



Camp Northwoods
Camp Elk River
Camp Singing Hills
Camp Lockeslea
Camp Whispering Hills
Camp Edith Mayo
Camp Lakamaga



Camp Facility Master Plans

Girl Scouts of Minnesota and Wisconsin River Valleys, Inc.

December 2012

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INTRODUCTION

PROJECT BACKGROUND

Girl Scouts Mission and Goals

Started in 1912, Girl Scouts is the world's preeminent leadership development organization for girls. Today, Girl Scouts continues to strive to carry out its mission to build girls of courage, confidence, and character, who make the world a better place.

Background

Girl Scouting started in Minneapolis in 1914. Several councils were established in the region from 1921 to 1964. In 2007, the five councils serving southern Minnesota and western Wisconsin were Girl Scout Council of Cannon Valley, Girl Scout Council of Greater Minneapolis, Girl Scouts Peacepipe Council, Girl Scout Council of River Trails, and Girl Scout Council of St. Croix Valley. These merged to create Girl Scouts of Minnesota and Wisconsin River Valleys (River Valleys). In 2010, River Valleys decommissioned three camp properties and transferred ownership of one camp to Girl Scouts of Lakes and Pines.

Today, River Valleys serves nearly 45,000 girls each year in all or portions of 49 counties in southern Minnesota and Wisconsin. The current seven camp properties include:

- **Camp Elk River** located near the City of Zimmerman in Sherburne County, Minnesota
- **Camp Lakamaga** located in the City of Scandia in Washington County, Minnesota
- **Camp Singing Hills** located near the City of Waterville in Le Sueur County, Minnesota
- **Camp Northwoods** located near the City of Mason in Bayfield County, Wisconsin
- **Camp Whispering Hills** located near the City of Houston in Houston County, Minnesota
- **Camp Lockeslea** located in the City of Fridley in Anoka County, Minnesota
- **Camp Edith Mayo** and Program Center located in the City of Rochester in Olmsted County, Minnesota

River Valleys has been challenged to sell its decommissioned properties in this current economic environment while continuing to maintain its current programming properties. River Valleys is also acutely aware of the changing needs of girls and how their camp facilities need to respond in order to increase camp facility attendance. Based on this information, River Valleys engaged the design team of SRF Consulting Group, Inc. and Heartwood Forestry to produce a sustainable, systematic long-term plan that includes best use recommendations for all camp properties taking into account financial, programmatic, and land capacity considerations.

PROJECT SCOPE

The following tasks were included in the project scope for development of the master plan:

- Reaffirm goals and objectives for operating and maintaining camp facilities
- Complete site inventory and analysis of individual camp properties
- Evaluate camp programming and activities
- Identify infrastructure and facility needs
- Develop a natural resource stewardship plan
- Evaluate existing camp boundary and land parcels
- Establish operation and maintenance principles
- Provide comprehensive land use master plan recommendations and cost estimates

REAFFIRMING GOALS

After conducting site visits, the design team engaged Girl Scout staff and the Property Committee to reaffirm goals and objectives for the master planning process. Camp master planning goals and objectives include the following:

Maintain or Improve the Quality of Each Camp Facility Experience

- Provide clean and comfortable accommodations
- Provide convenient access to all camp facilities and amenities
- Ensure safety and security for all camp users
- Develop a life-cycle phasing approach for replacing outdated camp facilities and amenities

Maintain or Increase Camp Facility Attendance

- Enhance and promote existing or new camp programming activities
- Provide four-season facilities and activities to promote year-round use
- Identify camp facility needs for each geographical service area

Reduce Camp Operation and Maintenance Costs

- Implement sustainable land and building management practices
- Identify building facilities to remain, be remodeled, or be removed
- Evaluate current boundary configurations of camp properties
- Engage volunteer efforts

Establish Standardized Land Management and Stewardship Practices

- Evaluate current and future timber harvesting and reforestation approaches
- Protect existing native woodland, prairie, wetland, and water resources

- Identify approaches for managing invasive plant species
- Identify natural resource hazards and threats to ensure the safety of camp users

Adhere to Girl Scout Mission of Building Girls of Courage, Confidence and Character

- Reinforce communal aspects of camp facilities and programming
- Maintain individual challenge and reward of participating in camp activities
- Accommodate a wider diversity of Girl Scout user groups
- Increase awareness and appreciation of the natural resource environment

PROCESS

Stakeholder Meetings

The collaborative process involved engaging stakeholders and listening to needs and issues for each of the camp properties in order to provide thoughtful analysis and identify realistic strategies and recommendations for each camp property. The following stakeholders were engaged:

- Core Girl Scout Staff
- Property Committee
- Finance Committee
- Board of Directors

Site Visits

In December 2011, the design team visited each camp property during a three-day trip. Girl Scout staff led the design team on a tour of each camp to evaluate existing facilities and gain a better understanding of each property and natural resource areas. Photo documentation and site notes were recorded at each camp. Based on the notes and existing mapping of the camp properties, existing condition maps were generated for each camp property.

CAMP CLASSIFICATIONS

After evaluating the camp properties, it became clear individual camps could be categorized based on location, level and quality of amenities, quality of natural resources, and available programming options. By grouping the camps into distinct categories, priorities could start to be evaluated and determined for each camp facility.

Core Camps

Core camps were designated by the River Valleys Board of Directors based on geographical distribution within the region. In general, core camps have modern facilities and the widest range of programming activities. Core camps are suitable for all ages and camping skill levels. A first-time camper would attend a session at a core camp for an optimum first-time experience.

Classified core camps are Elk River, Lakamaga, and Singing Hills.

Destination Camps

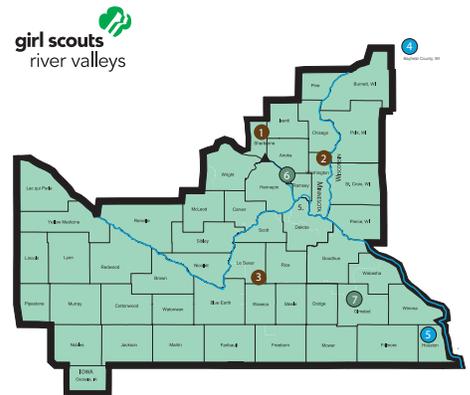
Destination camps are defined by their unique natural features, quality of the natural environment, and greater distance from the Twin Cities metropolitan area than the core camps. There are a wide range of camp programming options, including equestrian programs. Camp facilities are generally more rugged than at core camps. Destination camps are best suited to Girl Scouts seeking a more advanced rustic-level experience.

Classified destination camps are Northwoods and Whispering Hills.

Urban Retreat Camps

Urban retreat camps are defined by their convenient location within city limits, small size, limited facilities, and limited programming options. Urban retreat camps can host day camps and overnights for local or visiting Girl Scout troops.

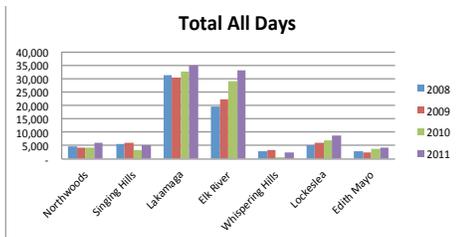
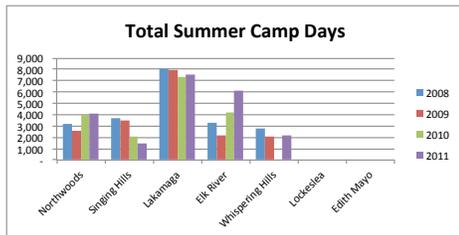
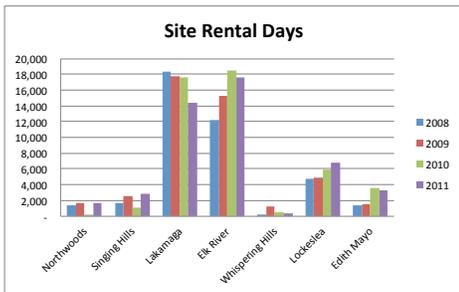
Classified urban retreat camps are Lockeslea and Edith Mayo.



- | | |
|-----------------------|--------------------------|
| 1. Camp Elk River | 4. Camp Northwoods |
| 2. Camp Lakamaga | 5. Camp Whispering Hills |
| 3. Camp Singing Hills | 6. Camp Lockeslea |
| | 7. Camp Edith Mayo |

CAMP ATTENDANCE

Camp attendance numbers over the last four years clearly indicate both Camp Elk River and Camp Lakamaga are the most visited camp facilities within the River Valleys system. Most of this can be attributed to the quantity and quality of amenities and programming offered at these camp facilities. These attendance figures begin to establish some preliminary criteria for understanding the needs and priorities for enhancing the quality of each camp facility.



NATURAL RESOURCES MANAGEMENT PLAN FOR CAMP PROPERTIES

Each River Valleys' camp is a unique combination of natural forests, water resources and altered landscapes that provide a setting for activities and experiences that girls remember throughout their lives. Until recently, camps were under the management direction of multiple staff and committees in different councils. Now consolidated into one, River Valleys desires consistent assessment and management of its properties. The ultimate goal is a quality experience for girls.

This report provides a comprehensive review of the natural resources and management practices at camps. It is based on a review of existing management plans and aerial photographs, conversations with Girl Scout and state agency staff, biological survey information for unique resources, and brief site visits. Available information varied significantly from camp to camp. No new forest inventories or field investigations were conducted for this report.

This report contains general recommendations for all camps along with a brief description of the natural resources at each camp and recommendations specific to that camp. The location of forests, wetlands, and fields are shown on maps. Tree risk management and tree protection during construction activities are discussed in general with some camp-specific tree risk considerations identified for each camp.

The dominant plant community at each camp is forest. Natural water features range from springs, seeps, and creeks to lakes. Each camp has unique assets and constraints that impact how it can be developed and impacts girls. All forests have been altered by human activity, especially since European settlement began in the 1850s. Impacts on Girl Scout properties range from modest, such as fire suppression that affects the ecology of the landscape, to extreme such as the invasion of European Buckthorn, which turned the Edith Mayo property in Rochester from an oak savanna into a thicket of brush.

All camps are impacted by the same soil compaction, stormwater runoff, and erosion issues faced in urban and suburban areas but on a smaller and more manageable scale. Wise management of altered and natural areas of camp can result in adequate usable space and protection of natural resources. Landscapes altered for use may be blended into the surrounding natural forest to encourage girl interaction with natural landscapes and positive experiences at camp.

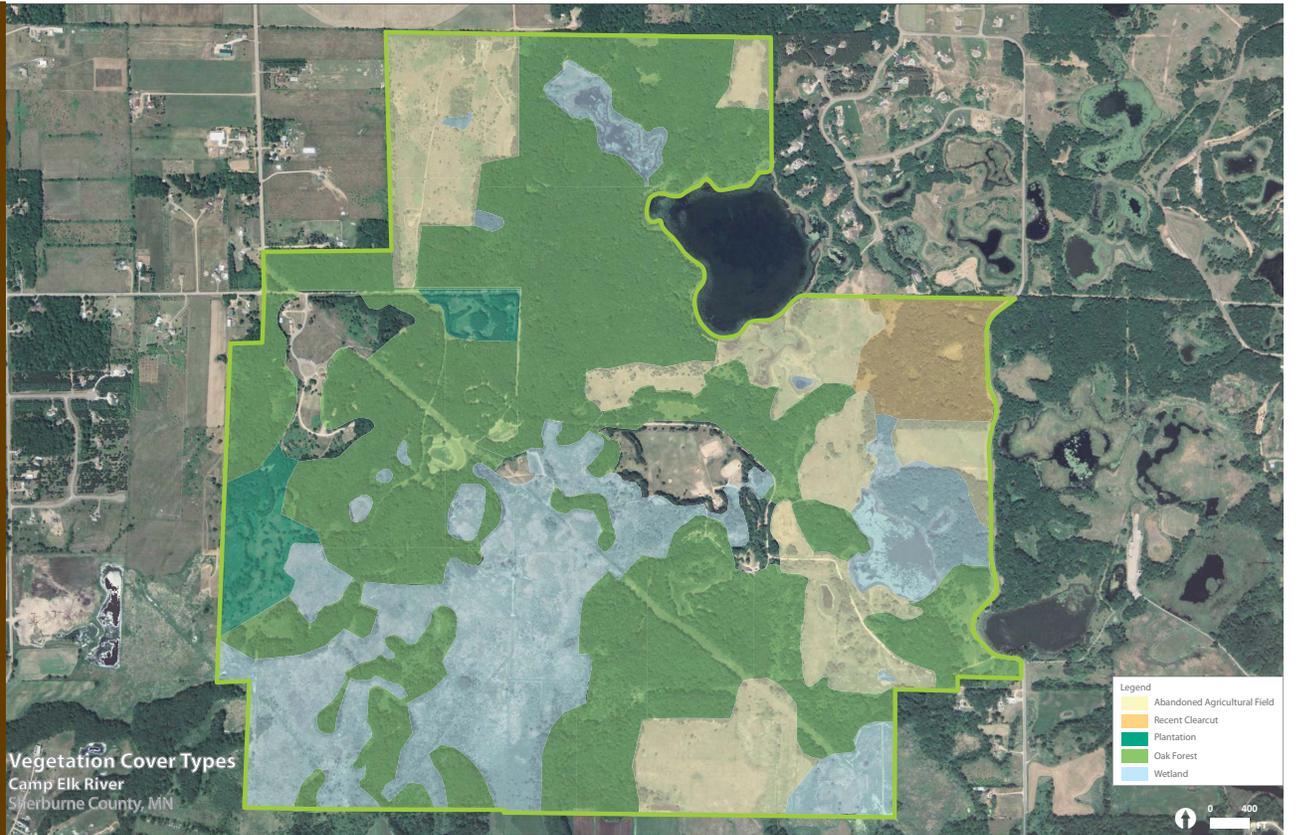
Natural Resource Needs - All Camps

Maintain a plan for stewardship of natural resources at each camp that is prepared by a natural resources professional and updated every five years
Provide staff with the training needed for tree risk assessment and tree pruning, and for management of firewood, invasive species, insects, diseases and other pests
Conduct periodic tree risk assessments at each camp using trained staff with professional support as needed
Follow nationally or state recognized guidelines and standards for management practices
Follow each natural resource intervention (logging, brush removal, burning, etc.) with a site visit and management recommendations from a professional
From the planning stages through completion, have a natural resources professional involved with each construction or redevelopment project that may impact tree roots
Manage firewood to limit the movement of tree pests especially Dutch elm disease, oak wilt disease, and emerald ash borer
Harvest timber from selected areas consistent with the management plan and with the guidance of a professional forester
Use consistent procedures for marking trees scheduled for harvest and the boundaries of timber sales and property
Provide post-timber sale follow-up as recommended by a forester to insure regeneration of a healthy forest
Continue to allow hunting at camps for management of deer populations
For parcels of property divided from camp and sold to others, consider using an easement and working with a land trust to insure that future uses of the property are compatible with the Girl Scout camp that remain
Use consistent signage for welcoming, way-finding and interpretation in natural areas



CORE CAMPS CAMP ELK RIVER

Vegetation Cover Types
Camp Elk River
Siberburne County, MN



CAMP ELK RIVER

Livonia Township, Sherburne County

Sections 25, 26, 35, and 36. Township 34N, Range 26W

INVENTORY AND ANALYSIS

Natural Resources

Property Description

Acquired in 1963, Camp Elk River is 1,130 acres of forest, field, and wetland on Stone Lake. Identified by River Valleys as a core outdoor program site for the future, it is a busy camp that Girl Scouts use year-round. A township road bisects the camp as does an oil pipeline easement. Residential homes are adjacent to the northeast corner of the camp property.

In 2009, River Valleys staff began working with Minnesota DNR Forestry staff to develop a land stewardship plan for the property. The plan was not completed but the local forester provided information used for this report.

The landscape is a mosaic of forest, wetlands and planted groups of evergreen trees:

Oak Forest

The forest is red oak, almost all of it northern pin oak, with bur oak or white oak, quaking aspen, red maple, eastern red cedar, basswood, ironwood, and paper birch mixed in. In some areas, paper birch grows in nearly pure stands. Oak wilt disease is a significant problem in the parts of the oak forest that have a lot of human activity.

A few bur oak trees on the property are broad in form, which indicates that they grew for many years in open areas such as prairies or savannas. Areas that are now oak forest were dense, young aspen with scattered oaks with a few elms, ash and basswood at the time of European settlement.

Logging was done in 2010 and 2011 in the southwest day camp area and in the northeast corner of the property. Tree removal and grubbing was done in the main parking lot as well. In the day camp

area, it was done to remove trees killed by oak wilt disease, trees leaning toward structures, and to open the area.

Clearcut

The logged area in the northeast corner of the property was recently logged by clearcutting. The logger was to leave small oak saplings for future growth. If appropriate steps are taken to ensure that oaks regenerate successfully, the site will quickly return to oak forest.

Plantation

There are planted non-native trees at various locations throughout the camp. These include white and red pine as well as white spruce, which are native to Minnesota, and blue spruce, which is not. The Pines unit is located in a pine plantation probably established in an abandoned agricultural field. Evergreens are planted south of the day camp, within most overnight units and along the west boundary of the property at Whispering Prairie.

Wetland

Small wetlands dot the forest in the northern half of camp property. Wetlands adjoin Stone Lake on the northwest and southeast sides. In the southern half of the Camp Elk River, wetlands dominate the landscape. Historically, these were probably tamarack swamps, which are forests of tamarack (American larch) with red maple, paper birch, and black ash. Some were cleared or burned and used for pasture or hay during dry years. Others were drained and farmed for a period of time and then abandoned. The elevation of the wetlands and Stone Lake change with the level of the water table. In some years, the trails near the lake are underwater.

Unique Natural Resources

Stone Lake and wetlands are unique natural features of the camp. The Minnesota County Biological Survey found much of the camp to be a rare remnant of Oak Forest (dry subtype). Such forests are dominated by northern pin oak, bur oak or white oak, with quaking

aspen common along wetlands. Red maple may grow in the understory.

Invasive Species

Buckthorn is uncommon but found in locations throughout camp. Loggers reportedly cut buckthorn during recent logging operations. Staff reports finding buckthorn in Day Camp Unit 2. Amur maple is established in the Whispering Prairie area.

Tree Risk Management

Hazardous trees have been a special concern at this camp, particularly trees dead from oak wilt disease. Logging was used to remove trees. After logging, many trees blew down in storms.

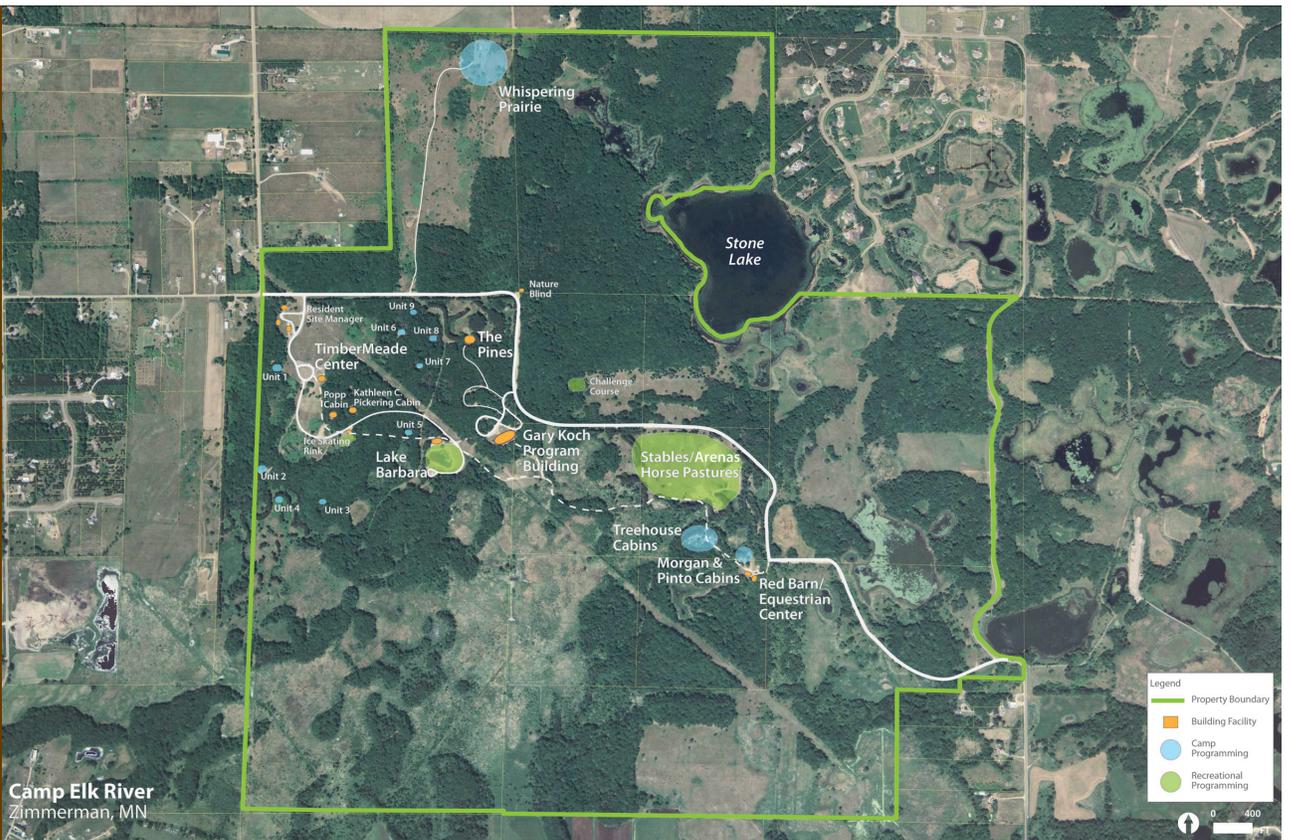
Although there is no recent history of wildfire at the camp, is in an area that could experience wildfire and application of national Firewise principles is appropriate.

Storm shelters are provided at Timber Meade and Gray Koch. Although not a storm shelter, people are likely to seek shelter in the Equestrian Center building in the event of a sudden storm.



Oak wilt is a problem at Camp Elk River. The disease spreads from tree to tree through interconnected root systems. Picnic beetles carry the fungus from infected trees to freshly wounded trees from April through June.

CORE CAMPS
CAMP ELK RIVER



Camp Facility Assets and Constraints

Camp Elk River is one of the most updated camp facilities and provides many amenities to meet the needs of camp users. The following issues were identified as assets and constraints of the camp property:

Assets

- Many newer updated building facilities
- Can accommodate multiple programs at the same time including day camps, resident camps, rentals, and single-day programs
- Several existing four-season facilities: Gary Koch, The Pines, Morgan, Pinto, Red Barn, and Equestrian Center
- Four-season troop houses: Timbermeade, Pickering, and Popp
- Year-round staff housing
- Equestrian facility
- Sand basin pool facility
- Can accommodate large number of campers at one time (approximately 250)
- Diverse natural resources
- Good buffers from surrounding properties

Constraints

- Pipeline easements restricts camp development opportunities and creates visual barrier through camp property
- Remote access to Stone Lake
- Township road cuts through middle of camp property. Illegal activities and dumping occur along edge of roadway
- Large number of newer facilities entering maintenance phase for roof replacements, furnaces, etc.
- No year-round equestrian riding capacity
- Limited variety of sleeping accommodations



The Pines building is one of several modern cabin accommodations that can house both girls and adult staff.



Gary Koch Lodge provides a modern dining hall facility and sleeping accommodations for camp visitors.



The existing bath house



The sand basin pool facility and beach house provide a high-quality swimming experience for camp visitors.

RECOMMENDATIONS

Follow the general recommendations on pages iii and 42-43 that apply to all camps, plus these recommendations that apply to this specific camp.

Natural Resource Management Recommendations

Priority	Natural Resource Needs
High	Implement an oak wilt management program
High	Survey all logged areas for regeneration of trees and, if found inadequate, work with a forester to correct
High	Continue working with Minnesota DNR Forestry staff to complete the Stewardship Plan initiated in 2009
High	Manage poison ivy by eradicating infestations along trails and in and adjacent to camp units
High	Clear brush and overhanging branches from overgrown trails
Medium	Eliminate European buckthorn and amur (ginalla) maple and monitor for other aggressive exotic invasive species
Medium	Harvest over-mature aspen, birch, and red oak in accordance with the plan
Medium	Thin pine and spruce trees for tree health and remove lower dead branches from pine and spruce trees near structures for fire safety
Low	For each open field, decide if it is to be used for pasture, hay, prairie, or natural forest succession and then develop a management plan accordingly
Low	Conduct prescribed burns of prairies
Low	Contact the Sherburne Soil and Water Conservation District (SWCD) and investigate the Minnesota Wetland Bank program as a potential source of funds for restoration of tamarack swamps



Trees in an existing pine wind break need to be thinned to preserve tree health.



Existing red barn



Emerald Ash Borer (EAB) is spreading in Minnesota and Wisconsin. It kills all native species of ash trees.



The equestrian program is a high demand activity at Camp Elk River.



Some cabin facilities lack accessibility provisions.



Existing cabin facilities have limited space to accommodate both girls and staff.

Preliminary Opportunities and Recommendations

As the largest camp property within the River Valleys system, Elk River has many modern facilities to meet the needs of both day use and overnight camp users. Most of the programming activities are within a comfortable walking distance from camp accommodation areas, with the only exceptions being the equestrian center located on the east side of the camp and access to Stone Lake on the north side of the camp.

The camp is well buffered from surrounding private properties and adjacent development. Although some consideration could be given to selling a portion of the upland camp property for development on the north side of the Township Road, it is not recommended to ensure that the remote quality of the camp is maintained for camp visitors. If feasible, conversion of the Township Road to a restricted private access drive for the camp should be considered to curtail dumping and other illicit activities currently taking place along the roadway.

While Camp Elk River can accommodate a large volume of visitors, many of the cabin facilities can only accommodate smaller groups of girls, and the provision of larger cabins or yurts to house both girls and adult staff together is desired. Having a more primitive camp unit with basic amenities located somewhere on the camp property was also identified as a need for the camp.

While the camp does provide some year-round outdoor programming including ice skating and cross country skiing in the winter, the desire to add more facilities, such as an indoor equestrian arena, was identified as a potential popular amenity that could attract more camp visitors during the winter months.

The following recommended site improvements are proposed at Camp Elk River to improve overall function and usability for camp visitors:

- **1-3 Years**
 - Maintain existing building facilities as needed
 - Add traditional cabins or yurts to provide additional housing accommodation options
 - Convert township road to private camp access road
 - Add primitive camp unit
- **3-5 Years**
 - Add a camper cabin unit
- **5-10 Years**
 - Consider acquiring township road and convert to private entrance drive
 - Add indoor riding arena for year-round equestrian programming
 - Maintain private camp access road

Proposed Improvements and Associated Costs

CORE CAMPS	Near-Term 1-3 Years	Mid-Term 3-5 Years	Long-Term 5-10 Years
Camp Elk River			
Add yurt unit (3 yurts per unit)	\$75,000	–	–
Add camper cabin unit (3 cabins per unit)	–	\$225,000	–
Add primitive camp unit	\$10,000	–	–
Add indoor equestrian arena facility	–	–	\$800,000
Subtotal	\$85,000	\$225,000	\$800,000

CORE CAMPS CAMP LAKAMAGA

Vegetation Cover Types
Camp Lakamaga
Washington County, Minnesota



CAMP LAKAMAGA

City of Scandia, Washington County

Sections 28, 29, 32 and 33, Township 32, Range 20

INVENTORY AND ANALYSIS

Natural Resources

Property Description

Camp Lakamaga is 170 acres in size and was acquired in the late 1940s. Identified by River Valleys as a core outdoor program site for the future, it sits on Big Marine Lake and is busy year-round. A River Valleys staff member lives in the home on the site. At the time of European settlement, the area was forested with oak, maple, basswood, and hickory trees. The camp is surrounded by residential development. Big Marine Park Reserve is located on the southwest side of the lake.

River Valleys staff began working with Minnesota DNR Forestry staff to develop a land stewardship plan for the property. The plan was not completed. The camp is predominantly a mixture of forest and wetlands.

Oak Forest

Oak forest dominates the upland areas of camp and is comprised of mature oak and soft maple along with aspen and birch. Tree species include red, bur and white oak, soft maple, aspen, birch, basswood, and hickory. Among the native trees are some planted red and white pine and spruce trees. Along the lake, the forest transitions to species that tolerate wetland conditions. Logging and clearing was done in the day camp area in the spring of 2010 or 2011.

Wetland

There are wetlands located within camp and a good quality Willow-Dogwood Shrub Swamp adjoining the property. Wetlands in the north half of the property include areas of tamarack. Along the lake, ash, basswood, and black cherry grow on a peninsula that is the site of camp waterfront activities. Cottonwood grows along the lakeshore and the terrace. The camp is in the Carnelian Marine Watershed.

Unique Natural Resources

The Minnesota County Biological Survey identified a rare Willow-Dogwood Shrub Swamp plant community adjoining Camp Lakamaga to the southeast. It is a wetland area with a canopy of willow and dogwood shrubs.

Invasive Species

There is no known buckthorn on the site.

Emerald ash borer (EAB) is not known to be in the area, but it will eventually arrive and kill all ash trees. Ash should be removed now while they have merchantable value.

Tree Risk Management

There are many large diameter oak trees within close proximity to camp units.

Storm shelters are provided at the dining hall and the basements of Ober Program Center, Lakamaga Troop House, Mary Randall, staff residence, and shower house buildings.



Trees in the high use area of camp should be managed separate of other forested areas and periodically assessed for risk.



Oak forest

CORE CAMPS CAMP LAKAMAGA



Camp Facility Assets and Constraints

Camp Lakamaga offers one of the most scenic lakeshore locations for a camp facility and also has a variety of accommodations to meet the large amount of camp visitors. The following issues were identified as assets and constraints of the camp property:

Assets

- Access to Big Marine Lake
- Four-season facilities: yurts, camper cabins, and dining hall
- Variety of facilities from modern to rustic to accommodate all groups
- Arts and crafts studio facility
- Four-season sports pavilion
- Year-round staff housing on site
- Frequently hosts other groups, such as youth groups, church groups, and culture camps
- Diverse natural resources within a small area
- Existing buffers from surrounding residential properties

Constraints

- Limited beach area
- Lack of interpretive trail system
- Little natural resource interpretation
- Lack of food preparation areas
- Wash stands in cabin/yurt areas in need of upgrades
- Substandard outdoor gathering space



Cabins provide a higher quality accommodation for camp users.



Yurts can be heated for year-round use.



The historic lodge building is an integral part of the camp.



The swimming facility on Big Marine Lake lacks a shoreline beach area.



RECOMMENDATIONS

Follow the general recommendations on pages iii and 42-43 that apply to all camps, plus these recommendations that apply to this specific camp.

Natural Resource Management Recommendations

Priority	Natural Resource Needs
High	Continue working with Minnesota DNR Forestry staff to complete the Stewardship Plan for the property that was initiated in 2009
High	Correct erosion problems on foot trails in the day camp area
Medium	Continue to use the Sentence to Service crew to cut firewood
Low	In anticipation of emerald ash borer, harvest all merchantable ash on the peninsula



High quality woodland areas are present throughout camp property.



Art studio space in lodge building



Annie Paper dining hall accommodates year-round camp use.

Preliminary Opportunities and Recommendations

Like Camp Elk River, Camp Lakamaga accommodates a large volume of camp visitors and has many four-season facilities, including camper cabins, yurts, and the dining hall facility. While the dining hall can accommodate serving food to a lot of camp visitors, a desire to have more outdoor food preparation areas was identified as a need by camp staff. Some of the existing wash stands could also use some cosmetic upgrades and a toilet facility is needed near the cabin and yurt area of the camp.

Big Marine Lake offers a high-quality setting for water recreation activities, although access to the shoreline edge is somewhat limited to an existing stair and boat dock. Opportunities should be explored for creating a small beach area near the Tyoga building to improve access to the lakeshore. Other informal small group seating areas could be provided along the shoreline to improve the camp's visual connection to the lake.

The camp property does have a network of trail systems, but efforts could be expanded to include more interpretive/educational components to the trail system. The camp appears to have adequate open lawn areas near the parking lot to accommodate large group gatherings, but adding a more formalized outdoor seating/amphitheater space could be a nice addition to the camp.

While Big Marine Lake currently is one of the cleanest lakes in the metropolitan area, long-term improvements could also include the addition of a swimming pool facility, which would allow for better supervision and convenient access to water recreation for camp visitors.

The following recommended site improvements are proposed at Camp Lakamaga to improve its overall function and usability for camp visitors:

1-3 Years

- Establish a beach area to improve lake access
- Add food preparation areas throughout camp
- Provide amphitheater/large group gathering area

3-5 Years

- Establish an interpretive trail system
- Improve wash stands/latrines in cabin/yurt areas

5-10 Years

- Add a swimming pool and beach house building (if sand beach facility is not implemented)

Proposed Improvements and Associated Costs

CORE CAMPS	Near-Term 1-3 Years	Mid-Term 3-5 Years	Long-Term 5-10 Years
Camp Lakamaga			
Establish lakefront beach area	\$100,000	–	–
Provide interpretive loop trail system with lakeside seating areas	–	\$150,000	–
Provide food preparation areas for camp units (3 total)	\$45,000	–	–
Upgrade wash stand stations (3 total)	–	\$60,000	–
Provide amphitheater/large group gathering area along lakefront	\$15,000	–	–
Provide outdoor swimming pool facility	–	–	\$600,000
Subtotal	\$160,000	\$210,000	\$600,000

CORE CAMPS CAMP SINGING HILLS



CAMP SINGING HILLS

Elysian Township, Le Sueur County

Section 24, Township 109 North, Range 24 West

INVENTORY AND ANALYSIS

Natural Resources

Property Description

Camp Singing Hills is 160 acres in size and located in the Big Woods landscape region and the Upper Cannon River Watershed. Identified by River Valleys as a core outdoor program site for the future, Singing Hills gets year-round use. The forest is dominated by mature sugar maple with basswood (American linden), red oak, and red elm trees.

The current Woodland Stewardship Plan was prepared by a DNR forester in 2009. The goal for the property is "to actively manage the forest resource while providing a safe, educational and inspiring environment to those who visit." The property is a combination of forest and wetland cover types:

Hardwood Forest

Described in the Stewardship Plan as Mixed Hardwoods, this cover type is 49 acres in size. Trees are American elm, green ash, red oak, and basswood with an understory of hackberry, bitternut hickory, red oak, and sugar maple with some butternut, aspen, and black cherry. European buckthorn has gained a foothold, but the infestation is light enough that with diligence it could be completely eradicated.

The stand of hardwoods on the peninsula in the northwest corner of the property is unique in that it has a dense population of American elm and red cedar, likely the result of trees invading an area that was once cultivated or grazed. The DNR forester described the peninsula as a "hogback ridge." From the developed parts of camp, there is limited access by foot to this remote area of the property.

Maple-Basswood Forest

Mapped as Central Hardwoods in the Stewardship Plan, there are 45 acres of this cover type. Trees are sugar maple, red oak, and basswood with an understory of almost pure sugar maple with a few bitternut hickory. There is also some aspen, American elm, hackberry, and ironwood in the stand. Trees with decay, broken branches, cracks and in decline are evidence that the largest trees in this stand are over-mature and near the end of their lives. Where branches have broken and fallen onto other trees, loud creaking noises may be heard when the wind blows.

This stand is in critical condition and active management is needed for regeneration and risk management. Without intervention, the trees will collapse into a tangled mess over the next decade. The lack of young trees within camping units is of special concern. Most camping areas are in this part of the forest. Within camping units, the roots of mature trees suffer from soil compaction that is the result of foot traffic and construction. Roots were likely directly damaged during recent installation of septic systems.

Oak Forest

This nine-acre stand is predominantly red oak with some American elm, aspen, bur oak, and hackberry trees. Whether the result of disturbance by fire or by clearcut, this is an example of successful oak regeneration. There is an adequate number of young red oak in the stand. Some of the oldest trees should be harvested now to thin the stand and so that acorns repopulate underneath before sugar maple and basswood come into the site.

Abandoned Agricultural Field

An abandoned agricultural field of six acres is in the northeast corner of the property and is full of weeds. It is a good candidate for a forest or prairie establishment project or could be converted to pasture use for horses. If nothing is done, it will fill with trees, such as cottonwood and boxelder that have wind-blown seed. These, in

addition to weeds, may result in an area that neighbors consider a nuisance.

The forest opening in the northwest corner of the property is four acres in size and in better condition. It is full of young eastern red cedar and American elm trees. It can be left as is or altered by introducing native grasses to enhance diversity and support wildlife.

Wetland

A 38-acre wetland is in excellent condition with native grasses, sedges, and rushes along with a variety of native wildflowers. It needs no active management, only protection from excavating or filling, and development in the upland areas surrounding the site. There are dikes in the wetland that need periodic maintenance.

Unique Natural Resources

The forest and wetlands of Singing Hills and Fish Lake are unique resources. With the exception of a few exotic invasive plants, species are native to the area.

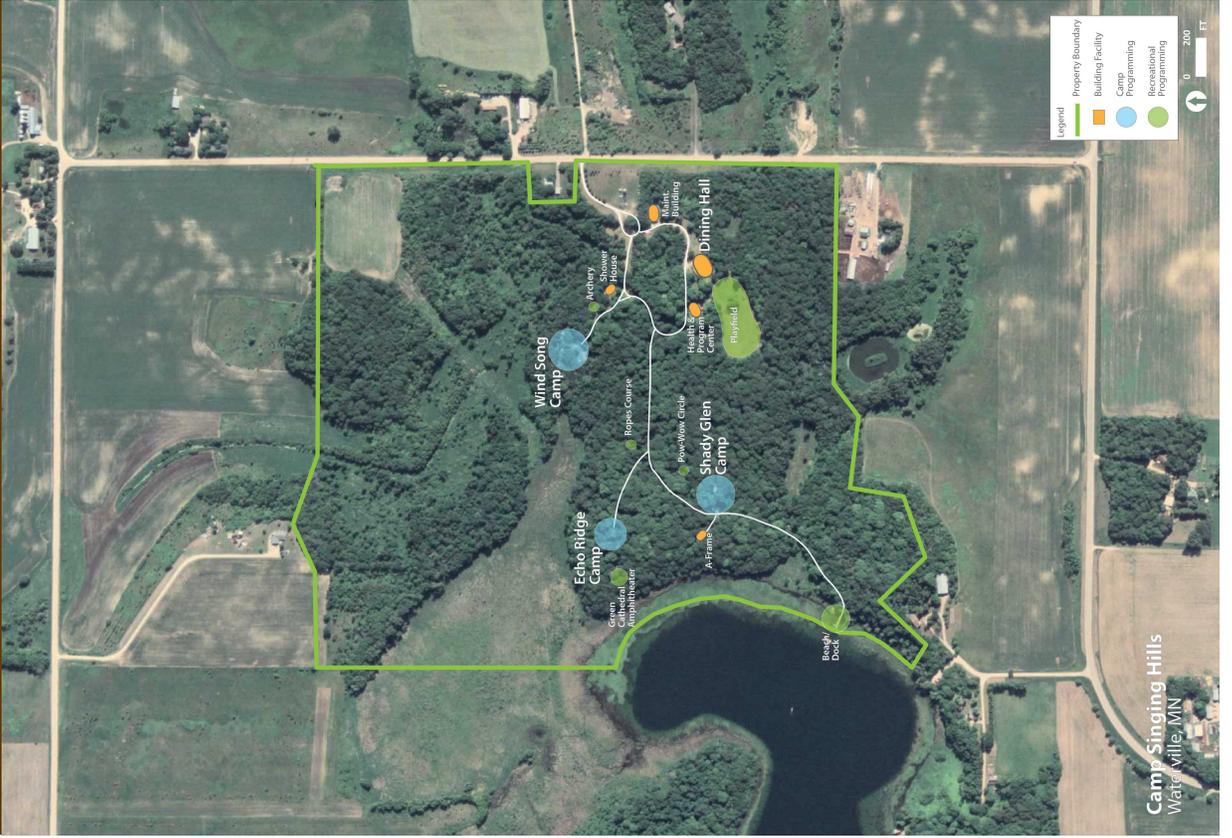
Fish Lake, wetlands, and a remnant of Big Woods forest are unique characteristics. There are wild ginseng plants and morel mushrooms on the property. The camp supports a great diversity of wildlife.

The Minnesota County Biological Survey identified unique natural features, including:

Wetlands/Lowlands Brush:

- This area is dominated by sedges with large clumps of shrubs in parts dominated by willow and red-twigged dogwood
- There is very nice species diversity with at least five plants not often seen in the region
- The area is surrounded by a moat
- Reed canary grass grows on the edges and under the power line that cuts across wetland

CORE CAMPS CAMP SINGING HILLS



Camp Singing Hills
Waterville, MN

There is a beaver dam on floating mat in large bay at north side east end of lake

- In Emmons-Faribault moraine geomorphic area

Plants occurring in very small clusters are widely scattered in maple-basswood forest stands on knobs on edges of northeast end of Fish Lake. Associated with Adam and Eve (an orchid), blue cohosh, declining trillium and wild leek.

Central Hardwoods:

- 40+ acre stand dominated by old growth sugar maple and red oak with basswood and red elm
- Frequent canopy gaps due to selective logging, roads, trails, and campsites of Girl Scout Camp
- Heavy nettle cover
- Excellent herb species diversity on large knob with glacial erratics at surface
- In Emmons-Faribault moraine geomorphic area

Invasive Species

European buckthorn has infested the fringes, small patches in the interior, and disturbed areas of the Hardwood Forest cover type. Some buckthorn is present in the Maple Basswood forest bordering Fish Lake.

Tree Risk Management

The degraded condition of trees in the use areas of camp is a special concern.

The storm shelter for Singing Hills is the lower level of the Program Center.



More new camper cabin accommodations are needed at the camp.



Convert dining hall to a four-season facility and upgrade commercial kitchen.



Inside of new camper cabin



Existing dining hall kitchen is in need of upgrades.

Camp Facility Assets and Constraints

Camp Singing Hills is in need of many facility upgrades to bring it up to the same standards as the other two core camp facilities. The following issues were identified as assets and constraints of the camp property:

Assets

- Four-season facility: Health & Program Center
- Four new camper cabins: Shady Glen Unit
- New amphitheater: Green Cathedral
- Access to lake with beach/dock
- Updated septic system and flush toilets in each unit
- New program facility in basement of Health & Program Center
- Close to Sakatah State Bike Trail

Constraints

- Low resident camp attendance within the last three years
- Three season dining hall and kitchen in need of upgrades
- Health & Program Center is dated
- Tent cabins with wood roofs and canvas sides need work or replacement (Wind Song Unit)
- Shower facilities have cement block walls and floors
- No full-time year-round housing for staff
- Summer housing for Camp Director is lacking (one-room facility)
- Mosquitoes are an issue



New amphitheater facility



Remodeled basement of health and program center.



Existing health and program center building.



Canvas camper cabin structures are in disrepair and in need of replacement.

RECOMMENDATIONS

Follow the general recommendations on pages iii and 42-43 that apply to all camps, plus these recommendations that apply to this specific camp.

Natural Resource Management Recommendations

Priority	Natural Resource Needs
High	Periodically harvest individual over-mature trees in the Hardwood and Maple-Basswood stands to help the forest regenerate and to manage risk
High	In selected areas of camping units, take aggressive steps to establish young trees: decompact the soil, add compost, plant trees, protect the site from foot traffic and animals while the trees become established
High	Where there is poor quality sugar maple and a source of oak acorns in either the Hardwood or Maple-Basswood stands, consult with a professional forester to conduct a shelterwood harvest with the goal of oak regeneration
High	Eradicate the light infestation of European buckthorn before the population expands
Medium	Monitor the wetland and for infestations of exotic invasive species such as purple loosestrife and flowering rush
Low	Maintain dikes in the Marsh/Wetland by cutting trees and brush and maintaining slopes as recommended in the Woodland Stewardship Plan
Low	Reassess the abandoned agricultural field and if it remains heavily infested with weeds and weed trees, work with DNR Forestry to establish trees by direct seeding
Low	If maple sap harvesting is to resume, establish a price per gallon charge
Low	Update the current (2009) Stewardship Plan in 2014



Existing swimming beach

Preliminary Opportunities and Recommendations

With Camp Singing Hills being classified as one of the three core camp facilities, its main shortcoming is its lack of four-season facilities, which limit some programming capabilities. The addition of a new four-season dining facility would greatly enhance the camp's use potential as well as the addition of four-season accommodations. The addition of more modern camper cabin units to replace the existing platform or canvas-sided cabin structures would begin to greatly enhance the camp experience for visitors. The recent remodel of the Health and Program Center basement is a good example of how existing building space can be repurposed to improve programming opportunities within existing facilities. Other opportunities for remodeling the main level of the Health and Program Center should be pursued to further update existing facilities.

In addition to remodeling existing building, some consideration should be given to adding a new multi-purpose program building and shower house to further enhance the camp user experience.

The addition of more site amenities, such as a circuitous trail system around the camp perimeter, could further enhance access to the natural resource environment of the camp.

The following recommended site improvements are proposed at Camp Singing Hills to improve its overall function and usability for camp visitors:

- **1-3 Years**
 - Replace/upgrade dining hall to four season facility
 - Add camper cabin unit
 - Provide permanent unit shelters
- **3-5 Years**
 - Remodel main level health and program center
 - Replace platform tents with camper cabins or yurts
 - Add four-season staff living facility
 - Construct new shower house facility
- **5-10 Years**
 - Construct new arts and crafts (multi-purpose) building facility
 - Add camp perimeter loop trail system

Proposed Improvements and Associated Costs

CORE CAMPS	Near-Term 1-3 Years	Mid-Term 3-5 Years	Long-Term 5-10 Years
Camp Singing Hills			
Add four season dining hall and kitchen facility	\$1,250,000	–	–
Remodel main level health and program center building	–	\$150,000	–
Add camper cabin unit (3 cabins per unit)	\$225,000	–	–
Add four season staff living facility	–	\$200,000	–
Add multi-purpose program building	–	–	\$200,000
Provide permanent unit shelters (3 total)	\$30,000	–	–
Add camp perimeter loop trail system	–	–	\$150,000
Add shower house facility	–	\$200,000	–
Subtotal	\$1,505,000	\$550,000	\$350,000

DESTINATION CAMPS CAMP NORTHWOODS



CAMP NORTHWOODS

Keystone and Delta Townships, Bayfield County, Wisconsin

Sections 32 and 33, Township 47 North, Range 7 West (Keystone) Sections 4 and 5, Township 46 North, Range 7 West (Delta)

INVENTORY AND ANALYSIS

Natural Resources

Property Description

Camp Northwoods is 432 acres in size and adjoins the Chequamegon-Nicolet National Forest. It surrounds Camp One Lake and is accessed by a road of the same name. The landscape is primarily forest with a lake (37 acres), pasture, lowlands, and developed use areas. Northwoods is unique amongst River Valleys camps because the largest trees in the forest are evergreens rather than deciduous trees.

Camp Northwoods has a long history of logging and began receiving assistance from Wisconsin DNR foresters in April 1980. Prior to 2008, harvesting did not keep pace with growth and the result was stands of aspen, birch and oak that were over-mature and in declining condition.

In 2008, a Wisconsin DNR forester identified approximately 290 acres of merchantable timber in five separate management stands, logical units for timber harvest bounded by roads, wetlands and property lines, within the forest. Girl Scouts began an accelerated program of harvesting timber. That program is nearly completed, and the result should be a better distribution of trees of various ages throughout the camp. Regular monitoring by a professional forester is critical in the years ahead.

The descriptions that follow are a 'snapshot in time' of the forest as the DNR forester saw it in 2008. Logging since then has changed the age of trees and to a lesser extent the species that grow in the forest:

Oak-Aspen Forest

This is a mixture of upland hardwoods including red oak, aspen, red maple, and white (paper) birch. Species are not evenly distributed throughout the stand. Some areas may contain mostly aspen and others contain more red oak.

The DNR forester divided this area into two stands: Stand 1 is approximately 65 acres and to the west, and Stand 2 is approximately 43 acres and to the east. The landscape of Stand 2 has steeper slopes and more structures and trails than Stand 1. The forester recommended harvesting timber by making one to three acre clearcuts in the aspen and shelterwood cuts in the red oak. This will allow the oak and aspen to regenerate. Extra care is needed when harvesting in Stand 2 to prevent erosion on steep slopes.

Hardwood Forest

The forester described this as Stand 3. It is approximately 78 acres in size and composed of red maple, red oak, and a mixture of other hardwood species. It is more diverse than Stands 1 and 2 because of the northern slopes. Sugar maple, ash, basswood, and ironwood grow here in addition to species found in the Oak-Aspen Forest. The aspen was harvested several years ago. In the northwestern part of the Hardwood Forest is an area of young sugar maple trees. For this stand, the DNR forester recommends no activity beyond salvage of aspen, birch, and poor quality oak.

Pine Forest

This is a 37-acre stand of large-diameter white pine with smaller red maple, red oak, and aspen mixed in. Described as Stand 4, the DNR forester recommends using timber harvests to reduce the number of trees with white pine blister rust disease and encourage white pine reproduction.

Maple-Basswood Forest

This forest is primarily red oak with a high component of sugar maple, which is a long-lived species that can be harvested by single-tree selection. The forest is 66 acres in size. The DNR forester recommended beginning harvesting via single-tree selection of maple, basswood, and oak when the stand reaches a density of about 120 square feet of basal area by about 2020.



Natural white pine regeneration



Potential Hypoxylon Canker is a fungus disease of aspen trees. It can affect trees of any age especially older trees.

Wetlands

There are several wetlands on the site with cover that ranges from emergent plants to forest. The camp is in the Fish Creek Watershed.

Unique Natural Resources

Wetlands and a lake are unique assets of Camp Northwoods. The presence of mature white pine trees makes this camp unique amongst River Valleys camps.

Invasive Species

None are known to be present. The invasive exotic pest emerald ash borer (EAB) will eventually reach Camp Northwoods and kill ash trees growing in wetlands areas throughout the property.

Tree Risk Management

Although there is no recent history of wildfire at the camp, it is in an area that could experience wildfire and the application of national Firewise principles is appropriate.

Storm shelters are located within the Ariel Davidson Troop House, Troop House 3 basement, Wastahi basement, and the lower level of the residence.

Although they are not storm shelters, people are likely to seek shelter in the Equestrian Center building, Thunderbird Lodge, and Voyager Lodge in the event of a sudden storm.



Old platform tent structures should be replaced with camper cabins or yurts to improve quality of overnight accommodations.



Historic Voyagers Lodge offers some three-season camp programming opportunities.



Existing washstands are in need of cosmetic upgrades.



New equestrian stable facility

Camp Facility Assets and Constraints

Camp Northwoods is one of the more remote camp facilities in the River Valley system but also has some newer accommodations to meet the needs of user groups. The following issues were identified as assets and constraints of the camp property:

Assets

- New equestrian center with excellent layout and facilities
- Three new four-season troop houses along with Staff house, Wastahi, and Motel
- 1940s Voyager Lodge is a unique part of camp property history
- Water recreation and lake access
- Year-round staff housing on site
- Quality "Northwoods" natural resource environment
- Quality camp staff accommodations
- New year-round shower house

Constraints

- All platform tent sites are in need of major repair
- Thunderbird Lodge is a three-season facility, which limits year-round use of full camp due to lack of large group meeting and eating facilities
- Thunderbird Lodge has a rotting foundation
- There is no amphitheater or large outdoor gathering space
- The camp is in a remote location and a long drive from the Twin Cities



New accessible troop house cabin facility



Latrine exterior

RECOMMENDATIONS

Follow the general recommendations on pages iii and 42-43 that apply to all camps, plus these recommendations that apply to this specific camp.

Natural Resource Management Recommendations

Priority	Natural Resource Needs
High	Continue to harvest over-mature aspen, birch and red oak as outlined in the plan developed by Wisconsin DNR staff
High	Work with the Wisconsin DNR forester to update the current (2008) forest plan in 2013 with special attention to assessing regeneration and timber stand improvement needs in harvest areas
Medium	Monitor forests for health and density and plan harvests accordingly
Medium	Correct problems of erosion along some roads
Low	Harvest merchantable ash to mitigate the impact of Emerald ash borer



White pine

Preliminary Opportunities and Recommendations

Camp Northwoods has recently added some new facilities and amenities, with the addition of the Troop House Cabins and Equestrian Facility. The camp currently has a large quantity of platform tent sites, which are not frequently used and efforts to replace these with more camper cabins or yurts should be considered to improve the quality of the camp experience for visitors.

Adding provisions for a four-season dining hall facility should also be considered based on the programming opportunities that could be realized for late fall and winter use activities.

The high-quality natural resource environment of Camp Northwoods should also offer more direct access to these natural areas by providing a trail loop and boardwalk crossing around Camp One Lake, which could be used for interpretive and educational programming.

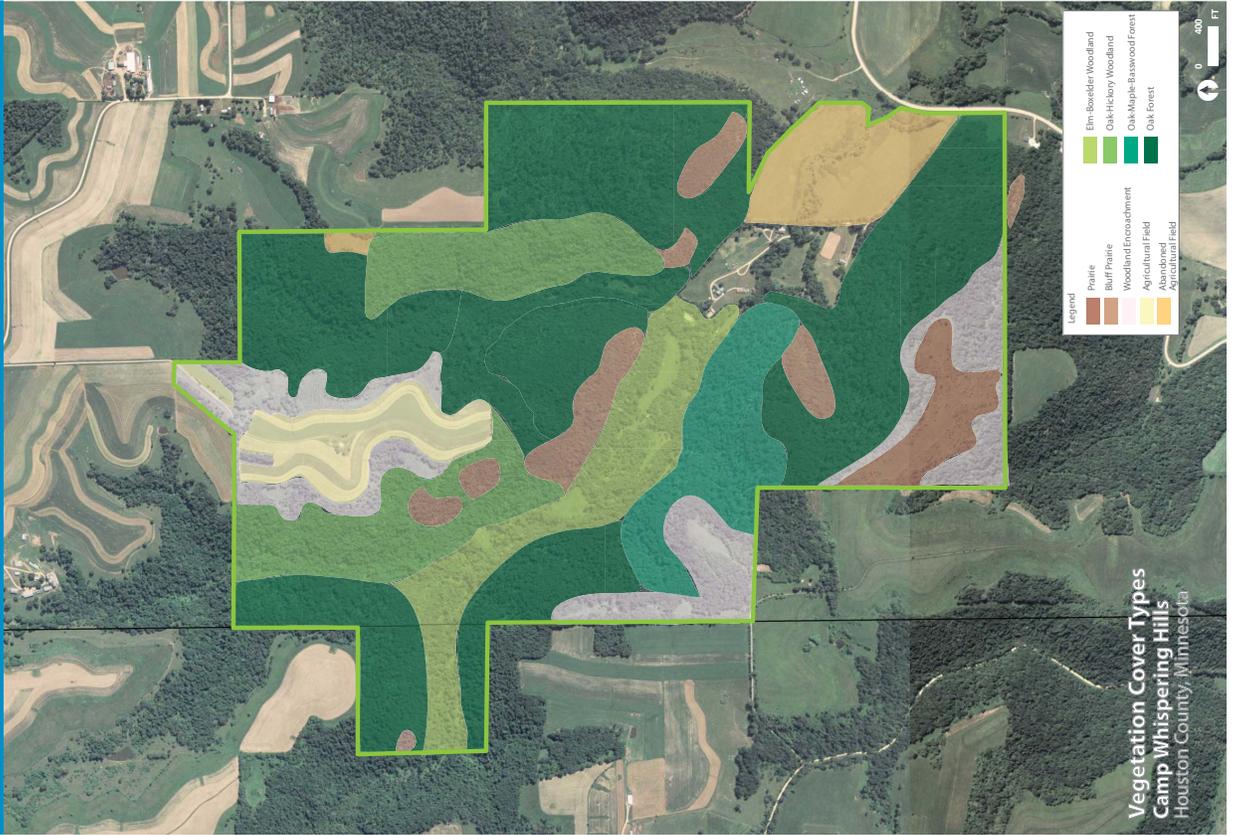
The following recommended site improvements are proposed at Camp Northwoods to improve overall function and usability for camp visitors:

- **1-3 Years**
 - Remove or rebuild old platform tent structures
 - Remove platform tent unit and replace with yurts
 - Upgrade Thunderbird Lodge dining hall as four-season facility
- **3-5 Years**
 - Remove some platform tents and replace them with camper cabins
 - Build an outdoor gathering space/amphitheater
- **5-10 Years**
 - Establish a perimeter trail and wetland boardwalk crossing

Proposed Improvements and Associated Costs

DESTINATION CAMPS	Near-Term 1-3 Years	Mid-Term 3-5 Years	Long-Term 5-10 Years
Camp Northwoods			
Convert platform tent unit to camper cabin unit (3 cabins)	–	\$225,000	–
Convert platform tent unit to 3 yurts	\$60,000	–	–
Establish perimeter lake trail and wetland boardwalk crossing	–	–	\$150,000
Construct outdoor amphitheater	–	\$15,000	–
Construct new platform tent stands	\$20,000	–	–
Upgrade Thunderbird lodge dining hall as four-season facility	\$500,000	–	–
Subtotal	\$580,000	\$240,000	\$150,000

DESTINATION CAMPS CAMP WHISPERING HILLS



CAMP WHISPERING HILLS

Yucatan Township, Houston County

Sections 19 and 30, Township 103 North, Range 7 West

INVENTORY AND ANALYSIS

Natural Resources

Property Description

Camp Whispering Hills is 836 acres in size and located in western Houston County. The camp includes natural resources of exceptional quality, including a spring, Girl Scout Camp Creek, bluff prairies, and forests. Some of the bluff prairies provide habitat for the state-threatened timber rattlesnake. Forests are maple-basswood or oak-hickory. Some drier areas are oak barrens (oak savanna), aspen-oak tends to grow along field edges, and lowland hardwoods grow in low areas.

Throughout the camp, there is a great deal of native cherry in the understory. There tends to be cottonwood, boxelder, and elm along waterways. Along the banks of the creek are areas that need restoration and others that need boxelder removal.

In years past, land on top of the bluff was used for day camp. It is now used solely for agriculture. There are pine and spruce trees planted along the fields.

The most recent logging was performed up top on the south side of the property.

The expansive mowed areas in the main use area of the camp are the legacy of a caretaker who enjoyed mowing grass.

In a 2005 Woodland Stewardship Plan prepared for the Minnesota DNR, the forest is divided into cover types:

Oak-Hickory Forest

Trees in this 34-acre stand include sawlog sized red and white oak, black walnut, shagbark and bitternut hickory, and basswood. Timber stand improvement was done in approximately 2000. The forester recommended a selective harvest in approximately 2011 followed by post-harvest removal of undesirable and damaged trees. Since this is a highly visible area, all harvesting must be done

with care. The Stewardship Plan preparer called this Cover Type 1 - Central Hardwoods.

Bluff Prairie

Several sites, totaling 82 acres, at Whispering Hills are dry, steep, bluff-top prairies, sometimes called goat prairies, and characterized by rocky outcrops. Historically, these areas burned frequently, which kept them free of trees. Fires happen less often today, if at all, and the result is that bluff prairies often have trees, especially red cedar, growing on them. Bluff prairies are home to rare species, including timber rattlesnakes. Most bluff prairies at Whispering Hills can be reasonably restored and maintained, although one prairie is so badly infested with European buckthorn that restoration would be cost prohibitive.

With grant funding from the Minnesota DNR, the Whispering Hills Girl Scout Camp Prairie Stewardship Plan was completed in June 2010. The DNR has since implemented restoration practices and plans to continue management as funding allows. The Stewardship Plan preparer called this Cover Type 2 - Goat Prairie.

Woodland Encroachment

These are transition areas between agricultural fields, some of which are abandoned and some are more mature woodland. It is an early succession stage of forest development that is especially valuable for wildlife. Trees include aspen, boxelder, and birch along with sumac and plum. The Stewardship Plan preparer titled these Cover Type 3 - Encroachment, with a total of 46 acres. In some areas to the west and east of the agricultural field that is on the north property boundary, plantations of trees and shrubs have been established.

Oak Forest

The oak forest on this property is composed of approximately 350 acres and contains of a variety of tree species of different ages. In previous management plans, the oak forest was broken into

different management units, each with specific management recommendations. Following is a summary of each unit.

The part of the stand described in the Stewardship Plan as Cover Type 4 - Central Hardwoods (95 acres) was harvested in about 2000 followed by post-harvest timber stand improvement. There is adequate regeneration of trees throughout most of the stand. The forester recommends reevaluation of the area in about 2015 with harvest in about 2020.

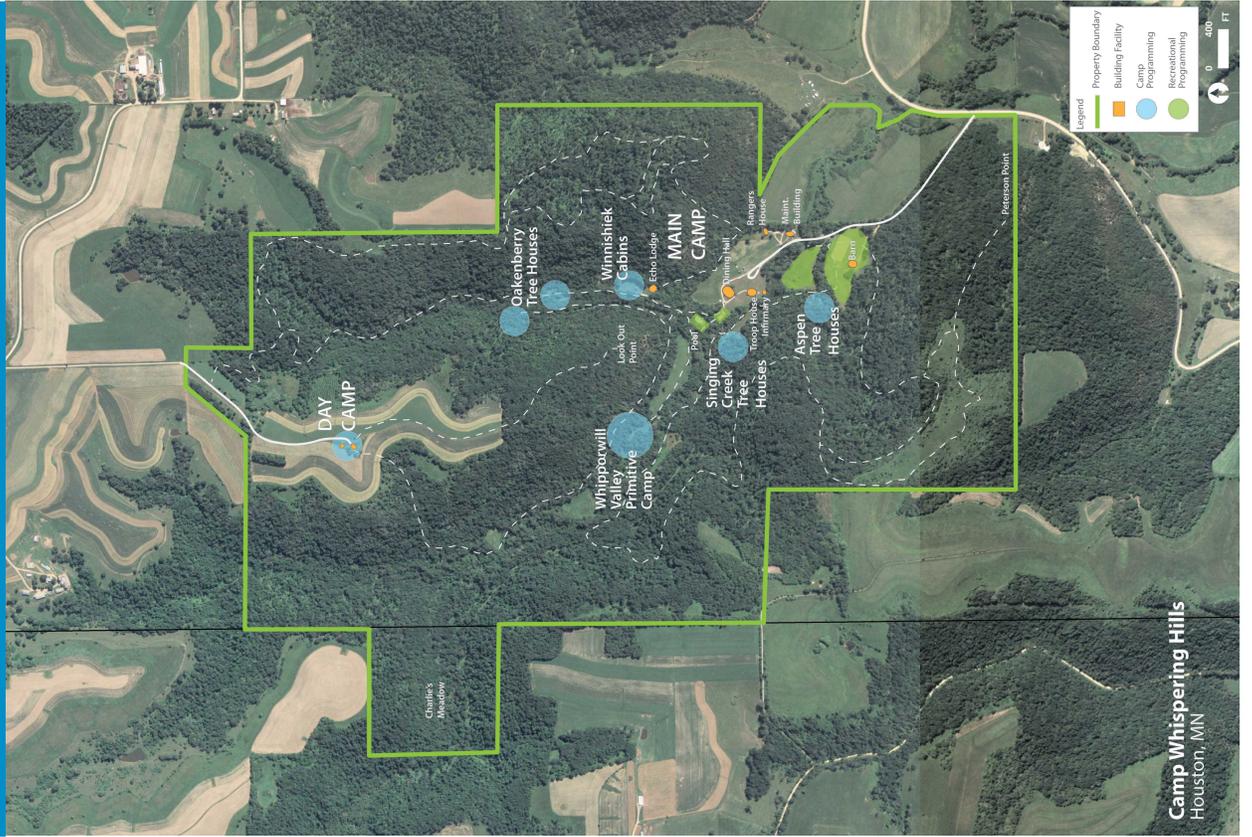
The part of the stand described in the Stewardship Plan as Cover Type 6 - Central Hardwoods (61 acres) was harvested around 2004 followed by post-harvest timber stand improvement. The plan recommends reevaluation of the stand in 2015, removal of undesirable species in 2018-2010, and harvest in 2023-2025.

The part of the stand described in the Stewardship Plan as Cover Type 8 - Oak (15 acres) was clearcut around 1985. It has regenerated with oak, cherry, and basswood trees. The plan recommended a timber stand improvement practice known as crop tree release in which trees are removed to favor about 100 of the best trees per acre.

Oak trees in the area described by the Stewardship Plan are Cover Type 10 - Oak (48 acres) stand average 16 inches in diameter. Other trees are basswood hickory, hackberry, and cherry. Understory trees are elm and ironwood. At least part of the stand has a history of harvesting. The plan recommended that timber stand improvement be done around 2005 to remove elm, ironwood, and boxelder and to increase reproduction of more desirable species; this is in anticipation of a timber harvest planned for about 2011.

Oak trees in the area described in the Stewardship Plan as Cover Type 11 - Oak/Maple (13 acres) average 16 inches in diameter. There are large diameter maples in the stand as well. The understory consists of young maple trees. The plan recommended that the stand be harvested and that this be followed by removal of ironwood, elm, and damaged trees for timber stand improvement.

DESTINATION CAMPS CAMP WHISPERING HILLS



Camp Whispering Hills
Houston, MN

The stand will transition to sugar maple once the oak are harvested. Tree species in the area as Cover Type 12 - Central Hardwoods (82 acres) in the Stewardship Plan oak, hickory, sugar maple, basswood, hackberry, cherry, elm, ironwood and boxelder. Some trees are mature or over-mature and merchantable as sawlogs. The stand was ready for harvest and the forester recommended that individual trees be marked and harvested by 2010, with follow-up timber stand improvement.

Oak trees in the stand described in the Stewardship Plan as Cover Type 13 - Oak (36 acres) average 14 inches in diameter. The stand was harvested around 2004 and includes basswood, hickory, elm, ironwood, and maple. Having been recently harvested, the forester recommended timber stand improvements to remove elm, ironwood and boxelder. The stand should not be harvested again until at least 2020.

Prairie

These two areas are former agricultural fields or pasture that have been idle for many years. Grasses, shrubs, and small trees have become established in the abandoned fields in the valley, which is the first step in forest succession. The site on top of the bluff (near the southwest corner of property) is a remnant mesic prairie. Unplowed mesic prairies are unusual in the region. Half of the plants are native with some brush invading the site. Both of these sites are good candidates for prairie restoration. The Stewardship Plan preparer titled these Cover Type 5 - Grassland. It totals 54 acres.

Elm-Boxelder Woodland

This is the valley bottom where several springs and seeps are located. Trees are predominantly elm and boxelder with some cottonwood, maple, and ash. There has been some direct seeding of ash and maple and timber stand improvement work done mostly in the valley to the west. The Stewardship Plan preparer described this area as Cover Type 7 - Elm/Boxelder (89 acres) and recommended that a survey of regeneration in the seeded areas be done by 2008 followed by thinning and planting as needed to get adequate tree cover. Nettles are a problem in some areas.

Oak-Hickory Woodland

Species in this stand are oak, hickory, elm, cherry, basswood elm, and hackberry that average 13 inches in diameter. They

are merchantable as sawlogs. The Stewardship Plan preparer described this as Cover Type 9 - Central Hardwoods (68 acres) and recommended timber stand improvements to reduce the number of less desirable elm, ironwood, and boxelder in the stand.

Unique Natural Resources

The Minnesota DNR's County Biological Survey staff inventoried high-quality plant communities within the county in the mid-1990s. The survey resulted in documentation of bluff prairie as well as oak forest on the Whispering Hills property. The rare plant jewelled shooting star was found in the dry bluff prairies along with the threatened timber rattlesnake.

The property has at least one spring and a creek that runs all year. The creek is known as Girl Scout Camp Creek to DNR Fisheries staff. There is a trail to the spring from an underused nature center but currently no programming associated with this unique water feature.

A prairie on top of the bluff in the southwest corner of the property is unique in that it is more moist and supports different plant species than the dryer bluff prairies common at Whispering Hills. The land has never been plowed.

Invasive Species

There are pockets of European buckthorn throughout the camp. Some locations are noted in the Whispering Hills Girl Scout Camp Prairie Stewardship Plan (June 2010) with others in the Woodland Stewardship Plan (January 2005). Multiflora rose and honeysuckle are also mentioned in the woodland plan.

There are 1-2 amur (ginalla) maple planted as ornamental trees in the camp including one by the dining hall. Because amur maple has a tendency to become invasive on dry sites, these should be removed and replaced.

There are a few planted ash. Replacements should be planted now in anticipation of the loss of these trees.

Tree Risk Management

Staff express concern about trees near the tree house units. A tree risk assessment should be completed by a professional arborist.

The storm shelter is located in the basement of the dining hall.



Girl Scout Camp Creek



Corral and surrounding bluff prairie landscape

Camp Facility Assets and Constraints

Whispering Hills is also one of the more remote camp locations and is in need of many facility upgrades to bring it up to the same standards as other camp properties. The following issues were identified as assets and constraints of the camp property:

Assets

- Unique site with rolling topography and ravines
- Equestrian facility
- Potential to accommodate a variety of programming
- Swimming pool
- Year-round staff housing on site
- Extensive trail system network
- Diverse natural resource environment
- No mosquitoes

Constraints

- Low rentals year-round based on a longer drive time to access
- Existing main camp building is located in the floodplain
- There is no four-season dining hall facility, an outdated kitchen, and cabin facilities in need of upgrades or replacement
- Day camp facility is in disrepair
- There is a lack of interpretive elements
- Pool and associated shower house are in disrepair. There is a limited roof on the facility, and it is open to animals
- The camp is divided by topography constraints into a top half and bottom half. The time to travel to each half is 20 minutes on a road outside of the camp
- There is no storm shelter on the top half of the camp
- The extensive trail system requires a high level of resources, time, and equipment



The existing bathhouse needs to be replaced at the pool facility.



The existing day-use facility on north side of camp property is in disrepair and should be removed.



Existing Winneshiek cabins

RECOMMENDATIONS

Follow the general recommendations on pages iii and 42-43 that apply to all camps, plus these recommendations that apply to this specific camp.

Natural Resource Management Recommendations

Priority	Natural Resource Needs
High	Work with Minnesota DNR Forestry to update the current (2005) Stewardship Plan
Medium	Continue to harvest trees and perform timber stand improvement practices throughout the property in accordance with the Stewardship Plan
Medium	Work with Minnesota DNR Fisheries to survey creeks, ravines, and other drainage-ways to determine stabilization needs
Medium	Work with a firewood producer to clear downed timber and eliminate an abandoned log pile
Low	Continue to work with the Minnesota DNR Nongame Wildlife Program for maintenance and improvement of the Bluff Prairies (dry bluff prairies) in accordance with the Whispering Hills Girl Scout Camp Prairie Stewardship Plan
Low	Work with Minnesota DNR Forestry or Wildlife to establish river bottom forest, oak savanna, and prairie in the abandoned field (Stewardship Plan Cover Type 5 - Grassland) along Girl Scout Camp Creek
Low	Conduct a prescribed burn of the mesic prairie on top of the bluff near the southwest corner of the property



Evaluate the need to remodel and assess structural integrity of tree houses.

Preliminary Opportunities and Recommendations

Camp Whispering Hills is situated within the beautiful Coulee region of the Mississippi River Valley and offers a more rustic camp experience for visitors. Of all the camp facilities within the River Valleys system, Whispering Hills is the most dated and in need of upgrades to both building facility and overnight accommodations. While the equestrian program at Whispering Hills keeps visitors coming to the camp, it has continued to lag behind in overall attendance numbers. Some of this can be attributed to the longer travel time required to get to Whispering Hills, but most can be attributed to the lack of updated facilities needed to provide a high-quality camp experience for visitors.

Some of the challenges associated with renovating many of the building facilities within camp are associated with their built locations within the flood plain. Both the Staff House and Infirmary Building are located within the 100-year flood plain and their renovation potential is limited based on flood plain development restrictions. Renovations to the dining hall should include consideration for being converted into a four-season building to expand programming opportunities for the camp.

Overnight accommodations are also in need of upgrades. While the tree house units provide a unique accommodation experience for camp visitors, some of the units are in disrepair and should be considered for removal and converted to either updated camper cabin or yurt units. The existing Winneshiek cabins are also in need of upgrades to enhance the overall quality of camp accommodations. The swimming pool facility is also an important amenity at the camp and high priority should be placed on replacing the existing bath house, which does not meet current building codes.

The camp also has an extensive network of trail systems that navigate some very steep slope areas to gain access to the north upland area of the camp where the existing day use area is located. Based on the poor condition of the day-use area facilities, consideration should be given to relocating this facility to a more accessible location.

There is ample open lawn space adjacent to the dining hall to accommodate larger group gatherings and efforts should be made to reduce the amount of turf areas to minimize maintenance costs. Provisions for adding an amphitheater space could be considered on one of many steeper hillsides located within the camp.

While there are several trail alignments that provide access to the north upland area of the camp, this land is seldom used by camp visitors and some consideration could be made for selling the northern 1/3 segment of the camp property. Most of this land area consists of steep wooded ravine areas and agricultural land that is very challenging to access from the main camp facilities. The selling of any camp property should be considered a long-term recommendation and evaluated in additional detail before making any final decision to reduce the size of the camp boundary.

The following recommended site improvements are proposed at Camp Whispering Hills to improve overall function and usability for camp visitors:

- **1-3 Years**
 - Update or rebuild the pool and associated bath house
 - Renovate the Oakenberry tree house unit

- Add a yurt unit
- Construct a new day-camp facility in lower half of camp on the south end of camp property
- **3-5 Years**
 - Improve trail access to the north end of the camp property from the main camp location
 - Build a new four-season dining hall facility
 - Convert the Singing Creek tree houses to camper cabins
- **5-10 Years**
 - Add ropes adventure course
 - Construct an amphitheater seating area
 - Renovate the Winneshiek cabins
 - Update/improve the nature center building

Proposed Improvements and Associated Costs

DESTINATION CAMPS	Near-Term 1-3 Years	Mid-Term 3-5 Years	Long-Term 5-10 Years
Camp Whispering Hills			
Update swimming pool/bathhouse	\$650,000	–	–
Add ropes/adventure course	–	–	\$20,000
Construct new day camp facility	\$20,000	–	–
Renovate Oakenberry tree houses	\$25,000	–	–
Construct amphitheater	–	–	\$15,000
Renovate Winneshiek Cabins	–	–	\$80,000
Convert Singing Creek tree houses to camper cabins (3 total)	–	\$225,000	–
Build new four-season dining hall	–	\$1,250,000	–
Add yurt unit (3 yurts per unit)	\$75,000	–	–
Repair eroded trail segments	–	\$100,000	–
Update/improve nature center	–	–	\$10,000
Subtotal	\$770,000	\$1,575,000	\$125,000

URBAN RETREAT CAMPS CAMP LOCKESLEA

Vegetation Cover Types
Camp Lockeslea
Anoka County, Minnesota



CAMP LOCKESLEA

City of Fridley, Anoka County

Section 10, Township 30 North, Range 24 West

INVENTORY AND ANALYSIS

Natural Resources

Property Description

Camp Lockeslea is 17 acres in size and located on the Mississippi River surrounded by residential neighborhoods in the Minneapolis suburb of Fridley. It was acquired by the Girl Scouts in the 1940s and is used for troop, service unit, and day camp activities. Despite its urban location, the site has the characteristics of a natural forest community and trees are of species native to the area. Due to the absence of fire or other disturbance, the forest is in a degraded condition. Trees in some areas are over-mature, in decline, and collapsing into a tangle of broken stems.

An urban-style yard is mowed and has mature trees that are remnants of the natural woods. Planted trees include Scotch pine and red pine. The lawn was established in the yard and spread into an existing woodland. There are dead trees in the mowed area.

The area behind the maintenance building is highly disturbed. Boxelder and ash trees, which are less desirable than other native species, are invading an open area. A stormwater drainage culvert discharges into the ravine behind the building. Water flows directly into the Mississippi River. The Girl Scouts recently did some work to end a problem of erosion.

Oak Forest

The woodland north of the buildings includes red oak, bur oak, sugar maple, black cherry, eastern cottonwood, and basswood

(American linden). It is difficult to traverse due to the existence of the exotic invasive species Tartarian honeysuckle and European buckthorn along with gooseberry.

Between a trail and the north property line is a boundary line planting of red pine planted at a close spacing. It helps provide a buffer between camp and abutting single-family residential homes.

Prairie

In the middle of the woods is an overgrown prairie in a highly degraded condition.

Unique Natural Resources

Spring and fall migration associated with the Mississippi River Flyway make this property unique amongst River Valleys camps.

Despite its current condition, the woodland has some wonderful characteristics. With its unique location on the river, the camp is in the middle of the Mississippi River Flyway. This great migration corridor is the flyway of 40% of North American waterfowl and an important flyway for 60% of North American bird species.

Invasive Species

The woodland understory includes exotic invasive Tartarian honeysuckle and European buckthorn along with native gooseberry. The latter is typical of sites that have a history of disturbance, such as grazing. In general, the honeysuckle and gooseberry are a bigger problem than is buckthorn. Buckthorn could be easily managed if addressed now. Removal of honeysuckle will provide a view of the Mississippi River. Gooseberry can remain except where its bristly stems pose a risk to visitors.

Tree Risk Management

There are dead standing trees (snags) in the mowed areas of the yard. A dead tree that fell onto a picnic table in the northwest part of the woodland is evidence that some trees present a risk to visitors.

The lower level of the Program Center is the storm shelter.

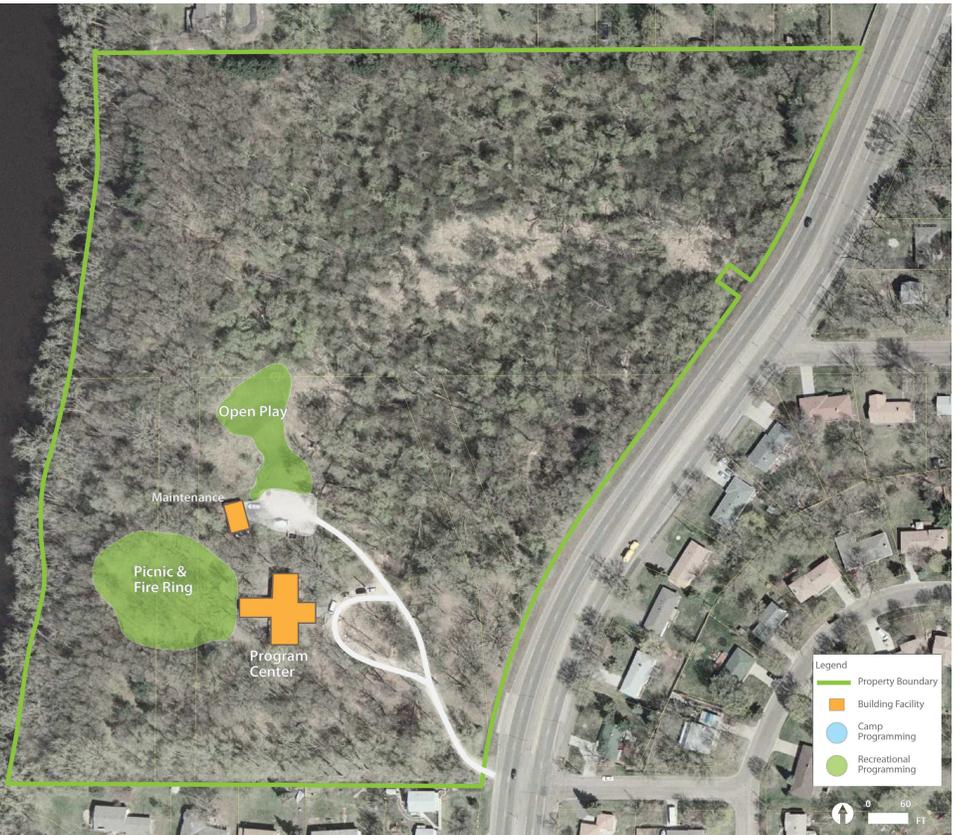


Conduct periodic tree risk assessments.

URBAN RETREAT CAMPS CAMP LOCKESLEA

Mississippi River

Camp Lockeslea
Fridley, MN



Camp Facility Assets and Constraints

Camp Lockeslea offers very convenient access from the metropolitan area but has somewhat limited programming opportunities beyond hosting troop meetings and weekend overnights.

The following issues were identified as assets and constraints of the camp property:

Assets

- Location overlooking Mississippi River
- Convenient location to Minneapolis and St. Paul
- Convenient location to transit facilities- bus, commuter rail, and bike trails
- Four-season building facility
- High property value

Constraints

- No river access
- No outdoor overnight facilities
- No day camp units
- Close to adjacent residential properties
- Limited outdoor programming activities



The existing camp building is in need of exterior and interior upgrades.



The lower level of the building offers a gathering place for troop activities.



The existing day use area has minimal site amenities.



Walk circulation around the building does not meet ADA accessibility requirements.



RECOMMENDATIONS

Follow the general recommendations on pages iii and 42-43 that apply to all camps, plus these recommendations that apply to this specific camp.

Natural Resource Management Recommendations

Priority	Natural Resource Needs
High	Remove all Tartarian honeysuckle and European buckthorn and perform selective pruning of trees to open view of the river from the building and yard
High	End the practice of pushing brush over the edge of the bank into the woods in viewing areas along river
High	Conduct a tree risk assessment in high use areas of the property
High	Partner with Great River Greening, Tree Trust or other non-profit conservation organization to remove exotic invasive species
Medium	Partner with Great River Greening to restore degraded woodland and prairie
Low	Thin the row of red pine planted on the north boundary of the property
Low	Consider clearing boxelder and establishing prairie or longer-lived native trees in the field behind the shed



Existing drainage way to Mississippi River

Preliminary Opportunities and Recommendations

Camp Lockeslea’s close proximity to the metropolitan area makes it very convenient to access for many local troop activities. However, because of its small size it has limited potential for increasing camp programming beyond the weekly meetings and weekend overnights, which it currently hosts.

The multi-purpose open space area behind the building could be enhanced with picnic shelters to accommodate more day camp activities. Views to the Mississippi River could be further enhanced by removing invasive plant material along the edge of the embankment and throughout the rest of the property.

Both the exterior and interior of the building are also in need of cosmetic upgrades to improve its overall appearance and make more inviting to user groups. Efforts should also be made to make all entries to the building accessible as well as adjoining walk circulation.



Existing archery range area

The following recommended site improvements are proposed at Camp Lockeslea to improve overall function and usability for camp visitors:

- **1-3 Years**
 - Add individual day camp units
 - Remove vegetation along bluff line
 - Provide an outdoor classroom or amphitheater
 - Restrain exterior building siding
 - Remove invasive plants
- **3-5 Years**
 - Update kitchen area in building
 - Enhance the property loop trail system
 - Manage invasive plants
- **5-10 Years**
 - Remodel building interior program and sleeping accommodations
 - Manage invasive plants

Proposed Improvements and Associated Costs

URBAN RETREAT CAMPS	Near-Term 1-3 Years	Mid-Term 3-5 Years	Long-Term 5-10 Years
Camp Lockeslea			
Add individual day camp units	\$20,000	–	–
Remodel service center building exterior	\$30,000	–	–
Update kitchen area in building	–	\$25,000	–
Remove vegetation along bluff line	\$5,000	–	–
Provide outdoor classroom or amphitheater	–	–	\$15,000
Enhance property loop trail system	–	\$75,000	–
Remove and manage invasives	\$35,000	\$5,000	\$5,000
Remodel building sleeping accommodations and restrooms	–	–	\$150,000
Subtotal	\$90,000	\$105,000	\$170,000

URBAN RETREAT CAMPS CAMP EDITH MAYO



CAMP EDITH MAYO

City of Rochester and Rochester Township, Olmsted County

Section 5, Township 106 North, Range 14 West

INVENTORY AND ANALYSIS

Natural Resources

Property Description

Camp Edith Mayo is 37 acres in size located in a critical ecological area related to regional water quality called the Decorah Edge. It was once oak savannah. In recent years, the site has become overrun with exotic invasive European buckthorn, a small tree that has transformed the camp woodland into a thorny impassable thicket.

The property perimeter is entirely fenced. In some locations, the fence is badly damaged, mostly as a result of trees falling. Volunteer trees grow in some locations along the fence and will cause damage if left alive. The deer population in camp is high but may drop once the fence is repaired.

Neighbor properties are residential homes and small woodlands. Some neighbors have done buckthorn management, others have not.

The entire wooded area of the property is oak forest. Within the forest is a unique wetland, as described below.

Oak Forest

The forest is composed of mature bur oak trees along with ironwood, red oak, and black cherry. Red oak and white oak are common on adjoining properties but rare on camp property, which is the result of high-grade logging. The forest is heavily infested with European buckthorn. If buckthorn can be managed, the area will return to an open character. If deer are excluded as well, oak will begin to regenerate itself. Some areas may need to be planted to establish a more diverse and healthy canopy of trees.

There are evergreen trees, especially pine, planted throughout camp. Some, such as balsam fir, are unique.

Wetland

Within the Oak Forest is a unique wet area where water seeps to the surface along the Decorah Edge.

Unique Natural Resources

The entire camp is located on the Decorah Edge, a critical ecological area where ground water flows over a layer of impermeable shale and then into a lower aquifer. This happens near the surface and the result is an underground waterfall that shows up on the ground as a seep, a kind of wetland. At Camp Edith Mayo this is the soggy wet area in the woods on the west side of camp. There may be other areas classified as wetland.

Groundwater above the shale is often polluted with fertilizers, pesticides, manure, and sewage. The Decorah Edge works as a natural filter removing pollutants, including nitrate, from water as it flows through the soils, vegetation, and wetlands that overlie the shale. The water that flows into the aquifer immediately below the Decorah Edge generally has few of these pollutants. About half of the drinking water in the City of Rochester is from the recharge of the lower aquifer along the Decorah Edge.

To protect water quality and the quantity of aquifer recharge relied upon for potable water supply, there are special protections in Olmsted County law for the Decorah Edge. The entire camp is in the Edge Support Area, which has features associated with perched groundwater tables or groundwater supported sloped wetlands. Since the water table is high along the edge, buildings typically have problems with wet basements and flooding. Some have structural problems related to the shrinking and swelling of shale.



Existing buckthorn infestation

Invasive Species

There is a heavy infestation of European buckthorn throughout camp. Buckthorn on most of the property is approximately five to 10 years of age. Some older stems were left standing or cut but not treated. The population is stump sprouts – seedlings that grew since a clearing operation that took place more than 10 years ago and stems that were left uncut. Among those left uncut, some individual buckthorn trees are as large as eight inches in diameter. This includes a large grouping on the west side of the property. It may coincide with the wetland area associated with the Decorah Edge and have been too wet to work in during previous clearing operations.

URBAN RETREAT CAMPS CAMP EDITH MAYO



Recommended Action for Buckthorn Management:

- Mechanical brush removal of all buckthorn to a height of less than two inches in a band at least six feet wide along trails, driveways, day use areas, and the perimeter fence. Maintain throughout summer with mowing.
- Prepare and implement a plan for buckthorn removal and woodland restoration throughout camp. Plan may include some or all of these items:
 - Large diameter stems cut with chainsaw and stumps treated with herbicide
 - Mechanical brush removal for smaller diameter stems
 - Goat browsing
 - Herbicide treatment of stump sprouts
 - Young seedlings pulled by hand
 - Prescribed burn to encourage native grasses and forbs
 - Native grasses, forbs, shrubs and trees planted
 - Annual monitoring to identify problems early
 - Professional inspection every one to three years

Whenever buckthorn management is done, it is imperative that follow-up work be done to manage regrowth.

Emerald ash borer will likely be found in Rochester in the next few years and will eventually kill the few ash trees that grow on camp property.

Tree Risk Management

The storm shelter is in the lower level of the main building.



Existing climbing wall structure



Existing service center building



Service center basement program space



Front entrance of service center building

Camp Facility Assets and Constraints

Camp Edith Mayo functions both as a service center and day use camp facility but offers limited programming compared to the other camp facilities. The following issues were identified as assets and constraints of the camp property:

Assets

- Ability to accommodate day camps
- The camp is in a convenient location close to Rochester
- The camp can host smaller overnight events
- Buffered from adjacent residential properties
- Boulderling wall for climbing

Constraints

- Program Center is not conveniently located for daily services and retail use
- The service center building space is underutilized
- The Edith Mayo Lodge is outdated and in need of upgrades
- There are no permanent facilities for outdoor overnight events
- Outdoor activity areas are limited
- Outdoor restroom facilities are limited
- The lodge kitchen facility is outdated
- The camp is infested with buckthorn



Day Use Area



Old Lodge Building has limited programming potential



Exterior restroom facility – need to replace pit toilet



Interior of old lodge building in need of updates

RECOMMENDATIONS

Follow the general recommendations on pages iii and 42-43 that apply to all camps, plus these recommendations that apply to this specific camp.

Natural Resource Management Recommendations

Priority	Natural Resource Needs
High	Remove buckthorn
Medium	Begin restoration of oak savanna and oak woodlands by planting red and white oak seedlings
Low	Continue restoration of oak savanna by seeding or planting native grasses and forbs



Day camp unit

Preliminary Opportunities and Recommendations

Camp Edith Mayo functions both as a service center and day camp facility for local troops, although there have been limited day camps hosted at the camp over the last several years. Many of the day use areas have been compromised by the infestation of buckthorn, which has overtaken trail circulation and other program areas within the camp. Initial efforts to make the camp more usable for programming activities should include the eradication of all buckthorn and continued removal efforts over the next several years.

The old lodge and storage building associated with camp programming also are in need of major remodel upgrades to make them usable as camp facilities. An outdoor restroom facility is also needed to replace the existing vault toilet present on the site. Day use areas could also be made more usable by providing food preparation areas at each site.

The service center building also has a surplus of office space that could be remodeled and converted into more programming space to accommodate troop activities and functions. The lower level of the service center currently provides programming space to accommodate meetings and overnight functions.

Further study should be made for relocating service center functions to a more convenient building located within the Rochester metropolitan area.

The following recommended site improvements are proposed at Camp Edith Mayo to improve overall function and usability for camp visitors:

- **1-3 Years**
 - Remove buckthorn
- **3-5 Years**
 - Add an outdoor restroom facility
 - Renovate/Convert service center space
 - Remodel the Edith Mayo Lodge interior
 - Provide an outdoor cooking area
 - Manage buckthorn removal
- **5-10 Years**
 - Manage buckthorn removal

Proposed Improvements and Associated Costs

URBAN RETREAT CAMPS	Near-Term 1-3 Years	Mid-Term 3-5 Years	Long-Term 5-10 Years
Camp Edith Mayo			
buckthorn removal and management	\$35,000	\$10,000	\$10,000
Renovate/convert service center space to programming use		\$100,000	-
Add outdoor restroom facility	-	\$150,000	-
Add outdoor food prep/cooking areas	-	\$15,000	-
Remodel Edith Mayo Lodge interior	-	\$50,000	-
Subtotal	\$35,000	\$325,000	\$10,000

GENERAL RECOMMENDATIONS: NATURAL RESOURCES

TREE RISK MANAGEMENT

Trees are an essential part of the experience of being in nature. On camp properties, they also provide protection from the sun and wind and extremes of summer heat and winter cold. They define spaces and provide screening. At the same time, although serious damage, injury, or death from tree failure is rare, there is risk associated with trees. To enjoy the benefits trees provide, risk must be accepted, and it can be managed.

Trees are unique living organisms and naturally lose branches or fall over. Although any tree can fail, especially in conditions of extreme force such as a tornado or ice storm, tree failure during ordinary weather conditions is often predictable and preventable. By managing risk, River Valleys can reduce the likelihood of a tree failure occurring and causing injury, property damage, or disruption of activities.

Trees in high use areas should be managed separate of other forested areas. In natural forests, trees are typically tall and slender. Their trunks have little taper compared to their counterparts in open areas. Forest trees protect each other as a group and may be prone to breakage when stands are severely thinned or along the edges of areas harvested by clearcut. Care should be used during harvesting operations so that trees removed in and around use areas are consistent with tree risk management goals.

The practice of tree risk assessment evolved in Minnesota over the past 20 years. There are nationally recognized guidelines for assessing and managing tree risk, but caution should be used when reviewing older resources that may contain outdated information. A Certified Arborist or qualified urban forester should be involved in design and implementation of the tree risk management program.

Guides recognized for Minnesota are:

- *Tree Risk Assessment Best Management Practices*, companion publication to the ANSI A300 Part 9: Tree, Shrub, and Other Woody Plant Management—Standard Practices (Tree Risk Assessment a. Tree Structure Assessment), International Society of Arboriculture, 2011

- *Urban Tree Risk Management: A Community Guide to Program Design and Implementation*, USDA Forest Service, 2003
- *How to Detect, Assess and Correct Hazard Trees in Recreational Areas*, Minnesota Department of Natural Resources (although this guide has outdated terminology and some omissions, it is a good, short introduction to risk assessment and remains the guide used by the Minnesota Department of Natural Resources for state parks and other recreational areas), circa 1990s

Recommended steps to establish a tree risk management program:

- Establish policies and a budget for tree risk management
- For each camp, determine the areas where trees need to be managed separate of other forested areas
- Assess use and occupancy for various target zones and focus attention on those of highest risk
- Provide management level staff with training in tree risk management
- Provide field staff with training to identify tree defects
- Incorporate periodic tree risk assessment into the regular schedule of work for each camp
- Conduct visual assessments of high risk zones after storms
- Retain a qualified urban forester or Certified Arborist for management advice, field work and reporting as needed
- Mitigate risks by pruning or removing trees, moving targets or other means
- Keep records of tree risk assessment activities

TREE PRESERVATION DURING CONSTRUCTION

Damage to tree roots during construction projects results in tree decline and death that can change the wooded character of sites. Damage is easy to prevent and difficult to correct. Oaks are particularly sensitive to construction damage, and older trees are more sensitive than healthy, young trees. Soil compaction resulting

from construction activities can limit growth of trees for decades into the future.

For construction projects, trees may need to be removed to make way for buildings or utilities, provide access to the site, or room for staging of construction activities. With planning and follow through, other trees can be preserved and with them the wooded character of the site. The goal is to protect tree roots from compaction and changes in grade.

The primary strategy used to protect designated trees is to install a sturdy barrier of fencing set at least one foot away from the trunk of the tree for each inch of tree diameter. These and additional requirements need to be described in detail in the construction contract specifications.

To limit tree loss and ensure that trees grow well in areas impacted by construction projects, work with a Certified Arborist or urban forester throughout each construction project. Begin early in the planning process to assess trees on each construction site and make a plan for protection of those identified for preservation.

Guides recognized for Minnesota are:

- *Protecting Trees from Construction Damage: A Homeowner's Guide*, University of Minnesota Extension, revised 1999
- *Conserving Wooded Areas in Developing Communities* (specifically the section of BMPs to Protect Trees at the Lot Level: New Construction, Remodeling and Redevelopment), Minnesota Department of Natural Resources, revised 2000

FIREWISE

Camp facilities located among large tracts of forest are at risk of wildfire. Wildfire is part of the natural ecological cycle for landscapes in the Midwest but could have adverse consequences for River Valleys camps, especially if buildings burned. There are strategies promoted by the national Firewise program that can be used to reduce the risk of harm to buildings in areas at risk of wildfire.

Firewise is a program based on fire science that offers guidelines and outlines practices that may allow structures to survive a

wildfire. With a defensible space around structures, radiant heat from a wildfire will not be able to ignite the structure itself. Other practices reduce the risk that embers, which can blow up to two miles ahead of a wildfire, can ignite a structure.

Firewise practices may also include thinning and pruning evergreen trees, screening eaves, roof vents and decks to keep embers and debris from entering, keeping woodpiles away from buildings and lawn mowed near buildings.

For more information on the Firewise program and practices visit the Minnesota Department of Natural Resources website at www.dnr.state.mn.us/firewise.

NATURAL RESOURCES MANAGEMENT AND BUDGET

Seeking advice periodically from natural resources and tree professionals will help River Valleys manage its properties cost effectively. Current needs are for assistance in forest management, risk management and employee training. In addition, River Valleys should hire arborists to trim trees as part of its risk management program.

Historically, some forestry services were available from state agencies at no cost. That is no longer true, and it leaves landowners with the challenge of finding a qualified professional with whom to work.

A forester is an individual who practices the management of large populations of trees. Most foresters have a bachelor's degree from a forestry college, but some do not. Each is a forest management generalist and typically specializes in an area such as private forest management, timber harvesting, or urban forestry. Many have the credential of Certified Forester, which ensures that they:

- Meet the profession's educational requirements
- Have at least five years of professional forestry experience
- Adhere to standards of professional practice
- Pass a rigorous competency exam that measures knowledge and skills
- Participate in continuing education

River Valleys camps have developed areas that are the setting for most activities. In that sense, they are more similar to urban interface areas than rural forests. At the same time, many camps have large stands of forest that generate income and need traditional management interventions, such as harvest and timber stand improvement practices. Each camp should have a current stewardship plan. All Certified Foresters are approved by Minnesota DNR to write stewardship plans.

An arborist is a specialist in the care of individual trees. Some are consultants, but more typically arborists work for tree services. Tree work should be done only by those trained and equipped to work safely in trees, but it is an unlicensed profession and skills vary greatly from company to company. Most good arborists have the credential of Certified Arborist which means they:

- Passed a competency exam that measures knowledge
- Participate in continuing education

Budget recommendations:

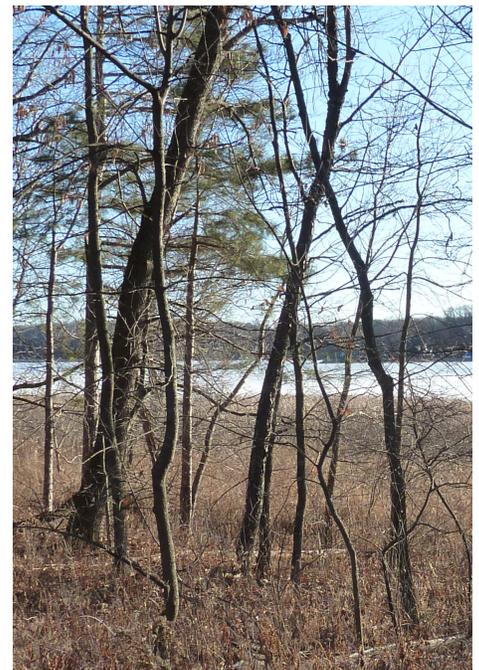
For each property, develop or maintain a plan for stewardship of natural resources. Plans can be prepared by either a DNR forester or a private consultant with the Stewardship Plan Preparer credential and should be updated every five years. The recommended budget is \$3,000 per year.

Hire a consulting forester for management level support of the property management program who has experience and qualifications in both traditional and urban forest management. The forester should have insurance coverage for both general liability and errors and omissions and be in compliance with workers' compensation law. Annual tasks include a field visit to each camp, staff training, report-writing and special projects. The recommended budget is \$7,000 per year.

For management of tree risk, hire a tree service for tree pruning and removal that requires an aerial lift. The company should employ Certified Arborists and must carry general liability insurance and be in compliance with workers' compensation law. The recommended budget is \$10,000 per year.

Camps are potential sources of revenue from the sale of timber. Because of their large size and the quality of timber, Northwoods and Whispering Hills may generate enough revenue to cover

natural resources land management costs over time. Revenue from Singing Hills, Elk River and Lakamaga may be significant, but because of the higher level of use and thus higher tree management costs, each is likely to need investment in land management that exceeds revenue from the sale of timber. Neither Lockeslea nor Edith Mayo would likely generate enough revenue to cover the cost of land management.



GENERAL RECOMMENDATION: FACILITIES

ASSESSING FACILITY INVESTMENT PRIORITIES

After visiting all of River Valleys' camps, it became clear there are some distinct differences in the quality of facilities being provided at each camp. Both Camp Elk River and Camp Lakamaga offer the most updated facilities in the system while Camp Singing Hills and Camp Whispering Hills have more outdated facilities that are in need of repair or upgrades to improve their overall user experience. Camp Northwoods has a balanced mix of newer building facilities and more rustic camp units that are in need of upgrades or replacement to offer higher quality accommodations. Both Camp Lockeslea and Camp Edith Mayo are somewhat limited in the types of outdoor facilities they provide with the existing buildings being used to host most of the programming activities. Both buildings are in need of exterior and interior upgrades to maintain their current value and meet long term programming needs for user groups.

BUILDING FACILITIES

All camps have a wide range of older, newer, and updated building facilities that host a wide range of activities and accommodations. Some of the similar building issues needing to be addressed at most camps include:

- Provide additional modern camper cabin or yurt camp units to replace old platform tent structures, tree houses, and canvas sided cabin structures to provide a higher quality accommodation experience for camp visitors
- Provide four-season dining hall and sleeping accommodations to increase year-round programming opportunities at each camp
- Provide adequate staffing accommodations at each camp and within each camp unit
- Upgrade shower and restroom facilities, wash stations, and outdoor food prep station shelters
- Increase the energy efficiency of building facilities by upgrading lighting and mechanical systems

In order to make more informed decisions about pursuing future building improvements and upgrades, an architect should be retained to complete a more detailed review and analysis of existing building facilities at each camp and provide recommendations and cost estimates for further review and discussion with Girl Scouts staff.

OUTDOOR SITE AMENITIES

All of the camp facilities offer similar outdoor site amenities to meet the needs of camp activities and programming. Some of the similar site amenities that could be enhanced at many of the camp facilities include:

- Provide more extensive interpretive loop trail systems that can provide access to a wide range of natural resource areas, including woodlands, prairie, wetland, water, and creek systems
- Provide designated large group gathering areas, outdoor classrooms, or amphitheater seating areas to accommodate presentations and performances
- Provide more year-round outdoor winter recreation and programming opportunities
- Provide a remote camp unit facility that can fulfill the need for accommodating a more rustic camp experience for visitors
- Provide convenient access and updated accommodations for water-based recreational activities and programming
- Upgrade the quality or increase the quantity of day use units at each camp facility
- Provide ADA access to all camp buildings and activity areas

OPERATIONS AND MAINTENANCE

Integral to each camp facility are operation and maintenance issues that need to be taken into consideration when upgrading or adding to existing camp facilities. Assessing the impacts of adding heating or cooling costs to building infrastructure should be evaluated carefully at each camp to ensure the increase in these costs have a direct benefit on enhancing or increasing programming opportunities. Consideration should also be made for removing building facilities that are in disrepair and no longer used for camp activities to further reduce operation and maintenance costs. Life-cycle costs should also be evaluated when adding or upgrading new building facilities to ensure adequate funding can be secured for long term mechanical, roof, and site furnishing replacements over time.

Other site maintenance and operations efforts should be made for reducing the amount of high maintenance lawn areas within informal recreation and gathering areas and reducing snow removal efforts to only those roadways and facilities that are programmed during the winter season.



ACKNOWLEDGEMENTS

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Natural resource inventory information provided by USDA Forest Service and Minnesota Department of Natural Resources.

APPENDIX A: PROPERTY COMMITTEE FEEDBACK

CAMP ELK RIVER Core Camp Near Zimmerman, MN Approx. 1,100 acres

STRENGTHS	WEAKNESSES
Many Newer Updated Building Facilities	Pipeline Easements
Can Accomodate Multiple Programs at Same Time Including- Day Camp, Resident Camp, Rentals, Single Day Programs, etc.	Limited Lake Access for Boating
Several Four Season Facilities- Gary Koch, The Pines, Morgan, Pinto, Red Barn, and the Equestrian Center	Town Road Cuts Through Middle of Camp- Dumping and Illegal Activities is an Issue
Four Season Troop Houses- Timbermeade, Pickering, and Popp	Large Number of "Newer" Facilites Entering Phase for Replacements of Roofs, Furnaces, etc.
Year Round Staff Housing	Pool Entering Time of Needing New Filtration System
Equestrian Facility	No Indoor Riding Capacity
Large Sand Basin Pool Facility	Only Have Dorm Type Sleeping or Tree Houses (which are too small for campers and staff)
Can Accomodate Large Number of Campers at One Time (Approx. 250)	Land Resources Not Fully Utilized
Diverse Natural Resources	

OPPORTUNITIES	PRIORITIES		
	High (1-3 Years)	Medium (3-5 Years)	Low (5-10 Years)
Maintain Existing Building Facilities as Needed	8		
Replace Sand Basin Pool Filtration System	5		
Add Traditional Cabins or Yurts	6	1	
Add Indoor Riding Capacity for Year Round Riding Program		3	
Sell Portion of Camp Property	1		

*Additional notes from May 9th meeting in italics

CAMP LAKAMAGA *Core Camp* Marine On St. Croix, MN Approx. 170 acres Additional notes: 2,300 campers

STRENGTHS		WEAKNESSES		OPPORTUNITIES	PRIORITIES		
					High (1-3 Years)	Medium (3-5 Years)	Low (5-10 Years)
Access to Big Marine Lake		Limited Beach Area		Expand Beach Area to Improve Lake Access	6		
Four Season Facilities- Yurts, Camper Cabins, Dining Hall		Limited Trail System		Add Boat Dock for Waterskiing	1	1	2 (15yrs)
Variety of Facilities from Ultra Modern to Rustic to Accomodate All Groups		Little Natural Resource Interpretation		Add Swimming Pool or Sand Basin Pond		2	
Arts and Crafts Studio		Lack of Food Preparation Areas		Establish Interpretive Trail System	2	3	
Four Season Sports Pavilion		<i>No Amphitheater Space</i>		Add Food Preparation Areas	5		
Year Round Staff Housing on Site				<i>Improve Wash Stands/ Latrine in Cabin/Yurt Areas</i>	2		
Hosts Other Youth Groups, Church Groups and Culture Camps							
Diverse Natural Resources in Small Area							
Buffer From Adjacent Residential Properties							

*Additional notes from May 9th meeting in italics

CAMP SINGING HILLS *Core Camp* near Waterville, MN Approx. 150 acres Additional notes: 550 campers

STRENGTHS	WEAKNESSES
One Four Season Facility (Health & Program Center)	Currently Lowest Attendance of All Camps
Four New Camper Cabins (Shady Glen Unit)	Three Season Dining Hall in Need of Upgrades
New Amphitheater (Green Cathedral)	Health & Program Center is Dated
Access to Lake with Beach/Dock	Tent Cabs With Wood Roofs and Canvas Sides in Disrepair. (Wind Song Unit)
Updated Septic System	Lack of Modern Shower Facilities
New Program Facility in Basement of Health & Program Center	No Full Time Year Round Housing for Staff/Summer Housing for Camp Director is Lacking (One Room)
<i>Close to Sakatah State Bike Trail</i>	
<i>Sledding Hill</i>	

OPPORTUNITIES	PRIORITIES		
	High (1-3 Years)	Medium (3-5 Years)	Low (5-10 Years)
Replace/Upgrade Dining Hall to Four Season Facility	6		
Remodel Health & Program Center	3	1	
Build New Shower House Facility	3	2	
Construct New Arts and Crafts Building Facility	1		1
Replace Tent Cabs with Camper Cabins	2	3	
Consider Year Round Staff Housing Needs	2	3	
<i>Powerwash/Whitewash Shower House, Add New Shower Curtains (as a Troop Project Improvements/Service Projects)</i>	5		

CAMP NORTHWOODS Destination Camp Near Mason, WI Approx. 400 acres

STRENGTHS	WEAKNESSES
New Equestrian Center with Excellent Layout and Facilities	All Platform Tent Sites Are in Need of Major Repair
3 New Four Season Troop Houses	Latrine and Wash Stands in Need of Upgrades
Some Four Season Housing- Staff House, Wastahi Troop House, Motel	Thunderbird Lodge In Need of Repairs (Rotting Foundation)
1940's Voyager Lodge	No Amphitheater/Outdoor Gathering Space
Water Recreation/Lake Access	Lodge Has Dated Kitchen and is a Three Season Building which Limits Year Round Use of Full Camp Due to Lack of Large Group Meeting and Eating Facilities
Year Round Staff Housing on Site	Remote Location and Long Drive
Quality "Northwoods" Natural Resource Environment	Need for Additional Food Prep Stations (Outdoor)
Quality Camp Staff Accommodations	
Brand New Year Round Shower House	

OPPORTUNITIES	PRIORITIES		
	High (1-3 Years)	Medium (3-5 Years)	Low (5-10 Years)
Replace Platform Tents with Camper Cabins or Yurts	2	2	
Remove Platform Tents and Maintain as Primitive Camping Areas	1	1	
Rebuild Platform Tents	1	2	
Update Latrine and Wash Stands	3	4	
Build Outdoor Gathering Space/ Amphitheater	1		2
New Year Round Dining and Large Group Gathering Facility to Replace Thunderbird Lodge	4	9	
Add Outdoor Food Prep Stations		8	

CAMP WHISPERING HILLS Destination Camp near Houston, MN Approx. 800 acres

STRENGTHS	WEAKNESSES
Remote Site with Rolling Topography	Low Rentals Year Round Based on Longer Drive Time to Access
Stream Meanders through Camp Property	Existing Main Camp Buildings Located in Floodplain
Equestrian Facility	No Four Season Dining Hall Facility
Can Accomodate Multiple Programs On Site at Same Time	Cabin Facilities in Need of Upgrades or Replacement
Swimming Pool	Day Camp Facility in Disrepair
Year Round Staff Housing on Site	Lack of Interpretive Elements
Extensive Trail System	Pool House/Shower House in Disrepair- Limited Roof/ Open to Outside Critters
Diverse Natural Resource Environment	Camp Divided by Top Half and Bottom Half- Time to Travel to Each is 20 Minutes
No Mosquitos	No Storm Shelter on Top Half of Camp
	Outdated Kitchen and Dining Facility
	Extensive Trail System Requires High Level of Resources- Time and Equipment

OPPORTUNITIES	PRIORITIES		
	High (1-3 Years)	Medium (3-5 Years)	Low (5-10 Years)
Renovate Treehouse Cabins	2	5	
Replace Treehouse Cabins with Camper Cabins that can Accomodate Staff and Campers			
Repair Day Camp Site	2	1	
Relocate and Build New Daycamp Facilities	1		
Build New Four Season Dining Hall Facility	1	2	4
Update/Rebuild Pool House/Shower House	13		
Update/Improve Nature Cabin	1	2	
Improve Trail or Road Access to North End of Camp Property from Main Camp Location		3	
Reduce Mowed Turf Areas	5		
Maintain Existing Camp Boundary	5		
Sell Portion of Camp Property	5		
Restore/Reforest Agricultural Field	3	1	
Continue to Lease Agricultural Fields			

*Additional notes from May 9th meeting in italics

CAMP LOCKESLEA *Urban Retreat Camp* Fridley, MN Approx. 35 acres

STRENGTHS	WEAKNESSES
Overlooks Mississippi River	No River Access
Convenient Location to Mpls/St. Paul	No Outdoor Overnight Facilities
Four Season Building Facility	No Day Camp Units
High Property Value	Close to Adjacent Residents
	Limited Outdoor Activities- hiking, sport court, archery, fire ring

OPPORTUNITIES	PRIORITIES		
	High (1-3 Years)	Medium (3-5 Years)	Low (5-10 Years)
Add Day Camp Units	3	2	
Add Outdoor Overnight Facilities		3	
Add Additional Program Activities	3	2	
Update Food Prep Area		5	1
Build Amphitheater/ Overlook to River	2	1	
<i>Remove Barriers to View Mississippi River</i>	2	1	

*Additional notes from May 9th meeting in italics

CAMP EDITH MAYO Program Center and Urban Retreat Camp Rochester, MN Approx. 37 acres

STRENGTHS	WEAKNESSES
Ability to Accomodate Day Camps	Service Center Not Fully Utilized
Camp is in a Convenient Location to Rochester Area	Edith Mayo Lodge is Outdated and in Need of Upgrades
Can Host Smaller Overnight Events	No Permanent Facilities for Outdoor Overnight Events (tents only)
Buffered From Adjacent Residential Properties	Limited Outdoor Activity Areas
Bouldering Wall for Climbing	Limited Outdoor Restroom Facilites
	Outdoor Cooking Facility Needed
	Buckthorn Infestation
	Program Center is Not Conveniently Located for Daily Services/Retail Use

OPPORTUNITIES	PRIORITIES		
	High (1-3 Years)	Medium (3-5 Years)	Low (5-10 Years)
Add More Programming Space to Service Center		2	
Remodel Edith Mayo Lodge	1	2	
Provide New Outdoor Cooking Area	1	1	
Add Outdoor Overnight Camp Facilities	1		
Add Outdoor Restroom Facilities	2	2	
Add More Activities/ Amenities			
Continue to Serve Day Camps Only	8		
Relocate Program Center Closer to Town		7	2
<i>Close As Camp Put Resources Into Whispering Hills. Relocated Service Center</i>	8	2	

APPENDIX B: RESOURCES

CAMP ELK RIVER

Livonia Township, Sherburne County

Resources Available for Natural Resource Management

- Minnesota Department of Natural Resources, Division of Forestry
www.dnr.state.mn.us/forestry
Mike Peltier, Forester-Zimmerman Office
- Sherburne Soil and Water Conservation District (SWCD)
www.sherburneswcd.org
Gina Hugo, Resource Conservationist

CAMP LAKAMAGA

City of Scandia, Washington County

Resources Available for Natural Resource Management

- Minnesota Department of Natural Resources, Division of Forestry
www.dnr.state.mn.us/forestry
Art Widerstrom, Forester-Forest Lake Office
- Carnelian-Marine-St. Croix Watershed District
www.cmescwd.org
Jim Shaver, Administrator
- Washington Conservation District
www.mnwcd.org

CAMP SINGING HILLS

Elysian Township, Le Sueur County

Resources Available for Natural Resource Management

- Minnesota Department of Natural Resources, Division of Forestry
www.dnr.state.mn.us/forestry
Jim Wilson, Forester-Faribault Office
- Le Sueur Soil and Water Conservation District (SWCD)
www.lesueurswcd.org
Michael Schultz, District Technician (wetlands)
- Cannon River Watershed District (regional water quality issues)
www.crvp.net
Beth Kallestad, Executive Director

CAMP NORTHWOODS

Keystone and Delta Townships, Bayfield County, Wisconsin

Resources Available for Natural Resource Management

- Wisconsin Department of Natural Resources
<http://dnr.wi.gov>
Joanna Bietka, Barnes Forester (replaced retired forester Brian Klobuchar)

CAMP WHISPERING HILLS

Yucatan Township, Houston County

Resources Available for Natural Resource Management

- Minnesota Department of Natural Resources-Division of Forestry
www.dnr.state.mn.us/forestry
Valiree Green, Forester-Caledonia Office
- Minnesota Department of Natural Resources-Ecological Services
www.dnr.state.mn.us/eco/hongame
Jaime Edwards, Nongame Wildlife Specialist-Rochester Office
- Minnesota Dept. of Natural Resources-Wildlife
www.dnr.state.mn.us/wildlife
Don Ramsden, Wildlife Specialist-Whitewater Office
- Minnesota Department of Natural Resources-Fisheries
www.dnr.state.mn.us/fisheries
Steve Klotz-Lanesboro Office

CAMP LOCKESLEA

City of Fridley, Anoka County

Resources Available for Natural Resource Management

- Great River Greening
www.greatrivergreening.org
Wayne Ostlie, Director of Conservation Programs
- Tree Trust
www.treetrust.org
Dave Nozal, Director of Project Development

CAMP EDITH MAYO

City of Rochester and Rochester Township, Olmsted County

Resources Available for Natural Resource Management

- City of Rochester (volunteer Citizen Foresters, mulch, Arbor Day events)
www.rochester.mn.gov/departments/park/forestry
Jacob Ryg, City Forester
- Minnesota Department of Natural Resources, Division of Forestry
www.dnr.state.mn.us/forestry
Lance Sorensen, Forester-Lake City Office
- Minnesota Department of Natural Resources, Division of Forestry
Zumbro Valley Woodland Council
www.minnesotafaforestry.org/chapters
Kurt Hinz, Forester
- Rneighbors (neighborhood volunteer projects)
www.rneighbors.org
René Jones Lafflam, Executive Director
- Minnesota Conservation Corps
www.conservationcorps.org
Doug Ekstrom, Southern District Manager - Mankato
Dustin Looman, Southern District Assistant Manager - Rochester
- Olmsted Soil & Water Conservation District
(woodland/wetland restoration along the Decorah Edge)
www.co.olmsted.mn.us/pw/oswcd
Skip Langer, District Technician
- Herring Eco-Logistics Inc. (buckthorn management vendor)
www.herringexteriordesign.com
Kyle Herring, Owner

