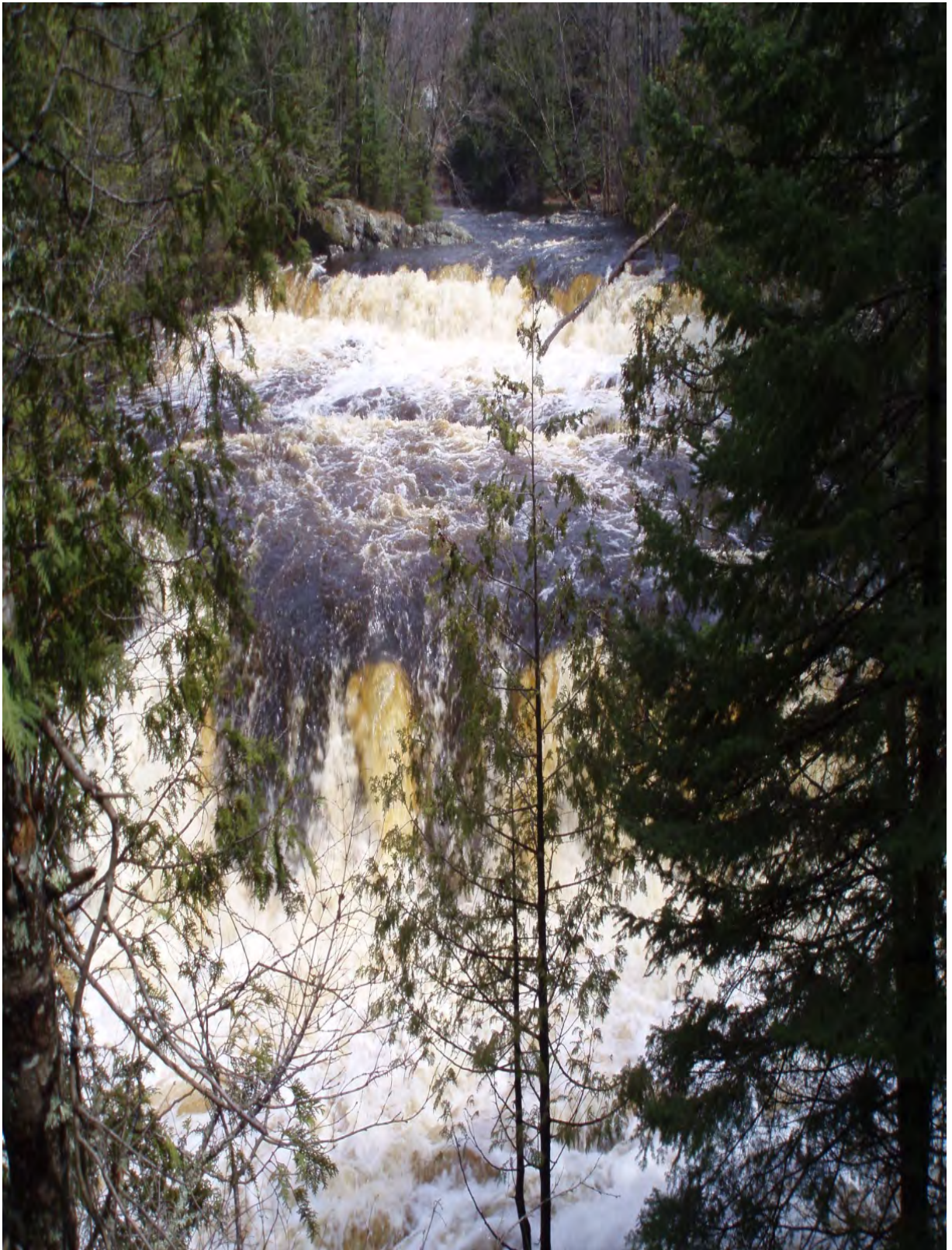


North Country National Scenic Trail
Wisconsin/Michigan Border Amendment
to 1982 Comprehensive Management Plan
Gogebic County, Michigan
Ashland and Iron Counties, Wisconsin



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Gogebic County, Michigan,
Ashland and Iron Counties Wisconsin**

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North Country National Scenic Trail
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February 2013**

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CHAPTER 1 BACKGROUND, PURPOSE AND NEED

The North Country National Scenic Trail is one of only eleven National Scenic Trails authorized by the United States Congress in The National Trails System Act of 1968 (P.L. 90-543, through P.L. 111-11, March 30, 2009 as amended). National Scenic Trails are long distance, non-motorized trails that follow major geographic features or pass through scenic areas. It is similar in concept to the Appalachian National Scenic Trail but is also uniquely different because of the landscape through which it passes. The Appalachian Trail traverses a mountain range through 14 states whereas the North Country Trail showcases natural, scenic and cultural features of seven northern states, but does not follow any specific geographical feature. When completed, the trail will extend over 4,600 miles from Lake Sakakawea in North Dakota to Crown Point, New York, on Lake Champlain along the eastern border of New York. See map 1 for an overview of the trail and the location of the planning area.

The National Trail system Act provides the following direction to the National Park Service through the Secretary of Interior to:

- Establish a trail within scenic and historic areas of the north central United States to provide increased outdoor recreation opportunities and promote preservation of these landscapes and improve access to foot travel within them
- Provide experiences that depend on preserving the landscape in which the trail is established;
- Encourage and assist volunteer citizen involvement in the planning, development, maintenance, and management of the trail, wherever appropriate.

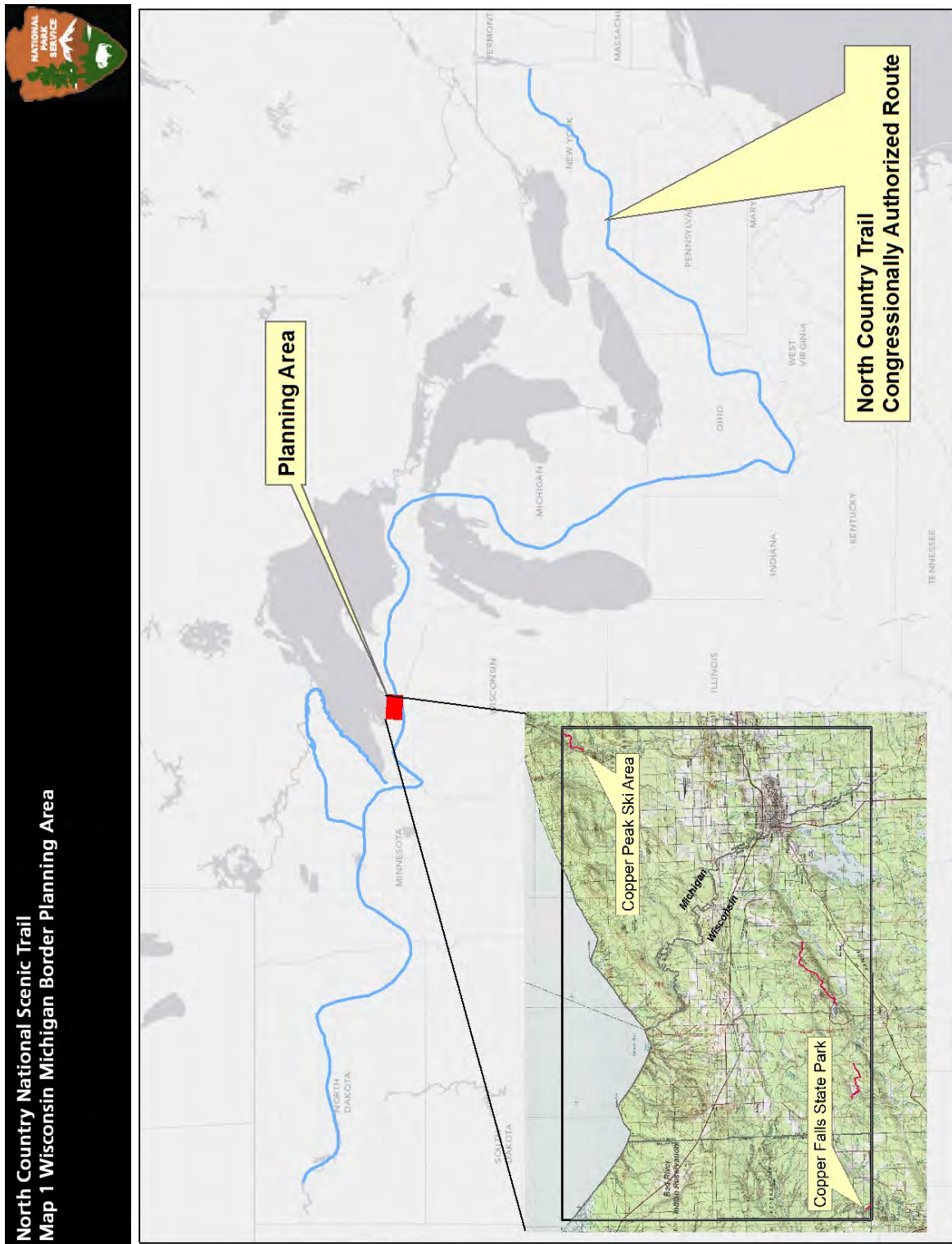
The National Park Service is responsible for the overall administration of the North Country Trail. In 1982, the National Park Service completed the *Comprehensive Plan For Management and Use of the North Country National Scenic Trail* (Comprehensive Plan). This plan provided a general route and overall guidance for development and management of the trail. The trail is intended to be a partnership venture accomplished through the efforts of many cooperating Federal, State, and local agencies, private trail organizations, and interested individuals.

The primary non-profit partner of the National Park Service is the North Country Trail Association, which has 2300 members who develop and maintain the trail. The Mission of the North Country Trail Association is to:

The North Country Trail Association develops, maintains, protects, and promotes the North Country National Scenic Trail as the premier hiking path across the northern tier of the United States through a trail-wide coalition of volunteers and partners.

North Country Trail Association, May 2010

MAP 1 PLANNING AREA LOCATION



Purpose of this Plan

The purpose of this plan and environmental assessment is to propose an amendment to the 1982 Comprehensive Plan to the route for the North Country Trail between the end of the existing developed trail at the Copper Peak Ski Area in Gogebic County, Michigan, and Copper Falls State Park in Ashland County, Wisconsin. Within this corridor, NCTA volunteers, state and local governments and community groups will work together to develop the trail on the ground to meet the intent of the National Trails System Act. The result will be a high quality continuous hiking experience throughout the planning area.

The National Trails System Act of 1968 and subsequent amendments created a general route for the North Country Trail, authorized the National Park Service to administer it, and provided authority to acquire land or land interests from willing sellers to provide a route for it. The Comprehensive Plan states that the North Country Trail should

- Provide for a diverse user experience by incorporating a variety of plant communities, terrain, open and enclosed spaces (ex. Forests, savannas, prairies).
- Provide vistas to broader landscapes for scenic and interpretive purposes.
- Link and protect significant geologic, biologic, and archeological sites
- Connect or provide linkages to communities for user support purposes.
- Where possible, use publicly-owned land for trail development and support facilities.

Need for this Amendment

The 1982 Comprehensive Plan identified a corridor through the planning area (“No Action Alternative” in this plan) as high potential from Copper Peak Ski jumping area through the communities of Ironwood, Michigan and Hurley Wisconsin where it met with the Uller Ski Trail which was recommended for immediate certification. From the end of the Uller ski trail the comprehensive plan identified a corridor extending to Copper Falls State Park as the general route of the trail.

Since the 1982 Comprehensive Plan was written, changes in land ownership, use and management have made the original route of the trail less feasible to develop. In general, private residential development on small tracts has made it a daunting task to complete this section of trail and provide a high quality experience. This plan is needed to show how the NPS, working with partners is amending the 1982 Comprehensive Plan to select and environmental assessment

There is a dedicated and enthusiastic group of volunteers who are focused on planning and building segments of the North Country Trail that could be established on public or private lands within the proposed corridor as well as maintaining existing sections of the trail. To complete the trail in this area, this plan is needed to provide guidance on where future segments should be established, given the changes in the planning area in the past 30 years. This plan will also help volunteers and other partners focus their efforts.

Issues and Concerns

During the internal and external scoping for this planning process, a few issues and concerns were identified by the general public, local, and state units of government. These are summarized below:

1. The North Country Trail route should make use of as much existing public land and trail as possible to minimize the amount of private land needed;

2. The trail should be located within the Potato River Valley in Wisconsin to take advantage of the scenery there;
3. The trail should have some connection to Ironwood, Michigan to benefit the community;
4. Subdivision of larger tracts of private land over time has made locating a corridor for the trail more complex. (The Existing Corridor described in the No Action Alternative contains over 1500 parcels of private land greater than .1 acre in size);
5. The potential extensive use of private lands means that the trail route must fit with the activities and land use objectives of these private land owners.

Impact Topics Considered but dropped from Further Analysis

NEPA and the CEQ Regulations direct agencies to “avoid useless bulk...and concentrate effort and attention on important issues” (40 CFR 1502.15). Certain impact topics that are sometimes addressed in NEPA documents on other kinds of proposed actions or projects have been judged to not be substantively affected by any of the alternatives considered in this EA. These topics are listed and briefly described below, and the rationale provided for considering them, but dropping them from further analysis.

Soundscape: Noise is defined as unwanted sound. Trail building and trail use can all involve the use of noise-generating mechanical tools and devices with engines, such as chain saws and brush cutters. Chainsaws, at close range, are quite loud (in excess of 100 decibels). The use of machines such as chainsaws would be relatively infrequent and fleeting, on the order of 6-8 hours per day for a few weeks at most when clearing is taking place. The trail would run through areas of active private and public timber management operations where this noise is common and expected. Therefore, this impact topic is eliminated from further analysis in this document.

Human Health and Safety: Safety practices and training are part of the normal operating procedures when National Park Service volunteers work on the North Country Trail, and use of the trail in either of the proposed alternatives would not constitute a threat to human health and safety.

Waste Management: Development of a hiking trail in either alternative would generate neither hazardous or solid wastes that need to be disposed of in hazardous waste or general sanitary landfills. Therefore, this impact topic is dropped from additional consideration.

Utilities: It is a standard procedure that before any excavation for the trail is begun in developed areas or public rights of way, utility locator services would be contacted per State Regulations. Therefore utilities are eliminated from any additional analysis.

Transportation: The intent of this plan is to route the North Country Trail off of roads and away from railroads, water based, or aerial transportation. Therefore, this topic is dismissed from any further analysis.

Environmental Justice / Protection of Children: Presidential Executive Order 12898 requires Federal agencies to identify and address disproportionate impacts of their programs, policies and activities on minority and low-income populations. Executive Order 13045 requires Federal actions and policies to identify and address disproportionately adverse risks to the health and safety of children. Neither of the alternatives would have disproportionate health or environmental effects on minorities or low-income populations as defined in the Environmental Protection Agency’s Environmental Justice Guidance; therefore, these topics are not further addressed in this document.

Indian Trust Resources/Interests: Indian trust assets are owned by Native Americans but held in trust by the United States. Other interests in Federal Actions may involve places sacred to Native Americans. Based on consultation with the Bad River Band of the Lake Superior Chippewa Tribe, all major blocks of Indian Lands have been excluded from the potential trail corridors. The tribe did request review of actual trail routes on the ground through subsequent section 106 and water quality permitting for activities near streams and wetlands flowing onto tribal lands if there are trail structures that need permitting in the future. The trail will not affect Indian Trust resources, therefore these impacts are not evaluated further in this document.

Prime and Unique Agricultural Lands: Prime farmland has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. Unique land is land other than prime farmland that is used for production of specific high-value food and fiber crops. Both categories require that the land is available for farming uses. There are approximately 600 acres of prime and unique agricultural lands found in the several hundred thousand acres of the planning area. The trail will be designed to not impede agricultural activity. This impact topic is not evaluated further in this document.

Wilderness: According to National Park Service Management Policies (2006), proposals having the potential to impact wilderness resources must be evaluated in accordance with National Park Service procedures for implementing the National Environmental Policy Act. Since there are no proposed or designated wilderness areas in the planning area, wilderness impacts are not further evaluated in this document.

Resource Conservation, Including Energy, and Pollution Prevention: The National Park Service's Guiding Principles of Sustainable Design provides a basis for achieving sustainability in facility planning and design, emphasizes the importance of biodiversity, and encourages responsible decisions. The guidebook articulates principles to be used such as resource conservation and recycling. Proposed project actions would not minimize or add to resource conservation or pollution prevention, and this impact topic is not evaluated further in this document.

Air Quality: Neither alternative involves activities which will degrade air quality, and any additional vehicle trips to access the trail when constructed will be minimal, so this impact topic is not evaluated further in this document.

Federally Listed Threatened and Endangered Species/State Listed Sensitive Species: The US Fish and Wildlife Service (USFWS) lists Canada Lynx (*Lynx canadensis*), a species federally listed as threatened, as possibly occurring in Gogebic County, Michigan and Iron County, Wisconsin, and piping plover (*Charadrius melodus*) in Iron County. The National Park Service initiated informal consultations by letter on June 21, 2012 with USFWS field offices in East Lansing, Michigan and Green Bay, Wisconsin on possible impacts of the project. On July 18, 2012 the USFWS East Lansing office concurred that the project would not likely have adverse effects on Lynx or their habitat. The Green Bay office responded on September 4, 2012 with a concurrence that the project would not likely have adverse effects on piping plover or Canada lynx on the Wisconsin side of the border.

Database surveys were done of the Wisconsin and Michigan state heritage databases of sensitive animals and plants. The results of these searches are shown in Appendix A. The planning team felt that with the exception of the wood turtle, which could be disturbed during trail construction and use

within any of the planning area, it would not be possible to assess effects of trail construction on other species, without having an actual alignment for the trail, so this topic was eliminated from further analysis. A mitigation measure for the project is to consult with state natural heritage programs when actual locations of the trail in undisturbed areas are known.

Topography: For the purposes of this assessment, topography is defined as a natural or human-made landscape condition where existing contours of the land create a condition that would require grading that would lead to a change in landform. Trail construction covered by this document will be a natural surface hiking trail with a 24 inch wide tread, laid out to flow with natural landforms, with minimal grades, and drained wherever possible by a 2-8 percent slope across the tread. No noticeable reshaping of landforms will take place.

Cultural Resources

In 2010 the NPS and Wisconsin State Historic Preservation officer signed a Programmatic Agreement that outlines how the National Park Service will carry out Section 106 of the National Historic Preservation Act regarding the long distance trail development in the State of Wisconsin.

Given the large areas covered with the trail corridor alternatives, the data reviewed so far in database surveys shows that there is a relative lack of cultural surveys conducted in either corridor, especially in the more remote areas. Therefore, it's not possible to compare potential effects of routing trails through either corridor.

Per section 106 requirements of the National Historic Preservation Act, the National Park Service will carry out phase 1 cultural surveys for the preliminary on-the-ground trail location. If cultural sites are identified along the route, the trail alignment would be moved to avoid any adverse impacts to cultural resources.

CHAPTER 2 DESCRIPTION OF ALTERNATIVES

Two alternative corridors are presented and analyzed: the No Action Alternative (also known as Alternative 1) and the northern alternative (Alternative 2) which is the new corridor preferred by the planning team. The No Action Alternative is the corridor identified in the 1982 Comprehensive Plan, which will remain the corridor for the trail if no other corridor is selected in this plan. Map 2 shows the two alternatives.

Several other alternatives were considered by the planning team, but dropped because they showed no advantages over the northern alternative.

The design of the proposed North Country Trail corridor is based on a number of factors, but the primary two are:

- 1) Making use of large tracts of public land which are managed in a way that's compatible with the North Country Trail;
- 2) Using one of the existing bridges across the Montreal River, which bisects the planning area from north to south. The river is deeply incised, and building a trail bridge would be excessively costly.

Other factors in corridor design are:

- 3) Linkage to public lands for support facilities and interpretive opportunities,

- 4) Provision for a varied and scenic hiking experience,
- 5) Preservation of significant natural features;
- 6) A reasonable directness of route.

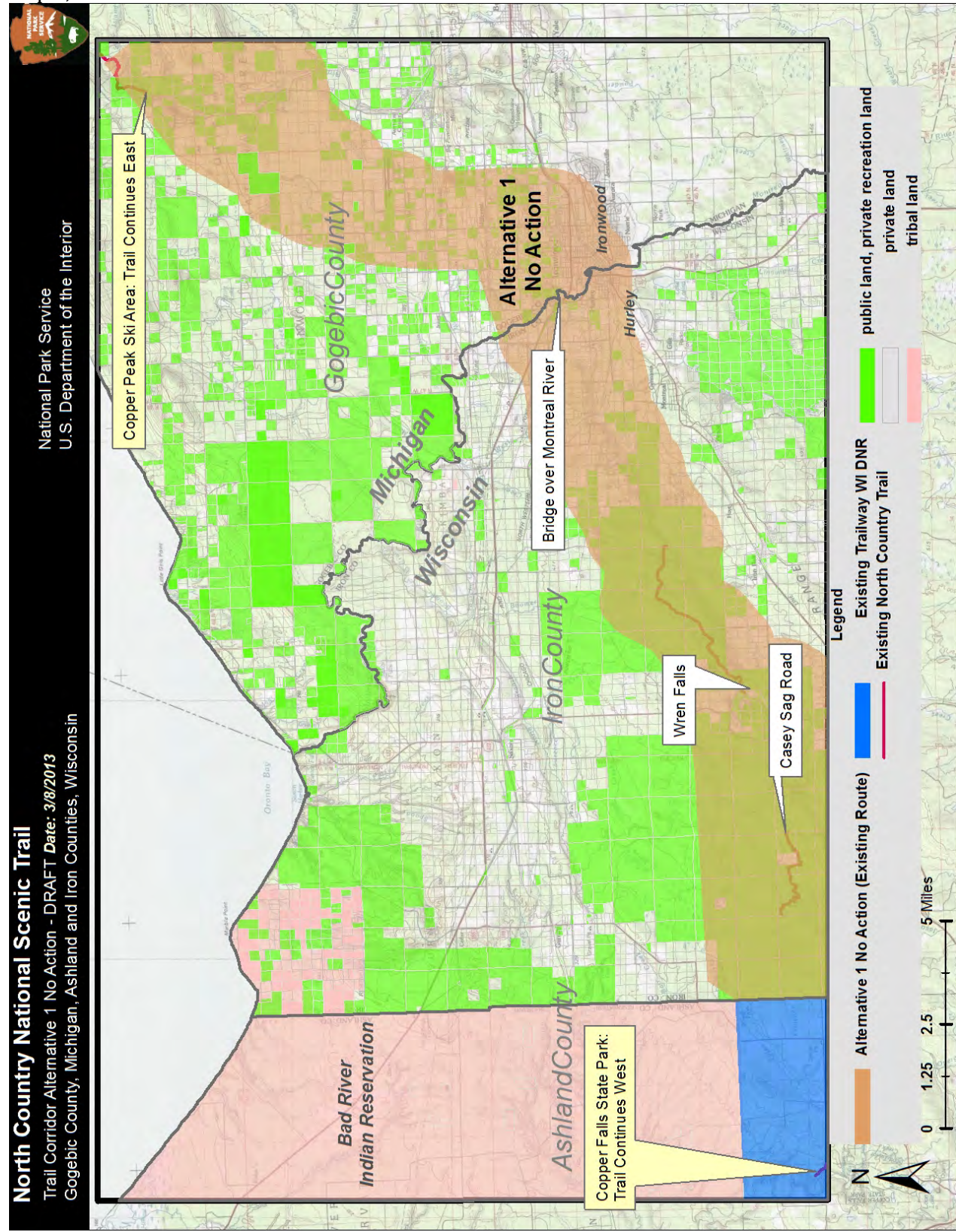
Alternative 1 No Action Alternative

Under the “No Action” alternative, the corridor referenced in the National Trails System Act and the 1982 Comprehensive Plan would continue to be the basis for locating the trail (See map 2). For comparative purposes, the width of this corridor was created at roughly 3 miles wide, and it covers 66,021 acres. Below is the 1982 description for the trail within the planning area:

Existing and potential routes continue through the Ottawa National Forest to Ironwood, MI and the Wisconsin State line. As the NCT crosses into Wisconsin, it follows a high potential route and a portion of the Uller Trail developed by the Iron County Young Adult Conservation Corps and maintained by the Penokee Rangers, a private trail organization. A general route continues to Copper Falls State Park where the NCT would follow existing trails in the park.

The corridor outlined above was given further definition by the planning team to make use of the features originally envisioned in the Comprehensive plan. The corridor would head south from the Copper Peak ski area, onto a mixture of land owned by private entities, the State of Michigan, Gogebic County, Iron County and the Wisconsin Dept. of Natural Resources. The corridor passes by the Gogebic-Iron County Airport, and roughly follows Black River Road due south towards the City of Ironwood (2010 census population 5,387) crossing Spring Creek north of the City of Hurley WI (2010 census population 1,547). Ownership in this area consists of 0.1 to 5 acre tracts of privately owned land. West of Hurley, the trail would probably cross the Montreal River at the US Highway 2 bridge. From here the corridor straddles the Penokee Mt. Range, and the North Country Trail would use about seven miles of the existing 11 mile long Uller ski trail, which runs from Pence to Weber Lake. The corridor consists of over 1500 tracts of private land. There are projects being implemented to develop abandoned railroad corridors for multi-use trails between Bessemer, Ironwood and Hurley, on which the North Country Trail could potentially be routed.

Map 2, No Action Alternative



Alternative 2 Northern Corridor – Preferred Alternative

Under this alternative, a Corridor of Opportunity also approximately three miles wide and 54.4 miles long (approximately 75,722 acres) would connect the existing North Country Trail terminus at Black River Road, near the Copper Peak Ski Flying area, to the existing section of the North Country Trail Constructed on Iron County Land near Casey Sag Road (See Map 2). It would also include a connector trail to be developed if desired to the Ironwood/Hurley area. It should be noted that the actual ground disturbance and grading due to construction of trail tread would be roughly 13.5 acres of the 75,722 acre total, and the vegetation brushing and pruning to maintain the trail would be about twice that, 27 acres.

From the east, the corridor would most likely make use of private commercial forest lands, heading west across the Maple Creek Drainage, then southwesterly, crossing Jarvi Road, Triplett Lane, and Lake Road (MI Hwy 505) heading towards Point Mountain (Elevation 1258 ft. above mean sea level, AMSL) onto Gogebic County Forestry Land. Near Point Mountain, the corridor has the opportunity to create a spur trail to Little Girls Point County Park, approximately 4 miles north of the center of the main northern corridor. This park is owned by Gogebic County on the shore of Lake Superior (approximate elevation 602 AMSL) and has camping available in a highly desirable location. From Point Mountain the main corridor would continue West towards Bald Mt. (elev. 1317), and continue to the Montreal River and the Michigan State border, at Superior Falls on the Montreal River.

The trail would most likely make use of the bridge on Lake Road, crossing into Wisconsin where the highway designation changes to N. State Highway 122. The corridor then would head north and the trail would most likely use the bridge on County Highway A, the access road into Saxon Harbor County Park, to make the crossing of Oronto Creek. The park is owned by the Iron County, WI Forestry and Parks Department, and provides 11 tent camping sites, bathrooms and showers. From the park heading south, the corridor would stay on Iron County Forest Lands as it runs along Oronto Creek, then to the west on Iron County parcels bordering the Bad River Reservation. Heading south, the corridor would cross US Highway 2, Old WI Highway 10, and State Highway 169, passing within a mile west of Gurney, WI (population 159 in 2010). Here, the corridor would join the Potato River Valley, near Potato River Falls, which would be one of the scenic highlights of the route. There are a series of three falls in this area, with a total drop of approximately 100 feet, and they are considered some of the most impressive in Wisconsin. The Iron County Forestry and Parks Department manages 5 primitive campsites (pit toilet, no drinking water) near the Falls, along with observation platforms, and trails. This site is accessed by heading west on Potato Falls Road from State Highway 169. The trail route itself would most likely be laid out on the right bank of the Potato River which flows SE to NW in this area. The corridor would take the trail up the Potato River drainage on Iron County forestry land heading east along the northern edge of Blueberry Marsh, then generally south following the Potato River to a point that is on the high ridge overlooking Upson Lake. It would then turn Southwest for about a mile, where it would join an existing, certified 3.4 mile long segment of the North Country Trail at Casey Sag Road about 4 miles north of Upson, WI. The route then follows this 3.4-mile certified segment to Wren Falls.

Near Wren Falls, a new bridge would be built to take the trail to the west side of the Tylers Fork River. The route would then angle Northwest and West utilizing additional Iron County Forest land until again approaching the Tylers Fork River. About ¼-mile south of the river the route would utilize permanent easements that have been secured by the Wisconsin Department of Natural Resources

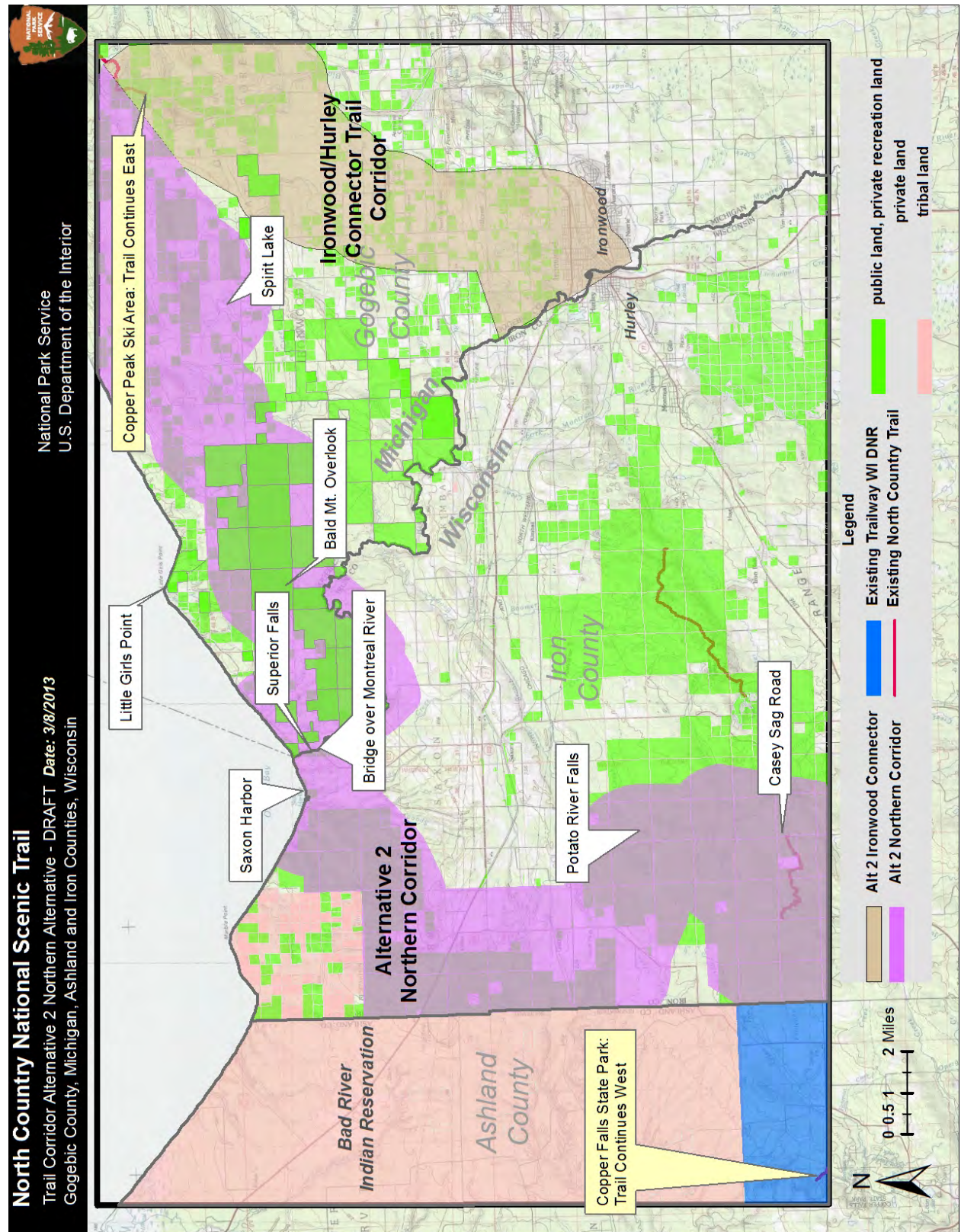
from several different private parties. Another large bridge would be required to cross the river but the alignment following public lands continues all the way to Copper Falls State Park.

Entering the park, the alignment angles generally west and then south across newly acquired Wisconsin State park lands and eventually joins the existing, certified segment of the North Country Trail.

A connector trail to the Ironwood/Hurley Area is part of this alternative. This would allow hikers from the communities of Hurley/Ironwood area to access the main North Country Trail, and the Copper Peak Area via a multiuse recreation trail. Bicyclists would be able to ride from these towns, then work a hike on the NCT into their trip. This trail would be developed by those communities, most likely within the North portion of the corridor identified in the No Action Alternative, and may make use of existing road and utility rights of way. Following North Country Trail marking standards, this trail would be a “white blazed trail”, as opposed to the blue blazes which mark certified North Country Trail segments. There is potential to make use of the corridor proposed in the No Action Alternative to complete a loop with the northern alternative, however there would be significant hurdles to secure a trail across large areas of private land ownership in small parcels.

Corridor from Casey Sag Road to Copper Falls State Park. From Casey Sag Road, both alternatives make use of the same corridor, DNR lands and existing constructed sections of the North Country Trail to continue to Copper Falls State Park, Wisconsin via a constructed segment of the North Country Trail in Iron County—from Casey Sag Rd. to Wren Falls, a large waterfall on the Tyler Forks River. It is in Copper Falls State Park that the corridor enters Ashland County, WI.

Map 3 Alternative 2, Northern Corridor-Preferred Alternative



Feature Common to Both Alternatives

Both alternatives share the concept of the trailway, which is the width or area of land that is managed for the purposes of the North Country Trail. It includes the trail itself, which is the actual tread and cleared area for the trail, as well as surrounding lands that are owned, leased, held by easement, or in some way controlled for management as part of the North Country Trail. Trailway width could range from 10 ft to 1000 feet, depending on the opportunities available and the geography and land use of the site. In areas of private land ownership, most often the trailway is secured either by purchase, easement, or use agreement for the North Country Trail. These secured rights may be held by a nonprofit partner or may be given to a state or local government entity. Where the trail passes through existing public ownership or management areas, the trailway is the width or area of land that the managing agency has committed to management for the trail.

This document does not specifically locate the trailway, because that would be dependent to a great deal on what types of agreements can be negotiated with private landowners and government agencies along the corridor for on-the-ground alignment of the trail.

The National Park Service North Country Trail Handbook for Trail Design, Construction and Maintenance guides its development. In rural and semi-primitive areas such as this planning area, North Country Trail construction standards (Appendix D) call for a 24-inch tread (walking surface), with an additional 1-foot vegetation clearance zone on either side. Ground disturbance would be limited to the trail tread itself, which may have organic material grubbed or scraped away, and the subsoil graded and compacted. In flat areas the trail tread would be lightly touched to prevent it from being below the surrounding ground, which in soils that don't drain, can cause it to be wet and muddy. Vegetation clearing for the trail may consist of brush cutting using chainsaws, a walk-behind brush mower, or pruning shears to remove limbs or small trees in the trail. Forest canopy would not be disturbed, helping to reduce regrowth of grass and shrubs back into the trail, maintain vegetative cover, and reduce splash erosion onto the trail tread. Total surface impacts would be approximately ½ acre per mile of trail construction. Trail construction and maintenance would take place using small equipment, mowers, hand tools and volunteer labor.

By following the standards in the North Country Trail Handbook the physical impacts to the resources would be similar between the alternatives. Between Copper Mountain Ski Area and Ironwood, the trail could be routed onto a multiuse trail if that were to be developed by others.

Mitigation Measures (These Measures Apply to Both Alternatives)

Invasive Species

A wayside exhibit and boot brush, as shown here, has also been located at some entrances to North Country Trail segments to inform hikers about the existence of invasive species, their effect on the native environment, appearance, and control measures. These interpretive materials include information about how the hiker can help to limit the spread of invasive species by staying on the trail and using the boot brushes.



Wood turtle protection

This turtle can be found near sandy-bottomed streams and rivers, and in the summer may forage in woods and upland areas. The species is especially vulnerable to human contact, and there is a potential it may be encountered on the trail by hikers. Outreach measures such as interpretive signs and trail crew briefings would be employed to instruct trail users to not handle or otherwise disturb turtles or other wildlife on the trail.

Trail construction practices

Appendix D contains the section of the North Country National Scenic Trail Handbook that specifies the most low impact trail design standards.

Cultural resources surveys

Once on-the-ground trail alignments are determined, NPS will coordinate archaeological surveys according to Department of the Interior Standards. If any cultural resources are present, consultations with state historic preservation officers under section 106 of the National Historic Preservation Act will be done by the National Park Service.

Water quality permits

Once the trail alignment is planned, the need for structures such as puncheons, boardwalks, and bridges will be determined and water quality permits will be obtained in cooperation with the appropriate landowners.

State listed Sensitive Species

Once on the ground trail alignments are determined, the NPS will consult with State heritage Program staff in both Michigan and Wisconsin to determine any possible effects of trail construction and use on these species.

Alternatives Considered But Dismissed

Several variations on the alternatives were evaluated but either dropped from consideration, or combined into the northern alternative. One alternative corridor that headed directly south from Saxon Harbor Recreation Area to Saxon, and on south to Casey Sag Road would have meant crossing at least 50 small parcels of private land, and bypassing a very scenic portion of the Potato River. Another proposal was to develop a side trail to Spirit Lake at the northeastern side of the study area- this alternative was absorbed into the corridor for the northern alternative.

Environmentally Preferable Alternative

The Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508) and the National Park Service Director's Order 12 require the NPS to identify the alternative that best promotes the goals of Section 101 of the National Environmental Protection Act. The environmentally preferred alternative is defined by the CEQ as: "...the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources" (CEQ 1981). The impacts of the alternatives analyzed here are so similar that either would be environmentally preferable.

CHAPTER 3 AFFECTED ENVIRONMENT

The Michigan-Wisconsin Border Area contains forest cover that consists of a diversity of uplands and lowlands and is considered a part of the Northern Highlands geographical province. It is known for its pitted outwash plains and kettle lakes mixed with extensive forests and large peat lands. Its landforms also contain some coarse-textured moraines. Soils are acidic and relatively unproductive due to low moisture-holding capacity and lack of organic matter. The Penoque- Gogebic Iron Range of Wisconsin and Michigan is about 80 miles long and half a mile to a mile wide running though the southern side of the planning area. The crest of the range rises 100 to 300 feet above the broad valley to the north.

In some places the range is broad and gently rounded, in others it is narrow, steep- sided and serrated. The lowest point in the study area is Lake Superior at 602 ft. above mean sea level, highest point in the study area is 1542 feet Above Sea Level.

Executive Order 11988-Floodplain Management, governs potential impacts of Federal Projects on flood plains. NPS regulations for implementing this order provide under Section 5, Part B Excepted Actions, 2a: "...foot trails are excepted from compliance with this order." This exemption is appropriate for the foot trail that would be constructed under the proposed action.

Visual Resources

Walking along the North Country Trail through the rolling hills, scattered open spaces and woodlands of the planning area would provide a continually changing and delightful experience to the hiker. The juxtaposition of land uses such as openings created by timber harvests in various states of regrowth, and small agricultural tracts upon the corridor's topographic features offers variety as well as a pedestrian scale to the landscape.

Invasive Species

According to Executive Order 13112, on Invasive Species, an invasive species is "a species that is: 1. non-native (or alien) to the ecosystem under consideration and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health." Species problematic for the planning area include glossy buckthorn (*Frangula alnus*), honeysuckle (*Lonicera X bella*), and most recently, garlic mustard (*Alliaria petiolata*).

Wildlife and Fisheries

Wildlife is abundant in the study area. The mixture of woodlands, croplands, and wetlands provides excellent habitat, cover and food source for many species, both game and non-game. Wildlife inhabiting the Michigan-Wisconsin Border Route Planning Area include black bear, moose, white-tail deer, grey squirrel, fox squirrel, cottontail rabbit, coyote, fox, weasel, lowland furbearers, ruffed grouse, woodcock, pheasant, wild turkey, a variety of native and migratory song birds, raptors, and waterfowl, and numerous reptilian and amphibian species.

The waters of the study area contain a variety of cold and warm-water fish species. Warm-water species such as northern pike, bass, pan fish and carp are found in the lakes, ponds and slow moving streams of the area. Winterkill is common with smaller, shallow lakes—like many of the kettle ponds. Cold water species such as brook trout, brown trout, and rainbow trout are generally found in the deep spring-fed lakes and faster flowing streams that have a temperature of less than 75° F.

State Listed Sensitive Species

The State Heritage Databases for both Wisconsin and Michigan were reviewed to determine the presence or absence of State Listed Sensitive Plant and Animal species that could be present in the study area. The results of the review are shown in Appendix A. In terms of this plan, the species of most concern is the wood turtle.

Cultural Resources

A preliminary coarse database search for historic and prehistoric sites was completed for Iron County and Ashland Counties in Wisconsin by the Wisconsin DNR. This search provided results at a coarse resolution of 40 acres, and showed that approximately fourteen parcels within the no action corridor and ten parcels within the northern alternative corridor contained prehistoric or historic sites that had been recorded in past surveys. It's important to note that further analysis would be needed when trail alignments are laid out on the ground.

In Michigan, a database and literature survey of both alternatives was conducted for the NPS by the firm Commonwealth Cultural Resources Group (CCRG) entitled *Cultural Resource Assessment of Two Proposed Alternative routes for the North Country National Scenic Trail, Gogebic County, MI R-1023.01 September 2012*. This review found 14 potential sites within the corridors and within a one mile buffer. These were mostly historic location records of homesteads, and not documentation of standing structures. Previous surveys and the resources they identified tended to be clustered near the existing communities. A large portion of the areas covered by the alternatives had not been surveyed. The report recommended conducting phase 1 surveys wherever ground disturbance was planned.

Existing Land Use

The main industries in the planning area are natural resource based: timber harvesting and processing, recreation and tourism. Timber harvesting takes place on larger tracts owned by timber companies, on federal, state and county lands, and to a lesser extent on smaller privately owned tracts.

Primary land uses within the proposed North Country Trail corridor are forestry and agriculture. In Wisconsin, the North Country Trail is a permitted use in all zoning classification (Wisconsin State Statutes 236.292).

Recreation and tourism is based on access to Lake Superior, fishing and hunting opportunities, the numerous federal, state and local parks, and campgrounds, and winter sports including snowmobiling, ice fishing, and downhill and cross country skiing and snowshoeing. The waterfalls and river canyons of the Black River, Potato River, and Montreal River are a big attraction in the summer months for tourists from the area, and the Midwest in general. Table 1 describes recreation sites within or nearby the corridors:

Table 1 List of Recreation Opportunities within Alternative Corridors

Corridor Alternative	Facility Name	Managing Agency	Recreation Opportunities
1	Wren Falls on Tyler Fork River	Iron County	Primitive camping, picnicking, and views of the Falls
1	Uller Ski Trail	Iron County/Penokee Rangers	11 mile long ski trail from Pence to Weber Lake
2	Little Girls Point	Gogebic County	Beach on Lake Superior, walking paths, picnic area, group use pavilion
2	Mouth of the Montreal River	Gogebic County	Views of Lake Superior and Superior Falls; walking paths
2	Saxon Harbor	Iron County	Camping, boating, picnic area, beach on Lake Superior
2	Weber Lake	Iron County	Campground, picnic area, boating and fishing
2	Foster Falls on Potato River	Iron County	Primitive camping, picnicking, and views of the Falls
2	Potato Falls on Potato River	Iron County	Primitive camping, picnicking, and views of the Falls

CHAPTER 4 ENVIRONMENTAL CONSEQUENCES

TERMS AND ASSUMPTIONS

Each impact topic includes a discussion of impacts, including the intensity, duration, and type of impact. Intensity of impact describes the degree, level, or strength of an impact as negligible, minor, moderate, or major. Because definitions of intensity vary by resource topic, separate intensity definitions are provided for each impact topic. Type of impact refers to the beneficial or adverse consequences of implementing a given alternative.

Duration of impact considers whether the impact would occur over the short term or long term:

Short-term impacts are those that, within a short period of time, generally less than 2 years from when trail construction begins would no longer be detectable as the resource or value returns to its pre-disturbance condition or appearance.

Long-term impacts refer to a change in a resource or value that is expected to persist for 2 or more years. The type of impact refers to whether the impact on the resource or value would be beneficial (positive), or adverse (negative).

The impact analyses describe the difference between the no-action alternative and the preferred alternative.

CUMULATIVE IMPACTS

The federal Council on Environmental Quality regulations, which implement NEPA, requires assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions, regardless of who undertakes such other actions. Cumulative impacts can result from individually minor but collectively important actions taking place over a period of time.

Cumulative impacts are considered for both the no-action and the action alternatives. These impacts were determined by combining the impacts of the alternatives with the impacts of other past, present, and reasonably foreseeable future actions. To do this, it was necessary to identify other planned actions in the surrounding area. For the purposes of most impact topics in this document, the cumulative impact analysis area was Gogebic County, Michigan, and Iron County, Wisconsin, which cover the majority of the planning area. The time horizon for the cumulative impacts analysis is generally plus or minus five years.

The following completed, planned or ongoing projects, or projects planned for the near future, were identified for the purposes of conducting the cumulative effects analysis:

- Ironwood to Hurley Multiuse Trail being developed through a partnership with local government, state government, and private landowners, approximately 10 miles long.
- County forestry operations-County Forest Management Activities in Gogebic and Iron Counties take place on approximately 150,000 acres of County owned Forest land, and cover approximately 3000 acres per year of timber that is harvested, thinned, or managed.

WETLANDS AND WATER QUALITY

Wetlands, in addition to the biodiversity they support serve critical roles as water purifiers, facilitating settling of particulates out of the water column and filtering remaining impurities. Because of the importance of wetlands to water quality, potential impacts to wetlands and water quality will be addressed together.

Wetlands and water quality can be impacted by trails crossing wetlands. Whenever possible, the North Country Trail is routed to avoid wetlands. Once the trail alignment is established, locations of trail bridges and boardwalks would be determined and appropriate permits would be obtained from the Wisconsin and Michigan agencies that manage water quality by the NCTA in cooperation with the land managing agencies.

Trails that are built too close to streams, built too steeply, or are not built to shed water can cause soil to wash into streams and have the potential to change the hydrology (quality or amount of water) in adjacent wetlands and waterways.

Wetlands are a protected resource managed under federal executive orders:

Executive Order 11990 was issued in 1977 “to avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.”

Approved in 1998, Director’s Order 77-1: Wetland Protection (NPS 1998) was developed for use by the National Park Service in carrying out its responsibilities under Executive Order 11990. The general policies, requirements, and standards included in the manual are: (1) no net loss of wetlands and a long-term goal of net wetlands gain, (2) park wide wetlands inventories, (3) restoration and enhancement of degraded wetlands habitats, (4) planning and siting facilities to avoid or minimize effects to wetlands, (5) restoration of degraded wetlands as compensation for adverse effects to wetlands, and (6) compliance with federal environmental regulations.

Impacts to wetlands and water quality were evaluated by comparing projected changes resulting from the northern alternative and the no-action alternative. The thresholds to determine wetlands and water quality impacts are defined as follows:

Intensity

Negligible: The impact is barely detectable and/or would result in no measurable or perceptible changes to wetlands or water quality.

Minor: The impact is slight, but detectable, and/or would result in small but measurable changes in wetlands or water quality; the effects would be localized to one area in a drainage basin.

Moderate: The impact is readily apparent and would result in easily detectable changes to wetlands or water quality; the effects would be localized to a drainage basin.

Major: The impact is severely adverse or exceptionally beneficial and/or would result in appreciable changes to wetlands or water quality; the effects would be regionally important.

No-Action Alternative

Under the no-action alternative, impacts to water quality would be minor, long term and adverse if the Trail was built to the standards in Chapter 4 of the *North Country Trail Handbook for Construction and Maintenance* (NPS 1995), included in Appendix 4. The impacts would be negligible if the trail was designated on existing multiuse rail trails developed by others. The minor impacts would result from understory vegetation clearing for the trail tread at approximately ½ acre per linear mile of trail constructed totaling at most 27 acres for the maximum of 54 miles of trail that would be built in this alternative.

Cumulative Impacts to Water and Wetlands. Other past, present, and anticipated future projects that contribute to impacts on wetlands and water quality are county forestry operations which would likely result in short-term, moderate adverse impacts to wetlands and/or water quality. The No Action Alternative's additional contributions to these impacts would be negligible.

Conclusion. The No-Action alternative would have negligible adverse short and long term impacts to wetlands and water quality.

Northern Alternative

In this alternative, the entire Trail is envisioned to be built within the corridor to the standards in the North Country Trail Handbook, and routing trail through wetlands and the need for bridges would be minimized as much as possible, for example this alternative would probably use the existing vehicle bridge for Hwy 122 across the Montreal River. Permits would be obtained which would require best practices to be employed for building structures in wetlands and across streams. Impacts to water quality are expected to be short term and long term, adverse and minor.

Cumulative Impacts to Water and Wetlands. Other past, present, and anticipated future projects that contribute to impacts on wetlands and water quality are county forestry operations which would likely result in short-term and long-term, minor adverse impacts to wetlands and/or water quality. The Northern Alternative contributions to these impacts would be minor, short term, long term and adverse.

Conclusion. The impacts of the Northern Alternative on water quality would be minor, short and long term, and adverse.

VEGETATION AND WILDLIFE

This section covers potential impacts to both wildlife and wildlife habitat, as well as federal and state listed Threatened, Endangered or Sensitive species. Wildlife habitat in this study area is primarily defined by the vegetation communities present. At most, the implementation of either alternative would result in a maximum of 13.5 acres of ground disturbance due to tread construction and 27 acres of understory (grasses, shrubs, and saplings) vegetative clearing through the corridor of 54 miles of trail construction (about ½ acre per mile). An important factor in wildlife habitat is the increase of invasive plant species which are currently spreading into the planning area. Under both the alternatives it is possible that non-native plant species could be introduced within the railway through import of seeds from other areas.

The method of designing and building the North Country Trail in forested areas is to not cause any openings in the tree canopy, and plan the trail to leave large healthy trees (see Appendix 4). Trail construction would involve a human presence and scent, and sounds of trail work along the trail

alignment during the period of actual trail construction, which generally occurs in work days or work weeks, where several hundred feet may be completed by a typical group of 5-15 people each day. When construction is completed, trail use would be by solitary hikers or small groups, resulting in a quieter, infrequent human presence, and little noise. Relative to other human activities in the planning area such as logging, agriculture, and residential development, these impacts would not affect sensitive or listed species such as Canada lynx or gray wolf. One vulnerable species listed on the Wisconsin side of the planning area is the wood turtle, which does not have the mobility of other wildlife. The mitigation measures in Chapter 2 will alert the public to not disturb turtles or other wildlife encountered while using the trail.

The thresholds to determine wildlife and wildlife habitat impacts are defined as follows:

Intensity

Negligible: Impacts are barely detectable and/or would affect a minimal area of vegetation. Impacts to the plant and wildlife communities at key organizational levels are not detectable.

Minor: Impacts are slight, but detectable, and/or would affect a small area of vegetation or few members of the wildlife community. The severity and timing of changes are not expected to be outside natural variability spatially or temporally. Key ecosystem processes and community structure are retained at the local level.

Moderate: Impacts are readily apparent and/or would affect a large area of vegetation and/or a large portion of the wildlife community. The severity and timing of changes are expected to be outside natural variability spatially and/or temporally; however, key ecosystem processes and community structure are retained at the landscape level.

Major: Impacts are severely adverse or exceptionally beneficial and/or would affect a substantial area of vegetation and/or the majority of the inhabiting wildlife community. The severity and timing of changes are expected to be outside natural variability both spatially and temporally. Key ecosystem processes and community structure may be disrupted. Habitat for wildlife species may be rendered non-functional at the landscape level.

No-Action Alternative

The No Action Alternative would make use of existing railroad and utility corridors and trails as much as possible, and where the North Country Trail was built to standards, it would not result in any canopy clearing, and clearing of less than 1% of the understory vegetation compared with other land management activities such as timber management. Building the trail using hand crews would minimize the possibility of affecting wood turtles, and trail builders would be instructed to not disturb turtles seen during construction and maintenance, and to move them out of danger when necessary. The effects of the No Action Alternative would be minor, short and long term, and adverse.

Cumulative Impacts on Vegetation and Wildlife

The impacts of county forestry activities on wildlife and habitat are moderate, short-term and long-term, and adverse at the current rate of 3000 acres per year of timber management in Iron and Gogebic Counties. The impacts of multiuse trail development will be minor, as the corridors through the vegetation are already existing, and the main disturbance will be from human presence which might displace wildlife either short term or if use was steady and continuous enough, long term.

Conclusion. The impacts to vegetation and wildlife would be minor, short and long term, and adverse from the no action alternative, with implementation of the mitigation measures.

Northern Alternative

The Northern Alternative would result in a maximum of 54 miles of trail being constructed, but in adhering to the standards in Appendix 4, use of existing railroad and utility corridors and trails as much as possible, and where the North Country Trail was built to standards, it would not result in an canopy clearing, and clearing of less than 1% of the understory vegetation compared with other land management activities such as timber management. Trail construction by hand crews minimizes the possibility of affecting wood turtles, and trail builders would be instructed to not disturb turtles seen during construction and maintenance, and to move them out of danger when necessary. The effects of the Northern Alternative would be minor, short and long term, and adverse.

Cumulative Impacts on Vegetation and Wildlife

The impacts of county forestry activities on wildlife and habitat is short-term and long-term, moderate and adverse at the current rate of 3000 acres per year of timber management in Iron and Gogebic Counties. The impacts of multiuse trail development will be minor, as the corridors through the vegetation are already existing, and the main disturbance will be from human presence which might displace wildlife either short term or if use was steady and continuous enough, long term.

Conclusion. The impacts to wildlife and wildlife habitat from the northern alternative would be adverse, short and long term, and minor with implementation of the mitigation measures.

SOCIOECONOMICS

The main socioeconomic factors that could be affected by selection of a trail corridor and development of the trail are recreation use, and land ownership.

The establishment of the North Country Trail in the Planning Area should provide a minor increase in recreation visits to the area, as people learn about the trail and it is included in regional marketing and promotion programs. The projected use of the trail is difficult to estimate, and would vary based on proximity to trailheads, and connections with other trails. Relative to the total number who already visits the region for camping, hiking, fishing, hunting, mountain biking, horseback riding, skiing and motorized recreation, the increase would probably be small. Based on patterns of use on other parts of the North Country Trail it is likely that use would be highest near populated areas or existing recreation areas. Trail use has beneficial effects on users in terms of improved health, relaxation, enjoyment of scenery and closeness to nature. Development of the trail and marketing new trail opportunities would take place over a period of years, so it's likely that effects would be long term.

To date, the vast majority of the North Country Trail that is marked and available for public use is secured with formal or informal agreements that allow access for trail users, but do not carry restrictions on adjacent land use, or often even a firm route for the trail. The two alternatives offer different patterns of land ownership, as shown in Table 2, so the impacts of trail development and corridor protection would differ.

Table 2 Comparison of Alternatives by Local Government and Private Land Ownership

Owner	Alternative 1 No Action	Alternative 2 Northern
Local government forestland	17261 acres	35042 acres
Private	24881 acres 407 private owners 1518 parcels over .25 acres	29409 acres 262 private landowners 894 parcels over .25 acres

Intensity

The thresholds to determine the intensity of impacts on socioeconomics are defined as follows:

Negligible: Effects on adjacent landowners, neighbors, businesses, agencies, community infrastructure, social conditions, etc. would be non-existent, barely detectable, or detectable only through indirect means and with no discernible impact on local social or economic conditions.

Minor: Effects on adjacent landowners, neighbors, businesses, agencies, community infrastructure, social conditions, etc. would be small but detectable, geographically localized, affect few people, comparable in scale to typical year-to-year or seasonal variations, and not expected to substantively alter established social or economic structures over the long-term.

Moderate: Effects on adjacent landowners, neighbors, businesses, agencies, community infrastructure, social conditions, etc. would be readily apparent or observable across a wider geographic area, affect many people, and could have noticeable effects on the established economic or social structure and conditions over the long-term.

Major: Effects on adjacent landowners, neighbors, businesses, agencies, community infrastructure, social conditions, etc. would effect a wider geographic area, affect many people, and would have noticeable effects on the established economic or social structure and conditions over the long-term.

No Action Alternative

This alternative would take the hiker into more developed areas, within sight of heavily traveled roads and facilities such as the Gogebic County Airport and US highway 2. These features detract from the scenic potential available in the corridor; however long distance hikers would have more opportunities to take advantage of services in the communities of Ironwood and Hurley. Because the trail would need to cross more, and smaller parcels of private land, as shown in Table 2, there would be more of a need for land/easement acquisition. Making use of multi-use trails developed by state and local government could lessen the need to acquire private lands. For the short-term, as negotiations took place with private landowners, the route of the trail would be along existing roads, many of which do not have sidewalks.

Cumulative Socioeconomic Effects

The Ironwood to Hurley Multiuse Trail being developed through a partnership with local government, state government, and private landowners, would have a beneficial, moderate short and long term effect on recreational trail use.

County Forest Management Activities in Gogebic and Iron Counties take place on land zoned, acquired and managed for these purposes, with recreational trail use managed to be in balance with forestry

practices. Lands are acquired through purchase or donation for the benefit of the counties as a whole in terms of financial returns, recreation opportunity, and forest health. The effects are short and long term, moderate, and beneficial.

Conclusion. The No Action alternative would result in beneficial, minor, and long term socioeconomic effects.

Northern Alternative

This alternative would route the trail through more scenic areas, with more topographical relief, large river corridors, and views and potentially access to Lake Superior. The opportunity to develop the trail and hike along the Potato River in Iron County was seen as an especially valuable opportunity by the planning team, along with the chance to access the Lake Superior shoreline at several points, and camp near the Lake at Saxon Harbor. The option would provide more of the values that the North Country National Scenic Trail was created for, while also be more feasible to implement, by making use of large tracts of public lands, requiring less negotiating for small parcels.

The connector trail to the Ironwood-Hurley Area, while requiring more negotiations with small private landowners, would provide for users of the North Country National Scenic Trail to have the option of accessing the services available in these communities, and allow the communities to be able to market and promote their connection to the trail. Use of the trail could take place in the short as well as the long term.

Cumulative Socioeconomic Effects

The Ironwood to Hurley Multiuse Trail being developed through a partnership with local government, state government, and private landowners, would have a moderate beneficial short and long term effect on recreational trail use.

County forest management Activities in Gogebic and Iron Counties take place on land zoned, acquired and managed for these purposes, with recreational trail use managed to be in balance with forestry practices. Lands are acquired through purchase or donation for the benefit of the counties as a whole in terms of financial returns, recreation opportunity, and forest health. The effects are short and long term, moderate, and beneficial.

Conclusion. The socioeconomic impacts from this alternative would be beneficial in terms of providing health and wellness benefits, and potentially protecting lands in the trailway, minor, and short to long term.

CHAPTER 5 PUBLIC INVOLVEMENT, CONSULTATION, COORDINATION

Public Involvement

The NPS and planning team members made numerous informal contacts with the public, and state and local government, since the planning process began in 2007. A formal scoping meeting with state and local governments was held October 18, 2007 in Wakefield, MI and a public meeting was held on September 24, 2008 at Gogebic County Community College in Ironwood, MI.

A public open house meeting sponsored by the NPS and Wisconsin DNR was held on August 8, 2012 at the Iron County Courthouse in Hurley, Wisconsin from 4-8 pm. Eighteen members of the public and local agencies attended, and were invited to provide comments on the alternatives. Several comments were received by email and in writing. These comments favored the northern alternative (alternative 2) as having the most scenery, and making the best use of existing public land.

Native American Consultation

Over the summer of 2012 the Natural Resources Director for the Band River Band was contacted and provided with a draft of this plan, which he circulated for review and comment within the tribal government. The only comments received were to make sure the tribe was consulted as trail was built on the ground within the watershed which drains onto tribal lands, so that the tribe could assess any potential impacts on water quality from trail construction.

APPENDIX A STATE LISTED PLANT AND ANIMAL SPECIES

Ashland County Wisconsin		Iron County, Wisconsin	
ANIMALS Scientific Name (Common Name)		ANIMALS Scientific Name (Common Name)	
	Agabus leptapsis (Diving Beetle)		Accipiter gentilis (Northern Goshawk)
	Brachycentrus lateralis (Casemaker Caddisfly)		Cochlicopa morseana (Appalachian Pillar)
	Glyptemys insculpta (Wood Turtle)		Glyptemys insculpta (Wood Turtle)
	Haliaeetus leucocephalus (Bald Eagle)		
	Psilotreta indecisa (Caddisfly)		
PLANTS		PLANTS	
	Osmorhiza berteroi (Chilean Sweet Cicely)		Asplenium trichomanes (Maidenhair Spleenwort)
	Polystichum braunii (Braun's Holly-fern)		Dryopteris fragrans (Fragrant Fern)
	Streptopus amplexifolius (White Mandarin)		Goodyera oblongifolia (Giant Rattlesnake-plantain)
COMMUNITIES			Moehringia macrophylla (Large-leaved Sandwort)
	Northern Mesic Forest		Melica smithii (Smith's Melic Grass)
Species occurring historically in area		COMMUNITIES	
PLANTS			Moist Cliff
	Northern Mesic Forest		Mesic Forest
	Listera convallarioides (Broad-leaved Twayblade)		
	Polystichum braunii (Braun's Holly-fern)		OTHER ELEMENTS
ANIMALS			Bat Hibernaculum
	Cochlicopa morseana (Appalachian Pillar)		Species occurring historically in area
	Glyptemys insculpta (Wood Turtle)		
PLANTS			
	Asplenium trichomanes (Maidenhair Spleenwort)		
	Dryopteris fragrans (Fragrant Fern)		
	Goodyera oblongifolia (Giant Rattlesnake-plantain)		
	Melica smithii (Smith's Melic Grass)		
	Moehringia macrophylla (Large-leaved Sandwort)		
	Polystichum braunii (Braun's Holly-fern)		
COMMUNITIES			
	Moist Cliff		
	Northern Mesic Forest		
OTHER ELEMENTS			
	Bat Hibernaculum		
Species occurring historically in area			
PLANTS			
	Botrychium mormo (Little Goblin Moonwort)		
	Woodsia oregana ssp. cathcartiana (Oregon Woodsia)		

Michigan State Heritage Database Listings for Gogebic County, Michigan
36 species

Scientific Name	Common Name	Habitat / Community Type
Accipiter gentilis	Northern goshawk	Hardwood-conifer swamp
		Northern hardwood swamp
		Floodplain forest
		Boreal forest
		Mesic northern forest
		Dry-mesic northern forest
		Dry northern forest
Botrychium mormo	Goblin moonwort	Boreal forest
		Mesic northern forest
Buteo lineatus	Red-shouldered hawk	Southern hardwood swamp
		Floodplain forest
		Mesic southern forest
		Dry-mesic southern forest
		Mesic northern forest
		Dry-mesic northern forest
Calypso bulbosa	Calypso or fairy-slipper	Rich conifer swamp
		Wooded dune and swale complex
		Boreal forest
		Dry-mesic northern forest
		Dry northern forest
		Great Lakes barrens
		Limestone bedrock glade
		Volcanic bedrock glade
		Volcanic bedrock lakeshore
Carex assiniboinensis	Assiniboia sedge	Floodplain forest
		Mesic northern forest
Clematis occidentalis	Purple clematis	Floodplain forest
		Boreal forest
		Mesic northern forest
		Dry-mesic northern forest
		Northern bald
		Granite bedrock glade
		Volcanic bedrock glade
		Volcanic bedrock lakeshore
		Volcanic lakeshore cliff
		Granite cliff

		Volcanic cliff
Clinostomus elongatus	Redside dace	Headwater Stream (1st-2nd order), Riffle
		Headwater Stream (1st-2nd order), Pool
		Headwater Stream (1st-2nd order), Pool
		Headwater Stream (1st-2nd order), Run
Coregonus artedi	Lake herring or Cisco	River (5th-6th order), Pool
		River (5th-6th order), Run
		Inland Lake, Pelagic, Midwater
		Great Lake, Pelagic, Midwater
Cottus ricei	Spoonhead sculpin	Headwater Stream (1st-2nd order), Riffle
		Mainstem Stream (3rd-4th order), Riffle
		Inland Lake, Littoral, Benthic
		Inland Lake, Pelagic, Benthic
		Great Lake, Pelagic, Benthic
Dentaria maxima	Large toothwort	Floodplain forest
		Mesic northern forest
Dryopteris filix-mas	Male fern	Mesic northern forest
		Limestone bedrock glade
		Volcanic bedrock glade
		Sinkhole
		Limestone cliff
Dryopteris fragrans	Fragrant cliff woodfern	
		Volcanic bedrock lakeshore
		Volcanic lakeshore cliff
		Granite cliff
		Volcanic cliff
Galearis spectabilis	Showy orchis	
		Southern hardwood swamp
		Mesic southern forest
		Mesic northern forest
Gavia immer	Common loon	Emergent marsh

		Bog
		Inland Lake, Pelagic, Midwater
		Great Lake, Littoral, Benthic
		Great Lake, Littoral, Midwater
		Great Lake, Pelagic, Benthic
Glyptemys insculpta	Wood turtle	Northern wet meadow
		Bog
		Rich conifer swamp
		Hardwood-conifer swamp
		Northern shrub thicket
		Mesic northern forest
		Headwater Stream (1st-2nd order), Pool
		Headwater Stream (1st-2nd order), Run
		Mainstem Stream (3rd-4th order), Pool
		Mainstem Stream (3rd-4th order), Run
Gnaphalium sylvaticum	Woodland everlasting	Mesic northern forest
Gomphus lineatifrons	Splendid clubtail	Mainstem Stream (3rd-4th order), Pool
		Mainstem Stream (3rd-4th order), Run
		River (5th-6th order), Pool
		River (5th-6th order), Run
Gomphus quadricolor	Rapids clubtail	Emergent marsh
		Great Lakes marsh
		Northern fen
		Patterned fen
		Bog
		Hardwood-conifer swamp
		Northern hardwood swamp
		Southern hardwood swamp
		Floodplain forest
		Southern shrub-carr
		Mesic southern forest
		Mesic northern forest
		Headwater Stream (1st-2nd order), Riffle

		Headwater Stream (1st-2nd order), Pool
		Headwater Stream (1st-2nd order), Run
		Mainstem Stream (3rd-4th order), Riffle
		Mainstem Stream (3rd-4th order), Pool
		Mainstem Stream (3rd-4th order), Run
Gratiola aurea	Hedge-hyssop	Emergent marsh
Haliaeetus leucocephalus	Bald eagle	Bog
		Poor conifer swamp
		Rich tamarack swamp
		Hardwood-conifer swamp
		Northern hardwood swamp
		Southern hardwood swamp
		Floodplain forest
		Mesic northern forest
		Dry-mesic northern forest
		Dry northern forest
Huperzia selago	Fir clubmoss	Intermittent wetland
		Open dunes
Littorella uniflora	American shore-grass	Submergent marsh
Lysimachia hybrida	Swamp candles	Southern hardwood swamp
Myriophyllum farwellii	Farwell's water milfoil	Emergent marsh
Nuphar pumila	Small yellow pond lily	Emergent marsh
Ophiogomphus anomalus	Extra-striped snaketail	Headwater Stream (1st-2nd order), Riffle
		Headwater Stream (1st-2nd order), Run
		Headwater Stream (1st-2nd order), Run
		Mainstem Stream (3rd-4th order), Run

Panax quinquefolius	Ginseng	Southern hardwood swamp
		Floodplain forest
		Mesic southern forest
		Mesic northern forest
Pandion haliaetus	Osprey	Hardwood-conifer swamp
		Northern hardwood swamp
		Southern hardwood swamp
		Floodplain forest
		Coastal Fen
Petasites sagittatus	Sweet coltsfoot	Patterned fen
		Poor fen
Potamogeton vaseyi	Vasey's pondweed	Submergent marsh
Ranunculus cymbalaria	Seaside crowfoot	Intermittent wetland
Ranunculus rhomboideus	Prairie buttercup	Oak openings
		Hillside prairie
		Volcanic bedrock glade
Vertigo bollesiana	Delicate vertigo	Limestone bedrock glade
		Limestone bedrock lakeshore
		Limestone lakeshore cliff
		Volcanic cliff
		Limestone cliff
Vertigo cristata	Crested vertigo	
		Granite bedrock lakeshore
		Volcanic bedrock lakeshore
		Volcanic lakeshore cliff
		Limestone lakeshore cliff
		Volcanic cliff
Vertigo paradoxa	Mystery vertigo	Limestone cliff
		Northern fen
		Rich conifer swamp
		Mesic northern forest
		Dry-mesic northern forest
		Limestone bedrock glade
		Volcanic bedrock glade
		Volcanic bedrock lakeshore

Viola novae-angliae	New England violet	Limestone lakeshore cliff
		Wet-mesic sand prairie
		Mesic sand prairie

APPENDIX B PLANNING TEAM MEMBERS

North Country National Scenic Trail Core Planning Team Michigan-Wisconsin Corridor Plan

Will Andresen	Iron County Extension
Ben Bergey	Wisconsin DNR-Copper Falls State Park Superintendent
Scott Erickson	City of Ironwood (City Manager)
Dean Gettinger	NPS Madison, WI (Management Assistant)
Chris Hoffman	Ashland County Forester.
Ken Howell	NPS Madison, WI, Team Leader (Land Protection Specialist, now retired)
Jeff McCusker	NPS Lowell, MI Team Leader (Trail Manager)
Bill Menke	NCTA Regional Trail Coordinator
Alan W. Stege	Keweenaw Land Association Limited (now retired)
Dick Swanson	Ni-Maakaanakke Chapter, North Country Trail Association
Fred Szarka	NPS Madison, WI (Trail Manager, now retired)
Joe Vairus	Iron County Forest Administrator

APPENDIX C GLOSSARY

Biodiversity: Biodiversity is the variety and variability among living organisms and the ecological system in which they occur on the local and regional landscape.

Corridor of Opportunity: A planned and mapped linear space, generally 1 mile to 4 miles wide, but wider in some places to protect exceptional features, within which the cooperating partners are working to establish the “Trail” and a suitable “Trailway”. Rarely would the partners seek to acquire or protect the entire width of the corridor for the trail. The reason the corridor is wider than the trailway that would be acquired is to provide the opportunity to be flexible in working with willing landowners on a voluntary basis. (see “Trailway”)

Endangered Species: A species on the Federal or State Endangered Species list whose continued existence as a viable component of the State’s wild animals or wild plants is determined by the U.S. Fish and Wildlife Service or state wildlife agencies to be in jeopardy on the basis of scientific evidence.

North Country Trail Association (NCTA) : The The North Country Trail Association develops, maintains, protects, and promotes the North Country National Scenic Trail as the premier hiking path across the northern tier of the United States through a trail-wide coalition of volunteers and partners.

National Park Service (NPS): The agency within the U.S. Department of the Interior responsible for preserving, protecting, and managing the natural, cultural, and recreational areas of the National Park System. The mission of the NPS includes two primary goals: to preserve our natural and cultural resources and to provide for public use and enjoyment of these resources in ways that will leave them unimpaired for future generations. The NPS is responsible at the Federal level for carrying out the provisions of the National Trails System Act as they relate to the North Country Trail by coordinating, guiding, and assisting the efforts of others to acquire, develop, operate, protect, and maintain the trail.

Special Concern Species: Species about which a problem of abundance or distribution is suspected but not yet proven scientifically. This State classification focuses attention on species before they become threatened or endangered.

Stewardship Fund: A Wisconsin legislatively established fund administered by the WDNR, which provides funding for conservation and recreation programs, including matching grants to not-for-profit conservation organizations for certain projects. The North Country Trail is one of the qualifying projects, and may receive grants for land acquisition.

Threatened or Endangered Species: A species on a Federal or State Threatened or Endangered Species list is one which appears likely, within the foreseeable future, on the basis of scientific evidence, to become endangered.

Trail: The usable tread and immediate surrounding space that is maintained for the purpose of passage along the trail route. For walking only segments, this may be a 24- to 30-inch wide tread and an additional 2 feet of cleared space on either side. For segments where other activities are also allowed, these measurements would likely be greater. Also see Corridor of Opportunity and Trailway.

Trailway: The width or area of land that is managed for the purposes of the North Country Trail. It includes the "Trail" and surrounding lands that are owned, leased, held by easement, or in some way controlled for management as part of the North Country Trail. Generally its width ranges from 50-1000 feet. It most often is the land secured for the North Country Trail. Where the trail passes through existing public ownership or management areas, the "Trailway" is the width or area of land that the managing agency has committed to management for the trail. Also see Corridor of Opportunity and Trail.

APPENDIX D NORTH COUNTRY TRAIL STANDARDS

Below is taken from Chapter 4 of the National Park Service handbook, “The North Country National Scenic Trail: A Handbook for Design, Construction, and Maintenance” (1996):

The objective of trail standards is to ensure a consistent look without compromising local initiative, a high standard of quality without over-building, a basic level of safety without removing all risk, accessible portions without compromising the character of the trail, and environmental and resource protection. Standards were developed to meet these objectives without compromising the character of the trail or imposing undue hardship upon those who maintain the trail. Whenever it is possible to retain the foot- trail-through-the-woods character, but still allow a very determined, mobility-impaired individual to get through simply by increasing trail width by an inch or two, it should be done. There are case-by-case exceptions, but every effort should be made to conform to the trail standards when building or rebuilding trail.

The North Country NST passes through a variety of recreation settings (ROS). Therefore, the trail should not and will not look exactly the same from end to end. It is not appropriate to build the trail to urban standards in a semi-primitive setting, nor vice versa. For this reason all standards are based on the ROS setting. Consistency is achieved through signing, blaze color, and the fact that a segment occurring in a particular ROS setting (roaded natural, semi-primitive, etc.) will look similar to a segment in another area that is in the same ROS setting.

Figure 1 on page 33 summarizes the desired trail design standards. If a trail segment is significantly below these standards, it should be gradually improved. However, if no attempt is made to rectify the situation, it may be decertified or closed. Whenever a portion is being reconstructed or receiving heavy maintenance, attempts should be made to bring it up to standard. Although these guidelines do not prevent a particular trail segment from exceeding desired standards, it should not be assumed that doing so is always desirable. Routinely exceeding the standards will adversely impact the character of the trail and hiker experience.

Exceeding trail standards in selected locations may be appropriate, such as the trail segment in the Little Miami Scenic Trail (OH)—a converted rail-trail that accommodates multiple use and is designed as fully-accessible. (See Figure 1.)

TREAD WIDTH

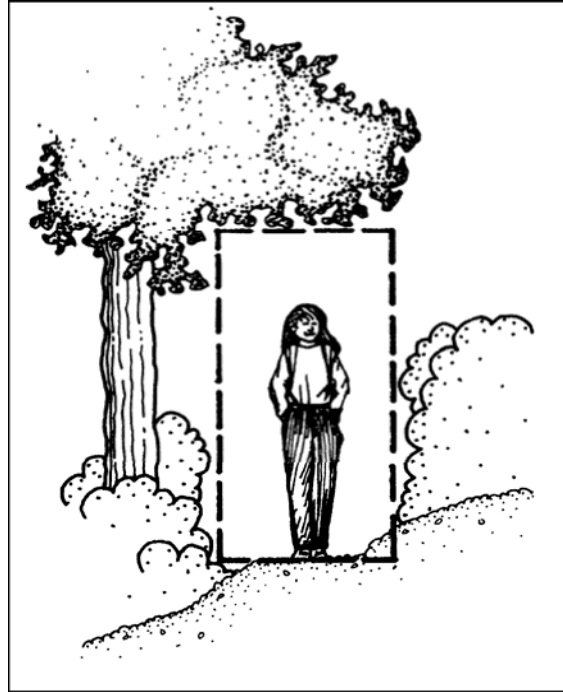
Tread width refers to the actual walking surface of the trail—whether native soil, grass, or surfaced. Initial tread should be constructed or smoothed to this standard. In less used areas the bare tread may gradually transform into a tread that needs to be mowed. This is acceptable as long as the basic underlying, smooth structure is still in place.

CLEARING WIDTH

Clearing width is the area kept free of brush, limbs, briars, tall grass, weeds, and other obstructions which would slap against the hiker or their pack, or soak them following a

rain or heavy dew. In heavily wooded areas, the clearing width is normally maintained simply by pruning limbs. Here, the area between the edge of the tread and the edge of the clearing is normally leaf litter or short herbaceous plants. While four feet is the average standard width, some variation is allowed and encouraged—it is visually appealing and often more sensitive to adjoining natural resources. In wooded areas there are occasions when it is desirable to narrow the clearing width in order to route the trail between two large, visually interesting trees. Generally, the trail winds between existing medium to large size trees, and is created by cutting only smaller trees and saplings. Narrowing the clearing width below the desired standard is done only for reasons of aesthetics—not merely to reduce trail construction/maintenance efforts. When the trail is crossing fields or prairies, it is suggested that as a minimum, the entire desired clearing width should be mowed. It

may be desirable to widen the mowing to create a variety of gentle clearing undulations. Some of these may highlight a particularly bright clump of wild flowers or a well- developed flowering shrub such as a hawthorn or dogwood.



In selected wooded areas (especially near roads) a common practice is to reduce the clearing width for a short distance (25 to 100 feet) to discourage unauthorized use by ATVs, horses, etc. (When this is done accessibility may be compromised).

Figure 1 (on page 33) shows the clearing width on each side of the tread. On a hiking segment in a rural area, the total clearing width would be the 24-inch tread plus 12 inches on each side for a total of 48 inches (the commonly accepted 4-foot clearing window).

CLEARING HEIGHT

The trail should be cleared to a height of 8 feet (10 feet within Wisconsin DNR properties). At this height, branches that could snag on a tall hiker's extended pack or attachments, such as a fishing rod, are removed. Branches that could restrict the trail when weighted with rain or snow are also removed. If the trail is in an area of deep snow and it receives winter use, clearing may have to be higher. Whatever the reason for a higher clearing height, an overhead canopy of branches should remain to slow the growth of grasses and shrubs that thrive in sunlight.

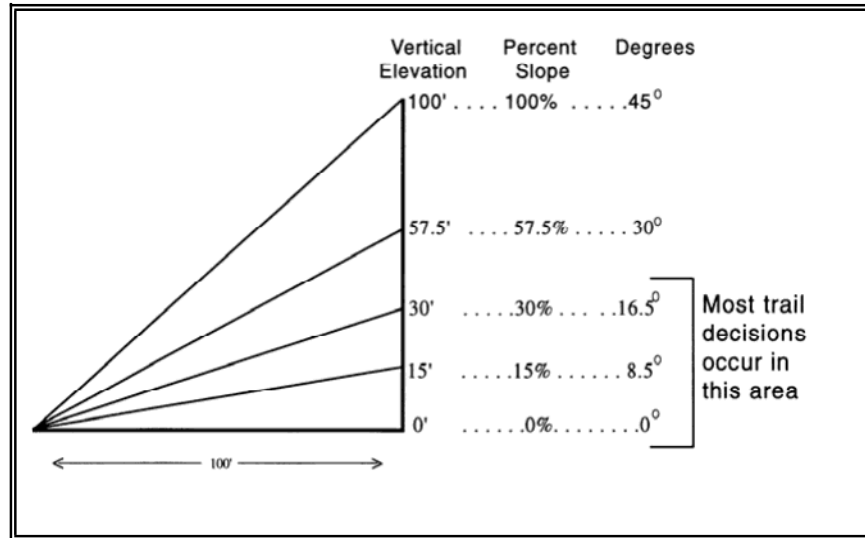
SLOPE (SUSTAINED)

The slope (grade) of the trail may be the key factor contributing to tread stability. Trail grades must be moderate to promote a stable, maintainable tread and a more pleasant hike. The trail should be designed to traverse a hilly area with gentle changes in grade. Grade and slope are interchangeable terms.

To avoid erosion, the slope should normally be less than 10%—even in steep terrain. Grades less than 7% in all soils are ideal, but in sandy soils are almost a necessity to prevent erosion. In flatter areas, trail should be located so that there is some grade to provide for proper drainage. A grade should undulate gently to provide natural drainage and to eliminate monotonous level stretches and long, steep grades that are tiring to trail users.

Slope can be calculated in degrees, but is normally calculated in percent by dividing the vertical distance by the horizontal distance and multiplying by 100 (10

feet of rise/100 feet of horizontal distance X 100 = 10%). An easier, more accurate way to determine slope is through the use of a tool, about the size of a compass, called a clinometer. By sighting through the clinometer, the percent of slope can be read.



SLOPE (MAXIMUM)

While reasonable efforts should be made to construct the trail using the sustained slope guidelines, there are occasions where doing so is impossible. Because of terrain obstructions, such as cliffs, it may be necessary to use a short, steep segment to regain access to more moderate slopes. In these instances, the maximum slope guidelines should be used and additional erosion control measures incorporated. Sections of trail exceeding the sustained grade standards should normally be less than 100 feet.

In some areas, it may be necessary to go up a very steep slope for a short distance. In these areas, steps may be necessary but should be considered as a last resort due to the barrier they impose on many people.

CROSS SLOPE

Cross slope is a consideration when constructing trail across the face of a hill (sidehill trail). Some degree of cross slope, or out slope, is desirable so that water moving down the face of the hill continues across the trail. A cupped trail or a trail that slopes back into the hill collects water and is undesirable. However, the cross slope should not exceed the percentages shown in Figure 1. Cross slopes greater than those shown make walking on the trail uncomfortable and serve as an impediment to mobility-impaired individuals. A 5% cross slope on a 24-inch tread amounts to a drop of 1.2 inches.

OTHER STANDARDS FOR ACCESSIBLE TRAIL

These standards apply only when a trail segment is designed to be fully accessible. Figure 1 specifies the maximum distance between passing and rest areas. Each passing space should be 60" × 60". At intervals specified, rest areas are built adjacent to passing areas and may include a bench or other facilities.

TRAIL SURFACE

In most cases, the native material found during trail construction will be satisfactory for surfacing the trail. However, if the material consists of large amounts of topsoil or organic matter, it should be set aside for later use as a cover and planting surface for exposed sub-soil.

Figure 1 shows a range of surfaces that are acceptable in the various ROS settings. While several options are shown for rural/roaded natural areas, the strong preference is for native surfacing. The Accessible Surface Standards apply only when a trail segment is designed to be fully accessible. Wood chips should not be used to correct wetness problems. They only add more organic material to the site and compound the problem when they rot. Also, wood chips can not be used on steeper slopes as they do not stay in place. They are acceptable on relatively level sections of trail to smooth an otherwise rough tread surface and to help retard weed infestation and wear of the natural surface.

FIGURE 1. NORTH COUNTRY NATIONAL SCENIC TRAIL TRAIL CONSTRUCTION DESIGN STANDARDS

Standards (desired)	ROS Class			
	Urban	Rural and Roaded Natural	Semiprimitive	Primitive
<u>Tread Width</u> Hiking Segments Accessible Segments	48" 60"	24" 36"	18" 28"	*
<u>Clearing Width</u> (each side of tread)	24"	12" (WIDNR-24")	12"	*
<u>Clearing Height</u> (min.)	10'	8' (WIDNR-10')	8'	*

<u>Slope(max.sustained) Hiking</u>				
Segments Accessible	10%	10%	15%	*
Segments	5%	8%	12%	
<u>Slope (max.) Hiking</u>				
Segments Accessible	15% for 100'	20% for 100'	30% for 100'	*
Segments	8% for 30'	10% for 50'	10% for 50'	
<u>Cross Slope (max)</u>	3%	5%	8%	*
<u>Other Accessible Segment</u>				
<u>Standards</u> Passing Spot Int.-				
max Rest Area Interval-max	N/A	600'	1200'	N/A N/A
	1200'	1200'	1/2 mile	
<u>Surfaces</u>	Asphalt. Concrete. Stabilized- aggregate. Screening(1). Wood Chip. Sod.	Native. Wood Chip(2). Stabilized- aggregate. Screening(1).	Native	Native
<u>Accessible Surfaces</u>	Asphalt. Concrete. Stabilized- aggregate.	Asphalt. Stabilized-aggregate.	Native. Stabilized- aggregate.	Native

*In Primitive ROS (wilderness), human impacts and changes to the scenery are meant to be less obtrusive—when entering a wilderness area, one accepts greater personal risk. Trails in primitive areas lay "light-on-the-land." Because of this, no hard standards have been established. Generally, the tread is more faint, the grade varies depending on the terrain, etc. However, it is still important to consider trail design standards which protect the environment. Because trails in wilderness areas may receive less frequent maintenance, designing a trail that requires little maintenance is of utmost importance.

(1) Limestone screenings include the fines.

(2) Not in wet areas—adds to the problem.