



# HARTLEY NATURE CENTER PARK STEWARDSHIP PLAN: 2011

HARTLEY NATURE CENTER  
PARK STEWARDSHIP COMMITTEE

APRIL 1, 2011

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\*Cover Photo Courtesy: Dennis O'Hara, website: [www.northernimages.com](http://www.northernimages.com)

## **Hartley Nature Center Park Stewardship Plan April 1, 2011**

### **Executive Summary:**

On September 29, 2010, the Hartley Nature Center Park Stewardship Committee met to more clearly define the mission, objectives and action steps needed for the committee to cohesively perform environmental stewardship within Hartley Park.

*Guiding Principles:* The primary objective of the exercise was to open the floor for discussion among Committee members and better determine the guiding principles that should drive Hartley Nature Center environmental stewardship projects.

*History of Stewardship:* A secondary objective was to take stock in the many good environmental stewardship activities that Hartley Nature Center has achieved over the 21 years of its existence and to develop a Park Stewardship Plan that will guide HNC staff, board and committee members.

*Leveraged Support:* This Park Stewardship Plan is also intended to illustrate the very positive influences and support Hartley Nature Center has been able to leverage on its behalf to protect the natural qualities of Hartley Park.

*Methodology:* In this plan, topical issues of concern are addressed such as the proliferation of trails, trail maintenance, the built-environment and invasive species control. In addition, the plan identifies how the Park Stewardship Committee will evaluate and communicate projects and encourage community involvement in protecting the natural qualities of Hartley Park. The Park Stewardship Plan is considered a living document that will require timely updates as processes are refined or circumstances dictate.



## **I. Hartley Nature Center's Park Stewardship**

### **A. History of Park Stewardship**

The roots of environmental stewardship of Hartley Park go back to the inception of Hartley Nature Center. At that time, in the early 1980's, Tom Jordan, Bob Seitz, Tim Howard and others were instrumental in forming the organization based on the mission of providing the community with the City of Duluth's first nature center that would provide *environmental education and protect the natural qualities* of Hartley Park.

Since that time, countless hours and projects have been undertaken by the organization by virtue of a strong volunteer base, leveraged with the strength of Hartley Nature Center being able to secure grant money and staffing resources.

### **B. Coordination with the City of Duluth**

Since Hartley Park is a City of Duluth Park, the environmental stewardship projects and activities undertaken by Hartley Nature Center have been communicated and coordinated with City Parks and Recreation and Facilities Management staff, working in close consultation and coordination over the past 21 years.

### **C. Scope**

The Hartley Nature Center Park Stewardship Committee has provided valuable support to the City of Duluth over the years, through finding or combining financial and human resources, coordinating projects, being the "eyes and ears" of park use and issues, and providing a screening process for new activities and environmental stewardship projects within the park.

With the adoption of this Park Stewardship Plan, the Hartley Nature Center intends to clearly define its guiding environmental stewardship principles and focus, and strengthen its efforts within the park with hands-on projects in keeping with City of Duluth and community-wide support for environmental education and park stewardship objectives.

### **D. Projects**

The list of past environmental stewardship projects within the park undertaken by Hartley Nature Center is very lengthy. Projects are identified in the details of this Park Stewardship Plan, but primarily focus around managing invasive species, trail maintenance and management, and communicating to the public the good projects undertaken.

## II. Park Stewardship Plan Development Process

On September 29, 2010, the Hartley Nature Center Park Stewardship Committee met to better define its mission, objectives and action steps needed to cohesively perform environmental stewardship within Hartley Park.

The primary objective of the exercise was to open the floor for discussion among Committee members and better determine the guiding principles that should drive Hartley Nature Center's environmental stewardship activities. Initially, the group brainstormed a list of basic Environmental Stewardship Principles in order to reach consensus and guidance that drive activities and projects within the park (See Section III, below).

From this set of principles, the committee developed subcommittees to better define key aspects and issues surrounding park use and environmental concern. Each subcommittee then developed management plans, strategies and actions steps. Finally, these plans were brought back together into this Park Stewardship Plan. The following is a list of the Committee sub-groups and the primary focuses they were to undertake:

### A. HNC Park Stewardship Management Planning:

- Committee of the Whole: Draft a statement of management principles, including addressing preservation, restoration, patterns of use, recreation, and accessibility.
- Forest Landscape Subcommittee: Delineate geographic areas of special concern and develop policies for them, for example areas to be left undisturbed, and areas that are heavily used by the Hartley Nature Center. Determine what the Park should look like in 25 to 50 years.
- Trails Subcommittee: Develop trail management plan, including acceptable locations, processes, standards and schedules.
- Invasive Species Subcommittee: Develop invasive species control plan, including acceptable processes, standards and schedules.
- Built-Environment Subcommittee: Determine the location, size, and basic design elements of a possible storage building. Evaluate possible alternatives for building storage.
- Project Review Subcommittee: Create review process for new projects or activities (e.g. trail proposals, DNR proposal for pond, etc., special events).

### B. State of the Park Report:

- Agree on report focus and needed elements (e.g. park environmental health, efforts/projects performed to date, park human and natural history, reiterating mission, and goals).
- Develop methods data gathering, updating, and publication, and include how this will be done, by whom and schedules.
- Annual meetings of local residents and stakeholders.

- Prepare handout(s) to describe the information about the natural history of the park that is available on the web site.

**C. Subcommittee Process:**

- Facilitator/Lead shall seek input from outside the subcommittee, particularly gathering input from HNC Education Staff and user groups, as appropriate.
- Plans must be measurable, but flexible.
- Keep meetings brief and stick to timeframe
- Draft of documents/issues shall be presented to subsequent committee meetings for updates and discussion.
- Formatting of Final Document by January 15, 2011, with final deadline for completion: March 1, 2011.
- Final presentation of recommendations shall be presented to the HNC Board for approval.

**III. Environmental Stewardship Guiding Principles**

The following are the guiding principles adopted by the Hartley Nature Center Park Stewardship Committee related to environmental stewardship activity within the park:

<p><b>Hartley Nature Center Park Stewardship Committee Environmental Stewardship Guiding Principles October 21, 2010</b></p>
<ul style="list-style-type: none"><li>• Based upon collected data and identifiable ecologically important areas, sustainable standards shall be set to maintain and improve Hartley Park’s various natural environments.</li><li>• The park’s trail networks, signage, construction projects, public education and activities within the park shall conform to best environmental sustainable practices.</li><li>• Work with and educate user groups to encourage conformity to environmental sustainable principles.</li><li>• New proposal for Hartley Park shall be considered thru the filter of environmental sustainable principles.</li><li>• The existence of Hartley Nature Center within Hartley Park enhances public activities within the park and the sustainability of the natural environment.</li></ul>

## IV. Park Forest Landscape Plan

### Introduction:

Maintaining the quality and integrity of Hartley Park as a heavily used green space and educational tool for Duluth residents and visitors over the coming years will require the identification of areas of concern and the development of policies to govern these areas.

An analysis of the most important features of Hartley Park, both in terms of their value to Hartley Nature Center's (HNC) educational programming and the ecological value of the park, has identified the following areas of focus: invasive species, trails, forest communities, and bodies of water.



Fall colors on Hartley Park's Forested Landscape. Photo courtesy: Andy Hyser, website: [www.reflectinglife.com](http://www.reflectinglife.com)

Foundational data for this plan was primarily obtained and further analyzed from the Ethan Perry's 2004 report, "Native Plant Communities of Hartley Park"; however, additional native plant communities may be found over time and added to this data set over time.

### A. Invasive Species:

Invasive species such as Glossy Buckthorn, Tansy, Japanese Knotweed, and others are pervasive throughout much of the park. The complete elimination of these species is an unreasonable goal, given the resources available. As such, HNC will continue its current efforts to control the spread of invasive plant species with the assistance of interns and committed volunteers to maintain accessibility of trails, provide opportunities for education, and enhance the forest landscape (see Invasive Species Plan, Section V, below)

### B. Trails:

Hartley Park has an established system of multi-use trails that provide access to the park by a variety of users. Any new trails or reroutes of existing trails will take into account the quality of surrounding communities of flora and fauna, as identified by an analysis such as that found in Ethan Perry's 2004 report, "Native Plant Communities of Hartley Park".

### C. Wetlands:

Temporary vernal pools are a valuable resource of Hartley Park, providing shelter and breeding grounds to many amphibians, insects, and other macroinvertebrates like fairy shrimp. Floating boardwalks have been installed at those pools with heaviest traffic and will be maintained to limit degradation of these sensitive areas.

### **D. Hartley Pond:**

Hartley Pond is an artificial pool formed by the damming of Tischer Creek. It has developed into an important aspect of HNC's programming and is used as an educational resource throughout the year. In addition, it is one of the sites most often visited and enjoyed by park users. It is the view of HNC that Hartley Pond's educational and aesthetic values outweigh the impact of the dam on the ecology of Tischer Creek.

### **E. Native Forest Communities:**

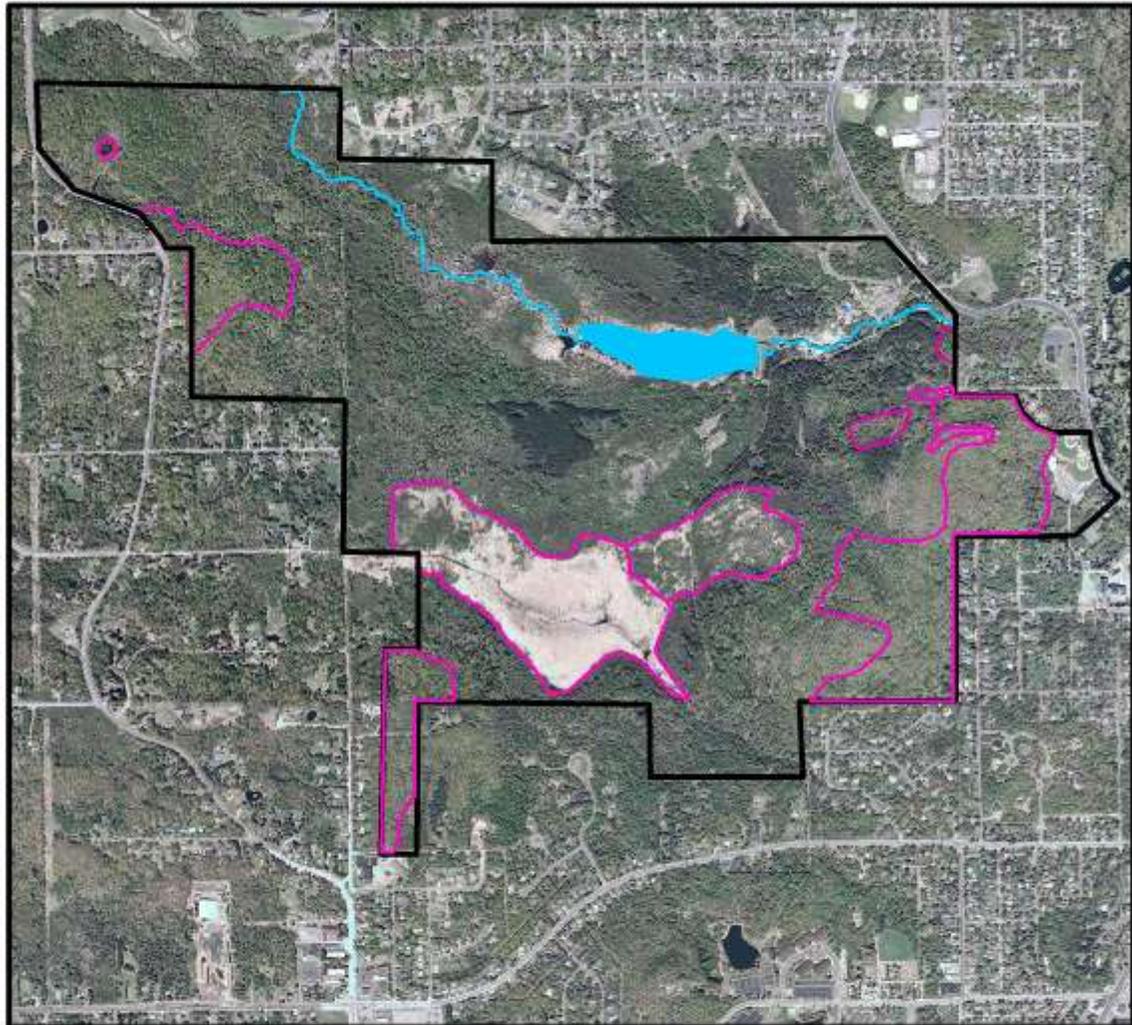
The native forest communities are an integral facet of Hartley Park, known not only for supporting high biodiversity, but enhancing the park visitor's outdoor and educational experience. Protection and/or enhancement of the identified unique forest types, should be of vital importance. Forest enhancement areas and projects should be clearly delineated and discussed with the City. Potential forest enhancement efforts should have the potential for multiple benefits of forest landscape values such as water quality, wildlife habitat, and ecological diversity.

### **F. Forest Stewardship Principles:**

In an effort to maintain and improve the park landscape into the future, work being performed in the park must conform to a set of governing principles. Hartley Nature Center, in collaboration with the City of Duluth, will screen new stewardship project proposals in advance to ensure their adherence to the following guidelines:

- Projects must not increase the presence of invasive species.
- Projects must not decrease the diversity of native flora or fauna.
- Projects must not degrade the quality of established native plant communities
- Projects must not negatively affect the quality of nearby waterways.

## Geographic Areas of Emphasis for Preservation/Conservation



Land and water areas delineated are based on having multiple attributes of the following criteria : High/Medium Native Plant Diversity, High Patch Quality Ranking, Low Non-Native Populations, Unique Native Plant Communities (Forest Type), and other important qualities of the park.



Map Source: 2004 Ethan Perry Report "Native Plant Communities of Hartley Park"

## V. Invasive Plant Species Control Plan

### Introduction:

In keeping with its mission to protect the natural qualities of Harley Park (the Park), the Hartley Nature Center (HNC) has been instrumental in developing and implementing initiatives to control invasive plant species in the Park for the past 10 to 20 years through volunteer efforts, grant funding and the City of Duluth (City) efforts.

HNC shall continue to work in close cooperation with the City to implement further management/control initiatives.



Treatment of buckthorn, in this case using herbicidal spraying, is an ongoing effort at Hartley Park.

### A. Statement of Purpose:

The purpose of this Invasive Plant Species Plan is to continue past invasive plant species control initiatives undertaken by HNC and the City, and to implement an agreed-upon procedure for the future.

### B. History of HNC and City's Invasive Control Efforts:

Over the past ten years, Hartley Nature Center has worked with Duluth area schools, colleges, churches, scouts, the City of Duluth, ecological consultants, and general public volunteers to control buckthorn (primarily *Frangula alnus*, but also *Rhamnus cathartica*) within Hartley Park. Adult and youth volunteers provided most of the labor for the effort by pulling, cutting, girdling, dragging, piling, and chipping trees. Licensed volunteers and Hartley staff applied herbicide (Roundup initially, then Garlon 4) and city staff hauled away several truckloads of pulled buckthorn.

Once cleared of buckthorn, native trees and shrubs were planted back into the most severely impacted areas. Species planted include: red-berried elder, high-bush cranberry, red-osier dogwood, willow spp., serviceberry spp., northern red oak, sugar maple, mountain maple, paper birch, yellow birch, white cedar, white spruce, black spruce, and white pine. All of these species are found in more pristine areas of the park and surrounding northern hardwood forests. These areas guided the selection when choosing native trees and shrubs. Maps have been created to help direct future efforts and to identify areas that are highly impacted and relatively pristine. It appears that about 400 of the total 650 acres of the park contain buckthorn. In some areas, buckthorn is the dominant plant, in other areas, it is barely present at all. Primary effort has been focused on the areas near the Hartley Nature Center building, and there is still much work to be done. About 100 acres have been treated so far, but in areas which had mature, fruiting trees, young plants are sprouting from the soil seed bank.

One of the most encouraging outcomes of the project has been the degree of community participation. Public programs, school programs, and media attention have helped raise awareness and improved volunteer recruitment. Local radio shows, a television news program, and newspaper and newsletter articles have led many community members to control buckthorn on their own properties, and Hartley has made tools and staff available toward these efforts. HNC staff has also developed a brochure for homeowners.

In addition to buckthorn, control efforts have been applied to Purple loosestrife (*Lythrum salicaria*), Reed canary grass (*Phalaris arundinacea*), Japanese knotweed (*Polygonum cuspidatum*) and Tansy. In the early

2000's two leaf-feeding beetles, one root-boring weevil and one flower-feeding weevil were introduced to Purple loosestrife populations around Hartley Pond, and control has been effective.

**C. Objectives for Invasive Plant Species Control in Hartley Park:**

The objective of invasive plant species control shall be to encourage support and help to facilitate projects that reduce the prevalence and spread of invasive plant species in Hartley Park. These efforts will demonstrate various procedures for controlling invasive plant species in the City of Duluth and surrounding communities by making inroads in existing invasive species populations and identifying and eliminating infestations of new invasive species.

**D. Invasive Species Control Procedure:**

<b>Hartley Nature Center Hartley Park Invasive Species Control Procedure</b>	
1.	Choose species for control priority and establish specific procedures for each (e.g. recognition, finding and documenting locations, control methods, time of year, multi-year outlook, disposal after removal, restoration, record-keeping, who does what) Especially, determine movement and management of buckthorn waste by City of Duluth.
2.	Establish procedures for locating and marking populations of invasive species in Hartley Park.
3.	Identify areas of highest quality vegetation. Initiate focused control actions there, then proceed outward from their edges. (see report by Ethan Perry).
4.	Clearly delineate boundary lines between Hartley Park and adjoining properties. Seek and obtain permission, if possible, from adjacent landowners to inspect for invasives on their property and to control them. This may require education of adjacent landowners about invasive species problems.
5.	Identify potential hazards from underground or overhead utilities that may be affected by removal of buckthorn roots or by toppling of large buckthorn trees.
6.	Apply for grant to fund a full-time person to coordinate city invasives control efforts, focusing on Hartley Park as the demonstration site.
7.	Determine needed equipment and supplies, and make purchases. Obtain funding from appropriate organization (HNC, city of Duluth, etc.).
8.	Determine training needs and obtain needed training.
9.	Determine permits needed, if any, for herbicide application.

## **E. Priority Species List for Hartley Park**

The following is a priority list of invasive species under this plan. The list will be periodically updated as needed.

- **Hartley Park Forest:**
  1. glossy buckthorn
  2. common buckthorn
  3. Japanese knotweed
  4. garlic mustard
  5. garden forget-me-not
  6. common speedwell
  7. grove woodrush
  8. Chaix's bluegrass
  9. Lilacs (consider historic context of lilacs as part of analysis)
  10. honeysuckle spp. (not invasive in shade)
  
- **Hartley Park Wetlands and Aquatics:**

See DNR site for potential candidates:  
[\[http://www.dnr.state.mn.us/invasives/aquaticplants/index.html\]](http://www.dnr.state.mn.us/invasives/aquaticplants/index.html)
  
- **Hartley Park Non-forested uplands:**

Consider any state prohibited or restricted noxious weed law list (see below), plus wild parsnip. For more information, see:  
<http://www.mda.state.mn.us/news/publications/pestsplants/badplants/weedlaw.pdf>

## VI. Hartley Park Trail Plan

### Introduction:

For nearly 100 years the general public has utilized Hartley Park landscape for recreational purposes. To this day, the opportunity for year-round recreational trail use is one of the primary reasons people visit Hartley Park, providing immeasurable enjoyment and threshold recreational experiences for young and old alike.

Along with the recreational use of Hartley Park, non-designated uses, poor trail design and limited maintenance has caused environmental degradation to the natural qualities of the park.

Hartley Nature Center's founding mission is *to provide environmental education, and preserve the natural qualities of Hartley Park*. Over the past 21 years, the organization has taken action to help improve the environmental health of the Park by being a catalyst for environmental awareness and active public participation and stewardship.



Morning light greets hikers along the Hartley Park Dam Trail. Photo Courtesy: Dennis O'Hara.

The public use of the Hartley Park trail system shall serve the community's outdoor recreation and environmental education needs. Through the following trail plan, Hartley Nature Center shall continue to provide consultation, support, guidance, and hands-on efforts to help the City of Duluth oversee the trail system of Hartley Park.

### A. Trail Management Philosophy:

Hartley Nature Center recognizes that Hartley Park has many designated and non-designated trails throughout the landscape. Many of these trails were not purposefully built, but rather evolved with public use over time.

Most of these trails shall continue to serve a legitimate purpose; however, certain trails or trail locations should be closed. Basically, Hartley Park has lots of trails, most of which need maintenance work.

In order to preserve the natural qualities of Hartley Park, Hartley Nature Center is planning to continue to work with the City of Duluth, and other interested stakeholders, to protect against the indiscriminate growth of new non-purpose built trails.



Visitors enjoy a day on Hartley Park's Rock Knob, accessed by park trails.

**B. Trail Work Process:**

Trail work shall be performed in consultation with the City of Duluth and local trail users, and follow generally accepted recreational trail standards and guidelines, such as those from the Minnesota Department of Natural Resources (MDNR), and the International Mountain Biking Association (IMBA), and similar professional trail building organizations.

*Maintenance Focus:* Maintenance of City-approved trail networks are a top priority for projects, and will receive the bulk of the attention from Hartley Nature Center. An evaluation of non-designated trails or trail segments shall begin in 2011 with the goal of developing a management strategy by the end of the year. If outside groups wish to perform maintenance projects upon existing trails, HNC shall work directly with their leadership and the City to ensure activities take place on preferred trail networks, and fulfill the basic criteria intended for trails within the Park.

*New Trail Project Evaluation Process:* If new trails or trail segments are brought before Hartley Nature Center or the City of Duluth, the two organizations shall meet to discuss. Both Hartley Nature Center and the City of Duluth shall continue to meet on a regular basis to foster open communication on trail-related projects.

The Hartley Nature Center Environmental Stewardship Committee shall continue its role of screening proposed new trail projects in cooperation with the City of Duluth. As projects are proposed (whether from outside or within HNC), the committee shall analyze the purpose, value and effects on the natural environment of the Park, in keeping with the organization’s mission *to provide environmental education and protect the natural qualities of the park*. As a guide, the following New Trail Project Evaluation Process shall be utilized by the Hartley Nature Center Environmental Stewardship Committee:

<b>New Trail Project Evaluation Process:</b>	
1.	Purpose of Trail Project (singular use, multiple-use, seasonal, one-time events)
2.	Value of Trail Project (e.g. environmental education, social, recreational, aesthetic, environmental protection/improvement, public access, parochial access).
3.	Trail route siting effects on natural qualities of the park.
4.	Whether trail slopes and soil conditions are adequate to support intended and anticipated future uses.
5.	Determine if planned project follows trail maintenance/construction standards.
6.	Ability of group to adequately complete project.
7.	Recommendations (including consultation needs)

Following the evaluation process of new trail projects, the Committee will provide its recommendations to the City of Duluth for formal review and consultation.

*Valuable Support:* Hartley Nature Center’s influence on trail management and maintenance shall continue to be a valuable support for the City of Duluth, the local community and for users of Hartley Park.

Hartley Nature Center is working to improve trails in Hartley Park for all park users as well as for use in its own programs. HNC sees this as supporting its mission to give people opportunities to develop understanding, appreciation, and stewardship of the natural world. This work is done, in cooperation with the City of Duluth (City) and user groups, by HNC staff, by many volunteers and volunteer groups directed by HNC staff, and with money obtained in grants to the center. HNC makes preservation of the natural qualities of the park a priority in the design of this work.

### C. Trail Work Communication and Consultation:

In order to better communicate trail work activities, timely use of electronic media such as Facebook, Twitter, E-mail, newsletters, the HNC website and the State of the Park Report shall be used to get the word out on trail projects that have been accomplished, solicit a wider perspective on Park recreational interests, and encourage volunteerism. An excellent example of this is the City of Duluth Employee Judy Gibbs’s City of Duluth Parks Stewardship E-mail messages.

*Neighborhood Consultation:* The HNC Environmental Stewardship Committee shall seek periodic consultation with the local community on the use and trails within the park.

Of particular interest are the non-designated trail uses and trail segments within the Park. The committee shall solicit consultation with neighboring property owners to better understand trail access issues and develop a strategy.

*Other User Group Consultation:* The HNC Environmental Stewardship Committee shall also seek opportunities to consult with the spectrum of user groups on a periodic basis to better understand the visitors and their uses of the Park.

The ultimate goal for consultation is to better equipped HNC staff and committee members with management strategies and anticipate future demands of Park resources for public recreational uses. Recent consultation with mountain biking interests has led to excellent coordination and volunteerism on trail maintenance and construction projects.

Additional consultation with local users of the parks may include the Duluth Cross Country Ski Club, the Duluth and regional public and parochial schools, other nature centers, as well as environmental and other programmatic organizations in order to better understand user groups, conflicts and issues involving Hartley Park trails.

Hartley Nature Center will work closely with the City of Duluth to coordinate and encourage this consultation with the intent of casting a wide net and facilitating communication on the subject of trail use and identifying maintenance needs.



**Harley Nature Center initiated accessible trail construction and maintenance within Hartley Park, including consultation that led to this evaluation of disabled trail facilities in 2008.**



**The first-ever City of Duluth mountain biking network was approved via the considerable consultation efforts of current Hartley Nature Center’s board member Kurt Lange.**

## D. Trail Work Plan:

Hartley Park has many trails. Most need work. The focus should be maintaining existing trails. The few remaining areas of Hartley Park that trails don't pass through should be left undisturbed. Any new trail, trail segment, or reroute should be carefully planned for a compelling purpose. Most of our effort will be to improve existing trails. In some cases this may require partial rerouting.

Hartley Nature Center's work plans have remained consistent but incomplete for several years. The center intends to follow the policy established by the City that trails east of Old Hartley Road will be for hiking or skiing only. Multi-use (bicycle and hiking) will be along and west of Old Hartley Road.

Hartley Nature Center is using reroutes, drainage, and boardwalks where they are needed, to make multi-use trails good enough to withstand bicycle use and erosion and remain attractive for hiking as well as bicycling.

Improvements are designed according to Minnesota DNR and International Mountain Biking Association trail standards. All projects are approved by the City. This work should be coordinated with planning and work on trail signs and trail heads, so they will complement each other.

Hartley Nature Center's plans are noticeably incomplete in the area of the Rock Knob. There is a plan for a reroute of the Superior Hiking Trail spur to the Rock Knob. It would be for walking only. There is no accompanying plan for bicycle routes, and no decisions have been made about how existing trails might be rerouted or replaced. Plans for access to the park from the north also are noticeably incomplete. Planning work should focus on these areas.

In other areas of Hartley Park, where basic trail routes are established, it is clear that what is needed most is improvement of existing trails. Planning has kept pace with this work. Here we describe improvement projects that we think should have priority. This will be updated as projects are completed or new needs arise. The last update was in October 2010.

### *Hiking Trails Tasks:*

- **North Tischer Trails.** Across the bridge in front of the nature-center building to Old Hartley Road and from the nature-center building along the north side of Tischer Creek to the pond and across the dam to Old Hartley Road. These trails will be made accessible for wheel-chair use. Gravel and boardwalk work will continue until this goal is reached. *Trail skill level-easy.*
- **Wildflower Trail.** The loop behind the nature-center building through the wildflower garden inside the deer fence. Wood chips, gravel, and boardwalks will be used to make this trail roomy enough to accommodate groups in two-way stop-and-go traffic and substantial enough to be maintained for heavy year-around use. A level part will be made accessible for wheelchair use. *Trail skill level-easy.*



Hartley Nature Center is a catalyst for securing volunteers, such as this “Incredible Exchange” participant working on trail restoration.

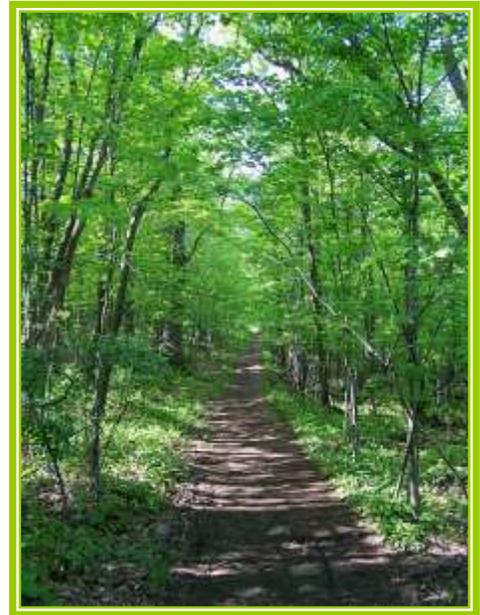


The maze of trails in the westerly Hartley Park pine plantation has been better defined through Hartley Nature Center trail stewardship initiatives.

- **Superior Hiking Trail.** Essentially completed in 2006, the Superior Hiking Trail through Hartley Park needs only minor finishing. *Trail skill level-intermediate.*
- **Rock Knob Trail.** Plans for the Superior Hiking Trail in Hartley Park include a new route for the spur trail to the Rock Knob. It will provide inspiring views and will better resist erosion. It will be for walking only. A different approach to the Rock Knob will accommodate bicycles. *Trail skill level-intermediate.*
- **Ski Trails.** Drainage work and addition of gravel will be completed to make at least one good dry loop of trail for walking when there is no skiing (the east part of the outer loop and the west part of the inner loop). *Trail skill level-easy to intermediate.*
- **South of Rock Knob.** This trail has a dead end because a trail to which it connected was rerouted. It should be closed at least until a comprehensive trails plan for the area around the Rock Knob can be implemented.

***Multi-Use Trails Tasks (for both biking and hiking):***

- **Old Hartley Road Trail.** From Woodhaven Lane north to the pond and then east to the nature-center parking lot. Drainage work and addition of gravel will be completed to make this a good dry trail for both bicycling and walking. From Woodhaven Lane north across the boardwalks, more gravel should be enough. From the boardwalks to the pond, redirection of the flow of water will be needed; engineering this will take some planning. The boardwalks will be repaired and maintained. From the pond to the parking lot, the road will be made accessible for wheel-chair use, completing loops with the North Tischer Trails. *Trail skill level-easy.*
- **Tunnel Trail.** Running east-west south of the pond. Surrounding buckthorn and alder will be removed to open the tunnel and allow drying of the trail and restoration of more diverse vegetation. Further west, the north fork through a wet area will be closed in favor of the south fork through a pine plantation. Gravel and drainage work will be used to make the whole route a good dry trail that will hold up for both bicycling and walking through changing seasons and conditions. This is the main east-west connecting trail in Hartley Park. Because hiking is fundamental for many users of the park, it is important that main routes designated for bicycling be maintained as good dry trails for walking as well. *Trail skill level-easy.*
- **Outer Loop (Guardrail) Trail.** Single-track trail in the northwest part of the park. The trail bordering the golf course will be rerouted to the south. This will take the trail off the property line and out of wet areas. The eroded downhill trail will be rerouted; an existing trail to the south will be incorporated into this reroute. A section of lowland trail will be rerouted onto higher terrain. *Trail skill level-intermediate.*
- **Drunken Fisherman Trail.** West of the rock Knob and pine plantations. A reroute of half the trail will eliminate wet areas. This is an “advanced skill” trail, not used by many walkers; the reroute should be built accordingly.
- **Root Canal Trail.** East-west along the southern edge of the park. A reroute (if possible) will eliminate wet areas. *Trail skill level-intermediate.*
- **Northwest Passage.** A constantly wet low spot (120+ feet long) will need a reroute (if possible) or a boardwalk. COGGS would like to reroute the complete section of trail. *Trail skill level-easy.*



The aptly named Tunnel Trail and Old Hartley Road are scheduled for trail improvement projects in 2011 via grant donations secured by Hartley Nature Center.

- **Naymark Trail.** This trail needs some additional work in wet spots. *Trail skill level-intermediate*
- **Power Line Trail.** North-south in the west part of the park. Boardwalk for 400 feet will be added to bridge wet areas. *Trail skill level-easy.*
- **Inner Loop (Guardrail) Trail.** An “advanced skill” single-track trail in the northwest part of the park. This trail is in relatively good shape, needing only occasional maintenance.
- **Soapbox Knoll Trails.** These trails are in relatively good shape, needing only occasional maintenance. *Trail skill level-easy to intermediate.*

***Trailhead(s) Tasks:***

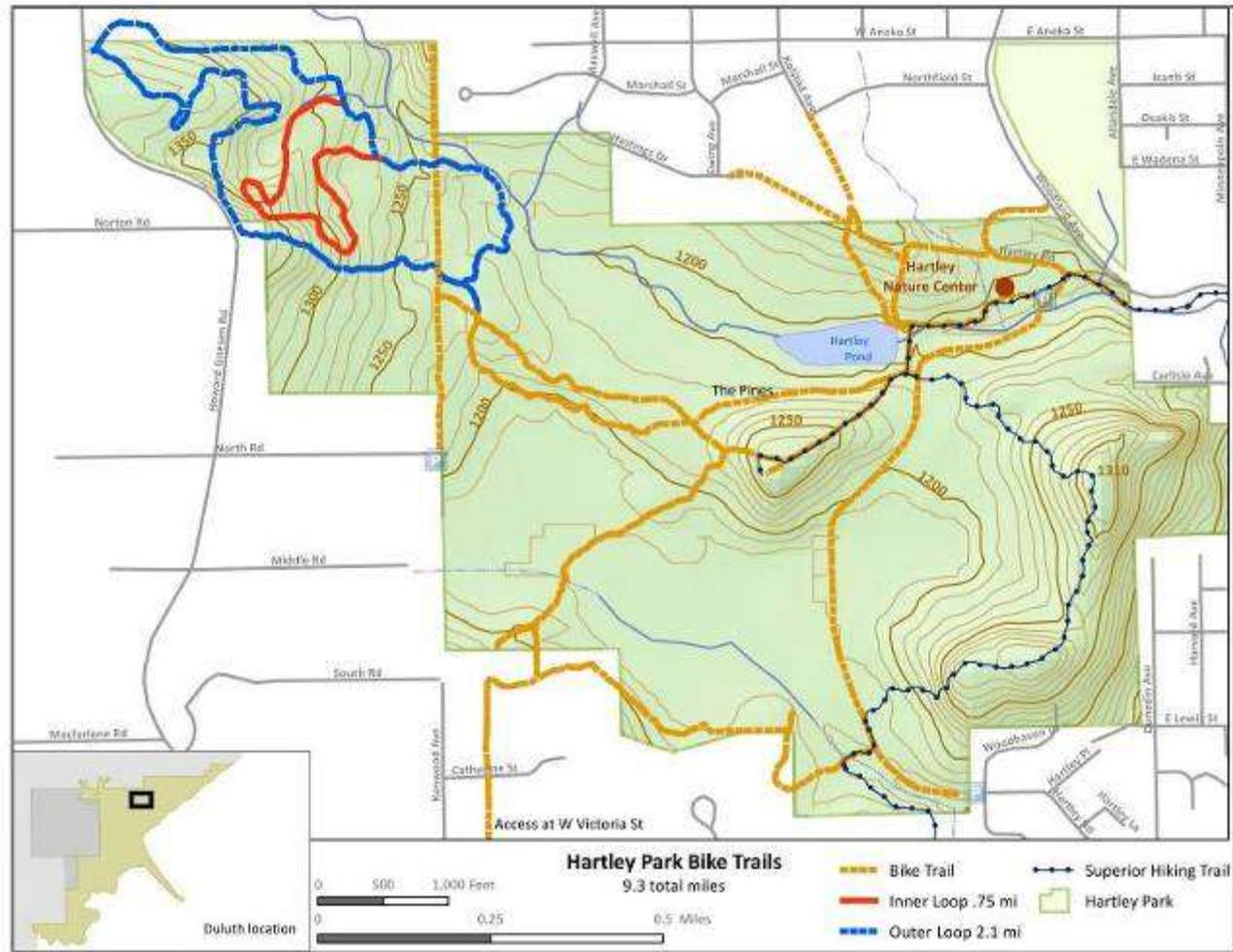
- **Marshall Street.** Needs to be rerouted onto City land. Needs a kiosk and map.
- **North Road.** Needs a map and more boardwalk.



**Hartley Nature Center in cooperation with COGGS and the City of Duluth has performed considerable trail maintenance work on existing trails within Hartley Park.**



**HARTLEY PARK MOUNTAIN BIKE TRAILS - 2011**  
(From COGGS Website)



## VII. Built-Environment Plan

### Introduction:

In keeping with Hartley Nature Center's mission of "providing opportunities to develop understanding, appreciation, and stewardship of the natural world", HNC's staff, board, and committee members have been very intentional in creating a built environment that allows for this mission to be realized while limiting the impact on the natural setting of the park.

Small scale projects such as the ADA accessible trails, the pond side dock, and the outdoor amphitheater, as well as the large scale 'green' nature center building project have allowed people of all ages and abilities to learn about and experience the many natural elements of the unique setting that is Hartley Park. These projects have been developed through input from park users, consultation with the city Parks and Recreation Department, and the dedicated members and volunteers of Hartley Nature Center. Many of the smaller scale projects have been designed and built by the spring Environmental Studies Stewardship Internship program under the guidance of staff and volunteer experts.



Hartley Park's built-environment includes the nature center building and associated structures.

### A. Current Built-Environment

Working within its educational mission, HNC utilizes elements of the built environment that allow thousands of visiting students to access areas of the park while limiting degradation of these areas from repeated use. And the outdoor classroom space, walkways, and gardens also enable teachers to engage students in hands-on learning. Currently, Hartley Nature Center is maintaining the following built structures within Hartley Park:

- Hartley Nature Center Building, built in 2003
- Hartley pond boathouse, dock, and amphitheater
- ADA boardwalks and bridge- along and over N. Tischer Creek and in the enclosure
- Vernal pond walkways at Fairmont and Caroline ponds
- Three acre deer enclosure fence
- Butterfly and water gardens around the building
- Outdoor amphitheater within the enclosure

### B. Future Built-Environment

Given the growing programming and space needed to store the associated materials, there have been discussions over the past few years about storage options both on and off site. Plans are currently being developed for the building of a portable timber frame storage building to be located directly behind the nature center building on the leased premises. The project would utilize the red pine logs harvested from the enclosure area and the 2011 spring ESS Interns who will mill the logs and construct the building. The design work and oversight will be provided by experienced contractor Denny Hovde. The goal of this

project is to provide the need space to secure and protect many of the outdoor equipment and tools utilized by HNC's growing group of volunteers who help maintain the gardens and trails in Hartley Park.

## VIII. Park Stewardship Project Review Process

### Introduction:

Park stewardship projects tend to occur on a continuous basis, and range from low level activities to highly visible construction projects. An effective review and communication process is critical to project success. Ongoing review, oversight, management and communication of these activities have been typically run through the Hartley Nature Center staff. The following section identifies the typical method employed for project review and communication as well as areas requiring further refinement.

### A. Project Notification:

New/outside activities, projects or ideas most often come through several points of contact, listed below in order of frequency:

1. HNC Staff (mostly Executive Director & Director of Operations)
2. City Park and Recreation staff (e.g. Kelly Fleissner, Tom Kasper, & Judy Gibbs)
3. Outside interest/user groups (i.e. Hartley neighborhoods, COGGS, DXC)
4. HNC Stewardship Committee
5. HNC Board

### B. Review Process:

Decisions are made on three different levels based on the impact, cost and significance of the proposal:

- **Low Level Projects:** tend to occur by most groups above without review, permission or much communication. Mostly maintenance of existing trails, such as trail clearing and limb trimming, trail drainage and buckthorn removal. The Park Stewardship Committee will help to encourage communication between user groups, using the HNC Director of Operations as a communication hub to disseminate information internally and externally.
- **Mid Level Projects:** tend to run through HNC staff for permission, oversight, and/or communication to all groups listed above, and approval is sought from other groups, if necessary. City Parks and Recreation Department staff also approve Mid-Level Projects and tend to communicate with HNC staff. Some historical projects have undergone review, some have not. (Eagle Scout projects, special events). The Park Stewardship Committee will help to encourage communication between user groups, using the HNC Director of Operations as a communication hub to disseminate information internally and externally.
- **High Level Projects:** are communicated and approved by HNC staff, HNC Board (via the HNC Stewardship Committee), and the City Parks and Recreation Department. Recent examples include the amphitheater and boathouse construction. Other qualifying examples would include discussions on the future operation or maintenance of the Hartley Pond Dam, additional built-environment projects, or any new trail proposals.

Any proposal that is construed to have a significant impact to the natural qualities of the park must go through the review and approval process with the HNC Board (via the HNC Stewardship Committee), Duluth City Parks and Recreation Department, as well as any other directly impacted and represented user group before the project begins.

As Hartley Nature Center or other projects are developed or brought before the Hartley Nature Center Park Stewardship Committee, it is prudent that the group utilizes a formal review process to ensure park stewardship principles and guidelines are maintained. The following is a general method for the Park Stewardship Committee to use in evaluating activities or projects:

<b>High Level Project Evaluation Process:</b>	
1.	Identify the Purpose of Activity or Project (e.g. new trail, new trail segment, trail maintenance, shelter, storage building, dock, invasives mitigation, forest landscape activities)
2.	Value of Project (e.g. environmental education, social, recreational, aesthetic, environmental protection/improvement, public access, parochial access).
3.	Effects on natural qualities of the park (e.g. adequate design, aesthetics, materials and siting).
4.	Whether site conditions are adequate to support intended and anticipated future uses.
5.	Alternatives considered. Whether there are alternative actions that achieve better results.
6.	Consultation considered. Determine whether other user groups or agencies should be consulted.
7.	Document recommendations. If the activity or project is of a significant scope, HNC board input (or approval, if warranted) shall be consulted in an expeditious manner.

## **B. Communication Methods**

Timely communication is a critical element to getting the good word out on Hartley Nature Center Park Stewardship activities or projects. Depending on the significance of the project or activity, various forms of communication have been and will continue to be employed. The following is a list of methods used to communicate projects

- Currently, most communication is run through established channels/connections between HNC staff and contacts at the various groups listed above.
- Most communication is currently done via e-mail (group or direct) and by phone when a specific timeline is short.
- For ongoing low level or mid level projects or activities, the Park Stewardship Committee will consider how to develop real-time communication with HNC Board, HNC members, other interested parties and user groups, via social media, E-mail postings, and our website.
- High impact activities or projects shall have face to face informational meetings with all interested user groups.

- Communication to the greater community happens via HNC newsletter and media PR for larger projects.
- Post-project communication is also performed via newsletters and the State of the Park Report.
- On a periodic basis, the Park Stewardship Committee shall consider ways to “Take the Pulse of the Neighborhood” by various methods in order to gather insight into park stewardship issues, identify concerns, and obtain support. This can be done, for example, by hosting a gathering of neighboring property owners or specified user group, and/or requesting comments through mailings or phone calls. Information gathered from these methods shall assist the Park Stewardship Committee in planning and strategy.