bins (3 at \$50 each)	\$150
TOTAL potential equipment costs	\$30,150

Monthly expenses. Both fixed (expenses that remain basically the same month-to-month; Table 19) and variable (expenses that change based on the number of visitors) expenses can be expected at the nature preserve. When accounting for monthly expenses, it is important to understand that these costs will not be consistent and will most likely change over time. For example, the expense incurred from the use of electricity/heat will be much greater during the winter months than during the summer. It is also important to consider how much money will be allotted towards salaries, as this will be the single largest monthly cost in the creation of our nature preserve.

Table 19. Monthly summertime expenses. Variable costs related to visitor use are not included but should be considered in the nature preserve budget once the nature preserves programs are operating. Expenses will likely be lower during seasons when the nature preserve building is closed.

Expense	Estimated cost per month
Advertising	\$ 50
Telephone/Internet	\$ 80
Electricity/Heat (averaged over year)	\$ 150
Office supplies	\$ 50
Copying expenses	\$ 50
Maintenance supplies	\$ 100
Insurance	\$ 150
Part-time educator salary	\$ 1,500
Part-time director salary	\$ 2,500
Contracted maintenance staff	\$ 500
Total monthly expense	\$5,130

Balancing the budget. After the nature preserve has been created, it will be important to keep a consistent record of all revenues and expenses. These can most efficiently and effectively be reported in a financial statement that includes a balance sheet, a statement of monthly cash flow, and an income statement. These documents will help maintain the transparency of all financial activities within the nature preserve as well as prove beneficial for later reference. In the future it will be possible to use these documents to estimate future budgets and to determine where the most money is being allocated in nature preserve expenses. This information could identify cost-effective strategies to improve the integrity and vigor of the Nichol's Nature Preserve. The Nichol's Nature Preserve should limit overhead costs as much as possible, as it is the largest source of expense. To do this, the nature preserve should be kept open only on the weekends/holidays or when a school group has specifically scheduled a visit. This will help bring cost-savings to salary expenses and help lower maintenance and overhead costs. Table 20 shows a potential budget scenario that does not include the construction costs for the site, but is instead focused on the yearly operational costs of the facility.

Table 20. Example of an annual balance sheet for the Nichol's Nature Preserve.

Category	Expense	Income	Balance
Revenue:			
Fundraisers		9,000	
Program Service Fees		1,000	
Membership fees		2,000	
Grants		25,000	
Interest on accounts		50	
Miscellaneous donations		1,500	
TOTAL INCOME:		\$38,550	
EXPENSES:			
Part-time director salary (7 months/year)	17,500		
Part-time staff salary (summers only)	4,500		
Part-time maintenance salary (7 months/year)	3,500		
Equipment	1,000		
Fund Raising expenses	100		
Office Supplies	300		
Postage	150		
Printing	200		
Promotion/Advertising	200		
Utilities	3,000		
Insurance	6,650		
Repairs	400		
Program Materials, etc.	500		
TOTAL OPERATING EXPENSE	\$38,000		
NET			\$550

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Appendix 1. Wildlife present on site (excludes insects; source: Barbara Reuter).

Family	Latin Name	Common Name	Notes
Canidae (Canine family)	<i>Canis latrans</i>	Coyote	
	<i>Vulpes vulpes</i>	Red Fox	
	<i>Urocyon cinereoargenteus</i>	Gray Fox	
Cervidae (Deer)	<i>Odocoileus virginianus</i>	White-tailed Deer	
Sciuridae (Squirrel)	<i>Tamias striatus</i>	Eastern Chipmunk	
	<i>Marmota monax</i>	Woodchuck	
	<i>Sciurus carolinensis</i>	Gray Squirrel	
Leporidae (Rabbit)	<i>Sylvilagus floridanus</i>	Eastern Cottontail	
Columbidae (Pigeon and Dove)	<i>Zenaida macroura</i>	Mourning Dove	
Corvidae (Crows and Jay)	<i>Cyanocitta cristat</i>	Blue Jay	
	<i>Corvus brachyrhynchos</i>	American Crow	
Mimidae (Thrasher)	<i>Dumetella carolinensis</i>	Gray Catbird	
Parulidae (Wood-warbler)	<i>Geothlypis trichas</i>	Common Yellowthroat	
Emberizidae (Sparrow)	<i>Melospiza melodia</i>	Song Sparrow	
Icteridae (Blackbird)	<i>Agelaius phoeniceus</i>	Red-winged Blackbird	
Fringillidae (Finch)	<i>Carduelis tristis</i>	American Goldfinch	
Ranidae (True frog)	<i>Rana clamitans melanota</i>	Green Frog	

Appendix 2. Vegetation present on site (source: Barbara Reuter).

Family	Latin Name	Common Name	Notes
Ferns			
Osmundiaceae (Royal-fern family)	<i>Osmunda cinnamomea</i>	Cinnamon Fern	Exploitably Vulnerable in NYS
Dennstaedtiaceae (Bracken fern)	<i>Dennslaedtia punetilobula</i>	Hay-scented Fern	
	<i>Pteridium aquilinum</i>	Bracken	
Dryopteridaceae (Wood fern)	<i>Onclea sensibilis</i>	Sensitive Fern	
Trees			
Magnoliaceae (Magnolia)	<i>Magnolia acuminata</i>	Cucumber Tree	
Pinaceae (Pine)	<i>Larix laricina</i>	American Larch	
	<i>Picea abies</i>	Norway Spruce	
	<i>Picea glauca</i>	White Spruce	
	<i>Picea pungens</i>	Colorado Blue Spruce	
	<i>Pinus strobus</i>	White Pine	
Ulmaceae (Elm)	<i>Ulmus americana</i>	American Elm	
Juglandaceae (Walnut)	<i>Carya glabra</i>	Pignut	
Fagaceae (Beech)	<i>Quercus velutina</i>	Black Oak	
Betulaceae (Birch)	<i>Alnus incana ssp. rugosa</i>	Speckled Alder	
	<i>Betula lenta</i>	Sweet Birch	
	<i>Betula populifolia</i>	Gray Birch	
	<i>Betula papyrifera</i>	Paper Birch	
Salicaceae (Willow)	<i>Populus tremuloides</i>	Trembling Aspen	
Rosaceae (Rose)	<i>Prunus serotina</i>	Black Cherry	
	<i>Sorbus americana</i>	American Mountain Ash	
Fabaceae (Bean Family)	<i>Robinia pseudo-acacia</i>	Black Locust	
Aceraceae (Maple Family)	<i>Acer rubrum</i>	Red Maple	
	<i>Acer saccharum</i>	Sugar Maple	
Oleaceae (Olive Family)	<i>Fraxinus americana</i>	White Ash	
	<i>Fraxinus pennsylvanica</i>	Green Ash	

Appendix 2 (continued). Vegetation present on site (source: Barbara Reuter).

Family	Latin Name	Common Name	Notes
Shrubs & Vines			
Berberidaceae (Barberry Family)	<i>Berberis thunbergii</i>	Japanese Barberry	Invasive in NYS
Myricaceae (Bayberry)	<i>Comptonia peregrina</i>	Sweet-fern	
Salicaceae (Willow)	<i>Salix spp.</i>	Shrub Willow	
Clethraceae (White Alder)	<i>Clethra alnifolia</i>	White Alder	
Ericaceae (Heath)	<i>Gaultheria procumbens</i>	Wintergreen	
Grossulariaceae (Gooseberry)	<i>Ribes cynosbati</i>	Wild Gooseberry	
Rosaceae (Rose)	<i>Amelanchier canadensis</i>	Serviceberry	
	<i>Rosa multiflora</i>	Multiflora Rose	Invasive in NYS
	<i>Rubus allegheniensis</i>	Northern Blackberry	
	<i>Rubus flagellaris</i>	American Dewberry	
	<i>Rubus hispidus</i>	Swamp Dewberry	
	<i>Rubus idaeus</i>	Red Raspberry	
	<i>Rubus occidentalis</i>	Black Raspberry	
	<i>Spiraea alba</i>	Meadow-sweet	
Cornaceae (Dogwood)	<i>Cornus amomum</i>	Silky Dogwood	
Celastraceae (Staff-tree)	<i>Celastrus orbiculata</i>	Oriental Bittersweet	Invasive in NYS
Vitaceae (Grape)	<i>Parlhenocissus quinquefolia</i>	Virginia Creeper	
	<i>Vitis aestivalis</i>	Summer Grape	
	<i>Vitis riparia</i>	Riverbank Grape	
Anacardiaceae (Sumac)	<i>Rhus hirta</i>	Staghorn Sumac	
Caprifoliaceae (Honeysuckle)	<i>Lonicera tatarica</i>	Tatarian Honeysuckle	
	<i>Sambucus canadensis</i>	Black Elderberry	
Hamamelidaceae	<i>Hammamalis spp.</i>	Witch-hazel	

Appendix 2 (continued). Vegetation present on site (source: Barbara Reuter).

Family	Latin Name	Common Name	Notes
Herbaceous & Grasses			
Phytolacaceae (Pokeweed Family)	<i>Phytolacca americana</i>	Pokeweed	
Polygonaceae (Buckwheat)	<i>Polygonum cuspidatum</i>	Japanese Bamboo	Invasive in NYS
	<i>Polygonum persicaria</i>	Lady's-thumb	
	<i>Polygonum sagittatum</i>	Tearthumb	
	<i>Polygonum virginianum</i>	Jumpseed	
	<i>Rumex crispus</i>	Curly Dock	
Brassicaceae (Mustard)	<i>Hesperis matronalis</i>	Dame's-rocket	
Primulaceae (Primrose)	<i>Lysimachia quadriflora</i>	Four-flowered loosestrife	Endangered in NYS
	<i>Trientalis borealis</i>	Starflower	
Rosaceae (Rose)	<i>Fragaria virginiana</i>	Wild Strawberry	Rare in NYS (but not listed)
	<i>Geum macrophyllum</i>	Bigleaf Yellow Avens	
	<i>Potentilla simplex</i>	Common Cinquefoil	
Fabaceae (Bean)	<i>Coronilla varia</i>	Crown-vetch	
	<i>Lotus corniculata</i>	Bird's-foot Trefoil	
	<i>Melilotus alba</i>	White Sweet-clover	
	<i>Trifolium pratense</i>	Red Clover	
	<i>Trifolium repens</i>	White Clover	
Lythraceae (Loosestrife)	<i>Lythrum salicaria</i>	Purple Loosestrife	Invasive in NYS
Onagraceae (Evening-primrose)	<i>Epilobium coloratum</i>	Purple-leaf Willow-herb	
Oxalidaceae (Oxalis)	<i>Oxalis stricta</i>	Lady's-sorrel	
Balsaminaceae (Touch-me-not)	<i>Impatiens capensis</i>	Spotted Jewelweed	
Araliaceae (Ginseng)	<i>Aralia nudicaulis</i>	Wild Sarsaparilla	
Apiaceae (Carrot Family)	<i>Daucus carota</i>	Queen Anne's-lace	
	<i>Pastinaca sativa</i>	Wild Parsnip	
	<i>Zizia aurea</i>	Golden Alexanders	
Solanaceae (Nightshade)	<i>Solanum dulcamara</i>	Trailing Nightshade	
Convolvulaceae (Morning-glory)	<i>Convolvulus sepium</i>	Hedge Bindweed	
Verbenaceae (Verbena)	<i>Verbena hastata</i>	Blue Vervain	
	<i>Verbena urticifolia</i>	White Vervain	
Lamiaceae (Mint)	<i>Glechoma hederacea</i>	Ground-ivy	
	<i>Lycopus americanus</i>	Water Horehound	
	<i>Prunella vulgaris</i>	Self-heal	
	<i>Satureja vulgaris</i>	Wild Basil	

Appendix 2 (continued). Vegetation present on site (source: Barbara Reuter).

Family	Latin Name	Common Name	Notes
Plantaginaceae (Plantain)	<i>Plantago lanceolata</i>	English Plantain	
Scrophulariaceae (Figwort)	<i>Chelone glabra</i>	Turtle-heads	Exploitably Vulnerable in NYS
	<i>Linaria vulgaris</i>	Butter-and-eggs	
	<i>Veronica serpyllifolia</i>	Thyme-leaf Speedwell	
Rubiaceae (Madder)	<i>Galium palustre</i>	Marsh Bedstraw	
Asteraceae (Aster)	<i>Achillea millefolium</i>	Common Yarrow	
	<i>Anaphalis margaritacea</i>	Pearly Everlasting	
	<i>Aster lanceolatus</i>	Tall White Aster	Endangered in NYS
	<i>Aster novi-belgii</i>	New York Aster	
	<i>Aster racemosus</i>	Small White Aster	
	<i>Aster umbellatus</i>	Flat-top White Aster	
	<i>Cichorium intybus</i>	Chicory	
	<i>Cirsium vulgare</i>	Bull Thistle	
	<i>Conyza canadensis</i>	Horseweed	
	<i>Eupatorium maculatum</i>	Spotted Joe-pye-weed	
	<i>Eupatorium perfoliatum</i>	Thoroughwort (Boneset)	
	<i>Euthamia graminifolia</i>	Flat-top Goldenrod	
	<i>Prenanthes altissima</i>	Rattlesnake-root	
	<i>Solidago canadensis</i> var. <i>canadensis</i>	Canada Goldenrod	
	<i>Solidago canadensis</i> var. <i>scabra</i>	Tall Goldenrod	Protected in NYS
	<i>Solidago gigantea</i>	Late Goldenrod	
	<i>Solidago rugosa</i>	Tall Hairy Goldenrod	
	<i>Tussilago farfara</i>	Coltsfoot	
	<i>Zizia aurea</i>	Golden Alexanders	
Juncaceae (Rush)	<i>Juncus brachycephalus</i>	Small-headed Rush	
	<i>Juncus effusus</i>	Common Rush	
	<i>Juncus tenuis</i>	Path Rush	
Crassulaceae (Sedum)	<i>Sedum telephium</i>	Live-forever	
Cyperaceae (Sedge)	<i>Carex crinita</i>	Sedge	
	<i>Cyperus strigosus</i>	Galingale	
	<i>Scirpus atrovirens</i>	Bulrush	
	<i>Scirpus cyperinus</i>	Woolgrass	

Appendix 2 (continued). Vegetation present on site (source: Barbara Reuter).

Family	Latin Name	Common Name	Notes
Poaceae (Grass Family)	<i>Agropyron repens</i>	Quackgrass	
	<i>Agrostis gigantea</i>	Redtop	
	<i>Anthoxanthum odoratum</i>	Sweet Vernalgrass	
	<i>Bromus inermis</i>	Smooth Brome	
	<i>Dactylis glomerata</i>	Orchard Grass	
	<i>Festuca sp.</i>	Fescue	Sheep fescue is protected in NYS
	<i>Leersia oryzoides</i>	Rice Cutgrass	
	<i>Phalaris arundinacea</i>	Reed Canarygrass	
	<i>Phleum pratense</i>	Timothy	
	<i>Poa compressa</i>	Canada Bluegrass	
	<i>Poa nemoralis</i>	Wood Bluegrass	Endangered in NYS
	<i>Poa palustris</i>	Fowl Meadowgrass	
	<i>Poa pratensis</i>	Kentucky Bluegrass	
	<i>Schizachyrium scoparium</i>	Little Blue-stem	
Typhaceae (Cattail)	<i>Typha angustifolia</i>	Narrow-leaf Cattail	
	<i>Maianthemum canadense</i>	False Lily-of-the-valley	
Iridaceae (Iris)	<i>Iris versicolor</i>	Blue Flag	
	<i>Sisyrinchium montanum</i>	Blue-eyed Grass	
Orchidaceae (Orchid)	<i>Cypripedium acaule</i>	Pink Ladyslipper	Endangered in NYS

