

ICE AGE NATIONAL SCENIC TRAIL

Corridor Plan and Environmental Assessment for Southern Langlade County, Wisconsin



Prepared by:

**National Park Service
Ice Age National Scenic Trail
Madison, Wisconsin**

Wisconsin Department of Natural Resources

**Ice Age Trail Alliance
(Formerly Ice Age Park and Trail Foundation)**

North Central Wisconsin Regional Planning Commission

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Address comments to: National Park Service, Ice Age National Scenic Trail, 700 Rayovac Drive, Suite 100, Madison, Wisconsin 53711 by June 14, 2013.

**U.S. DEPARTMENT OF INTERIOR
NATIONAL PARK SERVICE**

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Southern Langlade County, Wisconsin**

EXECUTIVE SUMMARY

This document analyzes alternatives for locating and developing the Ice Age National Scenic Trail (NST) through southern Langlade County in Wisconsin and proposes implementation of the “Preferred” alternative.

On October 3, 1980, an amendment to the National Trails System (16 U.S.C. 1241 et seq.) authorized establishment of the Ice Age Trail as a National Scenic Trail (NST). To date, Congress has authorized the establishment of eleven NSTs—“extended trails so located as to provide for maximum outdoor recreation potential and for the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of the areas through which such trails may pass.” These trails are patterned after the renowned Appalachian NST. NSTs are intended to provide superlative experiences compared to other trails.

Congress only authorized a general route for the trail. The National Park Service (NPS) and Wisconsin Department of Natural Resources (WDNR) are coordinating and facilitating the planning process to determine a more specific route for the trail in each county or multi-county area. A planning team was formed to evaluate corridor and possible trail route options and conduct a public involvement process in southern Langlade County.

The proposal is to establish a planned and mapped “Corridor of Opportunity” within which lands for the trail may be acquired, developed, managed, and protected for the southern Langlade County portion of the Ice Age NST. This will help guide agencies and private volunteer organizations in their efforts to secure a route for the trail. The Corridor of Opportunity is approximately 3-6 miles wide. Since all participation in the Ice Age NST is voluntary, this width allows flexibility when locating the trail. A decision to not adopt the preferred alternative would limit some Federal participation in this County, but it would not preclude the work continuing as described under the No-Action Alternative. Each segment of trail will be developed as funds and approvals allow. The goal, however, is a continuous completed trail.

The Langlade County portion of the Ice Age Trail contains a diversity of geologic features left by the last glacial advance. It generally follows the undulating terrain of the Hancock, Almond, Summit and Parrish Moraines left by the Green Bay and Langlade Lobes. This landscape reveals a dramatic contrast between the hilly terrain of the forested moraines and the vast, nearly level outwash plain they encompass. The plain, known world-wide as the Antigo Flats, is dominated by vast agricultural fields. Depending on the route, it is expected that when complete

the Langlade County portion of the Ice Age Trail will be between 70 and 75 miles. Today, more than 54 miles of the trail have been established from the Lincoln/Langlade County line to just northeast of Mueller Lake Park in the Towns of Polar and Evergreen. The actual alignment of the remaining trail in southern Langlade County between the Town of Evergreen, and the Marathon County line to the southwest is dependent on the willing cooperation of affected landowners.

A “No Action” alternative has been identified. Two other possible alternatives—Alternative 2 & 3--were presented to the public for review and comment as part of the planning process. While the southern halves of both corridors are identical, Alternative 2 focuses on the terminal moraine. Alternative 3, located behind the terminal moraine, concentrates on capturing the existing public lands and facilities in this area. The “Preferred” alternative, Alternative 4, represents a combination of both Alternatives 2 and 3.

The “Preferred” alternative provides the potential to link a number of public properties including four state fishery areas, the Steffen Memorial Forest, County Gun and Bow Range, Mueller Lake Park and several local parks. It contains the communities of Polar and Elmhurst, with the City of Antigo located immediately north of the proposed corridor. Collectively, these areas may provide support facilities such as trailheads, parking, food, water, lodging, and phones. The corridor encompasses an intricate patchwork of native woodlands, pine plantations, cropland, open grasslands, and wetland areas. Among the natural resources found within the corridor are a white cedar-dominated seepage swamp, spring ponds, outstanding trout streams, springs and deep kettle lakes. Well-placed scenic overlooks could provide dramatic views of the expansive Antigo Flats and the Parrish and Summit Moraines beyond. A number of possible trail route options within the corridor were identified and evaluated, and can be found in Appendix A.

The 1983 Comprehensive Plan for Management and Use of the Ice Age NST states that the trail is primarily intended to be a hiking trail. This management approach helps ensure that it provides a high quality walking/hiking experience. It also reflects a high level of consideration for private landowners who allow the trail to cross their property or who live near the trail, who are generally more willing to accept a hiking trail than a trail with activities that have more impact on the land, or are more intrusive in terms of sight and sound. Other compatible recreational activities such as bird-watching and snowshoeing are encouraged. In addition, the trail may accommodate cross-country skiing on ungroomed segments that are designed and constructed for this use. Development of a low impact trail using careful design and construction techniques will result in no significant impacts to natural, cultural, social, and economic resources.

Developing and managing the Ice Age NST through southern Langlade County may produce minor negative impacts. Negative impacts on the human environment are generally limited to a perceived increase in nuisance level. Experience has shown that these concerns do not materialize after the trail is constructed. As a group, hikers tend to be environmentally conscious and responsible, and typically do not trespass or litter. At public open house meetings, concerns were expressed about interference with hunting, logging, and potential conflicts with motorized use. The trail’s authorizing legislation prohibits motorized use; however, snowmobiles may be

allowed on designated sections. Currently, some existing portions of the Ice Age NST in Langlade County, particularly those located on logging roads, allow snowmobiles.

Positive benefits for trail users and neighboring landowners would include recreation and fitness opportunities. Other benefits may include aesthetic beauty, open space, natural resource protection, and higher property resale values. Local communities may also experience bolstered economies and increased local pride.

Written comments on this Trailway Plan and Environmental Assessment will be accepted by the NPS, for purposes of compliance with Federal requirements, and by the WDNR, for purposes of compliance with State requirements until [XXXXXXXXXX](#) Address your comments to:

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**ICE AGE NATIONAL SCENIC TRAIL
Corridor Plan and
Environmental Assessment**

For Southern Langlade County, Wisconsin

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Chapter 1

BACKGROUND ON THE ICE AGE NATIONAL SCENIC TRAIL

A mere 15,000 years ago, during the Ice Age, most of North America lay under the grip of colossal ice sheets thousands of feet thick. The effects of the advancing and retreating glaciers can be seen in the headlands of Cape Cod, the Finger Lakes of New York, and the hills of Michigan, but nowhere is the glacier's mark upon the land more impressive and distinctive than in Wisconsin. Indeed, the state has lent its name to the most recent series of glacial advances and retreats—the Wisconsin Glaciation lasting from about 100,000 to 10,000 years ago.

Wisconsin's legacy from the glaciers and meltwater streams of the Ice Age is a landscape of great diversity and beauty. The state contains world-renowned examples of many landforms that are evidence of continental glaciation. These include moraines, eskers, kames, kettles, drumlins, wetlands, and lakes. These many features invite us to explore and enjoy the landscape of Wisconsin.

The purpose of the Ice Age National Scenic Trail (NST) is to preserve some of the finest features of Wisconsin's glacial landscape, as well as other scenic, natural, and cultural resources, while providing opportunities for low impact recreational and educational activities (See Appendix C—Purpose and Significance of Ice Age NST). In addition, the trail connects six of the nine units of the Ice Age National Scientific Reserve and many other Federal, state, county, and local parks. The National Park Service (NPS) administers the trail in close cooperation with the Wisconsin Department of Natural Resources (WDNR), Ice Age Trail Alliance* (IATA), counties, local governments, and other private organizations that are working to help build and maintain the Ice Age NST.

The Ice Age NST is one of only eleven National Scenic Trails—long distance, non-motorized trails that follow major geographic features or pass through scenic areas. It is similar in concept to the Appalachian NST, but is uniquely different because of the landscape through which it passes. The Appalachian NST traverses a mountain range through 14 states whereas the Ice Age NST showcases the glacial landscape of just one state. When completed, the trail will extend over 1,200 miles from Interstate State Park on the St. Croix River in Polk County to Potawatomi State Park in Door County, tracing features left by the last continental glacier that swept over Wisconsin. Statewide, over 600 miles of the trail are currently on the ground.

*In April 2009, the Ice Age Park and Trail Foundation (IAPTF) officially changed its name to the Ice Age Trail Alliance (IATA). The organization's prior name was used throughout the planning process in this county, including all correspondence sent to landowners, elected officials, and government agencies.

The three primary statewide partners in the Ice Age NST—the NPS, WDNR, and IATA—are establishing the trail guided by the following Vision Statement:

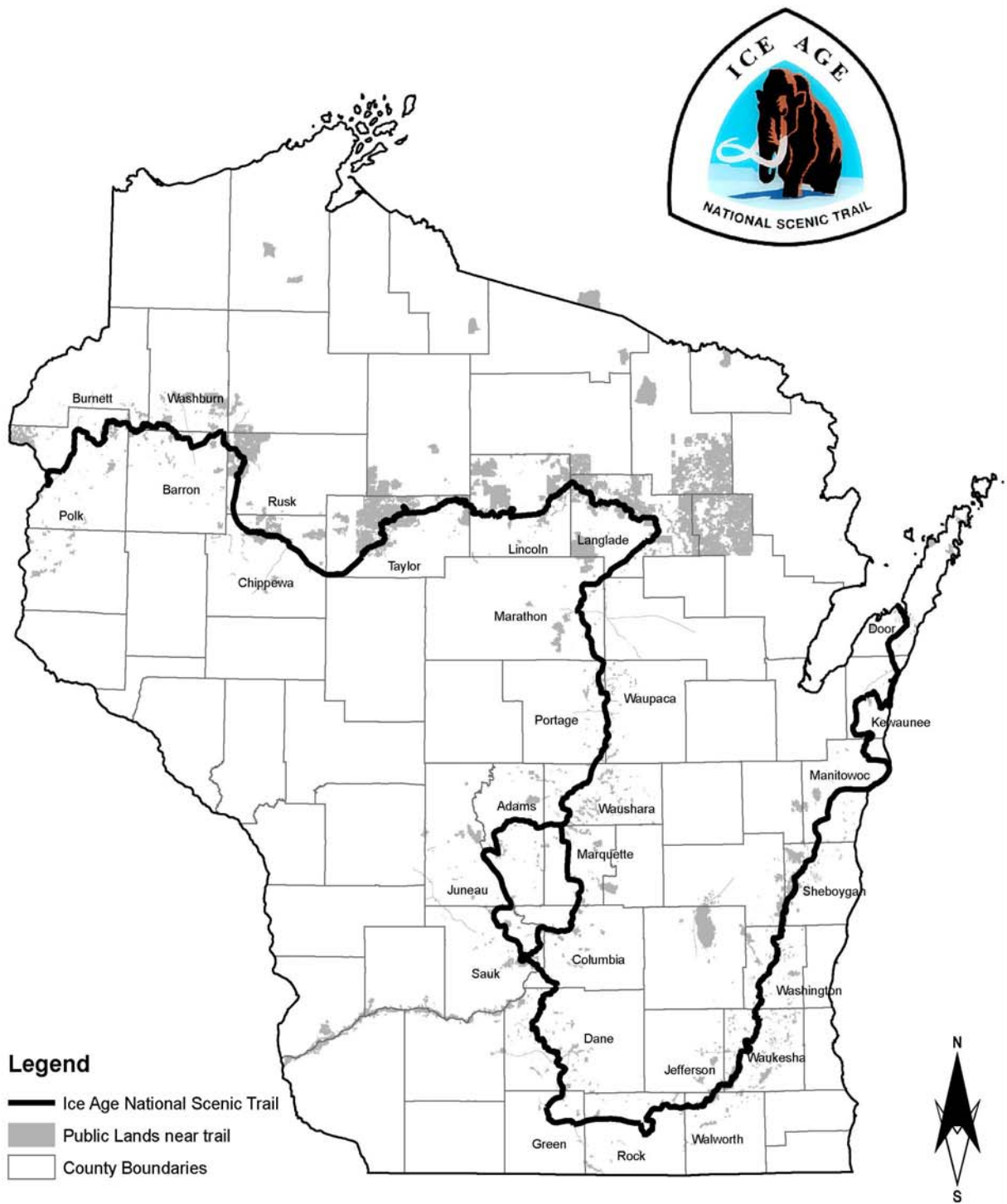
The Ice Age NST is a continuous footpath through diverse landscapes that:

- Provides superlative outdoor recreation experiences;
- Preserves and commemorates world renowned geological features formed during the Wisconsin Glaciation;
- Provides a natural corridor that protects habitat and enables the movement of wildlife;
- Serves as a lifelong educational resource;
- Provides quiet places for people to form and nurture a spiritual connection with the landscape;
- Promotes the health and vigor of users of all ages and abilities; and
- Links the history and diverse human cultures of the land that we call Wisconsin.

The NPS is responsible for overall administration of the Ice Age NST. In 1983, the NPS completed the *Comprehensive Management Plan for the Ice Age National Scenic Trail*. The plan provides overall guidance for development and management of the trail, which is intended to be a partnership venture, accomplished through cooperating Federal, State, and local agencies and private trail organizations. The primary cooperators are the WDNR and the IATA. A Memorandum of Understanding (MOU) between these parties outlines their respective roles and responsibilities for the acquisition, development, operation, maintenance, and protection of the trail. A copy of this MOU can be found in Appendix D.

The WDNR is the state agency responsible for implementing state and federal laws that protect and enhance Wisconsin natural resources—its air, land, water, wildlife, fish and plants. More than 225 miles of trail are located on WDNR properties. The WDNR assists in planning and developing the Ice Age NST, provides grants to the IATA and others for acquisition and maintenance of the trail, and acquires and accepts gifts of land for the trail.

The IATA (formerly the IAPTF) was founded in 1958 by Wisconsin citizens who envisioned a thousand-mile trail that followed the terminal moraine and other Ice Age formations across the state. Today, the IATA is a member-based non-profit organization that continues to work to develop the Ice Age NST into one of the premier hiking trails in the United States. They maintain the trail and its associated lands, promote and raise money to support the trail effort, and assist in planning and acquiring lands for the trail.



Chapter 2

PURPOSE AND NEED FOR ACTION

When Congress amended the National Trails System Act in 1980 to authorize establishment of the Ice Age Trail as a NST, it designated only a general route for the trail.

“Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the National Trails System Act (82 Stat. 919; 16 U.S.C. 1241), as amended, is further amended as follows:

(a)Section 5 (a) is amended by adding the following new paragraph at the end thereof:

(10) The Ice Age National Scenic Trail, a trail of approximately one thousand miles, extending from Door County, Wisconsin, to Interstate Park in Saint Croix County [should have read “Polk County”], Wisconsin, generally following the route described in “On the Trail of the Ice Age –A Hiker’s and Biker’s Guide to Wisconsin’s Ice Age National Scientific Reserve and Trail”, by Henry S. Reuss, Member of Congress, dated 1980.”

This general route identified for the trail across the state was then incorporated into the *1983 Comprehensive Plan For Management and Use of the Ice Age National Scenic Trail (Comprehensive Plan)*. The maps in the plan frequently identify roads as “Connecting Road Segment to NST” where there was no actual “trail” in existence and no specific idea where an off-road trail could be established in the future. This alignment was displayed on the maps even though it was known that these road routes could not serve as the route of the Ice Age NST over the long-term. The *Comprehensive Plan* states that the Ice Age NST “should be a continuous overland (off-road) trail. The roads identified on the maps were “place holders” for a future alignment that would need to be determined through a detailed analysis. This planning work was identified as a priority action on page 50 of the *Comprehensive Plan*:

“1. Detailed planning for the location and construction of new trail segments needed to make the Ice Age NST a continuous off-road trail as identified in this plan should begin as soon as possible as a cooperative effort between the Ice Age Trail Council, Wisconsin Department of Natural Resources, and the National Park Service.”

The purpose of the Corridor Planning Process is to identify and evaluate potential corridors where an overland route for the Ice Age NST could be established in southern Langlade County. (See Map 2-1) A desirable location for the trail would meet the following objectives.

- Traverse a variety of glacial features that are located in a visually pleasing corridor.
- Provide for a diverse user experience by incorporating a variety of plant communities, terrain, open and enclosed spaces (ex. Forests, meadows).
- Provide vistas to broader landscapes for scenic and interpretive purposes.
- Link and protect significant geologic, biologic, and archeological sites
- Link other significant natural resource areas.
- Connect or provide linkages to communities for user support purposes.

- If possible, use publicly-owned land for trail development and support facilities.

In the 1970s, extensive segments of the Ice Age Trail were established in Langlade County. At that time volunteers built 54 miles of trail from the northwest corner of Langlade County, at the Lincoln County line, to just northeast of the community of Polar. Here the trail follows the Parish and Almond moraines as they rise from the vast expanse of the Antigo Flats, a huge outwash plain to the west. As the trail winds in a semicircle southwest around the Antigo Flats, it is located primarily on county and private forest land. When the trail reaches its current terminus near Polar, land use patterns change. Here in the towns of Antigo, Polar, Rolling, and Norwood, land use consists primarily of private agricultural and residential lands, interspersed with small public state fishery areas. While national, state, and county owned lands (2004 UW-Extension make up 32 percent of the total land area in Langlade County, within the towns of Antigo, Polar, Rolling and Norwood, only two percent are in public ownership. To connect the existing segments of trail through this area, in 1983, the *Comprehensive Plan* identified a connecting road route that linked the trail north of Polar to the Dells of the Eau Claire County Park in Marathon County.

The purpose of the Langlade County Ice Age Trail Corridor Planning Process (CPP) is to identify and evaluate potential corridors where an overland route for the Ice Age NST could be established in order to complete the trail through Langlade County and connect it to the Marathon County line, a distance of approximately 20-25 miles. Concurrently, a CPP is also taking place in Marathon County that will link the Ice Age NST to the Dells of the Eau Claire County Park.

The project area for this CPP occurs within defined endpoints that are located in the south central portion of Langlade County. The northeastern boundary of this study area is in the town of Evergreen, Sections 6 & 7, northeast of Mueller Lake Park. The southwestern boundary is located at the Marathon County line in the town of Rolling. (See Map 2-2 and Map 2-3)

Today, Langlade County has a dedicated, self-sustaining, and enthusiastic group of volunteers who want to complete the trail county wide. A plan is needed that will provide guidance on where future trail segments could be established. Such a plan will help volunteers and other partners focus their efforts.

Locally, there is also a history of support for the Ice Age Trail. On July 9, 1974, the Langlade County Board of Supervisors passed Resolution No.36 approving the development of the trail through county property and encouraging private landowners to cooperate where it crosses their property. The Langlade County Forestry and Recreation Department has also been very enthusiastic about the Trail. They have incorporated the Ice Age Trail into their Outdoor Recreation Plans since 1974, and it has been included in subsequent updates through 2008. While Langlade County Parks Department may assist with the development of the trail and intends to promote the trail in its literature, its present stance is that current funding levels prevent it from being involved with day-to-day trail maintenance activities.

Map 2-1
State of Wisconsin
With Ice Age NST
 Langlade County, Wisconsin



 Ice Age National Scenic Trail

 Project Area

Source: NPS, WI DNR, NCWRPC

This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only. NCWRPC is not responsible for any inaccuracies herein contained.



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 Miles



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 REGIONAL PLANNING COMMISSION

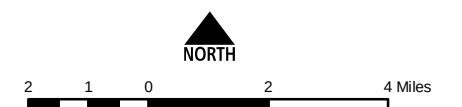
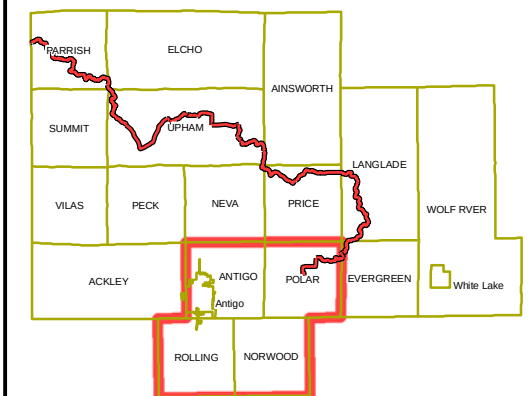
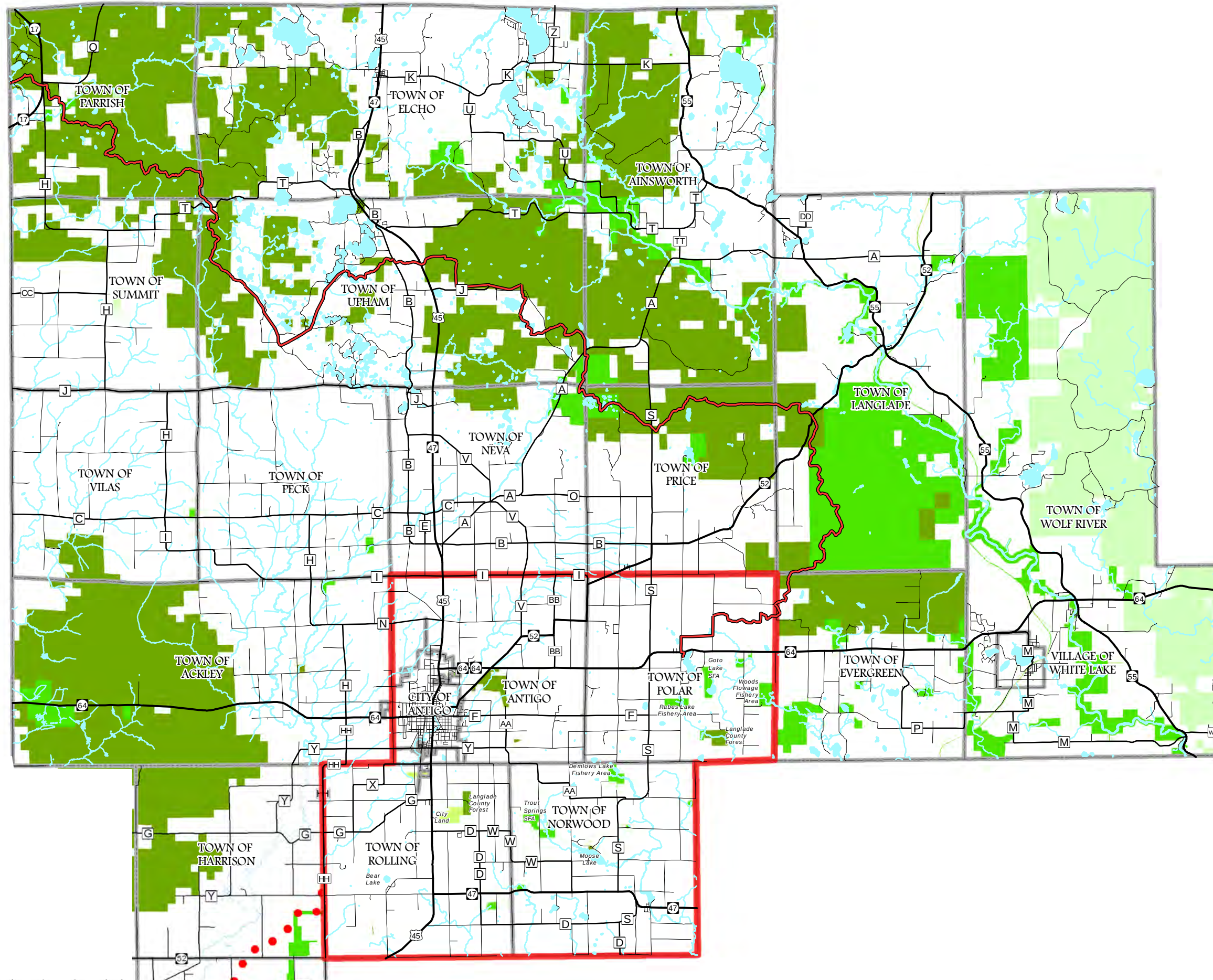
Map 2-2

Existing Ice Age NST & Public Lands

Langlade County, Wisconsin

Legend

-  Existing Ice Age Trail
-  US & State Highways
-  County Highways
-  Local Roads
-  Water
-  Project Area
-  Minor Civil Divisions
-  County
-  Nicolet National Forest
-  WI DNR
-  Proposed Ice Age NST in Marathon County



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Source: NPS, WI DNR, NCWRPC

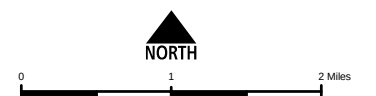
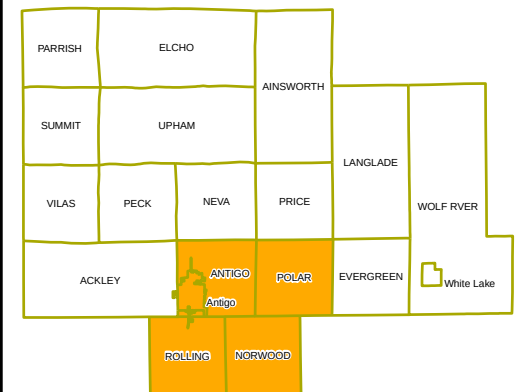
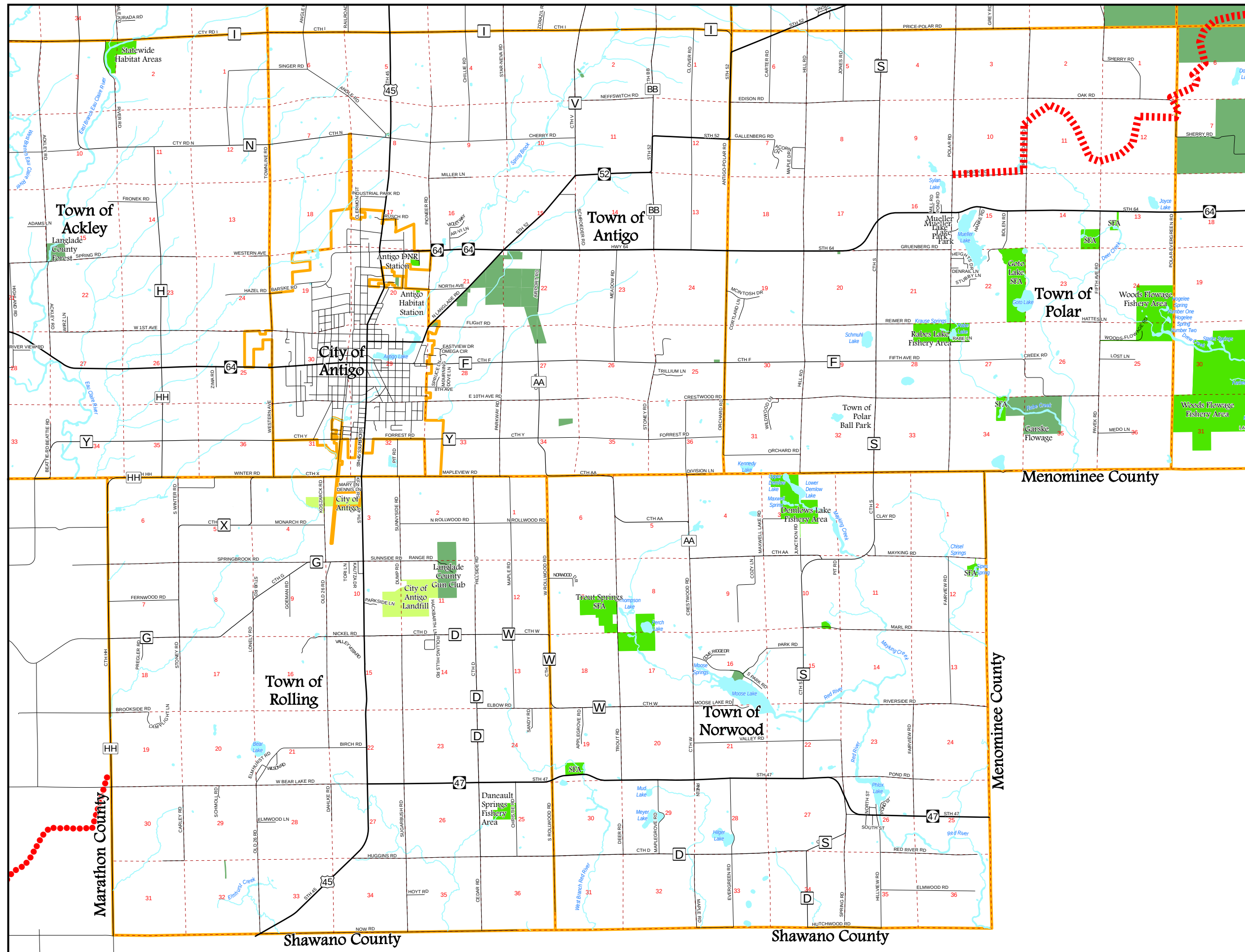


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any inaccuracies herein contained.

Map 2-3 Existing Ice Age NST in 1983 Comprehensive plan, Southern Langlade County, Wisconsin

Legend

- Existing Ice Age NST in 1983 Comprehensive Plan
- US & State Highways
- County Highways
- Local Roads
- ~ Water
- Section Lines
- Minor Civil Divisions
- Langlade County
- Nicolet National Forest
- WI DNR
- Proposed Ice Age NST in Marathon County



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Source: NPS, WI DNR, NCWRPC



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reference purposes only. NCWRPC is not responsible for
any inaccuracies herein contained.

Chapter 3

ISSUES AND CONCERNS

During the internal and external scoping process for this planning process, a number of issues were identified. Members of the general public, local units of government, state agencies, federal agencies, and other interested public gave their input on the plan at planning meetings, agency meetings, town and county board meetings, open house meetings and through letters and comment sheets. These issues are summarized below.

Why this location for the Ice Age NST?

What factors determine the location for the Ice Age NST? During the Pleistocene epoch, the glacier advanced and receded across Langlade County many times creating the landscape that we see today. In its wake it also left numerous geologic features such as the terminal and recessional moraines, kettle ponds, glacial drainage-ways, and outwash plains. The purpose of the Ice Age NST is to preserve some of the finest features left by the last glacial advance, as well as other scenic, natural, and cultural resources, while providing opportunities for an outstanding hiking experience and educational activities. For further details on the purpose and goals for the trail, the planning process, and Langlade County's geology see: Chapter 1—Background on the Ice Age National Scenic Trail; Chapter 4—Implementation of the Corridor Planning Process; Chapter 6—Corridor's Affected Environment: Geology; and Appendix C—NPS Purpose and Significance Statement of the Ice Age National Scenic Trail.

What are the allowable uses on the Ice Age NST?

The Ice Age NST is intended to be primarily a hiking trail. In Langlade County, future segments will have a native surface and be between 24 and 36 inches wide. Other compatible uses may include winter activities such as snowshoeing and cross-country skiing. However, a trail segment may not be suitable for cross-country skiing, unless this activity was considered in the initial design and layout. In general, horses, bikes, and snowmobiles are not allowed on the trail except for those sections where they are an allowed use, such as state/county recreational trails like the Mountain-Bay State Trail. On private lands, occasional travel on or across the trail with motorized vehicles by the landowner or manager for the purpose of managing and using their land is permitted. If necessary, various structures such as stiles, gates, or fences can be strategically placed along the trail to discourage unauthorized uses from occurring. Hunting is permitted on many of the publicly-owned lands where segments of the trail exist, dependent upon the property type and use. Information about whether or not a publicly-owned property is open to hunting may be obtained by contacting the property manager. Hikers are advised to wear blaze orange when hiking in areas that allow hunting. Privately-owned lands are open to hunting only by permission of the landowner, and segments located on private property are often closed during the November gun-deer season. For more information see Appendix B — Trail Development and Management Standards.

Impacts to existing public lands and their use by having the Ice Age NST across them.

Some individuals expressed concerns regarding impacts to the use of the existing public state fishery and wildlife areas for the trail. Any segment of trail that is placed on public lands has the potential to cause some level of impact to the resources and use of those properties. However, in the 2005-2010 SCORP, research findings suggest that hiking and hunting can be compatible given proper planning and managed user interactions. These issues are discussed in Chapter 6—Corridor’s Affected Environment: Water Resources, Recreation Resources, and Public Health.

Impacts on natural resources by trail construction and use.

People expressed concern about the impact on natural resources that could result from the construction and use of new trail. The Ice Age NST has *A Handbook for Trail Design, Construction, and Maintenance* that guides its development. If the standards are followed, the physical impacts would occur primarily when the trail is constructed and would be minor and temporary. In sensitive environments such as wetlands, the trail would either be routed around them or would go through a permitting process to construct bridges or boardwalks through them. These issues are discussed in Chapter 7—Corridor Impact Analysis: Geology, Soils, Water Resources, Air Quality, Ecosystem, Invasive Species, Wildlife, Fisheries, and Threatened and Endangered Species.

Preservation of the glacial landscape

Some individuals were concerned about preserving the resources that are important to the trail’s geologic story and the scenic experience of the hiker. Through the planning process, the Core Team identified the Preferred alternative corridor that captured, what we believe to be, the best examples of geologic features left by the glacier. Working with willing landowners we will attempt to protect some portion of these resources for the trail. For further details see Chapter 7—Corridor Impact Analysis: Visual Resources; and Land Acquisition and Trail Development.

Impacts on cultural resources by trail use and construction of new trail.

Impacts on cultural resources that may occur due to new trail construction was considered by some people to be an issue. As stated in 36 CFR Part 800—PROTECTION OF HISTORIC PROPERTIES, Subpart A—Purposes and Participants, 800.1 Purposes: “Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the impacts of their undertakings on historic properties and afford the Council a reasonable opportunity to comment on such undertakings....” The National Park Service has a Memorandum of Understanding with the Wisconsin State Historic Preservation Office that defines methods to identify and avoid impacts to cultural resources when designing and building the Ice Age NST. For further details see Chapter 7—Impacts to Cultural Resources, and Appendix E—Memorandum of Understanding between the State Historical Society of Wisconsin and the National Park Service.

Impacts on private land and private ownership.

Some people expressed concerns regarding the completion of the trail through the county and its impact to private land. By congressional authorization, the Ice Age NST is a continuous footpath that spans the State of Wisconsin for approximately 1,200 miles and in doing so has the potential of crossing both public and private lands. Private interests may be affected by the trail in a variety of ways such as purchase of lands, community economic development, or change of land use from agriculture to conservation. These issues are discussed in Chapter 7—Corridor Impact Analysis: Communities and Businesses, Land Use and Land Ownership, Land Acquisition and Trail Development, and Tax Base and Fiscal Impacts.

Chapter 4

IMPLEMENTATION OF THE CORRIDOR PLANNING PROCESS IN SOUTHERN LANGLADE COUNTY

When Congress authorized the Ice Age NST in 1980, it directed that “[o]verall administration of the trail shall be the responsibility of the Secretary of the Interior....” The Secretary delegated this administrative responsibility to the National Park Service.

The purpose of preparing this Corridor Plan and Environmental Assessment is to carry out the Secretary’s responsibility in Section 7(a)(2) of the National Trails System Act [16 U.S.C. 1246(a)(2)] to “select the rights of way for [the Ice Age] national scenic [Trail] ...” The act goes on to specify: “That in selecting the rights of way full consideration shall be given to minimizing the adverse effects upon the adjacent landowner or user and his operation. Development and management of each segment of the National Trails System shall be designed to harmonize with and complement any established multiple-use plans for the specific area in order to ensure continued maximum benefits from the land.... In selecting rights-of-way for trail purposes, the Secretary shall obtain the advice and assistance of the States, local governments, private organizations, and landowners and land users concerned.”

Selection of the route for the trail is needed to facilitate the first and most critical aspect of establishing the trail—securing lands on which the trail may be constructed. This work requires contacting individual landowners either to propose acquisition of some or all of their land or to ask permission for the trail to cross their land. To determine which landowners should be contacted for this purpose, a refinement of the general route designated by Congress is needed. It is the purpose of this plan to determine that more specific route by establishing a “Corridor of Opportunity” within which lands may be acquired for the trail, and to do so through an open process involving affected agencies and landowners as well as trail users and the general public.

Therefore, the objectives of the Corridor Planning Process are to: define a boundary within which Federal and State monies may be used to acquire lands for the trail, design possible route locations for the trail within those boundaries, and fulfill Federal and State environmental requirements by taking the proposed plan through a public review and complying with the Endangered Species Act and Historic Preservation Act. Of the 30 counties the Ice Age NST passes through, Langlade County is the twelfth county to go through this process.

The Corridor Planning Process for southern Langlade County began in March 2003 with a meeting of representatives from the NPS, WDNR, IATA staff and volunteers, Langlade County, and the North Central Wisconsin Regional Planning Commission. This group, better known as the “Core Team” was formed to oversee the planning process. Their task is to provide input to the NPS on conceptual ideas for a corridor and possible route options for the Ice Age Trail, and shepherd these ideas through the public review process.

The *Comprehensive Plan for Management and Use of the Ice Age National Scenic Trail* provides general guidance on where to locate the trail. It states that the trail shall follow the terminal

moraine or glacial features left by the last glacial advance. To determine a location for the trail, three important elements are identified. They are the Corridor of Opportunity, Trailway, and Trail. (Also see Definitions of Terms: *Corridor of Opportunity*, *Trailway* and *Trail* in Chapter 8.)

The Corridor of Opportunity is the largest of these elements. It is defined by locating clusters of outstanding, interpretable glacial and biological features, public lands, as well as areas of continuous scenic beauty. After these features are mapped, their patterns typically reveal a very general, natural alignment for the trail. The width of the corridor is usually on a landscape scale of 3-5 miles, although in the case of large significant features it can be wider. The corridor includes desirable features for the user to walk or gaze upon, or to be preserved. Another reason the corridor is wide is to allow flexibility in working with landowners since participation in the project is voluntary.

The Corridor of Opportunity is also the area within which WDNR may acquire lands for the Trailway, provide Stewardship grants to others to acquire lands for the trail, and accept lands for permanent dedication. It also defines the area within which federal involvement in land protection and acquisition for the Ice Age NST may occur. Lastly, the corridor provides focus and direction to the trail's land protection program and partnerships.

Two other elements, the Trailway and Trail, fit within the corridor. The Trailway is the width or area of land that is managed for the purpose of the Ice Age NST. It includes the Trail and surrounding lands that are owned, leased, or managed as part of the Ice Age NST. These management purposes may include but are not limited to: creating a buffer for the trail to separate it from adjoining land ownerships and uses, and protecting scenic or significant geologic features or plant communities.

The Trail is the actual usable tread and surrounding space that is maintained for the purpose of passage along the trail route. The trail width may vary from 24 inches to 72 inches depending on the Recreation Opportunity Spectrum (ROS) classification—urban, rural/roaded natural, or semi-primitive. (See Appendix B—Trail Development and Management Standards.) All of the remaining Langlade County Ice Age NST to be built is located in a rural/roaded natural setting and will average 24-36 inches in width. Again, the location of the Trailway and Trail are dependent on landowners who are willing to be part of the Ice Age NST project.

Chapter 5

DESCRIPTION OF ALTERNATIVES

The NPS and WDNR propose to establish a planned and mapped Corridor of Opportunity within which lands for the trail may be acquired, developed, managed, and protected for the southern Langlade County portion of the Ice Age NST.

Descriptions of alternative strategies for establishing the Ice Age NST are presented below. Alternative 1 is the No Action alternative. Alternative 2 and 3 (Map 5-1) were presented during the alternative phase of the planning process. Alternative 2 focuses on the glacial features of the Almond and Hancock Moraines and the topographical contrast between the moraines and the Antigo Flats. Alternative 3 sought to maximize the use of public lands and facilities found behind the terminal moraine. Alternative 4, the Preferred alternative (Map 5-2 & 5-3), connects the 54 miles of existing trail segments in Langlade County, developed by the Ice Age Trail Alliance over the last thirty-five years, to the Marathon County line in the town of Rolling. This alternative features key elements of both Alternatives 2 and 3, highlighting both the significant geologic features left by the last glacial advance as well as the many public lands and their associated facilities found on the back side of the moraines. While geology will be discussed some in this section, for more information, see Affected Environment, B. Corridor's Physical Resources, Geology.

The design of the proposed Ice Age NST corridor is based on a number of factors. These factors are: general adherence to features left by the Wisconsin Glaciation, linkage to public lands for support facilities and interpretive opportunities, provision for a varied and scenic hiking experience, preservation of significant natural features, and reasonable directness of route. The goal of establishing the Ice Age NST would best be met by Federal, State and private partners having specifically delineated, authorized areas in which to work.

A. ALTERNATIVE 1 – “NO ACTION” ALTERNATIVE

Under the No Action alternative, no Corridor of Opportunity to more specifically identify the route of the Ice Age NST would be established. The Secretary of the Interior's responsibility under the National Trails System Act to select a specific route for the trail would not be carried out. The various federal, state, local and private partners working to establish the trail would continue to be guided only by the general route referenced in the National Trails System Act and *Comprehensive Plan*.

Any activities by partners to acquire lands for the trail would be done without a professional analysis of the best route for the trail or the environmental impacts of trail construction. The No Action alternative would constrain the involvement of governmental partners in the project since their involvement requires environmental analysis. It would also not provide the opportunity for local units of government and private citizens to be involved in determining the best route for the trail. Without the inclusion of local government and private citizens in the planning process, the Ice Age NST would not be identified in local planning documents, a situation that could result in

lost opportunities to build the trail. Trail development, management, and operation under this alternative would continue as in the past. The WDNR would continue to provide trail segments on lands that it manages. Trail built on private land by permission only would continue to be vulnerable to loss by increasing development pressures. This would result in much slower and haphazard establishment of the trail.

B. ALTERNATIVE 2 (Map 5-1)

Alternative 2 (presented to the public as “Corridor A”) is identical to Alternative 3 through the towns of Rolling and Norwood. This alternative was developed to take advantage of the terminal Hancock and Almond Moraines and the glacial features found on them. Besides the moraines, other features located here include ice-walled lake plains, eskers, and a series of five tunnel channels. The immense outwash plain called the Antigo Flats lies adjacent to this alternative’s northern edge. Alternative 2 would provide multiple opportunities to highlight the contrast between the wooded highlands of the Almond Moraine and the predominantly agricultural, Antigo Flats.

Starting from the Marathon County line in the town of Rolling, the west side of Alternative 2 includes the terminus of the Hancock Moraine, and the ice-walled lake plains and eskers associated with it. Bear Lake, the headwaters of the Plover River, and the community of Elmhurst are also found here. The City of Antigo is located approximately 2.0 miles north of the proposed alternative. Moving east this area also encompasses three of the project area’s five tunnel channels, two of which intersect at the Langlade County Gun Club (town of Rolling, Section 11). In addition to the County Gun Club property, public lands available for the trail are limited to Trout Springs and Demlow Springs State Fishery Areas (SFA).

Approximately 10 miles east of the Marathon and Langlade County line, Alternatives 2 and 3 diverge. Their separation occurs along County Trunk F in the town of Antigo and at the Polar/Norwood town line. Here Alternative 2 follows the Almond Moraine north and east slightly beyond where two different lobes of the glacier—Green Bay and Langlade (see Chapter 5, Geology)—respectively deposited the Almond and Parrish Moraines. Also found in this area are two additional tunnel channels in the towns of Antigo (Section 35) and Polar (Section 18); the western portion of Rabe Springs SFA, Mueller Lake town Park, and the community of Polar. A 6.4 mile segment of the Ice Age Trail is located between the communities of Polar to the town of Evergreen. Two miles of this segment is off-road through private forestland.

C. ALTERNATIVE 3 (Map 5-1)

Alternative 3 (presented to the public as “Corridor B”) is identical to Alternative 2 through the towns of Rolling and Norwood, as described in the Section B above, with the communities of Elmhurst, Polar, and Antigo, located within or near this corridor alternative. This alternative was designed to take advantage of the existing public lands located behind the moraines. Most of these lands are state fishery areas established around springs and the headwaters of high quality trout streams. Many of them have existing parking lots and trails.

Alternative 3 diverges east away from Alternative 2, and the front edge of the terminal Almond Moraine, at County Highway F in the town of Antigo and at the Polar/Norwood town line. Compared to Alternative 2, the number of public lands within this alternative increases to include: Rabe Springs SFA, Gartzke Flowage-Langlade County, remnant WDNR SFA properties along Deer Creek, and scenic Goto Lake, one of the deepest kettle ponds in the County. However, this alternative provides fewer opportunities to highlight the contrast between the wooded highlands of the Almond Moraine with the outwash plain called the Antigo Flats. Like Alternative 2, Alternative 3 includes Mueller Lake Town Park, the community of Polar, and an existing off-road segment of the Ice Age Trail.

D. ALTERNATIVE 4 – “PREFERRED” (Maps 5-2 and 5-3)

Under this alternative, a Corridor of Opportunity that is approximately 3 to 5 miles in width, extending east and north from the Marathon County line to existing trail in the town of Evergreen in southern Langlade County, has been identified and would receive State and Federal approval. Within this corridor, a railway that is approximately 200-1000 feet or more in width would be acquired for Ice Age NST purposes. A wider railway may be necessary to incorporate significant features of a particular area. The corridor is intentionally designed to be wide enough to allow flexibility in working with cooperating landowners to site the trail since all participation in the project is voluntary. The established corridor will define areas for purchase using private, state, or federal funds and will serve as advisory information for town and county land use planning.

The Preferred alternative includes aspects of both Alternatives 2 and 3. It was developed using information obtained through the open house meetings and other comments received from the public. It provides a number of opportunities to highlight most of the glacial features that are common to Alternatives 2 & 3. In addition, the preferred alternative would allow the possibility of interpreting the interface between the Almond Moraine and the Antigo Flats. It includes all but one of the tunnel channels which are featured in Alternative 2, and all of the public properties, with the exception of Gartzke Flowage-Langlade County, found in Alternative 3.

This alternative fulfills the purpose and need, and the intent of Congress and the Wisconsin State Legislature. This alternative is based on an evaluation of the geological and biological features found in southern Langlade County, as well as the field work of representatives of the Core Team. This proposed corridor generally follows the Hancock and Almond Moraines deposited approximately 23,000 – 30,000 years ago. Here it encompasses glacial features found on the edge of the glacier such as kettle ponds, distinctive tunnel channels and a number of spring-fed ponds. The vast outwash plain called the Antigo Flats lies adjacent its northern edge. The proposed corridor has the potential to link several state properties including four state fishery areas, the Steffen Memorial Forest, Langlade County Gun and Bow Range, Mueller Lake Park and a number of smaller local parks. It also contains the communities of Polar and Elmhurst, with the City of Antigo located approximately 2 miles to the north. Collectively, these areas provide support facilities such as trailheads, parking, food, water, lodging and phones. Among the resources found within the corridor are a white cedar-swamp, hardwood forests, spring ponds, outstanding trout streams and deep kettle lakes. Well-placed scenic overlooks could potentially provide dramatic views of the Antigo Flats and the Parrish and Summit Moraines.

The following is a general description of the corridor starting at its southern end in the town of Rolling. The corridor boundaries tend to follow roads, section lines, and property lines. Possible trail route options are described and analyzed in Appendix A of this document.

Towns of Rolling and Norwood (Map 5-2)

Beginning at the Marathon County line the proposed corridor extends northeast starting at the southwest corner of the town of Rolling in Sections 19, 30 & 31. It varies in width from 3 to 6 miles. Its northern edge follows the interface between the terminal Hancock Moraine and the Antigo Flats, which is outlined by a number of town roads including County Trunk G. U.S. Highway 45 is a major transportation corridor that runs north and south through the town of Rolling, and extends to the City of Antigo and northern Langlade County. Bear Lake Road, which transitions into State Route 47 at U.S. Highway 45, is the only road that spans both towns from east to west. A couple of county highways are located here including County Trunk AA which winds in a northwest to southeast direction near the junction of four towns--Antigo, Polar, Rolling, and Norwood. All of these roads need to be considered when identifying potential routes for the trail. Depending on the route, the Ice Age NST may encounter a number of other low volume roads. This corridor segment is located within 2-5 miles of the City of Antigo. There are no existing segments of the Ice Age NST in these two towns.

The western edge of the town of Rolling contains the terminus of the Hancock Moraine that marks the furthest extent of the glacier some 30,000 years ago. The moraine is just a sliver here that covers portions of Sections 9, 16, 17, 19, 20 and 30 within the town. The moraine is predominately covered with woodlands and pine plantations, rural home sites, and agricultural field openings. The enormous Antigo Flats outwash plain, which is approximately 97 square miles in size and contains the City of Antigo, lies adjacent to the proposed corridor's northwestern edge. Agriculture in the form of dairying and field crops are its primary use. On top of the moraine are outstanding views of the Antigo Flats with the Parrish and Summit Moraines visible approximately 10 miles away in the distance. Roughly paralleling the front edge of the Hancock Moraine before winding north into the City of Antigo, is a short segment of Spring Brook, a tributary of the Eau Claire River. If the trail were placed through this area of the town of Rolling, it could provide hikers with expansive views across the Antigo Flats and potentially a hike over or a close up view of an ice walled lake plain or esker. As proposed by the *Downtown and Springbrook Vision Plan*, a connecting trail to the City of Antigo could be placed along Spring Brook.

Located to the east, southeast of the Hancock Moraine is the Almond Moraine, which was deposited at a later date. Between the two moraines and still west of U.S. Highway 45 is a low, wetland area that contains the headwaters of the Plover River, Bear Lake, and the once booming community of Elmhurst. Elmhurst, located in Section 21, is a potential opportunity to interpret some of the early settlement patterns, and history of the area. Positioned along the former Chicago and Northwestern Railroad grade that used to extend to the City of Antigo and beyond, hikers would be able to see the few structures that survived a near catastrophic fire that wiped out most of the town in 1911.

Moving east from Elmhurst and crossing U.S. Highway 45, the remaining portion of the proposed corridor for southern Langlade County encompasses the Almond Moraine, its predominate feature. The Almond Moraine is approximately one mile wide at this location, and extends in a northeast southwest direction. It is rich with geologic features—kettle ponds, tunnel channels, ice walled lake plains, and eskers. Its backside (southeast side) is dotted with springs which feed into ponds, small lakes, streams, and wetlands that cover the moraine.

South of Antigo, along the proposed corridor's northern boundary, there is an opportunity to route the trail near the Langlade County Gun Range. The County Gun Range consists of 120 wooded acres and is located at the intersection of two tunnel channels that bisect the Almond Moraine. Both tunnel channels are very large, with the eastern channel expanding southeast to Moose Lake approximately 18 miles away. The County Gun Range has parking lots and outhouses that could potentially be used by hikers. An active quarry present at the outlet of the tunnel channels could provide an opportunity to interpret how the glacier deposited till as well as discuss the economic benefits of these resources.

The southern portion of this corridor, east of County Trunk W, passes through a landscape marked by springs and the headwaters of numerous streams. Several WDNR State Fishery Areas (SFAs) have been established to permanently protect these sensitive resources. Here the landscape is composed of gently rolling hills with a mosaic of private woodlots, managed forest, and small to medium sized agricultural fields. If the trail were located here, it could pass through the Trout Springs SFA, which is 110 acres in size. This property occupies a portion of the tunnel channel that originates at the County Gun Range. To the east of this SFA, across Trout Road, is another 120 acres of public lands consisting of the Steffen Memorial Forest and Perch Lake SFA. All of these properties have small parking lots and limited existing trails.

Leaving Perch Lake and continuing northeast along the south side of the Almond Moraine into the town of Norwood, the corridor passes through a patchwork of agricultural fields. If a trail were developed here it could connect another WDNR property, the Upper and Lower Demlows Springs SFA on Hill Road. Contained within this site are the headwater springs of Mayking Creek, a tributary of the Red River. This property also features an undisturbed white cedar swamp, notable for the size of the trees and lack of and deer browse.

Extending northeast and crossing County Trunk AA, Crestwood Road, and Division Lane, the corridor moves into the towns of Antigo, Polar and Evergreen.

Towns of Antigo, Polar, and Evergreen (Sections 6 and 7 only) (Map 5-2)

The corridor in the towns of Antigo and Polar varies in width from 3 to 5 miles. Within the town of Evergreen, which adjoins the east side of Polar, the proposed corridor includes approximately 500 acres in Sections 6 and 7. County Trunk F and State Route 64 pass through this portion of the proposed corridor in an east and west direction, and roughly split it into thirds. County Highway S extends north/south through the western portion of the town of Polar. In order to provide a safe option for hikers, care must be taken when considering potential route options

around the community of Polar. South and east of Polar, roads are quiet town roads and remote driveways. The City of Antigo is located within 6-8 miles of this corridor segment.

Beginning at Demlow Springs in the town of Norwood, and moving northeast across Division Lane, the proposed Ice Age NST corridor encompasses land used primarily for agricultural purposes such as dairying and field crops. If the trail were located here, behind the Almond Moraine, the hiker would experience an open, largely agrarian landscape. This gently rolling topography is dotted with springs and small kettle ponds. The baseball park and Perennial Gardens are located in the town of Polar just west of County Trunk S. Here hikers would find limited support facilities such as parking, and seasonal bathrooms and concessions. Continuing northeast across County Highway S, a potential trail route could wind into the Rabe Springs SFA. This 120 acre site contains the headwaters of Rabe Creek, a tributary to the Wolf River. Rabe Creek, along with Drew Creek, and Deer Creek punctuate this portion of the moraine. These high quality trout streams flow in a southeastern direction away from the mid-continental drainage divide marked by the Almond Moraine.

After crossing Polar Road at Rabe Springs SFA, the proposed Ice Age NST corridor continues northeast toward scenic Goto Lake SFA. Goto Lake is one of the deepest kettle lakes (82 feet) in the county. The topography of this WDNR owned property is moderately rugged providing a contrast to the gently rolling landscape found on top of the moraine. Goto Lake SFA is located just southeast of the community of Polar. Parking is available for hikers here.

The northern portion of this section of the proposed Ice Age NST corridor encompasses the north face of the Almond Moraine. Here the landscape is quite different from its' back side. On top of the moraine are woodlands that contain commercial hardwood forests, rural home-sites, and small subdivisions. Stands of pine plantations are also common.

Beginning at the southern edge of the town of Antigo, near Maple View Road and County Trunk AA, and winding northeast, this portion of the corridor contains the greatest topographic relief—150 feet—found within the entire corridor between the Antigo Flats and the crest of the moraine. The proposed corridor's highest elevation (1,650 feet) is found here between County Trunk F and State Highway 64. This general area would be a great place to site an overlook that interprets the contrasting landforms of the various moraines and outwash plain that were created by the Wisconsin Valley, Langlade, and Green Bay lobes during the late Wisconsin Glaciation. Because of its high elevation, the area on the top of the moraine is also where the St. Lawrence sub-continental divide is located. Here, the terrain forms a border between two distinct drainage basins—the Lake Michigan and Mississippi River. Approximately 2.5 miles to the east, across Hill Road and County Trunk S is the community of Polar, a possible supply point for hikers. Located within Polar is scenic Mueller Lake, which is surrounded by houses except for its southeast corner. Restrooms, picnic areas and parking are available there.

Crossing State Route 64 and leaving behind Polar and Goto Lake SFA, the proposed corridor extends northeast for 4 miles encompassing private forest land before reaching its terminus at the Langlade County Forest in the town of Evergreen. An existing Ice Age Trail segment has been built between the community of Polar and the Langlade County Forest. It begins on the northwest side of Mueller Lake and winds north and east crossing State Route 64 following

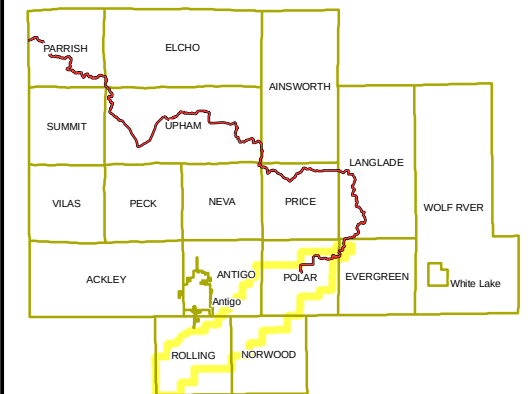
Groth Road for 2 miles before reaching Price-Polar Road. The trail then follows Price-Polar Road north for one half mile before winding east off road onto private lands. It then meanders northeast for approximately 4 miles before reaching the Langlade County Forest. This trail segment represents the current terminus of the 54+ miles of Ice Age Trail that winds through the northern half of Langlade County.

Map 5-1

Ice Age National Scenic Trail Corridor Alternatives

Legend

- Existing Ice Age Trail
- Water
- Minor Civil Divisions
- Section Lines
- Roads
- Alternative Corridor 2
- Alternative Corridor 3
- "Preferred" Ice Age NST Corridor
- 10 Foot Contour
- Langlade County
- Nicolet National Forest
- WI DNR



Prepared April, 2011 in coordination with
the National Park Service and the
NORTH CENTRAL WISCONSIN
REGIONAL PLANNING COMMISSION

Source: NPS, WI DNR, NCWRPC



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and is not intended to be used as one. This drawing is
a compilation of records, information and data used for
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Map 5-2

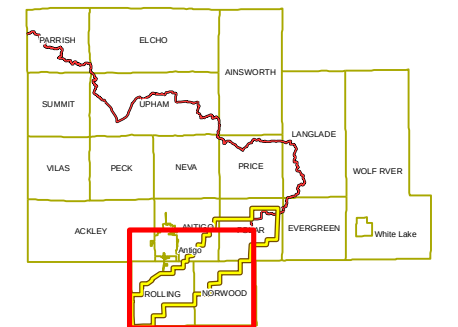
Ice Age National Scenic Trail

"Preferred" Corridor

(Southern Half)

- Legend**
- Existing Ice Age Trail
 - Roads
 - Water
 - Section Lines
 - Minor Civil Divisions
 - Parcels
 - 10 Foot Contour
 - Langlade County
 - Nicolet National Forest
 - WI DNR
 - Highest Point In Corridor

Proposed Corridor
shown in white

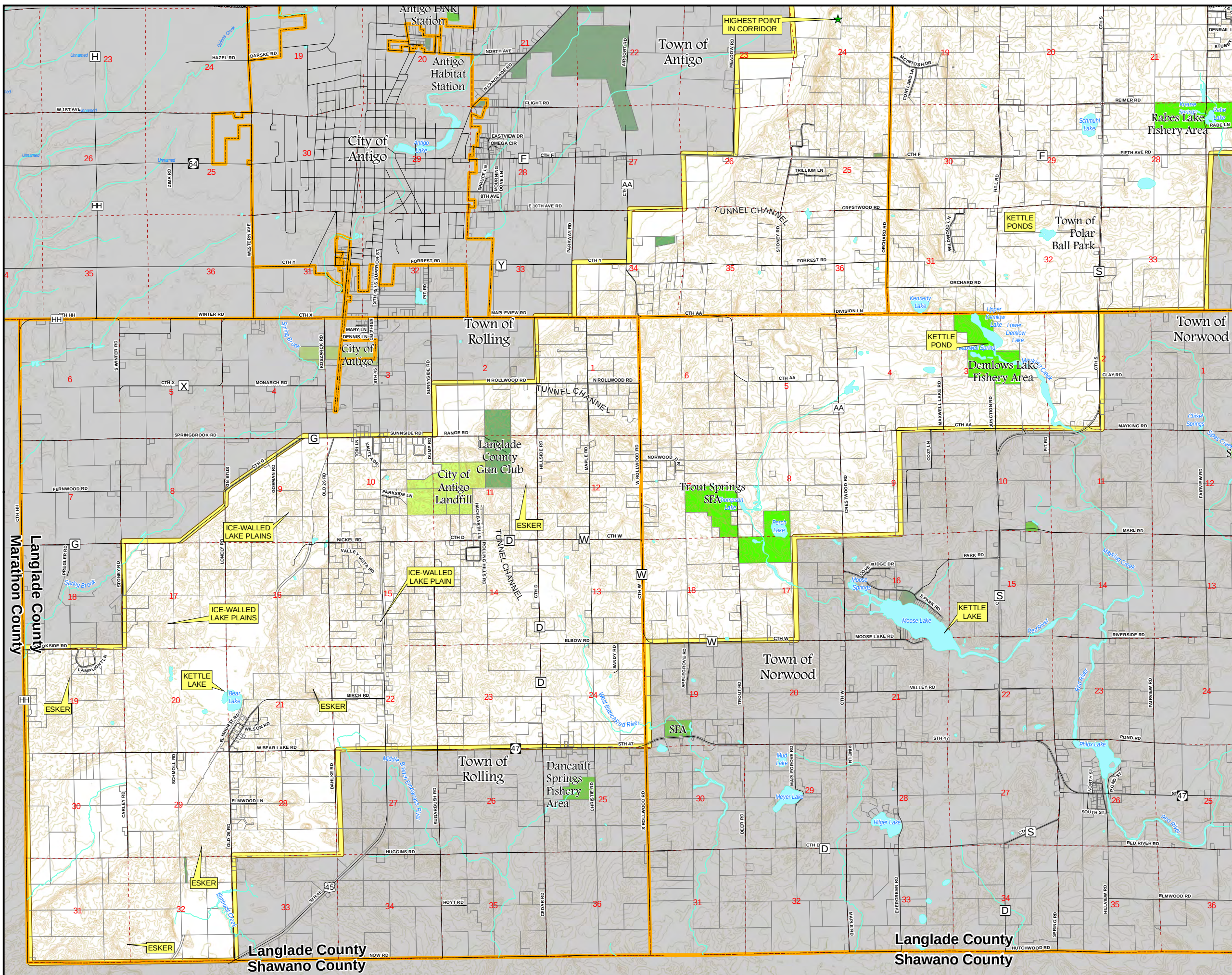


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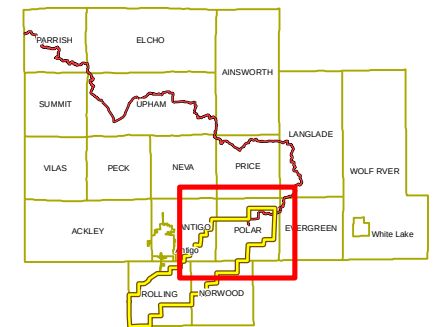


Map 5-3 Ice Age National Scenic Trail "Preferred" Corridor (Northern Half)

Legend

-  Existing Ice Age Trail
-  Roads
-  Water
-  Section Lines
-  Minor Civil Divisions
-  Parcels
-  10 Foot Contour
-  Langlade County
-  Nicolet National Forest
-  WI DNR
-  Highest Point In Corridor

Proposed Corridor
shown in white

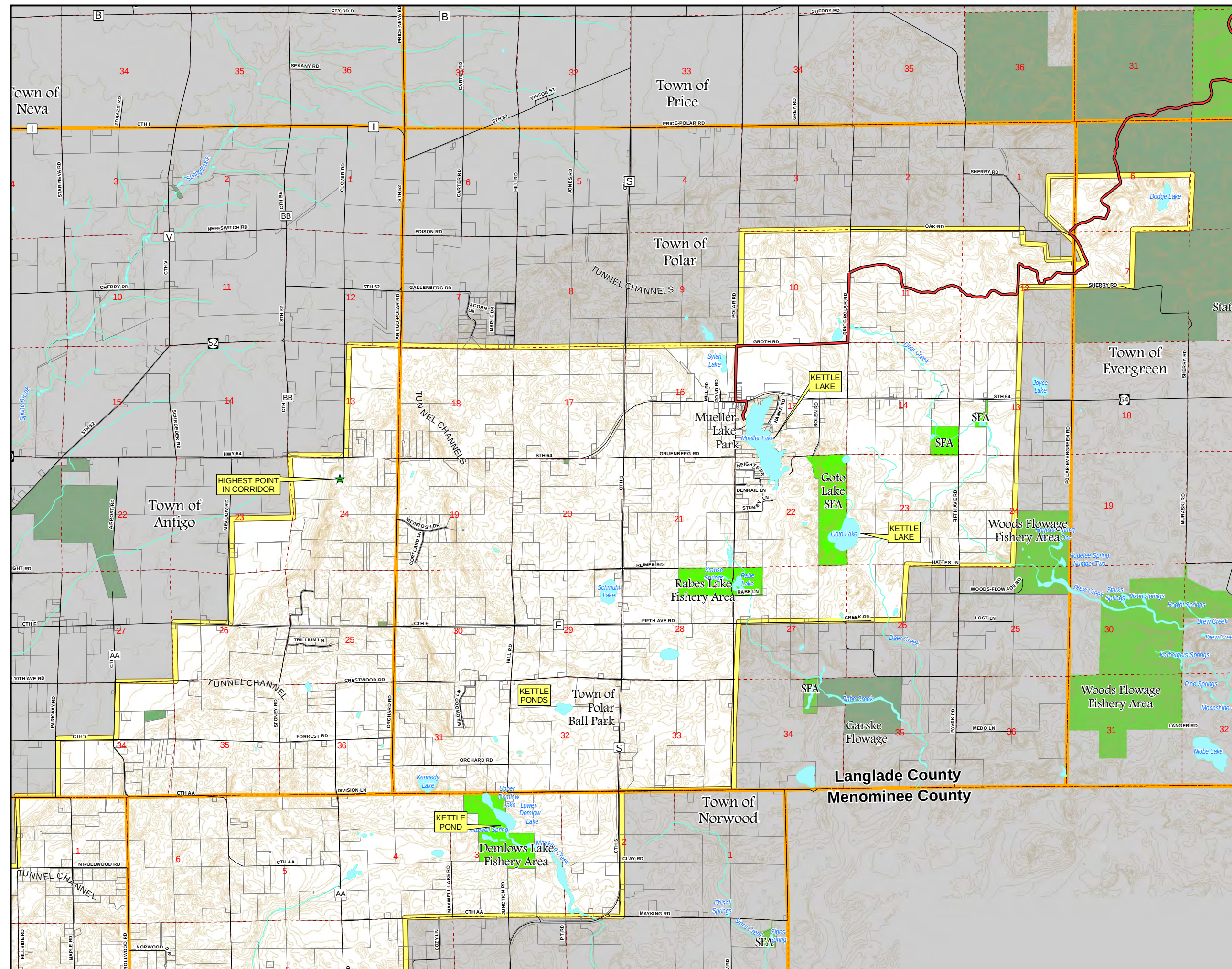


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E. ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508) and the DO-12 require the NPS to identify the alternative that best promotes the goals of Section 101 of the National Environmental Protection Act. The environmentally preferable 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).

This Trailway Plan and Environmental Assessment evaluates two alternatives: the Preferred alternative and a No-Action alternative. The No Action alternative would not adopt a specific corridor for the trail. A planning team was formed to investigate corridor and possible route options and conduct a public involvement process. A number of trail routes within the Preferred alternative's corridor were also identified and evaluated.

The environmentally preferable alternative for a Corridor of Opportunity for the Ice Age NST in southern Langlade County is the Preferred alternative. The Preferred alternative will provide a focused and accountable implementation of the trail. It will permanently protect some of the geological, biological, and archeological resources within the corridor from development and will create a protected, undeveloped trailway of diverse habitats (both uplands and wetlands) that will promote an increase in biodiversity. The Preferred alternative will increase public recreational opportunities and connect existing recreational resources. Securing a trailway in public ownership will help maintain existing wildlife and in some cases, will benefit threatened and endangered species by permanently protecting their environment. It will also provide opportunities for local landowners and visitors to have access to the glacial features along the trail as well as enhance public awareness of Wisconsin's glacial landscape through interpretation of the glacial features.

The No Action alternative amounts to abandoning any coordinated, collaborative effort to attain these goals. Through the No Action alternative, the trail may be built in a less than optimal location or have more water crossings than necessary. Without a coordinated effort, the No Action alternative may not join efforts with other groups to create mutually beneficial recreation opportunities or protect significant natural or cultural resources relating to the trail.

Chapter 6

CORRIDOR'S AFFECTED ENVIRONMENT

A. LOCATION AND DESCRIPTION OF LANGLADE COUNTY

The Ice Age NST's proposed corridor is located within Langlade County in the northeastern part of the state. The City of Antigo is the county seat with a population of 8,500 people. Langlade County is approximately 175 miles north of Madison (the state capital), 185 miles north of Milwaukee, and nearly 275 miles north of Chicago. It lies 35 miles northeast of Wausau and 90 miles northwest of Green Bay. U.S. Highway 45 runs north-south through the center of the county and through the western portion of the proposed Ice Age Trail corridor. It provides statewide access via State Highway 29. The project area encompasses southern Langlade County, specifically the towns of Antigo, Polar, Rolling and Norwood.

The county's 872 square miles includes 843 natural lakes, 418 with public access. There are over 400 miles of Class I trout streams and 200 plus springs. Most of Langlade County's natural lakes and springs are located on top of the moraines and are often associated with the headwaters of these Class I trout streams. The county is home to the famous Wolf River, as well as the Eau Claire, Hunting, Lily, Pine, Plover, Prairie, Trappe, and Red Rivers.

Langlade County is considered part of the Northern Highland Geographical Province with its natural vegetation consisting of maple, hemlock, and yellow birch and conifer swamp. Today approximately 74 percent of the land in the county is forested with the majority being privately owned. Langlade County forest products and processing represents 8 percent of the total county industrial output and accounts for 6.3 percent of its total employment.

Langlade County manages the majority of publicly owned forested lands. The Langlade County Forest was the first county forest established in the state and consists of 128,000 acres. The Chequamegon-Nicolet National Forest, managed by the U.S. Forest Service, includes an additional 40,000 acres. The State of Wisconsin owns approximately 36,000 acres of park, fishery and wildlife lands, and natural areas. With over 200,000 acres, of public open space, abundant opportunities exist for hiking, biking, fishing, hunting, golfing, cross-country skiing, snowmobiling, and other recreational activities.

While the majority of the county is forested, there is a striking contrast in land uses between the nearly level, Antigo Flats and the undulating terrain of the forested Almond, Hancock, Parrish and Summit Moraines. Boom-irrigated potato farming is common on the Antigo Flats, along with corn, wheat, soybeans, and vegetables. Agriculture, consisting of dairy farms and pastures for both horses and cattle, is common in the transition areas between the forested uplands and more gently sloping areas behind the moraines. The moraines themselves are primarily northern hardwood forests with some pine plantations.

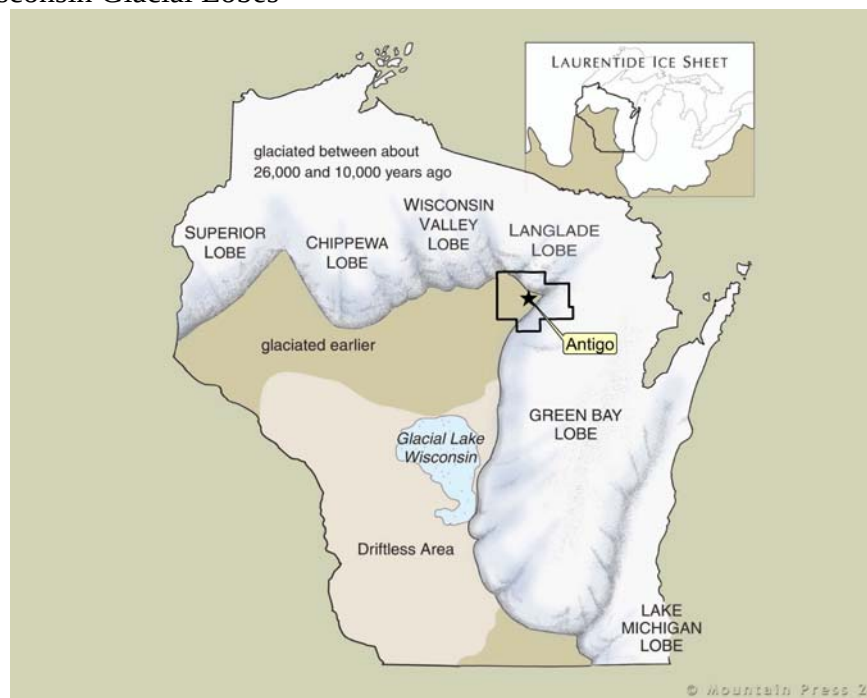
B. CORRIDOR'S PHYSICAL RESOURCES

Geology

Beginning about 2 million years ago the climate began to periodically cool and warm. During the colder periods, averaging 100,000 years each, ice sheets as much as three miles high at their centers formed in the Hudson Bay region of Arctic Canada and spread outward across northern North America, including Wisconsin. During warmer periods, averaging 10,000 years in duration, most of the ice sheets melted away. This cyclical process occurred as many as two dozen times during the 2 million years of the Pleistocene Epoch. It is likely that portions of Wisconsin were blanketed many times by these ice sheets, but evidence of these events is mostly buried beneath the deposits left by the most recent glaciation.

The several glacial advances of the late Pleistocene and the last part of the Wisconsin Glaciation left a landscape in Langlade County that is largely defined by glacial features such as moraines, drumlins, waterlain sediments, kettle depressions, and drainage and tunnel channels. These last advances began about 30,000 years ago. At that time, as the ice sheets flowed across the state, they were impeded by the uplands of the Bayfield, Keweenaw, and Door County Peninsulas, which split them into six major lobes—Superior, Ojibway, Wisconsin Valley, Langlade, Green Bay and Lake Michigan. The vast majority of landforms in Langlade County are the result of the Langlade and Green Bay Lobes and to a lesser extent, the Wisconsin Valley Lobe. Today in the county, the most prominent glacial features you see are the intersecting moraines--Hancock, Almond, and Elderon Moraines deposited by the Green Bay Lobe; and the Parrish and Summit Moraines deposited by the Langlade Lobe. The Antigo Flats, a large flat outwash plain, extends in a westerly direction from the moraines.

Figure 1—Wisconsin Glacial Lobes

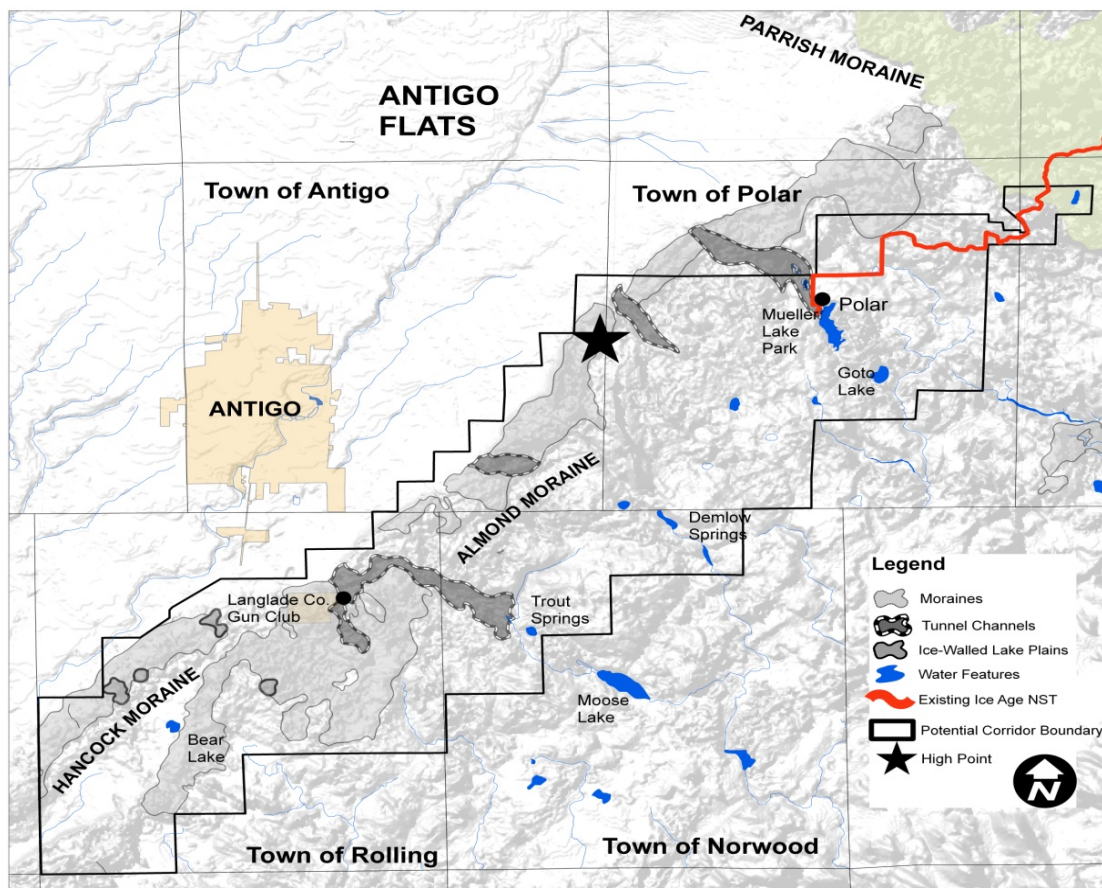


Graphic courtesy of Mountain Press Publishing Company

The advance of the various lobes from Canada into Langlade County did not occur simultaneously. The Green Bay Lobe entered the county from the southeast approximately 30,000 years ago. When the temperature warmed it retreated and left the Hancock moraine. As the climate cooled again, the ice advanced and covered all but the most southern portion of the Hancock Moraine in the county. When it once again retreated, it left behind the Almond Moraine. The Almond is the most prominent moraine within the proposed Ice Age NST corridor. The more recent Elderon Moraines, which are located east of the Hancock and Almond Moraines, were formed about 13,000 years ago. They are the result of the glacier melting back from the Almond Moraine, pausing and then advancing a number of times.

The Langlade Lobe advanced from the northeast sometime after the Green Bay Lobe deposited the Almond Moraine. As it retreated, it left behind the Parrish Moraine, which covers a portion of the Almond Moraine. The Parrish, Hancock, and Almond Moraines represent the farthest extent of the glaciers during the Wisconsin phase. They are composed of unsorted gravel, sand, and boulders carried by the glacier and deposited at various times along its outer edge. Today, the majority of the existing Ice Age Trail in northern Langlade County (outside of the proposed corridor) is located on top of the Parrish Moraine.

Figure 2—Geologic features in proposed Langlade County Ice Age NST Corridor



Another very distinctive and well known geologic feature located in the west and southwestern portion of the county is the Antigo Flats. The Antigo Flats was shaped by braided streams that flowed from both the Green Bay and Langlade Lobes when they were at their maximum extent. These streams were so filled with debris that they spread out in a number of intertwining channels and deposited stratified layers of fine sand, cobbles and larger boulders, eventually forming a large plain of this outwash material. At the end of the Wisconsin Glaciation, as the climate warmed, wind-blown silt known as loess was deposited onto the Antigo Flats creating what is today a very rich agricultural environment. In 1983, the Wisconsin State Legislature designated the Antigo silt loam as the official state soil.

The glacial features found within the proposed southern Langlade County Ice Age Trail corridor, in the towns of Antigo, Polar, Rolling, and Norwood, are exclusively associated with the Hancock and Almond Moraines left by the Green Bay Lobe. Not only are these moraines different in appearance than those left by the Langlade Lobe, but they also have tunnel channels bisecting them. Tunnel channels are created by fast moving rivers flowing under the ice, depositing their load onto an adjoining outwash plain. It has been suggested that when the Green Bay Lobe was at its maximum extent at this location, it was frozen to its bed. This would cause meltwater building up behind the glacier to find and create tunnel valleys to carry away the run off. Glaciers formed during warmer periods allow water to be released along their front edge.

Within the proposed corridor, tunnel channels funneled meltwater beneath the glacier towards the Eau Claire and Little Eau Claire Rivers. As the ice continued to recede, water began to flow southwest behind the Hancock Moraine to the Plover River. Notable tunnel channels found in the project area include two outstanding examples in the town of Polar: one in Sections 8, 9, and 16 that terminates at Mueller Lake and another in Sections 18 and 19. Both are oriented in a northwest-southeast direction. The Langlade County Gun Range is located at the intersection of two tunnel channels in the town of Rolling. The shorter of the two is located in Sections 2, 11, and 14 has a north-south alignment. The longer tunnel channel begins in Section 2 and extends in a northwest-southeast direction through Sections 1 and 12 before entering Sections 7, 14, and 16 in the town of Norwood. It terminates at Moose Lake.

Kettles are common along the Almond Moraine. These are surface depressions formed by large, buried blocks of melting ice. As the ice melted, the sand and gravel above them collapsed, leaving the depressions. These kettles may be dry or contain wetlands or small lakes. In Langlade County, many of these kettles remain as spring lakes and ponds where groundwater wells up to the surface. Kettle lakes in the project area include Bear Lake in the town of Rolling; Perch, Moose, Upper and Lower Demlow Lakes in the town of Norwood; Kennedy, Schmuhl, Goto, Mueller and Sytan Lakes in the town of Polar. The area's largest lakes, Mueller and Moose Lakes mark the locations of particularly large tunnel channels.

Ice-walled lake plains are found in the southwestern portion of the project area. These are flat-topped hills that were once lakes on a melting glacier. Streams flowing on the glacier deposited loads of sediment into these lakes and when the surrounding glacier melted, the lake bottoms

became hilltops. Good examples of ice-walled lake plains are found in Sections 9, 17, and 20 in the town of Rolling.

Several eskers have also been identified in the project area. These are sinuous rounded ridges of sand and gravel deposited by the streams that flowed through tunnels within the glacier.

The Ice Age Trail corridor for southern Langlade County is proposed here because it contains classic examples of features found in front of, at the edge of, and underneath the furthestmost advance of the glacial ice. This array of geologic features will provide an interesting and educational trail experience for the public.

Soils

Within the proposed corridor, soils are associated primarily with the Maplevue member of the Green Bay Lobe's Horicon Formation and to a lesser extent by the undifferentiated outwash plain of the Antigo Flats. The Hancock and Almond Moraines themselves are composed of materials that originate from bedrock deposits found to the north and east of the area and relocated by glacial action. Soils are largely derived from the weathering of these glacial deposits and consist primarily of sands, loamy sands, and sandy loams. The accumulation of organic matter in low areas resulted in the formation of peat and muck.

Six distinct soil associations are found in Langlade County. A soil association is a landscape that has a distinctive pattern of soils, relief, and drainage. It is typically named for the major soils even though it may contain other minor soil types. The majority of soils found in the corridor are represented by two associations: the Antigo-Pence (approximately 29 percent) and Kennan-Keweenaw (approximately 63 percent). The remaining soils are Antigo-Langlade and are generally associated with wet areas on and behind the moraine, and a small portion of the corridor's western boundary adjacent to the Antigo Flats.

The Antigo-Langlade soils formed in areas where sand and gravel outwash was covered with silty and loamy deposits. Antigo-Pence soils formed on eskers and kames and in other areas where sand and gravel outwash was covered with loamy or sandy deposits. (LCORP, 2002). Keenan and Keweenaw soils are both associated with moraines.

Antigo-Pence soils are well drained, sandy, and non-hydric with low available water capacity. The Natural Resource Conservation Service (NRCS) rates Antigo soils as prime farmland having only moderate limitations relating to slope and the availability of irrigation that reduce the choice of plants or that require moderate conservation practices. Pence soils are susceptible to erosion with those areas less than 6 percent slope considered farmland of state wide importance.

Kennan-Keweenaw soils are well-drained, stony, sandy, non-hydric soils with low available water capacity. These soils have limitations because of surface stones and significant erosion. These qualities can make them unsuitable for cultivation restricting their use mainly to grazing, forestland, or wildlife habitat.

According to the Natural Resources Conservation Service (NRCS), the Antigo-Pence and Kennan-Keweenaw associations have few limitations regarding trail development. Water erosion is a concern with the Antigo-Pence soils on slopes of 6 -15 percent, and may limit trail development. Keenan-Keweenaw soils can have large stones and slopes of 15-45 percent that may restrict trail development.

Water Resources

When the Wisconsin glaciers retreated more than 10,000 years ago, in Langlade County they left behind large glacial lakes, river dells, countless kettle holes (which today are spring lakes and ponds), and many miles of high quality streams and wetlands. These water resources sustain fisheries and wildlife, and provide ample opportunities for recreation. While the surface water quality in the proposed corridor is generally good with a number of springs and lakes in natural, unspoiled settings, there are some water quality problems affecting aquatic habitat, fisheries, and other aquatic life. These problems are primarily due to excessive runoff and shoreline development. (LMRM Plan, 2003)

Significant portions of several lakes and springs within the proposed corridor are managed by the Wisconsin Department of Natural Resources and protected from development including: Goto Lake, both Upper and Lower Demlow Lakes, Rabe Lake, Krause Springs, Trout Springs, and Perch Lake. However, there is some potential for future shoreline development on the non-protected portions and on the many privately owned lakes within the project area including Bear Lake, Meyer Lake, Hilger Lake, Kennedy Lake, Schnull Lake and Stenson Lake.

The construction of shoreline homes often results in excessive sediment entering the lakes. Habitat is destroyed when trees along shorelines are cut down and natural vegetation replaced with grass lawns. Failing septic systems leak pollutants into lakes which result in excessive nutrient loads, and pier construction can destroy fish habitat. (LMRM Plan, 2003) Accelerated eutrophication resulting from human activity is considered a major pollution problem. During the summer, shallow water areas contain algae and weeds. (LCORP, 2007) Moose Lake and Mueller Lake have already experienced significant shoreline development.

Within the proposed corridor only 4.3 miles of Spring Brook Creek are included on the Wisconsin 303 (d) impaired waters list. This segment of Spring Brook is on the list due to urban and rural non-point sources of pollution that have adversely affected water quality and the fishery portion of the stream (LMRM Plan, 2003). Nine streams within the planning area have been classified as exceptional or outstanding resource waters under Wisconsin Administrative Code NR 102.

Air Quality

The ambient air quality within the proposed corridor is generally good and could be characterized as “fresh country air.” For the most part, ozone is not an air quality concern in this area. Airborne dust mobilized by plowing or wind erosion of bare soil in agricultural fields at times may be a problem.

Visual Resources

When a corridor for the Ice Age NST is first defined, the geologic features as well as the aesthetic values such as the foreground scenery, distant views and natural environments, are taken into consideration. The corridor must contain elements that create a visually diverse hiking experience since the Ice Age Trail is foremost a National Scenic Trail. Most of these elements are contained within the corridor, but some are located outside of it and can be seen from high vantage points within the corridor. During the planning process, geologic features, high points, and places of scenic beauty such as kettle ponds and high quality plant communities are identified and mapped. Conceptual trail routes are then designed to connect these various features. These collective viewscapes are the heart of the Ice Age NST. They tell the story, first-hand, of how the glacier shaped the landscape of Wisconsin and created its diverse biological ecosystems and water resources. Also, they act as landmarks for hikers who consciously or subconsciously use these features as a map or way-finding system to identify where they are along the route of the trail.

Landforms, scenic views, and natural areas or plant communities have been designed into the proposed corridor plan, because of their aesthetic and educational value. The undulating topography of the Hancock and Almond Moraine, the bisecting tunnel channels, large outwash plain, and numerous kettle holes, both wet and dry, are the significant glacial features within the proposed corridor. Walking along the Ice Age Trail through the rolling hills and scattered open spaces and woodlands of Langlade County will provide a continually changing and delightful experience to the hiker. The juxtaposition of land uses (forest, pastures, crops) upon the corridor's topographic features offers variety as well as a pedestrian scale to the landscape. Depending on the eventual trail location, scenic overlooks may be placed to provide glimpses and views of the Antigo Flats, and Summit and Parrish Moraines in the distance. The proposed corridor also has several significant plant communities such as an undisturbed white cedar-dominated seepage swamp, and a stand of very rich, older second growth forest, as well as several high quality coldwater trout streams.

C. CORRIDOR'S BIOLOGICAL RESOURCES

Ecosystem

The vegetative cover of Langlade County is primarily wooded with more than half of the county, approximately 500,000 acres, divided between commercial forest lands and public forest lands. There are approximately 87,000 acres devoted to agriculture, the majority occurring in the area known as the Antigo Flats. Wetlands and other non-productive lands account for approximately 28,000 acres. Woodlands reach their greatest concentration where the moraines and other topographic relief are present. The proposed Ice Age NST corridor occupies a portion of the southern extent of this area.

Current vegetative communities found within the proposed southern Langlade County Ice Age NST Corridor are fairly diverse and representative of the area's historic and current land uses. At one time, Langlade County was covered with huge stands of pine, hemlock, and hardwoods on the highlands and cedar, spruce, and balsam on its lowlands. These forests provided raw

material for a thriving lumbering industry from 1860 to about 1910. Once the forest was cut over, much of the level land was eventually cleared of stumps and other debris making it suitable for agricultural use. The Antigo Flats, adjacent to the proposed corridor, is a vast agricultural plain that supports crops such as potatoes, oats, wheat, barley, snap-beans and forage hay.

The hilly topography of the moraines adjacent to the Antigo Flats contains a matrix of agricultural and commercial forestry lands. These typical northern hardwood forests consist primarily of sugar maple, yellow birch, basswood, white ash, eastern hemlock, and, to a lesser extent, American beech. Often, associated species such as balsam fir, red maple, white pine, red oak, and paper birch are found with them (Martin 1996). This timber type is generally harvested using selective logging which provides continuous and sustainable forest products. Pine plantations are also present. While little of the original vegetative communities remain, there are several notable plant communities in the proposed corridor like the Demlow Lakes Swamp and Elmhurst Maples.

The Demlow Lakes Swamp, which is located 5.5 miles southeast of the City of Antigo on Hill Road, is part of a SFA managed by the WDNR. It is a small (15 acre) undisturbed white cedar-dominated seepage swamp. Balsam fir, yellow birch, and hemlock are also present. Species vulnerable to deer browse such as yew (*Taxus*) and blue-bead lily (*Clintonia*) are abundant in the understory. Cedar and hemlock regeneration is taking place on the site. The general health and integrity of the forest and lack of deer browse is noteworthy. (2000 DNR)

The Elmhurst Maples, located 5.25 miles south southwest of the City of Antigo is privately owned. This site is situated in an area of agricultural land, rapidly developing residential areas, and moderately to heavily select-cut hardwood forests. This small (45 acre) plant community is an excellent example of a very rich older second growth forest. It is composed mostly of hardwoods and is located on the rolling, hummocky portion of the moraine that separates the Wisconsin and Wolf Rivers drainages. The dominant trees are sugar maples. Basswood and white ash are frequent associates, while hemlock is uncommon, and butternut is rare (2000 DNR). The understory is very rich and free of exotic species.

Invasive Species

According to Executive Order 13112, the “Invasive Species Act,” 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.”

The Ice Age NST will traverse a variety of ecosystems like northern hardwoods, coniferous wetlands, and pine plantations. According to the WDNR county forester, problematic species for wooded areas are buckthorn, honeysuckle and most recently, garlic mustard. According to the WDNR regional ecologist, the primary invasive species of concern for open areas are spotted knapweed, wild parsnip, leafy spurge, and sweet clover. Purple loosestrife is a concern in wet areas.

Langlade County has adopted a Noxious Weed Ordinance, as described in Sec.66.0407 Wisconsin Statutes, which lists those noxious weeds that could affect the county's environment and economy. In addition to those species noted by the WDNR, the ordinance also identifies the following: Canada thistle, bull thistle, field bind weed, and yellow rocket. Other invasive and exotic species of concern in Langlade County include: autumn olive, bird's-foot trefoil, burning bush, butter-and-eggs, common buckthorn, common burdock, common St. John's Wort, creeping bellflower, creeping jenny, crown vetch, and dame's rocket.

Wildlife

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 Langlade County in the area of the Ice Age NST include black bear, wolves 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, waterfowl, and numerous reptilian and amphibian species.

Fisheries

The waters of the study area are considered to be of extremely high quality, and able to support a wide variety of cold and warm-water fish species. Warm-water species such as northern pike, bass, panfish and carp are found in the kettle lakes and slow moving streams of the area. However, winterkill is a common problem with smaller, shallow lakes. Cold water species such as brook trout, brown trout, and rainbow trout are generally found in the deep spring-fed ponds and lakes and faster flowing streams that have a temperature of less than 75° F.

The proposed Ice Age NST corridor contains 19 springs which feed directly into ponds and streams. Portions of the Wolf River, Eau Claire River, and Spring Brook, which are located within the proposed corridor, have been designated Class I trout streams. Nine streams present in the corridor have been designated either Exceptional Water Resources or Outstanding Resource Waters in Wisconsin Administrative Code NR 102 for their superior water quality and their ability to sustain valuable fisheries.

Threatened and Endangered Species

The NPS began informal consultation with the U.S. Fish and Wildlife Service (USFWS) in October 2004. According to the USFWS, the gray wolf is present in increasing numbers. A management plan has been prepared by the WDNR in anticipation of its potential de-listing.

There are several plant communities and one animal species found in and near the corridor considered to be of special concern at the state level. The plant communities include Northern Mesic Forest, Northern Wet-mesic Forest, Southern Tamarack Swamp (Rich), Streams (Fast, Hard, Cold), Springs and Spring Runs (Hard), and Spring Pond. The animal species of concern is the Banded Killfish (*Fundulus diaphamus*), however, it is not considered to be threatened or endangered at this time.

D. CORRIDOR'S CULTURAL RESOURCES

Prior to the mid-1800s, Native Americans, predominantly the Menominee, Ojibway, and Pottawatomie were the area's only inhabitants besides a few European fur traders and trappers who began traveling the wilderness in the 1600s. These traders followed a centuries old route from the Fox River at Green Bay that ran along the Wolf River to the copper area of Lake Superior. In 1837 and 1842, the Ojibway ceded lands to the United States government, including what would become Langlade County, retaining certain hunting, fishing, and gathering rights.

Politically, Langlade County was originally part of the Northwest Territory with the first surveys coming in 1851. In 1879, the Wisconsin legislature created Marinette and "New County" from Shawano and Oconto County territory. In February 1880, the legislature changed the name to Langlade County in honor of Charles de Langlade, the most colorful and renowned pioneer of the wild and unexplored Wisconsin Indian Territory of the 1700s. Langlade County contains 17 towns, four of which are part of the Ice Age NST proposed Corridor of Opportunity.

Town of Rolling—The town of Rolling was created on December 16, 1880, in Shawano County, and on February 19, 1881 it became one of six original towns of Langlade County. A review of the Wisconsin Architectural History Inventory lists a total of two sites in the township, both church cemeteries, with no sites listed on the National Register of Historic Places.

The hamlet of Elmhurst, near the center of the township, was named after the many elm trees in the area. On August 28, 1911, Elmhurst was destroyed by a fire. At its height, the community had a population of around 450 and boasted a train depot, hotel, barber shop, school, post office, and church, in addition to several factories and lumber mills. A few structures remain near the intersection of Old Highway 26 and Elmhurst Road.

Town of Norwood—Norwood was originally part of the town of Milltown in Shawano County. It was attached to the "new" Langlade County in 1879 and split into the towns of Norwood and Rolling on April 15, 1881. Early settlements include the communities of Phlox, Mayking, and Rose.

A review of the Wisconsin Architectural History Inventory lists two church cemeteries and a campsite/village within the town. No sites are listed on the National Register of Historic Places.

Town of Antigo—The town of Antigo received its name from the Ojibway Indian name "Nequi-Antigo-Seebeh," which means balsam evergreen river, for the balsam evergreens that bordered Spring Brook. Two communities were originally located within the town: Weed and Antigo. One of the original six towns of Langlade County, it is currently the location of the City of Antigo, the County Seat.

A review of the Wisconsin Architectural History Inventory lists four cemeteries in the town of Antigo, along with a number of old school buildings: the Neff Switch School (1885), Selenski School (1914), and Pioneer School.

City of Antigo—The City of Antigo was planned before its development. In the early 1870s Antigo's founder, Francis A. Deleglise purchased and contracted large amounts of land in preparation for the colonizing and settlement of the area. In 1876 and 1877, he platted the lands and opened roads for prospective settlers. By 1878, the community had a mill, post office, and store; and, in 1881, it welcomed the Milwaukee Lake Shore and Western Railroad. The city incorporated in 1885. The City of Antigo has five sites—the Antigo depot, opera house, post office, former public library and Deleglise Cabin, and the Langlade County Courthouse—that are included in the Wisconsin National Register of Historic Places.

Town of Polar—In 1877, Moritz Mueller made the trip from Shawano into the wilderness of what is now Langlade County settling on the north shore of the lake that now bears his name. Originally part of Oconto County, in 1883, Polar became one of the first six towns of Langlade County. In the early days, Polar was covered with virgin forests. This timber was cut down for lumber and fields cleared for farming. The first industrial facility, a mill, was erected in Polar in 1888. The mill burned in 1918 and was never rebuilt.

A review of the Wisconsin Architectural History Inventory lists two cemeteries in the town of Polar and one campsite/village site. There are no sites listed on the National Register of Historic Places.

E. CORRIDOR'S SOCIO-ECONOMIC RESOURCES

Population Trends

The Wisconsin Department of Administration (WDOA) prepares population projections for all governmental units within the state on a regular basis. They are based on likely births and deaths, the aging of the existing population and well-established trends. The projection trends tend to be very conservative. Below are projections for the proposed Ice Age NST corridor through 2030, and for comparison, include projections for Langlade County.

Table 1 – Population Trends within or adjacent to Ice Age NST Corridor

MINOR CIVIL DIVISION	2005	2010	2015	2020	2025	2030
Antigo town	1,527	1,534	1,548	1,559	1,563	1,556
Antigo city	8,629	8,661	8,726	8,780	8,785	8,731
Norwood town	986	1,029	1,076	1,121	1,161	1,191
Polar town	995	1,015	1,040	1,063	1,080	1,089
Rolling town	1,538	1,605	1,680	1,751	1,812	1,860
Total: Planning Area	13,675	13,844	14,070	14,274	14,401	14,427
Langlade County Total	21,412	21,862	22,401	22,903	23,281	23,498

Source:DOA, NCWRPC

The proposed Ice Age NST corridor skirts the Antigo urban area. Overall the population growth in the rural towns that compose the proposed corridor—Antigo, Norwood, Polar, and Rolling-- is

higher than in the City of Antigo--12.88 percent versus 1.2 percent respectively. The town of Rolling has the highest growth rate, followed closely by Polar. This indicates a preference for homes on the outskirts of the city. Much of this new housing is built in the moraines, where the elevated, rolling topography appeals to potential homeowners. As residential development increases in the areas around the city, property within the corridor will become more attractive to commuters leading to increased residential development.

Like many other rural areas, the lack of employment opportunities and good paying jobs historically has resulted in the outmigration of a sizable number of young adults. In recent years, however, an improved transportation network has shortened travel times to nearby larger employment centers (Antigo, Merrill, Wausau), helping stem outmigration by allowing more permanent residents to remain in the area and commute to work. Similarly, new residents have been attracted to the county from these urban centers. These residents willingly trade a longer work commute for the ability to have the area's scenic attributes and year-round recreational opportunities at their doorstep.

Communities and Businesses

The Langlade County economy is strongly concentrated in manufacturing, natural resource-based industries (including agriculture), and recreation/tourism. Although concentrated in industries that have not experienced strong growth, in recent years the job market in the county has seen growth at a higher level than the state as a whole. Between 1980 and 2000 the labor force (those over the age of 16, employed or looking for employment) grew at roughly the same rate as the state. At the same time, those employed in the county grew by a rate almost twenty points higher than the state and unemployment declined at a rate almost ten points faster than in the state.

Manufacturing is the largest single sector of the Langlade County economy in terms of the number employed, followed closely by retail trade. Government and services are the two next largest sectors. Employment in the manufacturing, government and service sectors all grew by roughly a third during the 1980 to 2000 period, while employment in retail grew by 54 percent. It should be noted that during this period, employment in manufacturing nationally declined significantly, so the growth in this sector in Langlade County should be seen as significant. For those individuals seeking to recreate outdoors, Langlade County is a popular tourist destination and is likely to see dramatic increases in the years to come. In 2007, tourists spent an estimated \$43 million in the county (NCRPC 2009).

Dairy and potato farming are the primary farm enterprises. The major crops are oats, alfalfa, corn, red clover, and potatoes. Long the main farming enterprise of Langlade County, dairy is the largest part of Langlade County's agriculture in terms of combined on-farm value and processing value. In 2000, Langlade County milk producers and the dairy industry contributed \$84.7 million to the county's economy.

Potatoes are by far the most important cash crop in the county. In 2002, the market value of vegetable crops was \$30.8 million, or 55 percent of the total market value of all agricultural products sold in the County. Much of the corn and forage crops grown in the county are used for

livestock feed. Soybeans are also extensively grown for use on local dairy farms and as a commodity sold outside of the County. Because of the prominence of agriculture and forestry in the proposed corridor it can be anticipated that these land uses will remain stable over the coming years except to the extent that they are displaced by demand for expanded residential use in the areas nearer to Antigo.

Residential demand seems to be strongest in the glacial moraine landscape that is the focus of trail corridor planning. These influences will likely continue to contribute to the increase of land values and development within the proposed corridor. They will also create a greater need to protect significant natural resource features as well as provide additional areas for individuals to recreate.

The communities located near the proposed Ice Age NST corridor may benefit economically from trail users by providing such support opportunities as grocery stores, restaurants, campgrounds, and bed and breakfasts.

Land Use and Land Ownership

The primary land uses within the planning area are agriculture, forestry, and single home residences. Although forestry is the largest land use, agriculture has a larger economic impact and employs more people.

Currently, there is pressure for land to be used either for rural residential living or recreation and investment. This pressure has resulted in tremendous growth in land values. The Ag Census reports for 1987 and 1997 show farmland decreasing, while land values rise. Using additional data from the Department of Revenue, the Wisconsin Agricultural Statistics Service reported that from 1992 until 2000 the average cost for agricultural land in Langlade County rose 108 percent from \$489 to \$1,017 per acre. An even more dramatic change took place in the swamp and wasteland category, whose land values increased by 486 percent from \$68 to \$399 (Cadwallader). This elevation may be caused by the purchase of large tracts of land for hunting. As this area becomes increasingly parcelized, and more uses occur within a smaller area, the potential for land use conflicts will also rise. Also, as more development occurs, the cost of providing basic municipal services will increase.

The following table was taken from aerial interpretation of land use by the North Central Wisconsin Regional Planning Commission (NCWRPC).

Table 2

Estimated Land Use in the Proposed Langlade County Ice Age Trail Corridor	
Land Use Type	% of Total
Grasslands, Unused Open Space	2.73
Commercial	0.31
Forest Land	60.97
Agriculture	28.91

Farmstead	0.03
Governmental	0.29
Recreational	0.01
Residential	4.94
Transportation	1.08
Water	0.73

Source: NCWRPC

The most notable difference between the current land use within the proposed Ice Age NST corridor and the towns that surround it is the higher ratio of woodlands to farmland. In the towns of Norwood, Rolling, Antigo, and Polar, land use is generally split between forestry and agriculture (46 percent to 42 percent). This ratio varies from town to town: Antigo (19 percent to 71 percent), Polar (57 percent to 31 percent). Within the trail corridor, the ratio is 61 percent (forestry) to 29 percent (agriculture).

Many of the residential subdivisions located within the proposed Ice Age NST corridor were approved a number of years ago and are gradually filling up over time. Most of this development is located in the town of Rolling. It is likely that at the next census, the town of Rolling will pass the town of Antigo as the most populous in the county. The type of development located here consists of subdivisions and individual lots, mostly under five acres. In the other towns such as Polar, development is typically individual home sites on smaller parcels, especially in areas near State Highway 64, and in the hills overlooking the Antigo Flats. In the town of Norwood, it is estate-style properties over five-acres that are being developed.

Recreation Resources

Langlade County is known as the “County of Trails.” There are currently 54 miles of Ice Age NST in Langlade County and many hundreds more of hiking, biking, ATV and snowmobile trails. The majority of these recreational activities are located on public lands. However, a few cross private lands via easements and handshake agreements. While 32 percent of the total land area in Langlade County is comprised of national, state, and county-owned lands (2004, UW-Extension), the project area, consisting of the towns of Antigo, Polar, Rolling and Norwood, contains less than two percent. Collectively, these public lands accommodate a range of low and moderate impact recreational activities within and near the proposed corridor.

State Public Lands and Recreational Facilities

The WDNR currently owns or manages approximately 725 acres of state fisheries and natural areas within the proposed corridor. These lands represent a variety of diverse habitats ranging from spring fed ponds, wetlands, swamp lands, upland hardwood forests, and former fields. Some properties have off-road parking; others have road-side parking; a few include fishing access. While several spring ponds may receive increased use during trout season, most receive relatively light use during the remainder of the year. It should be noted that timber management is an active part of the overall management occurring on these lands. This not only includes

timber harvesting, but tree planting and prescribed burning. The following are state fishery areas located within the proposed Ice Age NST corridor:

Goto Lake is located within a collapsed hummocky gravel moraine complex and unpitted gravel plain, three miles east of Antigo in the town of Polar. It is approximately 167 acres in size, and has a well developed trail system through it with walk-in fishing access to the lake itself. This SFA has a fairly complicated vegetation mosaic with both upland and wetland communities. (2000 DNR)

Krause Spring and Creek, and Rabe Lake are located in the town of Polar as part of a 120 acre SFA. Vegetation on the site includes both cedar and hemlock. Designated parking and access are provided along Polar Road.

Demlow Springs is a 161 acre property located 5.5 miles southeast of Antigo in the town of Norwood. Land use surrounding the springs consists of agricultural and commercial private forestry land. The property features a small but undisturbed white cedar-dominated seepage swamp with spring runs surrounding the small, undeveloped Upper and Lower Demlow Lakes and Maxwell Springs - the headwaters of Mayking Creek, a tributary of the Red River. The main use of the site is for recreation, predominantly fishing and hunting. (2000 DNR)

Perch Lake SFA, which includes the Steffen Memorial Forest is also located in the town of Norwood, a couple miles north of State Route 47. The majority of the site is upland forest that rests on rolling sand and gravel outwash plains. Adjoining the Perch Lake property across Trout Spring Road to the west and north is the Trout Springs SFA. A well-developed trail winds through this property with walk-in fishing access to the 2-acre spring pond. Combined, both properties are 230 acres in size.

County Public Lands and Recreational Facilities

The 120 acre County Gun Range is a special use area of the county forest located south of Antigo in Section 11 of Rolling town. Located here are a 40 acre bow range, 40 acre gun range, and another 40 acre tract north of the gun range that acts as a buffer to the site. This facility is available to the public for use with special events scheduled through the forest administrator to avoid conflicts between groups. Cooperative agreements exist between various sportsman clubs and the County. This property also provides handicapped access, restrooms, 60 parking spaces, and play equipment.

Local Public Lands and Recreational Facilities

A number of local parks are found within the proposed Ice Age NST corridor and provide a number of amenities. Crestwood Elementary School Park, located at W8464 County Trunk Highway AA in the town of Norwood features a nature trail. Mueller Lake Park, located in the town of Polar, includes a boat landing, picnic and restroom facilities, and a swimming beach. The town of Polar baseball fields and perennial garden is located on County Highway S just south of Crestwood Road. This facility includes seasonal parking, water, and restroom facilities.

The *Downtown and Springbrook Vision Plan* prepared in 2010 for the City of Antigo, suggests that a connector trail be constructed along Spring Brook from the city to the Ice Age NST. This connection would provide access for city dwellers to the Trail, and a way for long distance hikers to obtain support services.

Existing Ice Age Trail

County-wide, there are approximately 54 miles of Ice Age NST currently open to the public. Starting at the Lincoln/Langlade County line, the Parrish Hills segment traverses the belt of morainal hills in the northwestern corner of Langlade County for 12 miles. Wetlands here are so extensive that the trail winds through the landscape taking advantage of beaver dams and narrow, high ridges.

The Western Highland Lakes segment of the trail begins at Kleevers Road. It continues for 5.8 miles to County Trunk Highway T. The Eastern Highlands Lakes segment begins at State Highway 45, and is 3.1 miles in length, ending at Forest Road. The Old Railroad segment, originating at County Trunk Highway A, is a 9.5 mile route that follows a former railroad grade used to haul logs in the 1900s. The route passes through Veterans Memorial Park and near several beautiful northern lakes. A number of white pine stands remain as reminders of the great forests that grew at the time of earliest settlement.

The 12 mile long Lumber Camp segment of the Ice Age NST features a dramatic exposure of massive boulders deposited by ice on the north slope of the Summit Moraine and passes through the remains of the Norem Lumber Camp. The Kettlebowl segment winds for nine miles through hilly terrain dotted with erratics. It has the most topographical relief found along the trail state-wide and passes a number of “frost pockets,” or kettles. In some areas the segment shares the various cross-country ski trails of the Kettlebowl Ski Area (IATA, 2008). The completed off-road portion of the Ice Age Trail currently ends on private forest lands in the northeastern corner of the proposed corridor in the town of Polar, northeast of Mueller Lake Park.

Public Health

The Ice Age NST will contribute to public health and well being. “Walking for Pleasure” is the most popular recreation activity in Wisconsin. It is enjoyed by an estimated 85 percent of the population. Completion of the Ice Age NST in Langlade will provide an opportunity for people to obtain regular exercise.

Tax Base

In 2009, the collective tax base of the four towns through which the proposed Ice Age NST corridor passes was \$343,417,100. This included about \$118,059,400 in land value. Based on the proportion of each town’s land area actually lying within the corridor boundary, it is estimated that the total tax base of corridor lands is approximately \$140,265,663, including \$38,378,904 in land, with the gross average assessed value of land about \$1,034 per acre. According to the 2007 Census of Agriculture the average value of agricultural land that remained in farming was \$2,555 per acre.

Chapter 7

CORRIDOR IMPACT ANALYSIS

This chapter presents the probable impacts to the natural, cultural, and socio-economic resources of the No Action and action alternatives. Evaluation of the impacts requires consideration of the intensity, duration, and cumulative nature of the impact, as well as a description of any measures to mitigate for adverse impacts. A summary of environmental impacts is discussed below. Impacts are described as beneficial, negligible or adverse.

IMPACT ANALYSIS SUMMARY

Impacts Common to Both Alternatives

The Ice Age NST is by law a non-motorized trail. It is administered by the NPS and managed by a number of public and private partners as a trail suitable for foot travel only. It is reasonably foreseeable that trail construction of a footpath would eventually take place either within the No Action alternative (1983 Comprehensive Plan route) or in one of the action alternatives. The Ice Age NST has *A Handbook for Trail Design, Construction and Maintenance* that guides its development. If the standards are followed, regardless of the trail's location, the physical impacts to the resources would generally be the same. Trail construction would have minor and temporary adverse impacts on natural resources located within the construction zone. These impacts would be limited to the period of actual trail construction. Trail use would be expected to have negligible and continuing impacts on the physical environment, primarily in the form of increase in foot traffic and periodic maintenance of the corridor. None of the alternatives would require actions resulting in impairment of natural, cultural, or social resources.

Ice Age NST construction standards call for a 24-36 inch tread, with an additional 1-foot vegetation clearance zone on either side. Ground disturbance would be limited to those areas where side-slope benching is required to create a level tread. Total surface impacts are estimated to be less than ½ acre per mile of trail construction. Generally, trail construction and maintenance would take place using hand tools and volunteer labor.

Differences between the No Action and Action Alternatives

Despite similarities between the No Action and action alternatives, several differences exist between them. These differences are summarized below.

Scenic and Recreational Values

Under the No Action alternative, it is likely that volunteers would initiate trail construction wherever they could gain permission from landowners. This type of unplanned construction would result in a trail that does not highlight or protect important scenic or recreational resources. Under the action alternatives, an evaluative process would allow planners to carefully design trail route options that would highlight and permanently protect the area's scenic and recreational resources.

Efficient Use of Resources

Unplanned trail construction that would occur under the No Action alternative may result in a trail that is more expensive to construct because of a longer length, more water crossings, or improperly placed and/or poorly constructed due to lack of foresight. Under the action alternatives, trail would be constructed according to a carefully executed plan. Construction of a planned trail would likely result in a more efficient use of resources as the trail length and number of water crossings will be enough to meet plan recommendations.

Threatened/Endangered Species and Cultural Resources

Under the No Action alternative, unplanned trail construction may adversely impact threatened/endangered species or cultural resources. This effect would be avoided if one of the action alternatives were chosen, because the biological and cultural resources would be identified within them before trail is constructed. Trail construction under this alternative would make efforts to avoid or protect sensitive resources.

DETAILED IMPACT ANALYSIS

A. IMPACTS TO PHYSICAL RESOURCES

Geology

One of the primary objectives of the Ice Age NST is to preserve and protect significant geological features. Under the Alternatives 2, 3 and 4, an established corridor would be designated that would allow permanent protection of some of these resources from disruptive land uses which would be a beneficial impact. Acquisition within this corridor of areas larger than the railway would at times be necessary to protect significant features. Development of a trail within this corridor would allow the public access to these geological resources, and would provide an opportunity to interpret their significance within the landscape. Broader public awareness might lead to greater support for protection of these landscape features. Regarding user experience and protection of resource, under Alternative 2, the trail would focus on the glacial features of the Almond and Hancock Moraines and the topographical contrast between the moraines and the Antigo Flats, but would miss out on some kettle ponds and tunnel channels found on public lands behind the moraine. Alternative 3 is located behind the terminal moraine to maximize the use of public lands and facilities. It lacks the opportunity to see the contrast between the moraines and the Antigo Flats. Alternative 4 captures the significant geologic features from both landscapes (Alternatives 2 & 3).

Under the No Action alternative, loss of significant geological features that are not currently protected may occur due to gravel excavation or residential development now occurring at an increasing pace within the corridor. Statewide, significant portions of the terminal moraine are being developed because the soils, drainage, and views afforded on that specific type of landform make it a highly desirable building site. Development on the moraine creates pressure for the extraction of gravel from the moraine and adjacent outwash plains.

There has been increasing development pressure in the moraine areas of southern Langlade County consisting of both individual home sites and residential subdivisions. As these new residences are built and the landscape becomes increasingly fragmented, the potential for securing an alignment that provides a setting for creating a quality trail experience is diminished. Gravel extraction along the face of the moraine and in other isolated areas is not considered desirable because it impacts the visual character of the landscape. However, it also allows for the availability of extracted material closer to the area's larger communities. Under the No Action alternative, adverse impacts would include the diminishment of the public's access to these significant geological features and the ability to learn about them first hand.

Soils

Under all the alternatives, impacts to soils may occur but can be mitigated to a negligible level. Soil type, slope, and drainage all influence the suitability of an area to withstand the potential impacts of trail construction and use. When the trail is laid out for construction, the alignment chosen would attempt to minimize the possibility of compaction or erosion of the soil surface. In addition, soils that are rocky or frequently wet, create difficult hiking conditions and would be avoided.

Under Alternatives 2, 3, and 4, the intensity of impacts to soils caused by trail construction would be limited to minor ground disturbance within the narrow tread corridor. With proper layout of the trail on the landscape, erosion control techniques, planking or bridges, and trail monitoring, potential impacts to soils from constructing and using the trail can be mitigated to a negligible level. As necessary, proper erosion control techniques such as side-hill construction, waterbars and drainage dips would be employed. Soils that are particularly unsuitable—such as in poorly drained areas—would be avoided. If the trail must cross a wet area, planking or bridges would minimize the negative impacts from this crossing. Monitoring of the trail by volunteer trail maintainers will identify any cumulative erosion problems so that appropriate erosion control actions can be taken. The NPS, in conjunction with the WDNR and the IATA, has developed a handbook on trail design, construction, and maintenance for the Ice Age NST. This handbook is used by all volunteer trail builders. Also, the Ice Age Trail Alliance has a “Mobile Skills Crew” that trains volunteers to build sustainable trail with minimal environmental impacts, and has work groups that build and maintain trail all along the Ice Age NST in support of local trail chapter efforts. For more information about the handbook, see Appendix B—Trail Development and Management.

Under the No Action alternative, the trail may be built wherever it is expedient. When constructed, the trail may not go through a design and layout process that includes development of possible alternative alignments and analysis of potential soil impacts. The assessment of impacts might not be ascertained and may be greater than negligible.

Water Resources

Kettle lakes, streams, marshes, and wetlands are some of the features included within the proposed trail corridor in southern Langlade County. Constructing the trail around these water features affords the opportunity to preserve them as well as interpret their significance within the

landscape. Impacts on water resources are possible during construction, use, and maintenance of the trail. These impacts may include sedimentation, degradation to habitat, and stream bank destabilization.

Executive Order 11990, Protection of Wetlands, requires federal agencies to avoid, where possible, impacts to wetlands. The NPS would expect that the necessary permits would be obtained before trail construction through wetland environments begins on any portion of the Ice Age NST.

Trail construction in wetlands is subject to permitting under federal regulations administered by the U.S. Army Corp of Engineers and the Environmental Protection Agency. Wisconsin State Law also has provisions regulating the construction of trail in wetlands and stream crossings. These provisions would be followed in all of the action alternatives.

Under all the alternatives, impacts to water resources can be mitigated to a negligible level by using proper water crossing structures where water and wetlands cannot be avoided or where water features are included as part of the glacial heritage. Bridges would be constructed to span creeks and streams, and boardwalks would be constructed through wetlands. Potential impacts would be short term and local.

Under Alternatives 2, 3, and 4, a planned corridor and professional involvement in siting the water crossing structures would help limit the number of these structures needed; therefore, minimizing the related negative impacts to water resources. Ongoing monitoring of existing segments of the Ice Age NST has ensured that there have not been significant impacts to water resources as a result of either trail construction or trail use.

When water structures are constructed, placement of fill materials or structures in wetlands would be subject to state and federal regulation. The rules in place that govern activities in Wisconsin wetlands include NR 1.95 and NR 103, Wisconsin Administrative Code. Any work on the bed or banks of navigable waters, including bridges, is governed under Chapter 30, Wisconsin Statutes. Permits from the WDNR would be needed to construct bridges and approaches, or conduct development activities in wetlands. Additionally, the U.S. Army Corps of Engineers has jurisdiction over wetlands and waters of the United States under Section 404 of the Clean Water Act. Permits would be needed from the Corps of Engineers for bridges and boardwalks in wetlands.

Under the No Action alternative similar impacts may occur, but it is difficult to quantify impacts since new and existing trail may be relocated without a planned corridor. Furthermore, the uncoordinated development of the trail may lead to the construction of more water related structures (i.e., bridges, boardwalks, etc.) than may be necessary or efficient, which would be an adverse impact.

Air Quality

Under all the alternatives, impacts to air quality would be minimal. The increased number of hikers in the area may slightly increase the level of motorized vehicle emissions as trail users

travel to the trail. Conversely, overall emissions may be reduced as more people walk the trail rather than drive for pleasure. Under the action alternatives, the presence of a protected greenway would limit some development and therefore limit negative impacts to air quality. The air quality of Langlade County is good, and current and anticipated use of the trail is moderate; therefore, the impact from trail users' vehicles on air quality is expected to be negligible.

Visual Resources

Alternatives 2, 3, and 4 would, over time, permanently protect land within the trail corridor from development. The trailway would typically include an area greater than the width of the trail itself, providing a visual buffer from the surrounding landscape. A planned corridor for the trail would ensure that possible trail route options are evaluated to provide outstanding views and excellent hiking experiences.

Vegetative management plans could be implemented to further increase the trailway's scenic value over time. This would positively affect not only the trail but also the surrounding land. Employing vegetative management plans might involve work to enhance existing plant communities or re-create former communities, which may beneficially impact biodiversity. Selective pruning or cutting may also be implemented to improve views of features inside or outside the immediate trailway.

Depending on its location, the trail offers numerous opportunities to preserve views, vistas, and other visually appealing topographical and vegetative features. Their incorporation into the trailway would expose visitors to scenic resources they do not normally encounter as they travel through the area which would be a beneficial impact. Because many of the areas within the proposed corridor are known for their scenic beauty, they are especially threatened by scattered site rural development. Some of the most significant are unprotected lake shorelines, undeveloped portions of the tunnel channels, and the western edge of the Almond Moraine overlooking the Antigo Flats. Since virtually any location on or near the moraine is a potential home site, preserving the trailway through acquisition would reduce the number of incongruous visual features seen by trail users, and preserve these features for generations to come. Alternative 4, encompasses the greatest number of unprotected lake shorelines, undeveloped tunnel channels, as well as views over the Antigo Flats. It would therefore have the greatest benefit.

Under the No Action alternative, the location of the trail would be more dependent on hand-shake agreements. This means that typically only the trail itself, or a very limited area surrounding the trail would be protected from development and, most likely, only on a temporary basis. The natural area created by the trail may be limited in size and could eventually be lost due to relocation of the trail. Under this alternative, planning activities to determine the trail route would be minimal and significant views might therefore be left out of the trail route, which would be an adverse impact.

B. IMPACTS TO BIOLOGICAL RESOURCES

Ecosystem

Development of the action alternatives in southern Langlade County will create a continuous, protected, undeveloped trailway of diverse habitats (both uplands and wetlands) that will promote an increase in biodiversity on lands purchased for the trail as well as on the public lands it connects. Of the action alternatives, Alternative 2 contains six publicly owned projects; Alternative 3 has eleven; and, Alternative 4 has ten. Because of the linear nature of the trail, this greenspace will serve as a wildlife corridor, facilitating movement between areas of protected land. A protected trailway will prevent future fragmentation of the trail by prohibiting encroachment of residential and commercial/industrial developments.

Development of a trailway would have less adverse environmental impacts than many of the existing land uses. Current agricultural land practices make the soils prone to erosion, and use of petro-chemicals may have a negative effect on land and wildlife health. The trailway will create an improved biological habitat for birds and wildlife by supporting plant diversity, allowing natural processes to occur, and reducing fertilizer and pesticide use.

It is possible that the development of the Ice Age NST may act as an attraction and lead to increased residential development along the trailway. This increase in home building could have an adverse impact on the plant and animal communities near the trail. However, the trail's role in encouraging residential development is likely to be limited to areas directly adjacent to the trail and will not be significant within the larger development trend of southern Langlade County. Residential development in Langlade County is based on larger market trends. A review of building permits indicates that construction activity peaked in Langlade County in 2000 and has declined countywide by 40 percent since then. Regarding the number of building permits, of the top five towns, two are in the Ice Age NST proposed corridor—Polar and Rolling. Building activity in Rolling peaked in 1995. Norwood and Antigo were seventh and eighth, respectively, on the list. The scenic, wooded rolling topography that characterizes the moraines close to the City of Antigo accounts for the popularity of these towns for housing development.

Further land acquisition and development of the Ice Age NST into adjacent counties and beyond will extend the protected trailway. The cumulative impacts of this protection would increase public recreational opportunities, and promote increased bio-diversity by discouraging habitat fragmentation and resource destruction, which would be a beneficial impact.

Under the No Action alternative, if the volunteers from the IATA are able to obtain permission from private landowners to cross their property, the ecosystem may temporarily benefit if the trailway is wide enough; however, this is not usually the case. Changing land ownership and development would always be a threat, causing an adverse fragmentation of the trailway and ecosystem.

Invasive Species

Invasive species are currently spreading into ecosystems within the corridor regardless of the trail. Under all of the alternatives it is possible that a non-native species could be introduced within the trailway. Under the action alternatives, planned and coordinated development and maintenance of the Ice Age NST would occur, which would help control the advance of exotic vegetation into native ecosystems. This is a beneficial outcome.

Ideally, a program of monitoring and inspection for invasive species should be a regular trail maintenance activity. Trail maintenance on publicly-owned properties is performed according to specific agreements, schedules, and policies developed specifically for the property. In some instances, trail maintenance will be performed by the WDNR staff according to procedures. In other cases, maintenance will be done by volunteers who participate in annual and periodic trail activities.

Control activities follow the recommendations outlined in the Wisconsin Manual of Control Recommendations for Ecologically Invasive Plants edited by Randy Hoffman and Kelly Kearns. This publication provides information about the identification, monitoring and control of exotic and invasive species in a manner sensitive to both individual species and natural communities. It was produced by Wisconsin Department of Natural Resources, Bureau of Endangered Resources in May 1997. The publication is available on-line through the department's website at <<http://dnr.wi.gov/invasives/publications/books.htm>>.

The Wisconsin Council on Forestry also sponsored the development of Best Management Practices to help control the spread of invasive species, specifically for forests, recreational areas, urban forests and transportation and utility rights-of-ways. This publication is available on-line at the council's website at <http://council.wisconsinforestry.org/invasives/>.

A wayside exhibit and boot brush, as shown below, could be located at the entrance to Ice Age NST 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.



Under the No Action alternative, development of the trail would be more opportunistic. It would probably not undergo the same evaluative process, at times utilizing WDNR land managers, to help identify a route that would have the least impact on advancing exotic species. This would adversely affect this growing problem.

Wildlife

In general, under Alternatives 2, 3 and 4, securing a trailway would have no significant impacts on the wildlife within the proposed corridor. The area where they are located is a mixture of commercial woodlands, public lands, agricultural fields, and home-sites. Generally, the flatter portions are used for crop production. The primary crops are potatoes, corn, wheat, soybeans. This type of land use creates good wildlife habitat particularly for “edge” species, which dominate.

If the land within the proposed corridor does not retain its rural character and development pressure grows, existing wildlife habitat will become increasingly fragmented. Securing a continuous corridor in public ownership would greatly benefit wildlife, both their habitat and movements. Some wildlife may be disturbed during construction activities and when hikers are using the trail. This disturbance is short term, and the overall pattern of wildlife use of the area would not change. Most wildlife would become accustomed to the occasional presence of hikers. It has been the experience of the Ice Age NST that users are concerned and aware of the surrounding environment and take great precautions to preserve the habitats that surround the trail.

Under the No Action alternative, attaining a continuous, permanently protected trailway would be unlikely. Without a continuous trailway and if development pressures increase, existing wildlife habitat will become increasingly fragmented. This fragmentation will cause sensitive species to decrease and edge species to increase, thereby adversely affecting biodiversity.

Fisheries

Under all alternatives, impacts to fisheries can be mitigated to a negligible level. With proper and effective trail design, erosion control during construction, proper placement of water crossings, etc., it is unlikely that there would be adverse impacts to the fishery resources of the area near the Ice Age NST. Proper maintenance of the trail, especially in hilly areas near surface waters, will help prevent impacts to the fishery resources due to erosion and sedimentation. This is also discussed under Water Resources.

Potential impacts to fisheries include increased sedimentation, stream bank destabilization, and increased exotic species. Under Alternatives 2, 3, 4, trail developers would work with the local WDNR wildlife biologist and water regulation and zoning staff to ensure that when construction of the trail occurs, potential impacts are minimized. Under the No Action, if coordination with land managers does not occur, adverse impacts may happen.

Threatened and Endangered Species

The National Park Service (NPS) and United States Fish and Wildlife Service (USFWS) have a review process in place to avoid impacting threatened and endangered species with the construction of the Ice Age NST state-wide including Langlade County. This process occurs in two phases. The first is a broad review of the alternative trail corridors for endangered and threatened species when the planning process is carried out. A more detailed review occurs when trail developers design a specific alignment for the trail in preparation for construction. Both reviews are coordinated with the USFWS and WDNR Bureau of Endangered Resources (BER). With this process in place, the action alternatives are unlikely to negatively impact threatened and endangered species in Langlade County. Consultation with USFWS and WDNR BER began in December 2002 and will continue as the trail is developed.

Under the No Action alternative, lack of a planned corridor and coordination with USFWS and WDNR BER may result in unintentional adverse impacts to species and habitats.

C. IMPACTS TO CULTURAL RESOURCES

In 2010, the NPS State Historic Preservation officer signed a Programmatic Agreement that outlines how the National Park Service will carry out their responsibilities regarding Section 106 of the National Historic Preservation Act for both the Ice Age and North Country National Scenic Trails in the State of Wisconsin. In general, there are two situations where Section 106 is triggered for both trails. They are the Corridor Planning Process and individual trail segment construction and maintenance. The agreement outlines the stipulations for meeting requirements. (See Appendix E—Programmatic Agreement between the US Department of Interior, Ice Age and North Country NSTs and the Wisconsin State Historic Preservation Officer).

Ideally, under the Programmatic Agreement, impacts to all of the alternatives would be negligible. However, under the No Action alternative, if there is no plan and trail construction occurs opportunistically, then there is a higher risk of lack of Section 106 coordination.

Nothing in this plan or its implementation is intended to modify, abrogate, or otherwise adversely affect tribal reserved or treaty-guaranteed rights.

D. IMPACTS TO SOCIO-ECONOMIC RESOURCES

Communities and Businesses

Establishment of the trail under all alternatives may attract users into the communities through which the trail passes. Under Alternative 2, 3, and 4, additional trailheads with parking areas would be planned for and developed. Minor increases in traffic on local roads may result.

Increased public use of the area may benefit local businesses. Although the trail may attract some new commercial establishments to the local communities, a significant increase in that type of development is not expected. As awareness and use of the Ice Age NST increases, some economic benefits to existing area businesses such as grocery stores and bed & breakfast inns, may result from spending by day hikers and overnight backpackers.

Economic benefits to trailside communities may not be as great under the No Action alternative. Lack of a coordinated effort to plan the route of the trail and its' support facilities may mean losing opportunities to make important connections that would benefit the local economy.

Under all alternatives, emergency services for hikers may be necessary. The appropriate local jurisdiction will be responsible for any law enforcement or emergency responses along the trail.

Land Use and Land Ownership

In some areas of the proposed corridor, land use will change from agricultural to conservation/recreational. This means that currently cultivated land may revert to native plant communities. The increased plant diversity and decreased use of fertilizers and pesticides in these areas would create an improved biological habitat for birds and wildlife thus having a beneficial impact.

According to the Natural Resources Conservation Service (NRCS), projects that irreversibly convert farmland to non-agricultural uses are considered subject to the Farmland Protection Policy Act. The NRCS does not consider the Ice Age NST project as an irreversible conversion of farmland and therefore its impact is negligible. Some land acquired for the trail may be leased back for agricultural purposes, preserving the existing land use.

There may be potential conflicts between trail users and neighboring agricultural management practices. For example, farmers are concerned about how and to what extent the trail and its users will impact their management practices (pesticide application, manure spreading). To address these concerns, the trailway typically provides a buffer between the trail and neighboring landowners.

Land use and ownership patterns within the proposed corridor are changing. In southern Langlade County, large parcels are increasingly being subdivided for residential and recreational purposes. Trends show that in some areas this change is occurring rapidly. Most of the lots being created for new home-sites are less than five acres in size. Under the No Action alternative, this trend will continue with a subsequent loss of opportunities to build the trail. Completion of a permanent, continuous trailway would be unlikely under the No Action alternative.

Securing lands for the trail may change current land uses but does not preclude other future uses. By protecting lands for the trail under the action alternatives, development is restricted and resources are protected. The trailway may, however, be such an attractive and desirable resource that, although unintentional, residential development around it may increase. The Ice Age NST is a permitted use in all zoning classifications (§ 236.292 Wis. Stats).

Land acquired or protected for the trail will provide opportunities for neighbors, non-residents, and non-owners to have access to the glacial features along the trail. Some neighboring landowners are concerned about the possibility of trail users trespassing onto their lands, and the loss of privacy that may occur as a result of these users. The proposed acquisition zone of the trailway will provide a natural buffer between trail users and property owners. Signage will be used to direct use. Volunteers will monitor the trail and provide information to users to discourage inappropriate uses and activities.

Recreation Resources

Creation of the Ice Age NST through southern Langlade County will not only enhance public awareness of Wisconsin's glacial landscape through interpretation of the glacial features, but it would also connect the county with an outstanding, statewide, recreational trail system. The trail could provide links between Goto Lake, Rabe Springs, Demlow Springs, and Trout Springs State Fisheries Areas. Depending on its location, the trail could also provide a potential link to the Langlade County Gun Range and Mueller Lake Park. It will be used primarily for hiking as well as for bird watching, interpretive walks, and snowshoeing. This county-wide linkage of public lands would increase their utilization and benefit the recreation user. Statewide, as part of the 2005-2010 Wisconsin SCORP, researchers completed a survey of state and local recreation plan recommendations. From this survey, the Ice Age NST was found to be a desirable feature across the state.

The trail may impact the current recreational use of the existing public lands within the proposed corridor. A positive impact is that the trail would provide better access to portions of these holdings for hikers as well as hunters and fishers and create a greater awareness of these public lands. In the 2005-2010 SCORP, "lack of access to public lands" was identified as a primary environmental barrier for increased physical activity and outdoor recreation. In the 2005-2010 SCORP, recreation compatibilities were assessed for a number of common recreation uses across the state. Through this work it was found that hikers view hunting as an activity antagonistic to their own. From the hunter's perspective, however, hiking has a neutral, supplementary interaction with hunting. These findings suggest that hiking and hunting—as well as other potential trail uses—can be compatible given proper planning and managed user interactions.

Because the trailway will pass through local recreation lands, these areas may receive additional visitors as a result of the trail. These facilities should not be greatly affected. Some secondary impacts may occur such as litter and trespassing. These impacts will be negligible because, by its nature, the Ice Age NST is designed and managed to provide for low-impact experiences.

The projected use of the trail is difficult to estimate. Based on patterns of use on other trails it is likely that use will be highest near populated areas or existing recreation areas. In some areas, conflicts between user groups could develop. These conflicts are also difficult to predict, because perceived conflict is directly related to volume of use. Trail volunteers and local law enforcement agencies will monitor the trail as necessary.

The physical and social carrying capacities of the trail are not known and to some degree may be dependent upon the width of the railway actually acquired, volume of use, and other factors. However, use of the Ice Age NST in other areas has not resulted in deterioration of the resource or lessened user experience.

As the trail is developed and as it becomes more widely known, users and patterns of use can be studied and monitored. Actions will be taken as necessary to resolve user conflicts or other conflicts that may develop as a result of the trail's presence.

In the case of an injury to a trail user or a fire along the trail, an emergency response may be needed. In these situations, law enforcement and medical professionals from the nearest community would be responsible for proper emergency response. The risk of such an event occurring is minimal as is the risk of environmental damage from such a response.

Under the No Action alternative, trail development may not occur in a planned fashion to connect public lands, which would be a lost opportunity and an adverse impact. Under the No Action alternative, recreational management responsibilities are the same as for the Alternatives 2, 3, and 4. Potential impacts would therefore be the same.

Public Health

Within the State of Wisconsin, 61 percent of adults are obese or overweight. (SCORP 2005-2010). By providing a space for active outdoor recreation, the action alternatives will help the state reach the 2010 Center of Disease Control (CDC) goal of only 15 percent of adults being obese/overweight. The trail corridor will also help the state meet an additional CDC goal of 30 percent of adults being physically active. Under the No Action alternative it is very possible that the obesity/overweight trend will continue, leading to an increased incidence of Type 2 diabetes, coronary heart disease, high blood pressure and stroke, all of which contribute to shortened life expectancies and higher costs of medical care.

Tax Base and Fiscal Impacts

It is difficult to determine the fiscal impacts to local units of government resulting from the development of the Ice Age NST. This is because there is no way to predict what private lands will be available for future acquisition or donation on a "willing seller-buyer basis."

The State's "Payments in Lieu of Taxes" (or PILT) are payments to local governments that help offset losses in property taxes due to nontaxable state lands within their boundaries. Eligibility for payment under the PILT program is reserved for local governments that provide services such as those related to public safety, environment, housing, social services, and transportation. PILT payment calculations to local governments are based upon State Statue 70:114: Aids on certain state lands equivalent to property taxes.

Currently, the Federal government provides grants to the State of Wisconsin to match funds for acquisition purposes. If the Federal government was to purchase lands, under the Federal Law U.S.C. 6901-6907, the Payment in Lieu of Taxes (PILT) Act, would authorize payments to

certain units of local government with eligible Federal lands within their jurisdictions. These payments would occur under prescribed payment formulas and within amounts annually appropriated by Congress. The laws that implement these payments recognize that the inability of local governments to collect property taxes on Federally-owned land can create a financial impact. PILT payments help local governments carry out such vital services as firefighting and police protection, construction of public schools and roads, and search-and-rescue operations. PILT payments are made annually for tax-exempt Federal lands. The Bureau of Land Management administers the program by calculating payments according to formulas established by law and distributes the funds in an equitable manner. The two basic formulas are based on population and the amount of federal land in a local jurisdiction. One formula allows \$1.99 per acre. The other formula applies as follows: if property taxes were paid for the previous 5 years, 1 percent of fair market value of the property (sale price) or the amount of property taxes paid (whichever is the smaller amount).

If land is acquired by the IATA, a non-profit organization, a petition to exempt the land from property taxation could be filed. Currently, the IATA pays property taxes on some of the Ice Age NST land it owns, and has filed for exemption on other properties.

Land Acquisition and Trail Development

Under the No Action Alternative, development of the Ice Age NST would be opportunistic and would not identify costs associated with the development of the trail, support facilities for users, or land acquisition costs. Without a plan to optimize costs, fiscal resources would likely be used in an inefficient manner. These impacts would largely be avoided under the planned trail construction and land acquisition practices outlined in the action alternatives. The costs of developing the Ice Age NST under Alternative 2, 3, or 4 are discussed below.

Estimated Costs of Land Acquisition

Under Alternatives 2, 3, or 4, depending on the route selected, the Ice Age NST through Langlade County is expected to be 75-80 miles in length when completed. Today there are 54 miles of trail on the ground leaving approximately 20-25 miles left to construct. It is difficult to determine the exact cost of acquiring and developing 20-25 miles of trail through southern Langlade County since the trail's exact location is not known. From a cost standpoint, much of the land most appropriate for trail development is also the same land that is in highest demand for rural home-sites as well as hunting lands. Recent property sales of rural non-agricultural land in the proposed Ice Age NST corridor have been upwards of \$2,500 to \$3,000 per acre for 40-acre parcels. This translates to about \$30,000 to \$36,000 per mile for each 100 feet of average corridor width acquired. For example, assuming that 20 miles of trail would need to be developed on lands presently under private ownership, at an average corridor width of 100 feet, the total land acquisition cost would be in the range of \$600,000 to \$720,000. The table below lists approximate costs based on different trail lengths and average width scenarios. Realistically, the trailway width will vary along its entire length because its' breadth is determined by a number of factors including land use, geography and what the landowner desires.

Table 4

COST OF TRAILWAY FOR ICE AGE NST
Assuming \$2,500 to \$3,000 per acre

TRAIL LENGTH		
Average Corridor Width	20 miles	25 miles
100 feet (12 acre/mile)	\$600,000 to \$720, 000	\$750,000 to \$900,000
200 feet (24 acre/mile)	\$1,200,000 to \$1,440,000	\$1,500 ,000 to \$1,800,000
330 feet (40 acre/mile)	\$2,000,000 to \$2,400,000	\$2,500,000 to \$3,000,000
660 feet (80 acre/mile)	\$4,000,000 to \$4,800,000	\$5,000,000 to \$6,000,000

Estimated Costs of Trail Development

The majority of the trail built in southern Langlade County will either be a simple brushed trail through grasses and trees, or a constructed trail composed of mineral soil. Aside from the cost of tools, the labor will be provided by volunteers from the Ice Age Trail Alliance. There will be steep or wet areas that the trail will cross requiring side-hill construction or surfacing such as puncheon, turnpike, or boardwalk. These areas are expected to be minimal and, since the exact location of the trail is unknown at this time, it is difficult to provide exact costs for these situations.

Depending on the trail's location, up to three water crossings will be required on the remaining Langlade County segment of the Ice Age NST. Two of the crossings would be small bridges located on headwater streams. Although the trail is expected to cross intermittent streams and drainage swales, none would require a significant bridge. A reasonable estimate for bridge construction costs is \$25,000. This estimate assumes that two new bridges would be built at \$10,000 each, and some minor construction cost (\$5,000) may be required to span smaller swales or intermittent streams.

Parking is presently available at several locations and, depending on trail location, can minimize the number of new parking lots that need to be constructed. Existing parking can be found in small parking areas located on WDNR State Wildlife and Fishery Areas. These areas are located at Goto Lake, Rabe Springs, Demlow Springs SFAs, Perch Lake and Trout Springs SFA. Additional parking and restroom facilities are available at the County Gun Range and Mueller Lake Park.

Based on current available parking, an additional 1-2 parking lots may be required to accommodate trail users. These parking areas would be designed for approximately 2-5 vehicles. A total estimated cost of \$13,000 is projected for constructing one large lot and one small lot. Simple information kiosks will be placed at existing and proposed parking areas; a total of 5 kiosks are expected to be needed. Based on an estimated cost of \$700 per unit, the total cost for the new kiosks is \$3,500. Interpretive exhibits may be placed on a few public lands that have important stories regarding glaciation or the natural resources of the site, i.e. the Antigo Flats overlook, Trout Springs SFA, and somewhere on a yet to be identified tunnel channel. For exhibits at three locations, this could cost approximately \$15,000-20,000.

E. SUMMARY OF CUMULATIVE IMPACTS

The Ice Age NST Corridor Planning Process for southern Langlade County is part of the overall implementation of the trail across 30 counties. Statewide, of the projected 1,200 miles, over 600 miles of the trail is complete. Much of the Ice Age NST has been, and continues to be, developed on private and public property. With the continued development of the trail in other counties, there will be cumulative impacts. This section serves to summarize these impacts.

- The continued planning and development of the Ice Age NST through 30 counties will require a commitment of funds to protect lands for the trail. Funds for acquiring lands will come primarily through the Federal Land and Water Conservation Fund and the State Stewardship Program. The State Stewardship Program provides funds to acquire lands for the trail that are matched with federal and/or private dollars, and for the WDNR to acquire lands directly.
- For lands it owns in fee simple, WDNR pays aids in lieu of taxes. WDNR acquisition of lands for use by the Ice Age NST will therefore not have a tax burden on local units of government. As more lands are acquired, however, there will be an increased tax obligation to WDNR.
- Some farmland would be used as trailway for the Ice Age NST. This farmland would, in essence, be “banked” since the land would be returned to a natural state. This natural state would increase wildlife habitat and biodiversity over the long term. The Natural Resources Conservation Service confirmed that only Federal projects that irreversibly convert farmland to non-agricultural uses are covered by the Farmland Protection Policy Act.
- Establishment of the Ice Age NST will result in an increased preservation of green, open space over both the short and long term.
- Development of the Ice Age NST will provide the opportunity for families and individuals to recreate and exercise their way back to health. Americans’ physical activity has reached an all time low. The National Center for Bicycling and Walking states that “Obesity, diabetes, heart disease, stress and a host of other ills are increasing. Physical inactivity and obesity rank second to smoking in their contribution to total

mortality in the United States.” Part of the problem is the lack of places to walk and recreate. Increasingly, in communities where there are opportunities to walk, people may not feel safe because of high motor vehicle speeds and volumes. Development of the Ice Age NST will provide a backbone for a statewide off-road trail system offering 1,200 miles of hiking trail. Those who travel on the Ice Age NST will relieve stress, better their health, and visit scenic natural spaces and recreation areas along the trail’s route.

- Founded in 1958, the IATA is a nonprofit organization whose primary focus is to protect, develop, and maintain the Ice Age NST. The IATA works with local trail chapters, NPS, and WDNR to assure the continuity of the trail throughout 30 counties in the State of Wisconsin. Continued development of the trail would require a greater commitment by the IATA to recruit more members to develop and maintain trailway.
- Time is an important factor in the development of the trail. The continued implementation of the Corridor Planning Process would speed up consensus on where the trail is located, as well as its acquisition and development. Given the rising values of land within the corridor, shortening the time for completion of the Ice Age NST would ultimately decrease its cost.
- Designation of this corridor in southern Langlade County would establish the location of the northern end of the trail corridor in Marathon County. Since the adjacent Marathon County trail segment is not presently in place, flexibility would be retained in interfacing the two segments.
- Implementation of this plan would require the commitment of human, natural, and fiscal resources to develop and maintain the trail. This commitment is justified given the benefits to the public in terms of opportunities for recreation and education, as well as preservation of significant national and state natural resources. Because this project is a partnership project composed of Federal, State, regional, county, local, and volunteer participants, its overall economic and management impacts are shared and therefore greatly diminishing the cost to any one agency or group.

Chapter 8

Public Involvement, Consultation, and Coordination; and Definition of Terms

PUBLIC INVOLVEMENT

There has been considerable emphasis on public involvement during this trail planning effort. As a part of this planning process, the IATA, NPS, and WDNR made numerous contacts with the public, Langlade County and the affected towns. Outlined below are the results of our contacts:

Core Team Meetings:

The Corridor Planning Process formally began on March 2003, with the initial meeting of the Core Team. The purpose of the first meeting was to explain the Corridor Planning Process, discuss past efforts to establish the Ice Age NST in southern Langlade County, and gain an overview of the county's glacial landscape and other significant natural and cultural features. Since that time, the Core Team has met over thirty times to coordinate public involvement, conduct field work and undertake other activities involved with refining the corridor, identifying potential trail routes, and assessing landowner interest.

Town and County Board Meetings:

During November 2003, a series of presentations were made to four local city and town boards potentially within the confines of the corridor. These presentations focused on providing an overview of the Ice Age NST, discussing the Corridor Planning Process, and responding to questions and concerns with the project. Similar presentations were made to the Langlade County Board on September 16, 2003, and the Langlade County Forestry Committee on August 14, 2003, and February 9, 2009. Additional presentations were made to the Langlade County Towns Association in the fall of 2005, and spring of 2009.

Public Open House Meetings—Series I:

After providing further definition to the corridor, the Core Team hosted an initial round of Public Open Houses. These were held on February 4, 7, and 8, 2006, in the towns of Antigo, Polar, and Rolling respectively. About 100 people attended the three sessions. These meetings provided area landowners with an opportunity to learn about the project, gain insight on how it would impact them, and share their level of interest as potential participants. Two possible "Corridors of Opportunity" were presented to the public. Corridor A focused on the terminal moraine to the west of Mueller Lake Park in Polar and the other, Corridor B, incorporated existing public lands and facilities to the south and east.

Public Open House Meetings—Series II

There was a gap of time between the first and second series of Open House meetings. The reason for this was to develop a single Preferred Alternative, which incorporated portions of both Corridors A and B, to identify possible route options for the trail within the preferred alternative, and individually contact landowners to determine the feasibility of the possible route options. The second series of Open Houses was held in June 2009 in the towns of Polar (June 10) and Rolling (June 13). More than 100 people attended. These meetings provided information about

the Ice Age NST project, specific information about the possible route options, and answered questions and concerns regarding the implementation and management of the trail. Presentations highlighting local trail segments and chapter led hikes and long-distance hiking were also provided. Comments received were subsequently organized and recorded in the NPS Planning, Environment and Public Comment (PEPC) system.

Local Comprehensive Planning Efforts

Throughout the planning for southern Langlade County, our consultant on this project from North Central Region Planning Commission was also developing comprehensive local plans for individual towns in the county. During committee meetings, he would regularly provide them with updates on the status of our planning process.

CONSULTATION FOR PREPARATION OF ENVIRONMENTAL ASSESSMENT

Agencies and individuals contacted:

Laukena Au, United States Fish and Wildlife Service
Ron Zalewski, Wisconsin Department of Natural Resources
Bharat Mathur, United States Environmental Protection Agency
Bruce Matzke, Federal Highway Administration
Charlie Peters, United States Geologic Survey
Michael Pfenning, United States Army Corps of Engineers
Chip Brown, State Historical Society of Wisconsin
Joel Trick, United States Fish and Wildlife Service
Chris Miller, Natural Resources Conservation Service
Joe Rywer, United States Department of Agriculture, Forest Service
Jonathan Gilbert, Great Lakes Indian Fish and Wildlife Commission
Victoria Doud, Lac du Flambeau Band of Lake Superior Ojibway Indians

DEFINITION OF TERMS

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 about 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”. The “Corridor” has different implications for each primary partner:

- To the WDNR, it represents the area within which it may (1) accept gifts of lands for dedication for the Ice Age State Scenic Trail, and (2) acquire lands for the trailway.
- To the NPS, it represents the area within which it will exercise its authorities to establish, protect, and manage the Ice Age NST. It is an area that has been delineated through a public planning process and has met Federal environmental compliance requirements. The lines defining the corridor will be treated as the “park” boundary for the trail and the

limits within which Federal land acquisition authority for the trail would be exercised to create a suitable “Trailway.” It also represents the area which will be considered in other planning documents such as resource management plans and land protection plans.

- To the IATA, it represents the area within which it will seek to protect or have protected a suitable “Trailway” for the Ice Age NST in order to preserve significant glacial features, provide an outstanding trail use experience, and manage on a sustainable basis the resources of the “Trailway”. Also see Trail and Trailway.

Rarely will the partners seek to acquire or protect the entire width of the corridor for the trail, unless it contains outstanding glacial features. The reason the corridor is wider than the trailway that will be acquired is to provide the opportunity to be flexible in working with willing landowners on a voluntary basis. (see “Trailway”)

Dedication: As provided for in Wis. Stats. 23.293, the transfer of land or a permanent interest in the land to the State of Wisconsin (for Ice Age NST purposes), and a binding unilateral declaration by the State that the land rights under the ownership of the State will be held in trust for the people by the WDNR in a manner which ensures the stewardship of the area. See also “Match-Grant Program.”

Drumlins: Elliptical or elongate hills formed by erosion and deposition of material beneath thick glacial ice and streamlined in the direction of ice flow.

Endangered Species: A species on the Federal or Wisconsin Endangered Species list and 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 the WDNR to be in jeopardy on the basis of scientific evidence.

Exurban: Pockets of residential development lying beyond the suburbs of a city, typically composed of upscale homes.

Ice Age Trail Alliance (IATA): The Ice Age Trail Alliance (formerly the Ice Age Trail Park and Trail Foundation) is a non-profit Wisconsin Corporation whose mission is to create, support, and protect a thousand-mile foot trail tracing Ice Age formations across Wisconsin.

Ice Walled Lake Plain: Mesa-like hills that were once lakes on a melting glacier. Streams flowing on the glacier deposited loads of sediment into these lakes. When the surrounding glacier had completely melted, the lake bottoms became the hilltops.

Kettle: A depression formed by the melting of buried glacial ice. Some kettle holes hold water.

Moraine: A moraine is a ridge formed by the gravel, sand, and boulders carried along by the glacier and deposited where the glacier stopped. Morainal ridges vary in height.

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 Ice Age NST by coordinating, guiding, and assisting the efforts of others to acquire, develop, operate, protect, and maintain the trail. The 1983 comprehensive plan prepared by the NPS identifies the DNR and the IATA as the primary cooperators in the long-term effort to develop and manage the trail.

Outwash: A sloping deposit of rounded gravel and fine sand left from the ice streams flowing away from the glaciers.

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 Ice Age NST is one of the qualifying projects, and may receive grants for land acquisition.

Threatened Species: A species on the Federal or Wisconsin Threatened 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 Ice Age NST. 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 Ice Age NST. Generally its width ranges from 50-1000 feet. It is land that has been secured for the Ice Age NST, frequently with state Stewardship and federal LAWCON funds. These secured rights may be held by the WDNR or IATA. 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.

Wisconsin Department of Natural Resources (WDNR): The state agency responsible for implementing State and Federal laws that protect and enhance Wisconsin’s natural resources—its air, land, water, wildlife, fish, and plants. It coordinates the many State-administered programs that protect the environment and provides a full range of outdoor recreational opportunities for Wisconsin residents and visitors. The WDNR serves as the primary land agent for the trail utilizing monies from the State Stewardship Program and federal grants.

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APPENDIX A. Identification of Possible Trail Routes

In addition to identifying a “Corridor of Opportunity” for the Ice Age NST, planners have found it useful and desirable to identify possible routes for the trail within the corridor. Because of the corridor’s extensive width (generally 3-5 miles), identifying possible routes would focus efforts to establish the trail (time and money), and enable planners to design routes that best exemplify the trail’s mission and goals. The trail was divided up into segments spanning the corridor’s entire length. Again, since participation in the Ice Age NST project is voluntary, the trail’s ultimate location would be determined by the willingness of landowners to sell lands or grant permission to cross their property.

To help design the alternative routes, the Ice Age NST Planning Team identified ten objectives listed below:

- Trail should provide scenic vistas
- Trail should traverse a variety of glacial features.
- Trail links other significant archeological, historical, cultural, geographical, geological, and biological sites.
- Trail utilizes public lands when possible.
- Trail traverses through a variety of plant communities.
- Trail has local landowner and town support.
- Trail avoids development in rural areas.
- Trail provides support facilities.
- Trail links to communities.
- Trail links other significant resource areas.

After the possible trail routes were developed based on the ten objectives, the desirability of each alternative could be evaluated on the basis of criteria grouped into three broad categories of concern: **trail quality**, **environmental considerations**, and **sociological considerations**.

Trail quality is an assessment of each proposed route from the hiker’s point of view. These criteria evaluate, as objectively as possible, how well each route meets the purpose and objectives of the Ice Age NST as set forth in the National Trails System Act. The purpose of National Scenic Trail, as stated in the Act, is “to provide for maximum outdoor recreation potential and for the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of the areas through which such trails may pass” [16 U.S.C. 1242(a)(3)]. Criteria studied under **trail quality** include:

- Length – the length of each proposed route. Information was obtained from GIS digital files compiled by Langlade County, the North Central Wisconsin Regional Planning Commission and the National Park Service.
- Road Crossings – the identification and number of road crossings. A high number of crossings may take away from the user’s experience of the trail and create a greater potential for accidents.
- Diversity and Interest of Route – identifies the significant points of interest that are designed into each route to create a desirable hiking experience. Elements evaluated may include significant geologic features, the amount of trail located in the sun and shade, amount of trail located on both hills and valleys, scenic views, and visually outstanding, unique or geographically limited plant communities. Information was obtained from the Core Team members, aerial photographs, and topographic maps.
- Existing development and the probability of future development (low, moderate, high) – the level of existing development and the degree to which each route is likely to be affected by future development. Assessments of future development, while speculative, are based on extrapolations of current patterns of development. Information was obtained from recent aerial photographs, detailed topographic maps and, where available, proposed land use from local land management plans.

Environmental considerations are those impacts that the trail might have on the local natural resources. Information on these impacts has been gathered by questioning Federal, State and County agencies, and interested private organizations and individuals. Criteria studied under **environmental considerations** include:

- Construction Impacts/Number of Stream Crossings – an evaluation of each possible route based on the degree of development needed to construct the trail. The assessment is based on slope, bridge installations, potential of soil erosion or excessive compaction, and impacts to wetlands, floodplains and fisheries. Information sources included, but were not limited to the WDNR Bureaus of Wildlife Management and Water Resources Management.
- Rare, endangered, and threatened species – identifies if a route goes through an occurrence of a plant or animal species that have been identified by the Federal or State government as being endangered or threatened. Information was obtained from the U.S.

Fish and Wildlife Service, and WDNR Bureaus of Wildlife Management and Endangered Resources, and the University of Wisconsin's environmental, biology, and natural resources experts.

Sociological considerations are those impacts that the trail might have on the local human environment, affected landowners, and communities through which the trail may pass. Criteria studied under **sociological considerations** include:

- Number of affected landowners – the number of landowners whose property might be crossed by each route.
- Percentage of public land utilized – the percentage of public lands crossed in relation to the total length of the possible route.
- Secondary benefits – potential positive outcomes resulting from the development of the trail through an area that affect public access, natural resource preservation or enhancement, or economic resources. Information was obtained from local officials, University of Wisconsin staff, local chapters of the Ice Age Trail Alliance, and landowners.

What it means if a possible trail route option goes through your property: Participation by landowners in the Ice Age NST project is voluntary. Planners recognize that actual trail placement will be modified due to the need for landowner acceptance and land-use constraints. The next section provides a summary of each possible route.

DESCRIPTION AND ANALYSIS OF POSSIBLE TRAIL ROUTES

	Segment ID		
Trail Quality	1A	1B	1C
Approx. Segment Length (miles)	2.58	2.46	1.4
Road Crossings	3	2	1
Diversity and Interest of Route	Begins on forested ground moraine near the headwaters of Deer Creek before passing through agricultural fields along eastern edge of tunnel channel. Terminates at Mueller Lake Park in the community of Polar.	Begins on forested ground moraine in commercial woodlands. Crosses Hwy 64 near 5 th Avenue which is used to traverse wetlands associated with Deer Creek. Passes through state and private lands and restoration area before terminating at Goto Lake SFA.	Provides for connection between Goto Lake SFA, Mueller Lake County Park, and community of Polar, passes through residential development along east side of lake.
Existing Development and Probability of Future Development	Properties near lake and along Hwy 64 and Polar Road are currently developed	Land is currently divided into 40-acre parcels or larger and used for recreational and/or agricultural purposes. Parcels located along improved roads may face pressure to subdivide into smaller, residential properties.	North and east ends of lake are already developed, the remaining parcels will face development pressure in the future.
Environmental Considerations			
Construction Impacts/Number of Stream Crossings	0	1	0
Endangered, Threatened, or Special Concern Species Identified by USFWS or WDNR BER	No federally listed species	No federally listed species	No federally listed species

	Segment ID		
Sociological Considerations	1A	1B	1C
Number of Landowners Affected	3	5	3
Landowner Interest		Some support shown by local landowners	Some support shown by local landowners
Public Lands and Rights-of-way Used	2%-Mueller Lake County Park	28%-Goto Lake SFA, Deer Creek, 5th Avenue right-of-way	48%-Goto Lake SFA, Hanke Road, Hwy 64 right-of-way
Secondary Benefits	Eliminates more than 2 miles of trail currently routed along roads and incorporates existing trailhead at Mueller Lake Park.	Eliminates more than 2 miles of trail currently routed along roads and provides a connection between 2 WDNR properties and possible support facilities	Provides connection or possible spur trail to existing trailhead at Mueller Lake Park and existing support facilities

	Segment ID		
Trail Quality	2A	2B	2C
Approx. Segment Length (miles)	1.36	2.12	0.49
Road Crossings	2	1	0
Diversity and Interest of Route	Begins at the existing trailhead at Mueller Lake Park and traverses a relatively flat, primarily wooded landscape with many openings.	Incorporated both the Goto Lake SFA and Rabe Lake SFA . This route option passes through primarily wooded landscapes with a large agricultural opening in the center. It features a contrast between the gently sloping agricultural fields, the high relief of the Goto Lake SFA and spring fed Rabe Lake SFA.	This segment serves as a connection between the northern and southern route options. It passes through commercial forest lands and rolling hills before terminating at the NW corner of the Rabe Lake SFA.
Existing Development and Probability of Future Development	Properties near Mueller Lake and Polar Road are currently developed. Those located along improved roads may face pressure to subdivide into smaller, residential properties.	There is some development pressure.	There is little development pressure.
Environmental Considerations			
Construction Impacts/Number of Stream Crossings	0	1	0
Endangered, Threatened, or Special Concern Species Identified by USFWS or WDNR BER	No federally listed species	No federally listed species	No federally listed species

	Segment ID		
Sociological Considerations	2A	2B	2C
Number of Landowners Affected	8	3	2
Landowner Interest	Some support shown by local landowners	Some support shown by local landowners	Some support shown by local landowners
Public Lands and Rights-of-way Used	9%	66%- Goto Lake SFA and Rabe Lake SFA	No public lands or rights-of-way
Secondary Benefits	Provides for a connection to the existing trailhead Mueller Lake Park and the community of Polar	Provides connection between existing public lands and possible support facilities	Provides for a connection between the northern and southern route options.

	Segment ID				
Trail Quality	3A	3B	3C	3D	3E
Approx. Segment Length (miles)	2.99	4.07	2.77	0.64	2.47
Road Crossings	3	4	4	0	2
Diversity and Interest of Route	This option travels through woodlands on hummocky topography as it heads west across County Highway S, skirting the edge of a former apple orchard as it approaches the edge of the terminal moraine.	Starting at Rabe Lake SFA, this option passes through a relatively flat agricultural landscape with some undulation and scattered woodlots. Midway along the segment are the Town of Polar ball fields and perennial gardens. The segment ends near Demlow Springs SFA, which features an undisturbed white-cedar dominated seepage swamp.	This route option traverses through commercial forest lands on the Almond Moraine interspersed with some agricultural fields and features a distinct north-south oriented ridgeline.	This option is mostly located on the Demlow Springs SFA and includes the headwaters of Mayking Creek, a tributary of the Red River. It is primarily wooded with gently rolling topography	This route option begins at Demlow Springs SFA, passes to the west of Kennedy Lake, and ends near the edge of the Almond Moraine. Primarily, it traverses woodlands interspersed with agricultural fields through gently rolling hills and relatively flat areas.
Existing Development and Probability of Future Development	Lands in the area are currently being subdivided into 10-acre lots. Those located along improved roads may face pressure to subdivide into smaller, residential properties.	Currently there is little pressure to convert these parcels into residential or other uses.	The wooded moraine and Kennedy Lake is an attractive setting for residential development.	Public lands are protected from development. Road access to private lands is limited.	The wooded moraine and Kennedy Lake is an attractive setting for residential development.

	Segment ID				
Environmental Considerations	3A	3B	3C	3D	3E
Construction Impacts/Number of Stream Crossings	0	1	0	0	0
Endangered, Threatened, or Special Concern Species Identified by USFWS or WDNR BER	No federally listed species	No federally listed species	No federally listed species	No federally listed species	No federally listed species
Sociological Considerations					
Number of Landowners Affected	11	11	11	2	7
Landowner Interest	Some support shown by local landowners	Some support shown by local landowners			Some support shown by local landowners
Public Lands and Rights-of-way Used	No public lands or rights-of-way	23%-Demlow Springs SFA , Town of Polar ball fields and perennial gardens	No public lands or rights-of-way	73%, Demlow Springs SFA	no public lands or rights-of-way
Secondary Benefits		Provides for a connection between Rabe Springs SFA, Town of Polar baseball fields and perennial gardens, and Demlow Spring SFA,		Possible trailhead location	

	Segment ID	
Trail Quality	4A	4B
Approx. Segment Length (miles)	1	3.6
Road Crossings	1	3
Diversity and Interest of Route	This option affords some of the best views of the Antigo Flats from atop the primarily wooded Almond Moraine. It features a stunning contrast between hummocky topography of the moraine and the vast outwash plain known as the Antigo Flats.	This option connects Demlow Springs SFA, to the Steffen Memorial Forest and Perch Lake. It passes through headwaters area of the Red River, large, relatively flat agricultural fields with some scattered woodlots. It offers expansive views of and agricultural landscape.
Existing Development and Probability of Future Development	The wooded moraine is an attractive setting for residential development. Large boulder field located along proposed route.	Larger parcels; although wooded portions may be attractive for residential development, this would be limited by road access to sites.
Environmental Considerations		
Construction Impacts/Number of Stream Crossings	0	0
Endangered, Threatened, or Special Concern Species Identified by USFWS or WDNR BER	No federally listed species	No federally listed species
Sociological Considerations		
Number of Landowners Affected	5	7
Landowner Interest		Little support shown by local landowners
Public Lands and Rights-of-way Used	No public lands or rights-of-way	18%-Steffen Memorial Forest

Secondary Benefits		Provides for a connection between the Demlow Springs SFA and Steffen Memorial Forrest, possible support facilities
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	Segment ID			
Trail Quality	5A	5B	5C	5D
Approx. Segment Length (miles)	2.23	3.14	1.83	0.51
Road Crossings	4	4	0	1
Diversity and Interest of Route	This route option lies atop the Almond Moraine. It is primarily wooded, with some agricultural fields. It highlights the contrast between relatively steep side slope and flatter bottom of a tunnel channel with the moraine's hummocky topography.	This route option begins in the Steffen Memorial Forest near the headwaters of the Red River. It passes through a relatively flat, mixed landscape of woodlands and large agricultural fields, and also passes near the springs which make up the headwaters of W Branch of Red River.	This segment follows a tunnel channel from the Trout Springs SFA, through the Almond Moraine. It is primarily wooded with portions that are relatively flat.	This route segment provides for a connection between routes that traverse the forested leading edge of the Almond Moraine, and one which highlights the more open agricultural fields and gently rolling topography of the headwaters of Red River.
Existing Development and Probability of Future Development	Wooded ground moraine is an attractive setting for residential development.	The land is currently divided into large parcels and used for recreational and/or agricultural purposes, and/or commercial woodlands.	Wooded moraine is an attractive setting for residential development.	Primarily protected lands
Environmental Considerations				
Construction Impacts/Number of Stream Crossings	0	2	0	1

Endangered, Threatened, or Special Concern Species Identified by USFWS or WDNR BER	No federally listed species	No federally listed species	No federally listed species	No federally listed species
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	Segment ID			
Sociological Considerations	5A	5B	5C	5D
Number of Landowners Affected	7	11	6	1
Landowner Interest	Some support shown by local landowners	Some support shown by local landowners	Some support shown by local landowners	Entire segment located on public land
Public Lands and Rights-of-way Used	No public lands or rights-of-way	6%-Steffen Memorial Forest	28%-Trout Springs SFA	100%-Steffen Memorial Forest and Trout Springs SFA
Secondary Benefits		Possible support facilities	Possible support facilities	Provides for a connection between the Steffen Memorial Forest and Trout Springs SFA, possible support facilities.

	Segment ID			
Trail Quality	6A	6B	6C	6D
Approx. Segment Length (miles)	2.08	2.58	2.29	0.26
Road Crossings	3	3	3	0
Diversity and Interest of Route	This option meanders through the rolling topography of the Almond Moraine. It is mostly wooded with several residential developments near its northern end.	This route option traverses the Almond Moraine. It is primarily wooded with some agricultural field. It features the contrast between relatively steep side slope and flat of tunnel channel and hummocky topography of the moraine.	This option connects the Trout Springs SFA and the County Gun Range atop the gently rolling, primarily wooded Almond Moraine. It passes near eskers and offers a view north of the receding hills associated with the moraine.	This segment provides for a connection between the two options which skirt the County Gun Range and landfill. It traverses a primarily wooded tunnel channel.
Existing Development and Probability of Future Development	Wooded moraine is an attractive setting for residential development.	Most parcels along this route are already held as individual home sites with the exception of a large agricultural tract to the south.	Wooded moraine is an attractive setting for residential development.	Wooded moraine is an attractive setting for residential development.
Environmental Considerations				
Construction Impacts/Number of Stream Crossings	0	0	0	0
Endangered, Threatened, or Special Concern Species Identified by USFWS or WDNR BER	No federally listed species	No federally listed species	No federally listed species	No federally listed species

	Segment ID			
Sociological Considerations	6A	6B	6C	6D
Number of Landowners Affected	7	11	5	2
Landowner Interest	Some support shown by local landowners		Some support shown by local landowners	Some support shown by local landowners
Public Lands and Rights-of-way Used	No public lands or rights-of-way	No public lands or rights-of-way	No public lands or rights-of-way	No public lands or rights-of-way
Secondary Benefits			Provides for a connection between the Trout Springs SFA and the County Gun Range, possible support facilities.	

	Segment ID			
Trail Quality	7A	7B	7C	7D
Approx. Segment Length (miles)	2.2	1.16	1.82	2.94
Road Crossings	2	2	1	4
Diversity and Interest of Route	This option skirts the County Gun Range, which is located in a tunnel channel, and the Landfill. The gently rolling topography is primarily wooded with some openings and potential views of gravel operations. It passes under Hwy 45 via a cattle crossing.	This option passes through the historic community of Elmhurst and generally follows an abandoned RR grade through a relatively open, flat landscape.	This option skirts the County Gun Range, which is located in a tunnel channel, and the Landfill. The gently rolling topography is primarily wooded with large residential lots. It crosses Hwy 45 just north of a former DOT wayside.	This route segment traverses the rolling topography of the Almond Moraine, primarily through woodlands, skirting some large agricultural fields and passing some large residential lots.
Existing Development and Probability of Future Development	The land has already been divided into small parcels for individual home sites.	This area is currently being subdivided into 10-20 acre residential lots.	This route's proximity to county landfill and gravel operations makes additional residential development unlikely.	The land is currently divided into large parcels and used for recreational and/or agricultural purposes, and/or commercial woodlands. Its proximity to Antigo and State Hwy 45 makes it attractive for additional development.

	Segment ID			
Environmental Considerations	7A	7B	7C	7D
Construction Impacts/Number of Stream Crossings	-	-	-	-
Endangered, Threatened, or Special Concern Species Identified by USFWS or WDNR BER	No federally listed species	No federally listed species	No federally listed species	No federally listed species
Sociological Considerations				
Number of Landowners Affected	6.00	2.00	6.00	9.00
Landowner Interest	Some support shown by local landowners		Some support shown by local landowners	Some support shown by local landowners
Public Lands and Rights-of-way Used	52%-County Gun Range and Landfill	No public lands or rights-of-way	44%, County Gun Range and Landfill	No public lands or rights-of-way
Secondary Benefits	Possible support facilities	Passes through the historic community of Elmhurst	Possible support facilities	

	Segment ID			
Trail Quality	8A	8B	8C	8D
Approx. Segment Length (miles)	0.53	2.66	0.88	0.4
Road Crossings	1	0	0	0
Diversity and Interest of Route	This route option provides for a transition between the Hancock and Almond moraines. The relatively flat landscape is primarily agricultural fields with some woodlots.	This segment traverses the hummocky topography of the Almond Moraine. It follows an abandoned RR grade for approximately 1/2 of its length, skirting wetlands associated with the headwaters of Elmhurst Creek. It passes near two eskers before terminating at the Marathon County Line.	This route option generally follows an abandoned RR grade, traversing forestlands with some open areas and wetlands associated with Bear Lake and the headwaters of the Plover River.	This option skirts wetlands associated with Bear Lake and the headwaters of the Plover River, generally following an abandoned RR grade, providing a connection to the historic community of Elmwood.
Existing Development and Probability of Future Development	A large subdivision already exists here. Its proximity to Antigo and State Hwy 45 makes this area attractive for development.	Land is currently divided into 40-acre parcels or larger and used for recreational and/or agricultural purposes. Additional development limited by access.	This route option is currently located on linear parcel- former RR grade, land on either side is not currently subject to development pressure	Currently there is little pressure for development
Environmental Considerations				
Construction Impacts/Number of Stream Crossings	0	0	0	0

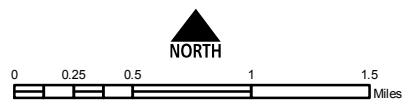
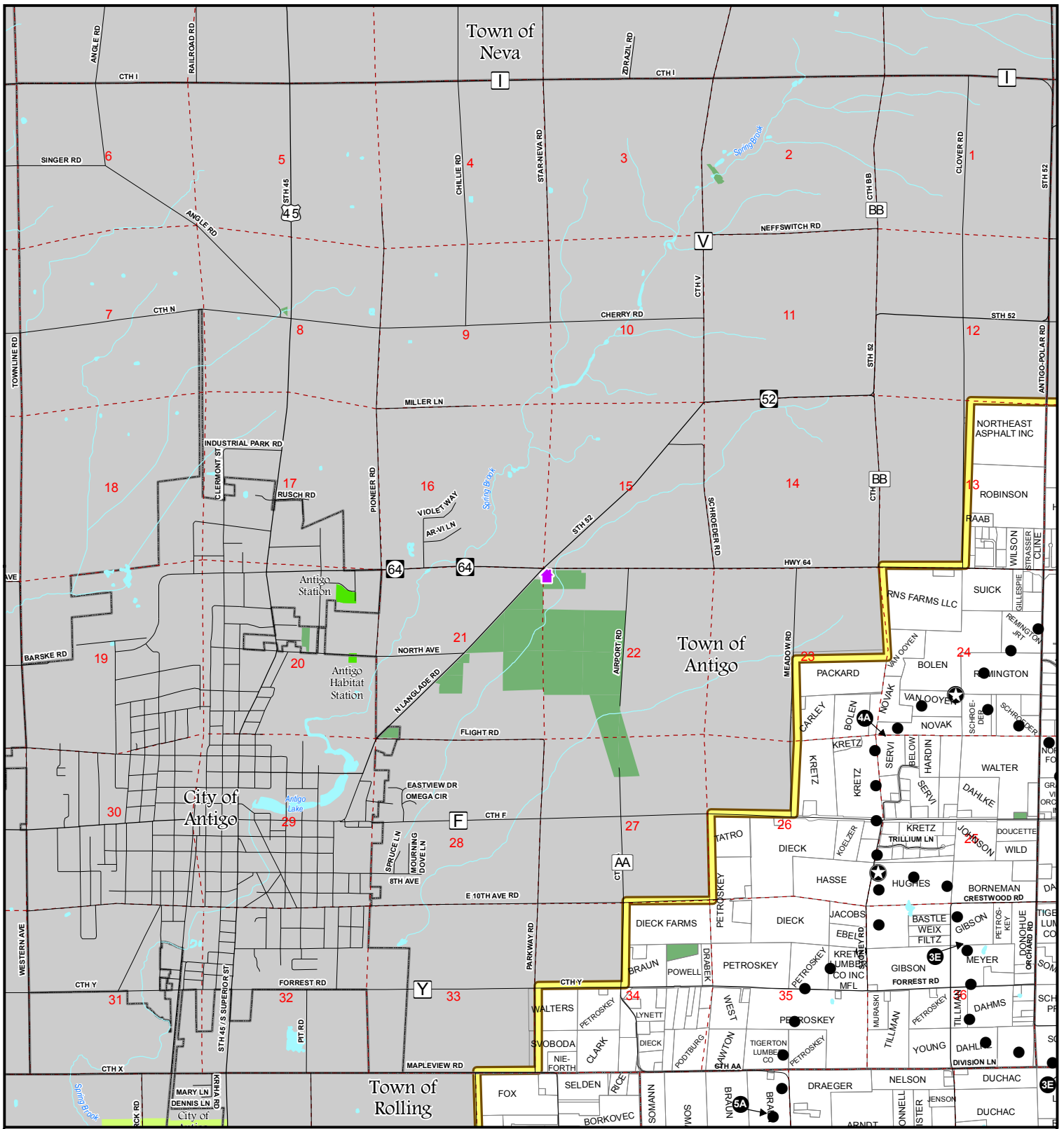
Endangered, Threatened, or Special Concern Species Identified by USFWS or WDNR BER	No federally listed species	No federally listed species	No federally listed species	No federally listed species
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	Segment ID			
Sociological Considerations	8A	8B	8C	8D
Number of Landowners Affected	4	4	2	2
Landowner Interest		Some support shown by local landowners	Little support shown by local landowners	Some support shown by local landowners
Public Lands and Rights-of-way Used	No public lands or rights-of-way	18%-Former RR right-of-way owned by County	No public lands or rights-of-way	No public lands or rights-of-way
Secondary Benefits				

	Segment ID		
Trail Quality	9A	9B	9C
Approx. Segment Length (miles)	2.1	2.16	0.91
Road Crossings	1	2	0
Diversity and Interest of Route	This route option begins near an ice-walled lake plain at the apex of the Hancock Moraine. It traverses the Hancock Moraine's hummocky topography on its way towards a second ice-walled lake plain through commercial forest lands and some larger openings.	This route option transitions between the front of the Almond Moraine and the back edge of the Hancock Moraine, eventually skirting wetlands associated with the headwaters of the Plover River. It terminates at the Marathon County Line.	This route option begins in a wetland area associated with Bear Lake and the headwaters of the Plover River. It traverses the Hancock Moraine and ends at a pine plantation located atop an ice-walled lake plain.
Existing Development and Probability of Future Development	The land is currently divided into 40-acre parcels or larger and used for recreational and/or agricultural purposes. Additional development limited by access.	This route option is currently located on linear parcel-former RR grade, land on either side is not currently subject to development pressure	Development is currently limited by lack of road access.
Environmental Considerations			
Construction Impacts/Number of Stream Crossings	0	0	0
Endangered, Threatened, or Special Concern Species Identified by USFWS or WDNR BER	No federally listed species	No federally listed species	No federally listed species

	Segment ID		
Sociological Considerations	9A	9B	9C
Number of Landowners Affected	10	3	2
Landowner Interest	Some support shown by local landowners		Some support shown by local landowners
Public Lands and Rights-of-way Used	No public lands or rights-of-way	No public lands or rights-of-way	No public lands or rights-of-way
Secondary Benefits			

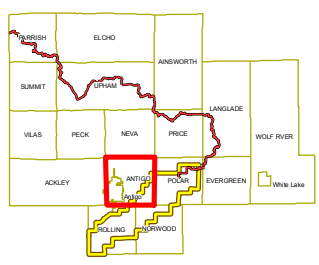
	Segment ID
Trail Quality	10A
Approx. Segment Length (miles)	1.71
Road Crossings	0
Diversity and Interest of Route	This route option begins in a pine plantation atop an ice-walled lake plain and traverses the primarily wooded hummocky topography of the Hancock Moraine, crossing an esker before terminating at the Marathon County line.
Existing Development and Probability of Future Development	Land in the area is currently divided into 40-acre parcels or larger and used for recreational and/or agricultural purposes. Additional development limited by access.
Environmental Considerations	
Construction Impacts/Number of Stream Crossings	0
Endangered, Threatened, or Special Concern Species Identified by USFWS or WDNR BER	No federally listed species
Sociological Considerations	
Number of Landowners Affected	7
Landowner Interest	Some support shown by local landowners
Public Lands and Rights-of-way Used	No public lands or rights-of-way
Secondary Benefits	



Source: NPS, WI DNR, NOWRPC
 This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only. NOWRPC is not responsible for any inaccuracies herein contained.



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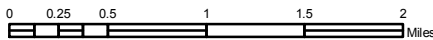
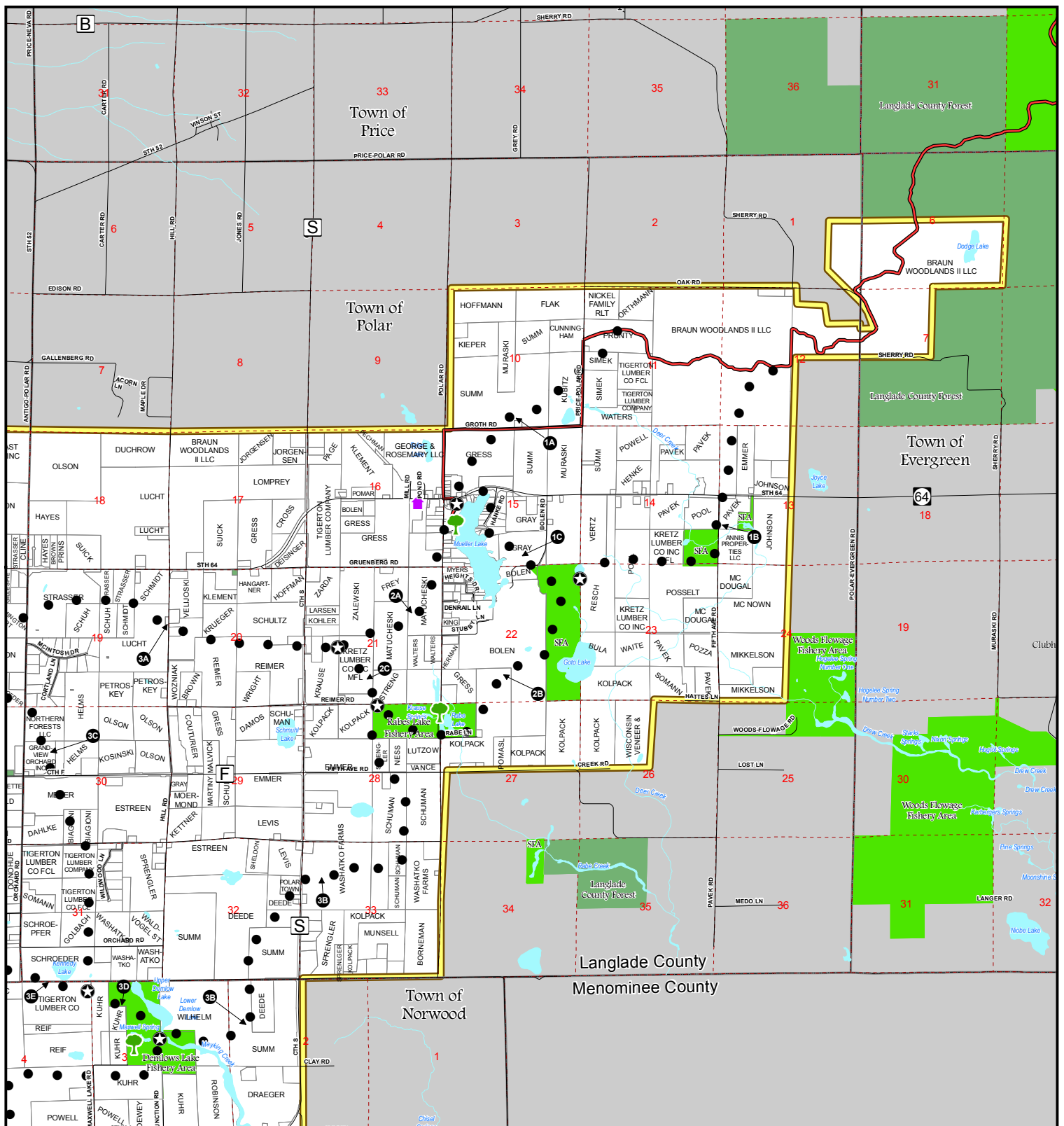
- Parks
- Town Halls
- City Halls
- Intersections
- Proposed Ice Age National Scenic Trail Routes

- US & State Highways
- County Highways
- Local Roads
- Existing Ice Age Trail
- Water
- Section Lines
- Minor Civil Divisions

- Langlade County
- Nicolet National Forest
- WI DNR

Proposed Corridor shown in white

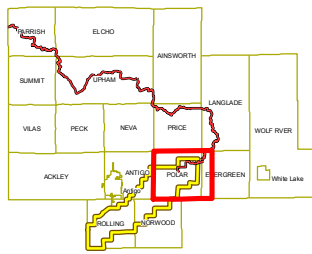
Map 1
Possible Route Options for the Ice Age National Scenic Trail



Source: NPS, WI DNR, NOWRPC
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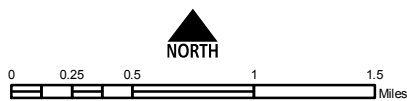
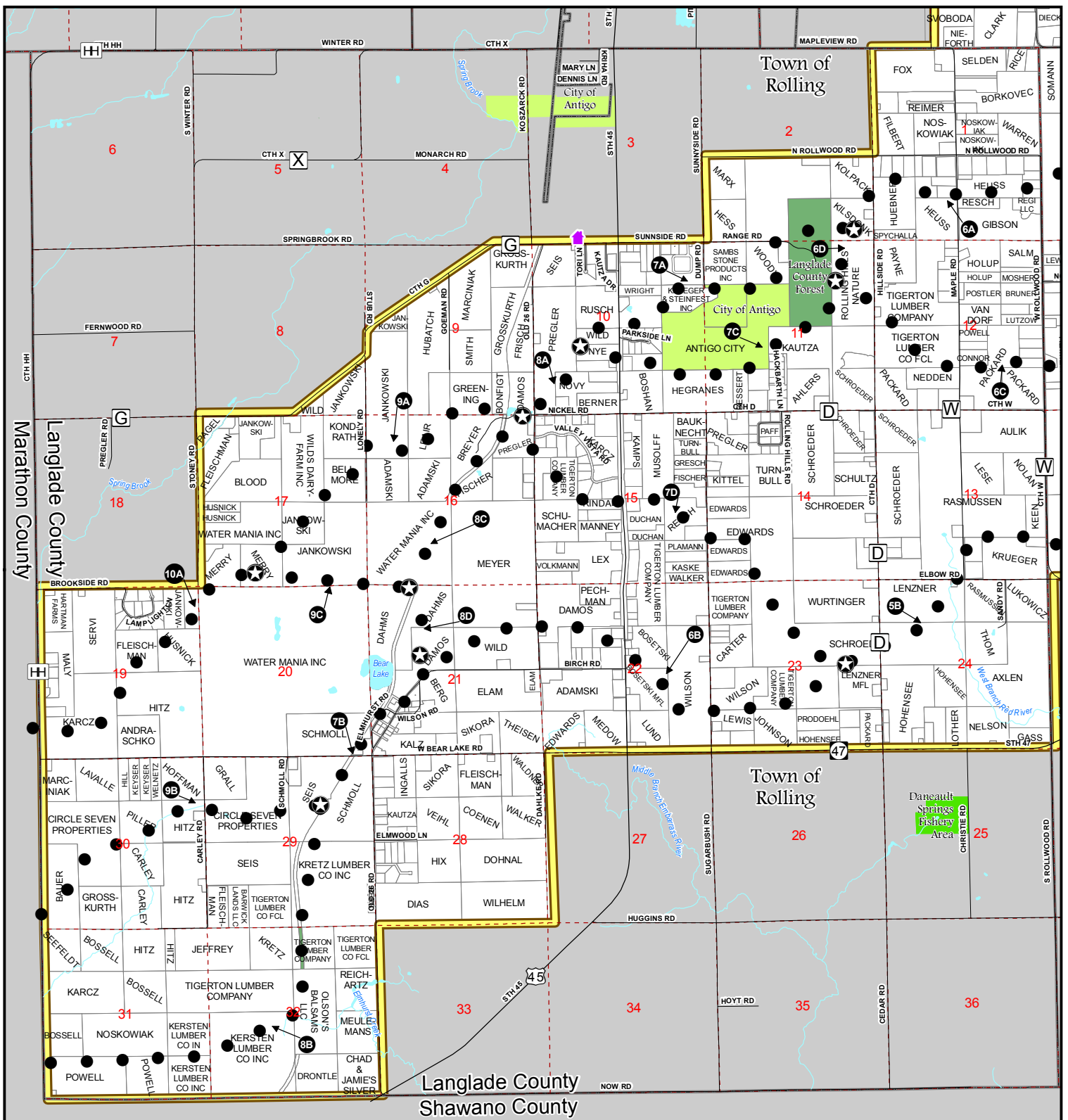
- Parks
- Town Halls
- City Halls
- Intersections
- Proposed Ice Age National Scenic Trail Routes

- US & State Highways
- County Highways
- Local Roads
- Existing Ice Age Trail
- Water
- Section Lines
- Minor Civil Divisions

- Langlade County
- Nicolet National Forest
- WI DNR

Proposed Corridor shown in white

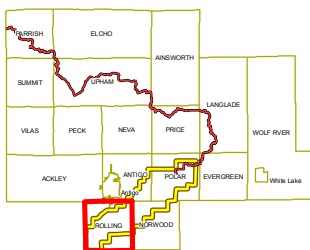
Map 2
 Possible Route Options for the Ice Age National Scenic Trail



Source: NPS, WI DNR, NOWRPC
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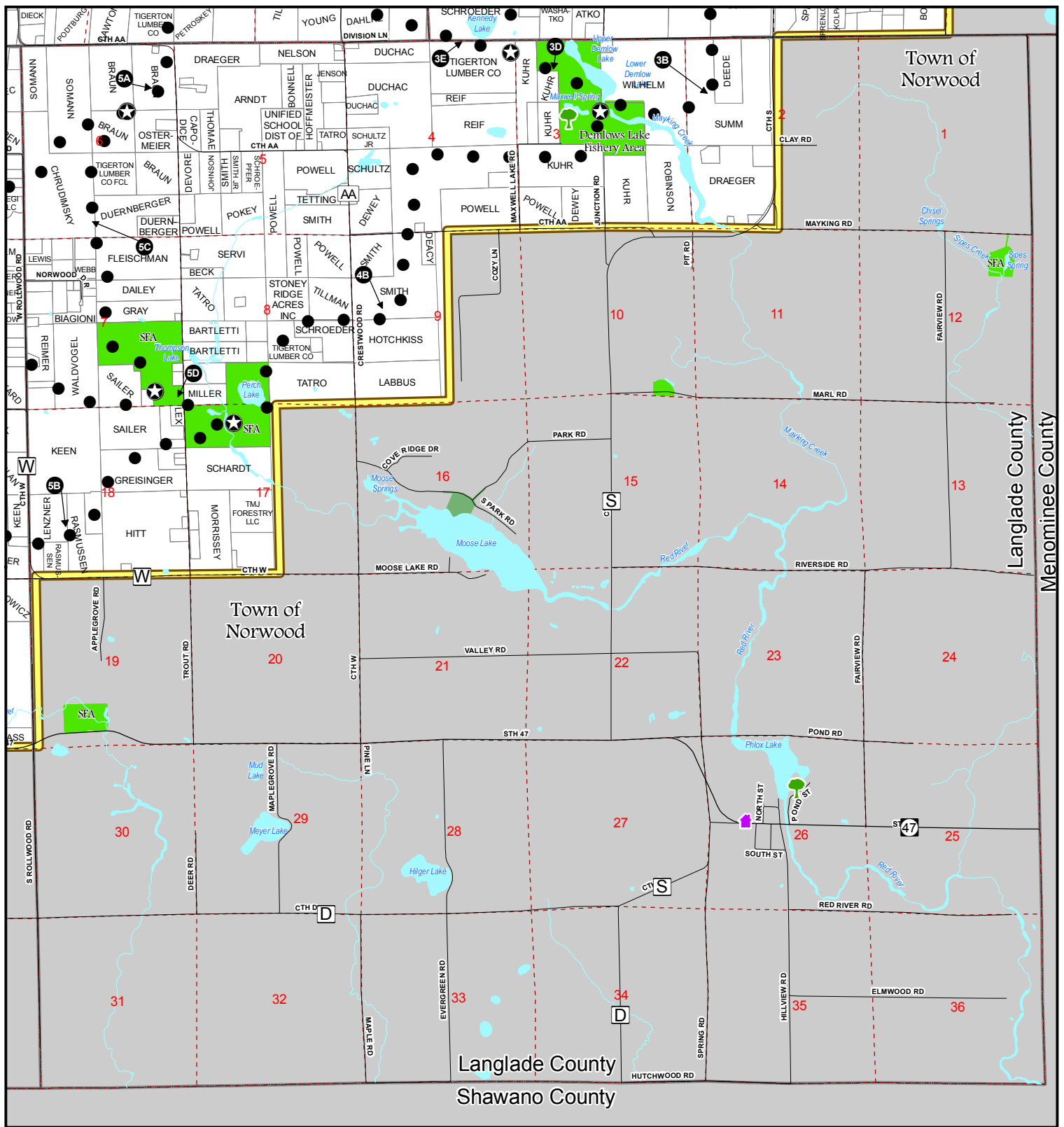
Legend

- Parks
- Town Halls
- City Halls
- Intersections
- Proposed Ice Age National Scenic Trail Routes
- US & State Highways
- County Highways
- Local Roads
- Existing Ice Age Trail
- Water
- Section Lines
- Minor Civil Divisions

- Langlede County
- Nicolet National Forest
- WI DNR

Proposed Corridor shown in white

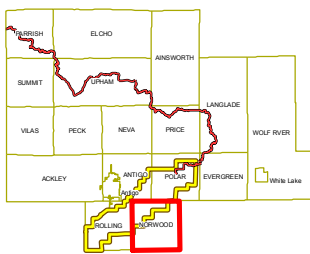
Map 3
 Possible Route Options for the Ice Age National Scenic Trail



Source: NPS, WI DNR, NOWRPC
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Legend

- Parks
- Town Halls
- City Halls
- Intersections
- Proposed Ice Age National Scenic Trail Routes

- US & State Highways
- County Highways
- Local Roads
- Existing Ice Age Trail
- Water
- Section Lines
- Minor Civil Divisions

- Langlade County
- Nicolet National Forest
- WI DNR

Proposed Corridor shown in white

Map 4
 Possible Route Options for the Ice Age National Scenic Trail

APPENDIX B:

TRAIL DEVELOPMENT AND MANAGEMENT STANDARDS

This section provides guidance on a variety of trail issues for planners and developers of the Ice Age NST across the state. It also provides introductory material on these issues. For each individual trail segment, the managing authority will make the final development and management decisions. The most current information about trail development and management standards, as well as a copy of the “Ice Age National Scenic Trail: A Handbook for Trail Design, Construction and Maintenance” is available from the National Park Service, Madison (Wisconsin) Trails Office upon request.

The way in which the Ice Age NST is designed, developed and maintained should make it easily recognizable as a National Scenic Trail (NST). The 1966 Department of Interior report, “Trails for America,” which helped set the stage for eventual passage of the National Trails System Act two years later, described NSTs as very special trails: “A standard of excellence in the routing, construction, maintenance, and marking consistent with each trail’s character and purpose should distinguish all national scenic trails. Each should stand out in its own right as a recreation resource of superlative quality and of physical challenge.” It is important that the collective effort of the many partners involved in this project maintains the Ice Age NST’s national significance and superlative qualities. The most basic way to accomplish this is to ensure that the trail is planned, established, and managed with a level of consistency over its entire length that conveys a sense of “connectedness” and continuity to the users. Quality design and construction of the trail, parking lots, and other facilities; clear and consistent signage, and timely response to problems created by storms or routine recreational use all help to maintain this consistency and foster pride in the trail. Regular cleanups of litter and a timely response to other public concerns about trail-related problems ensure that the trail will be a welcome addition to a community or area.

A. Development

Layout

The route of Ice Age NST generally follows the glacial features and moraines left by the Wisconsin Glaciation. The goal of those working on the trail and of Congress in authorizing the trail is that it be established within a permanently protected trailway corridor. The Ice Age NST will be designed to take advantage of the recreational, scenic, educational, and cultural opportunities present along this route. The route of the trail will minimize negative impacts on natural resources, cultural resources, the human environment, and adjacent land uses. Some basic principles that are used when laying out a route include:

- Traverse a variety of glacial features that are located in a visually pleasing corridor.
- Provide for a diverse user experience by incorporating a variety of plant communities, terrain, open and enclosed spaces (e.g. forests, savannas, prairies, etc.).

- Provide vistas to broader landscapes for scenic and interpretive purposes.
- Link and protect significant biological, archeological, and geological sites.
- Connect or provide linkages to communities and other trails for recreational, environmental, and/or user support purposes.
- Obtain local landowner and town support.
- Use publicly owned land for support facilities.

Construction/Maintenance of Trail and Trail-Related Structures

The Recreational Opportunity Spectrum (ROS), developed by the U.S. Forest Service, provides a framework for defining classes of outdoor recreation environments. These classes are useful guides for trail construction and management decisions. A modified form of the ROS reflecting the recreational environment of the Ice Age NST has been adopted, resulting in three broad categories of recreation settings—urban, rural/roaded natural and semi-primitive.

- **Urban** settings are characterized by substantially urbanized and modified natural environments. Large numbers of visitors may be present, both on-site and in adjoining areas. Sections of the Ice Age NST following sidewalks through towns or on highly developed linear parkways are described as “urban.”
- **Rural/Roaded Natural** settings are characterized by a more natural appearing environment with moderate evidence of human activity. Resource modification is evident but it is also harmonious with the natural environment. “Rural” settings are typically farmland or pastoral landscapes. “Roaded Natural” settings are mainly forested lands. Similar standards apply to trails being constructed through both types of settings. The majority of the Ice Age NST will pass through “Rural” and “Roaded Natural” areas including exurban and agricultural landscapes.
- **Semi-Primitive** settings are characterized by a predominately natural appearing environment of moderate to large size. Interaction between visitors is low and there is evidence of only minimal human activity. The Chequamegon National Forest and portions of the trail in Taylor and Lincoln Counties are the only places along the Ice Age NST route where the trail is planned through this type of setting.

Typically, before new trail is constructed, a site plan will be developed to guide the layout, design and maintenance of the trail and related structures. Design standards will reflect the ROS setting determination for the segment, resource considerations, and accessibility levels.

Crossing broad expanses of wetland will be avoided by careful trail planning. Where it is necessary to cross creeks, wetlands, and other seasonally wet areas, boardwalks and simple bridges will be used. Many proven designs using native material or treated timbers and boards can be found in the sources listed in Tools of the Trail: A Bibliography on Planning, Advocating, Designing, Building, Maintaining and Managing Trails Throughout America. In all instances, wetlands will be treated in accordance with NPS standards and guidelines and Wisconsin's Wetland Act. (See Impacts to Water Resources in Section 7 of this document).

Signing

The trail will be marked with 2 by 6-inch vertical yellow paint blazes or small plastic markers placed on trees or posts, facing the hiker coming from either direction. Small, 3 ½-inch Ice Age NST emblems will be placed where the trail crosses minor roads and at about half-mile intervals along the trail. Large, 9-inch Ice Age NST emblems will be placed at major trailheads and major road crossings. Primary trail access points should also have informational kiosks or signs with specific information about the adjacent trail segments. Regulatory signs will be posted as needed.

Support Facilities

Support facilities provide for hiker convenience, comfort and sanitation. These structures should be designed to harmonize with the surrounding environment and reflect the ROS determination for the trail segment. Whenever possible, parking and other support facilities will be provided in nearby communities but they may also be provided on county, state and federal lands.

B. Management

Recreational Uses

The 1983 *Comprehensive Plan for the Ice Age NST* states that the trail is primarily intended to be a hiking trail. Travel on foot is the one use that must be provided on all segments of the trail.

Although the trail is designed primarily as a hiking trail, other compatible recreational uses are encouraged (such as photography, birdwatching, and snowshoeing). In addition, the trail will accommodate ungroomed cross country skiing on segments that are designed and constructed for this use. In general, horses and bikes are not allowed on the trail except for those sections that follow State Rail-Trails (such as the Military Ridge, Ahnapee and Tuscobia). Also, occasional travel on or across the trail with motorized vehicles by the landowner or manager for the purpose of managing and using their land is permitted.

Sections of the Ice Age NST that pass through lands open to hunting (e.g. State Wildlife Areas) will remain open to hunting. Managing authorities may choose to discourage or prohibit non-hunting use of the trail during certain game seasons. On private lands, if a landowner grants permission for trail passage either informally or through permanent easement, hunting privileges are conveyed only if stated in the agreement. Other lands which are posted “closed” to hunting will remain closed after trail development.

The National Trails System Act specifies that National Scenic Trails may not be open to motorized use by the general public. However, the 1980 amendment authorizing the Ice Age NST also specified that segments could be open to snowmobiling, where it is deemed appropriate by the managing authority responsible for the segment and the Secretary of the Interior. Like horseback riding or bicycling, limited snowmobiling opportunities are available and these are located primarily on State Rail-Trails which are included as part of the Ice Age NST route.

Accessibility

The Ice Age NST will be designed to ensure that people with a wide range of ability levels have the opportunity to experience the significant resources that make this trail unique. At the same time, planners will strive to maintain the generally rustic character of a National Scenic Trail. To accomplish these goals, the trail will provide a range of opportunities to accommodate individuals who enjoy a challenge, as well as those who prefer easier, non-strenuous hiking.

Some segments of the trail will be fully accessible. These segments are designed to improve access for persons with mobility and vision impairments. They meet a number of specifications addressing width, passing space, surface, running slope, cross slope, edging, clear headroom, resting areas, signage and information points. Generally, these sites are usable without assistance. Multi-use trails near urban areas should be fully accessible, accommodating wheelchairs, strollers, and hikers of all abilities.

Some segments of the trail will be designed to provide a more challenging experience, while still accommodating use by individuals with disabilities. Facilities remain fully accessible, but the trail grades and surface materials may be more challenging to persons with limited mobility. Whenever possible, these segments are constructed “barrier-free” without possible impediments to movement (such as steps, waterbars, fords, stepping stones and narrow bridges). However, they offer a higher level of risk and challenge than is found in urban settings and some disabled users may need assistance.

Portions of the trail may not be accessible to people with disabilities. In some cases, the contours of the land or the natural surface of rocks present impediments which cannot be removed without causing major impacts on the environment or drastically altering the character of the trail. Other factors influencing decisions on accessibility include the protection of natural and cultural resources and the trail setting.

The Ice Age NST would provide all individuals, including individuals with disabilities, the opportunity to choose trails that provide different experiences and varying degrees of challenge and difficulty.

Law Enforcement

The Ice Age NST as a partnership endeavor, is a patchwork of ownership and managing authorities; no single entity owns and manages the entire trail. Since the WDNR is currently purchasing lands for the trail, over time they will likely own a large portion of the trailway. As lands come under their ownership, the WDNR may enter into agreements with local units of government or with the IATA for cooperative management of the trailway. State Conservation Officers have enforcement authority on all WDNR-owned lands.

Some trail segments will be on county or municipal lands and will be under the direct protection and enforcement of these local authorities. Additional trailway lands may be owned by the IATA, or may be on private lands under an easement or agreement with the IATA. Volunteers will monitor trail developed on private lands and will alert local law enforcement officials of any issues requiring their attention. The County Sheriff has jurisdiction over all lands in the county, including those used for the Ice Age NST. However, experience and research have shown that linear trails have few law enforcement problems.

The IATA stresses low impact trail use through signage, literature and public contact along the trail. Experience has shown that hikers leave very little litter and generally pack out what they pack in. Concentrations of litter normally occur near roads and other access points and are easy to monitor. If littering does occur, volunteers will clean it up during regularly scheduled trail maintenance.

APPENDIX C:

National Park Service Purpose and Significance Statement of the Ice Age National Scenic Trail

The mission of the National Park Service is to acquire, develop, operate, maintain, and protect through public and private partnerships, the Ice Age National Scenic Trail—a trail that meanders for approximately 1,200 miles through Wisconsin, from Potawatomi State Park in Door County to Interstate State Park in Polk County, generally following the terminal moraine and other glacial landscape features as a component of the National Trails System, for the enjoyment of present and future generations.

Purpose Statement

The purpose of the Ice Age National Scenic Trail is:

To establish a trail within scenic areas of the Nation to provide increased outdoor recreation opportunities and promote preservation of, public access to, travel within, and enjoyment and appreciation of the nations' scenic and historic resources.

To provide for maximum outdoor recreation potential and for the conservation and enjoyment of nationally significant scenic, historic, natural, and cultural qualities through which the trail passes.

To provide a superlative hiking facility and experience consistent with preserving the landscape in which the trail is established.

To encourage and assist volunteer citizen involvement in the planning, development, maintenance, and management of the trail wherever appropriate.

Significance Statement

The Ice Age National Scenic Trail preserves outstanding landscapes and landscape features resulting from continental glaciation. Nowhere are the marks of continental glaciation upon the land more impressive than in Wisconsin. Indeed, the State has lent its name to the most recent series of glacial advances and retreats—the Wisconsin Glaciation lasting from about 100,000 to 10,000 years ago. The meandering landscape that exhibits the marks of the glacier's furthest advance is a showplace of moraines, kames, drumlins, erratics, kettle lakes, potholes, eskers, marshes, meltwater channels, gorges, ice-walled lake plains, outwash plains, and glacial lake beds.

The Ice Age National Scenic Trail links together six of the nine units of the Ice Age National Scientific Reserve. The Reserve units contain outstanding examples of the glacial land forms found along the trail and are major nodes of interpretation of the glacial story and landscape.

The Ice Age Trail provides an opportunity to explore a slice of American landscape at a walking pace rather than at freeway speed, and a place of retreat from the hectic routine of everyday life. It exists as much for the enjoyment of the casual walker as it does for the challenge of hikers who travel its entire length, providing outstanding opportunities for recreation, education, inspiration, solitude, and enjoyment.

APPENDIX D:

Memorandum of Understanding Between the National Park Service, Wisconsin Department of Natural Resources, and Ice Age Trail Alliance and Vision Statement

MEMORANDUM OF UNDERSTANDING
BETWEEN THE
NATIONAL PARK SERVICE
AND THE
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
AND THE
ICE AGE TRAIL ALLIANCE, INC.
CONCERNING THE
ICE AGE NATIONAL AND STATE SCENIC TRAIL

This agreement is made and entered into, by and between the National Park Service, hereinafter referred to as the "NPS," and the Wisconsin Department of Natural Resources, hereinafter referred to as the "DNR," and the Ice Age Trail Alliance, Inc., hereinafter referred to as the "IATA," in furtherance of the purposes of and pursuant to the powers and authorities contained in the National Trails System Act of October 2, 1968, as amended [16 U.S.C. 1241 et seq.], hereinafter referred to as the "Act," and in ss. 23.17, 23.09(2)(d)10., 23.293, and 23.295, Wisconsin Statutes. These three partners are collectively hereinafter referred to as the "Triad".

Article I - BACKGROUND AND OBJECTIVES

This agreement is for the purpose of cooperating in the completion and long-term management of the Ice Age National Scenic Trail, hereinafter referred to as the "Trail," clarifying the responsibilities of each party for the Trail and lands traversed by the Trail, including Trail lands acquired with Wisconsin Stewardship grants and Ice Age Trail dedication, pursuant to the Act and ss. 20.866(2)(tz), 23.17, 23.175, and 23.293(11) Wis. Stats. This agreement supersedes the 2004 agreement between the NPS, DNR, and IATA.

On October 3, 1980, Congress amended the Act to authorize and establish the Ice Age National Scenic Trail as a component of the National Trails System [94 Stat. 1360; 16 U.S.C. 1244(a)(10)]. The Trail meanders through Wisconsin for approximately 1,200 miles from Potawatomi State Park in Door County to Interstate State Park in Polk County, generally following the terminal moraine and other glacial landscape features. The Secretary of the Interior was assigned administrative responsibility for the Trail.

The Act provides, in Section 7(h) [16 U.S.C. 1246(h)], that when determined to be in the public interest, the Secretary of the Interior may enter into written cooperative agreements with States or their political subdivisions, landowners, private organizations, or individuals to operate, develop, and maintain any portion of a national scenic trail either within or outside a Federally-administered area. Such agreements may include provisions for limited financial assistance to encourage participation in the acquisition, protection, operation, development, or maintenance of such a trail, provisions providing volunteer in the park status (in accordance with the Volunteers in the Parks Act of 1969) to individuals, private organizations, or landowners participating in such activities, or provisions of both types.

Because the Trail involves only a small portion of Federal lands and the Act provides that the development, operation, and maintenance of the Trail shall be a cooperative venture, with special emphasis on the participation of private volunteer trail organizations, the Secretary of the Interior has determined it to be in the public interest to enter into this agreement.

The Secretary of the Interior has delegated overall administrative responsibility for the Trail to the NPS. The NPS, in cooperation with the other parties to this agreement, completed a *Comprehensive Plan for Management and Use* of the Trail in September 1983. The NPS is responsible at the Federal level for carrying out the provisions of the Act as they relate to the Trail. The NPS carries out or facilitates trail planning, environmental compliance, and land protection activities. The NPS assists other public and private partners by coordinating, guiding, and assisting their efforts to acquire, develop, operate, protect, and maintain the Trail in accordance with the comprehensive plan and any supplemental plans. The comprehensive plan identifies the DNR and the IATA as cooperators in the long-term effort to develop and manage the Trail. The NPS serves as the primary liaison with other Federal agencies in matters relating to the Trail. In carrying out this role, the NPS reviews and comments on Federal or Federally-assisted/permitted projects and activities that may affect trail segments, such as highway, utility, and other development proposals.

The DNR is the State agency responsible for providing and maintaining outdoor recreation resources of Statewide significance, including trails, in Wisconsin. The Statewide significance of the Trail, the involvement of State recreation facilities in the route of the Trail, and the relationship of the Trail to the State-administered Ice Age National Scientific Reserve form the basis for the DNR's participation in development and management of the Trail. In 1987, the State legislature formalized this role by passing legislation designating the Trail as a State Scenic Trail and assigning the DNR responsibility for coordinating the involvement of State agencies in the Trail project and cooperating with the NPS and private interests in planning, acquiring, developing, and maintaining the Trail. Other legislation has made the DNR responsible for administering financial aids to assist the IATA and others to acquire lands for the Trail. The DNR serves as the primary liaison with other State agencies in matters relating to the Trail. In carrying out this role, the DNR works with other State agencies to ensure that the trail is accommodated within the lands and programs such agencies may manage.

The IATA is a private, nonstock, nonprofit corporation composed of individual members and county chapters. The IATA was incorporated in 1958 and it then and now exists under the Wisconsin Nonstock Corporation Law. The IATA is exempt from Federal income taxation under sec. 501(c)(3) of the Internal Revenue Code, and is classified under sec. 509(a) as other than a private foundation. The mission of the IATA is to create, support, and protect a thousand-mile foot trail tracing Ice Age formations across Wisconsin. It does this primarily by organizing and coordinating local government and private sector involvement in such efforts, including fund raising and the recruitment and training of volunteer trail builders/maintainers. It has the primary responsibility to develop and encourage the growth of strong and active local volunteer chapters. The IATA serves as the primary liaison with local governmental agencies and other nonprofit conservation organizations in matters relating to the Trail. In carrying out this role, the IATA works to secure and coordinate the involvement of local government, private interests, and private sector resources in the planning, acquisition, development, operation, maintenance, and protection of the Trail.

Article II - STATEMENT OF WORK

The NPS, DNR, and IATA agree to coordinate their work to establish and manage the Trail in accordance with the attached *Vision Statement and Attributes*, and commit to carrying out various tasks relating thereto, according to the following tables:

TRIAD ROLES

PLANNING THE ICE AGE TRAIL

Wisconsin DNR	National Park Service	Ice Age Trail Alliance
1. Commit central office and regional staff to: a. lead trailway planning process in selected counties b. participate on the trailway planning and trailway protection strategy core teams in other counties c. lead master planning on State Ice Age Trail Areas (SIATAs) d. advise real estate staff on acquisition decisions to implement plans e. provide technical assistance for site planning on protected lands 2. Interface the Trail with <i>Land Legacy Report</i>, Feasibility Studies, Master Plans for DNR properties, and other DNR-led projects.	1. Coordinate the Ice Age Trail corridor planning and trailway protection strategy processes a. coordinate assignment of lead responsibility and timing for each county b. monitor progress in each county 2. Commit staff to: a. lead trailway planning and trailway protection strategy processes in selected counties b. participate on the trailway planning and trailway protection strategy core teams in other counties c. manage planning contracts in counties where a contract agency leads the process d. Provide GIS mapping support	1. Commit staff to participate on trailway planning and trailway protection strategy processes core teams. 2. Recruit volunteers to participate on trailway planning process core teams. 3. Contact landowners as part of the planning process with the guidance of the core team. 4. Enter into an NHI data sharing agreement with DNR's Endangered Resources Review program; use NHI data to inform the trail layout planning process. 5. Participate in the preliminary scoping process for counties that have not yet had trailway planning. 6. Develop chapters/constituencies where needed to support the planning process.

3. Ensure that all DNR-led trailway planning complies with federal and state laws and regulations. Coordinate with NPS to ensure it complies with Federal requirements. 4. Provide Natural Heritage Inventory information, via an NHI data sharing agreement, to inform and guide Ice Age Trail planning efforts related to endangered resources (rare species, high-quality natural communities, and significant natural features). Provide endangered resources expertise in planning efforts. 5. Act as primary liaison with the Wisconsin Department of Transportation, especially to ensure safe highway and road crossings and access points, and to notify the other parties of projects that may affect the Trail. 6. Participate in the preliminary scoping process for counties that have not yet had trailway planning. 7. Use all appropriate opportunities to help ensure that the Trail is integrated into “Smart Growth” planning at the local	3. Ensure that all NPS-led trailway planning complies with federal and state laws and regulations. Coordinate with DNR to ensure it complies with Wisconsin requirements. 4. Enter into an NHI data sharing agreement with DNR’s Endangered Resources Review program; use NHI data to generate maps and other information and materials needed to inform the corridor planning process. 5. Submit request for formal Endangered Resources Review of the proposed corridor during the collection of information for the Environmental Assessment. 6. Coordinate the preliminary scoping process for counties that have not yet had trailway planning. 7. Use all appropriate opportunities to help ensure that the Trail is integrated into “Smart Growth” planning at the local level.	7. Advocate for and support the integration of the Trail into “Smart Growth” planning at the local level. 8. As able, assist with on-the-ground field assessments during the planning process.
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level. 8. Use every available opportunity to ensure that the Trail is incorporated into all appropriate long range County Forest plans.		
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TRIAD ROLES

FUNDING THE ICE AGE TRAIL

Wisconsin DNR	National Park Service	Ice Age Trail Alliance
1. Provide DNR staff support: a. dedicated Ice Age Trail manager b. regional staff - trailway planning - trail implementation - land acquisition - managing SIATAs - technical assistance related to endangered resources c. state trails coordinator assistance, including determining and disseminating policy guidance department-wide d. endangered resources staff support for conducting Endangered Resources Reviews 2. Provide capital development funding for	1. Provide funding for NPS operations: a. Ice Age NST staff and office b. financial support to partners for operational needs via cooperative agreement c. signing, brochures, etc. d. technical support and assistance related to endangered resources e. cultural resource compliance (e.g. Section 106 (of the National Historic Preservation Act of 1966) reviews and surveys) 2. Fund Challenge Cost Share projects. 3. Fund Volunteers in Parks (VIP) Program activities - volunteer training	1. Provide funding for foundation operations: a. administration b. volunteer and chapter support c. technical support and assistance related to endangered resources d. programs - newsletter - website - GIS - Mobile Skills Crew - Land stewardship 2. Seek congressional and legislative appropriations and private grants. 3. Provide funding for selected key acquisitions, as available.

trail improvements on department lands, 3. Provide capital development grant funding for trail development and facilities. 4. Provide land acquisition funding (Stewardship Program and Federal LWCF grant funds) a. For DNR acquisitions b. For grants to local governments c. For grants to nonprofit conservation organizations 5. Seek accommodation of Ice Age Trail in other state or state-assisted projects and programs. 6. Provide funding for long-term stewardship of DNR-held easements and fee lands.	- awards and recognition - tools and equipment 4. Utilize NPS project funds for development and maintenance projects. 5. Administer Land and Water Conservation Fund appropriations for Ice Age Trail land protection. 6. Seek increased funding through Operations Formulation System (OFS) and Project Management Information System (PMIS). 7. Seek accommodation of Ice Age Trail in other federal or federally-assisted projects and programs. 8. Provide funding for long-term stewardship of NPS-held easements and fee lands.	4. Seek appropriate funding for long-term stewardship of IATA-held easements and fee lands.
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TRIAD ROLES

DEVELOPING, MAINTAINING, AND MANAGING THE ICE AGE TRAIL

Wisconsin DNR	National Park Service	Ice Age Trail Alliance
1. Coordinate development, maintenance, and management of the Ice Age Trail on DNR managed properties and facilitate Ice Age Trail on state properties not managed by the DNR. This should be done in accordance with Triad approved <i>Ice Age NST Handbook</i> standards. 2. Provide technical assistance and materials for development, maintenance, and management on DNR owned properties where the IATA or others will develop and maintain the trail. 3. Develop a policy and process that addresses the long term management of State Ice Age Trail Areas. 4. Allow for the development of the Ice Age Trail on State Ice Age Trail Areas in advance of a master plan for the State Ice Age Trail Area, or allow an amendment to an existing master plan that specifically	1. Coordinate development, maintenance, and management of the Ice Age Trail on NPS managed properties and facilitate Ice Age Trail on properties not managed by the NPS. This should be done in accordance with Triad approved <i>Ice Age NST Handbook</i> standards. 2. Provide technical assistance to public and private partners in all aspects of trail planning, acquisition, development, operation, maintenance, protection, and interpretation. 3. Participate in the development of a policy that addresses long-term management of the Trail. Depending on resources and priority, provide a Resources Management staff position for the Ice Age Trail. 4. Assist with the development of a policy that addresses the long-term management	1. Coordinate development, maintenance, and management of the Ice Age Trail on IATA managed properties and facilitate Ice Age Trail on other private lands. This should be done in accordance with Triad approved <i>Ice Age NST Handbook</i> standards. 2. Provide volunteer services for Trail development and maintenance, and management of Trail lands. 3. Build and maintain the trail in accordance with Triad approved Ice Age NST Standards Handbook. 4. Identify other support for trail building and maintenance, and management of Trail lands, where volunteer support is lacking. 5. Assist with the development of a policy that addresses the long-term management

addresses the Ice Age Trail on the property. The location of the Trail and the specifications for trail development shall be agreed to by the Triad. This should be done in accordance with Triad approved <i>Ice Age NST Handbook</i> standards.	of State Ice Age Trail Areas.	of State Ice Age Trail Areas.
5. Participate in the development of a policy that addresses long-term management of the Trail. 6. Submit certification applications to NPS for Trail segments on state property. 7. Host and provide GIS support facilities for the IATA GIS function. 8. Appoint a representative in each region to act as an Ice Age Trail clearinghouse for dissemination of Trail information and to help identify and coordinate additional staff resources. 9. Complete DNR required reviews and documentation for Ice Age Trail development projects on DNR lands. 10. Provide technical assistance related to	5. Certify Trail segments and provide official Ice Age NST markers. 6. Provide tools, materials, and other use, regulatory, directional, and trailhead signage as resources allow. 7. Develop and maintain trail geospatial and management databases and other information about the trail to support trail planning and management. 8. Recognize the IATA and its members as Volunteers-in Parks through an Agreement for Sponsored Voluntary Services, for purposes of injury compensation and protection from tort liability. 9. Complete NPS required reviews, compliance (cultural resources—Section 106, T&E Species—Section 7, etc.), and documentation for Ice Age Trail development projects. 10. Provide partners with copies of the <i>Ice Age NST Handbook for Trail Design</i>,	6. Participate in the development of a policy that addresses long-term management of the Trail. 7. Submit certification applications to NPS for Trail segments on IATA properties and other private property. Prepare certification applications for lands administered by other public partners. 8. Assist in the development and maintenance of a GIS database and produce user-oriented maps and other appropriate information. 9. Assist the DNR and NPS with completion of necessary reviews and documentation for Ice Age Trail development projects. 10. With landowner cooperation, develop camping opportunities and infrastructure improvements to facilitate long-distance hiking of the Ice Age Trail. 11. Assist partners in managing Trail lands.

endangered resources, including formal Endangered Resources Reviews, during the corridor planning and trail layout planning processes. 11. Develop camping opportunities and infrastructure improvements on state-owned lands to facilitate long-distance hiking of the Ice Age Trail. 12. DNR land managers will work with IATA staff to obtain necessary permits and meet permit requirements. 13. Provide technical assistance and training to partners for resource management practices, including exotic plant removal and the protection and enhancement of rare and endangered plants, animals, and community types. 14. Review County Forest comprehensive plans to ensure appropriate accommodations for the Ice Age Trail.	<i>Construction & Maintenance.</i> 11. Provide technical assistance and training to partners for natural and cultural resource management, such as exotic plant removal and archeological artifact recognition and protection. 12. Develop camping opportunities and infrastructure improvements on NPS-owned lands to facilitate long-distance hiking of the Ice Age Trail. 13. Lead partner efforts to plan and provide for interpretation along the Trail.	12. Prepare or assist in preparing applications for needed permits relating to development of the Trail, with permission and on behalf of responsible parties. 13. Develop camping opportunities and infrastructure improvements on IATA-owned lands to facilitate long-distance hiking of the Ice Age Trail. 14. Submit requests for formal Endangered Resources Reviews of proposed trail section layouts well in advance of planned trail construction dates. Conduct and/or coordinate follow-up actions (e.g., site visits) identified in the Endangered Resources Review. 15. Work with County Forests to establish or revise appropriate ordinances, comprehensive plans, and/or land use agreements related to the Ice Age Trail.
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TRIAD ROLES

PROTECTING LANDS FOR THE ICE AGE TRAIL

Wisconsin DNR	National Park Service	Ice Age Trail Alliance
1. Lead the acquisition process. At least semi-annually, meet with NPS and IATA to discuss the status of Trail land acquisition efforts and to set or confirm priority areas. 2. Maintain a current list showing the utilization and planned utilization of all Federal funds granted to the state for Trail land acquisition. 3. Participate in the prioritization of lands to be acquired. 4. Directly acquire lands in agreed upon prioritized areas. 5. Dedicate lands under s.23.293, Wisc. Stats. 6. As requested or needed, exchange information with NPS & IATA staff	1. Administer the Special Ice Age Trail LWCF grant program. Prepare and administer grant agreements, process invoices, and monitor compliance with grant program regulations. 2. Participate in the prioritization of lands to be acquired. 3. Acquire and protect lands for the Trail to the extent it has authority to do so. 4. Provide technical and financial support to partners for land acquisition activities. 6. Periodically, as the need and opportunity arise, contact or meet with and exchange information with DNR lands staff in central and regional offices and IATA staff concerning lands that have been or may be acquired in agreed upon priority areas or	1. Participate in the prioritization of lands to be acquired. 2. Serve as primary advocate at local level for trail protection. a. Provide volunteer support to alert partners of acquisition opportunities and to aid in contacting landowners. b. Facilitate involvement of local government partners in the protection of trailway lands. 3. Secure temporary routes through handshake or license agreements. a. Institute and maintain a landowner registry program. b. Institute and maintain a Land

concerning lands that have been or may be acquired in agreed upon priority areas or elsewhere.	elsewhere.	Stewardship and monitoring program 4. Advocate for Federal and state funding to protect lands for the Trail. 5. As funding permits, acquire lands in agreed upon prioritized lands areas. 6. Participate in the dedication of Trail lands under s.23.293, Wisc. Stats. 7. Develop policies for determining when to acquire and hold properties, taking in account long-term stewardship responsibilities and associated costs.
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TRIAD ROLES

PUBLIC RELATIONS FOR THE ICE AGE TRAIL

Wisconsin DNR	National Park Service	Ice Age Trail Alliance
1. Provide for public relations in appropriate DNR publications, communications, and outreach such as State Parks Visitor's Guide, press releases, internet, property maps, etc. 2. Promote the Ice Age Trail by displaying information on state properties, and providing NPS Ice Age Trail brochures and Ice Age Trail Alliance's membership brochures and other appropriate materials at visitor centers and contact stations. 3. Promote Ice Age Trail and Trail related events on the DNR website. 4. Provide interpretive programs on the Trail and the Trail's landscape. 5. Support and host Ice Age Trail events on state properties when and where appropriate.	1. Provide a variety of promotional material or financial support for: a. brochures b. videos c. wayside exhibits d. maps e. publications f. Trail signs 2. Promote the Ice Age Trail on the NPS website. 3. Promote the Ice Age Trail in NPS publications and within the National Trails System.	1. Produce for members and trail users: a. Quarterly newsletter b. Membership brochure c. Trail maps d. Trail merchandise 2. Conduct special events, such as: a. Parade of Colors Fall Hikes b. National Trails Day Events c. Statewide Trail building, maintenance, or stewardship projects such as Mobile Skills Crew events. 3. Serve as primary advocate with local, state, and national media. 4. Provide easy access to Trail information.

6. Take the lead in coordinating or facilitating the involvement of other State agencies (DOT, Tourism, etc.) in marketing the Trail. 7. Include the Ice Age Trail in GIS information available to the public.		
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Article III - TERM OF AGREEMENT

This MOU is executed as of the date of the last signature shown below and shall be in effect for a period not to exceed 10 years, at which time it will be subject to review, renewal, revision, or expiration. However, at the end of 5 years, the parties to this MOU will conduct an interim review of its language, tasks, and direction and make any necessary corrections as mutually agreeable.

Article IV - KEY OFFICIALS

The key NPS officials are the Superintendent, Ice Age and North Country National Scenic Trails, and the Manager, Ice Age National Scenic Trail, located at 700 Rayovac Drive, Suite 100, Madison, Wisconsin 53711.

The key DNR officials are the Secretary, the Division of Land Administrator, and the Director of the Bureau of Parks and Recreation, located at 101 S. Webster Street, Madison, Wisconsin 53703.

The key IATA official is Executive Director, located at 2110 Main Street, Cross Plains, Wisconsin 53528.

Article V - TERMINATION

This agreement may be terminated upon 60 days advance written notice given by one party to the others, or it may be terminated earlier or revised by mutual consent of all parties. Termination of this agreement does not affect any operation and maintenance agreements or responsibilities under Chapter NR 51, Wisconsin Administrative Code, or those executed separately from the provisions of NR 51.

Article VI - STANDARD PROVISIONS

The obligation of the NPS, DNR, and IATA to perform the responsibilities specified in this agreement is contingent upon the necessary funds being available through governmental appropriations or other sources. No legal liability on the part of the NPS, DNR, or IATA to carry out such responsibilities shall arise unless and until funds are available to cover the expenses associated with performing the responsibilities specified herein.

Additional NPS Provisions

Nothing in this agreement shall affect or interfere with fulfillment of the obligations or exercise of the authority of the NPS or any other Federal Agency to manage the lands along the Trail route (within the boundaries of areas they administer) and the programs under their jurisdiction in accordance with their basic land management responsibilities.

No member of or delegate to Congress, or resident Commissioner, shall be admitted to any share or part of this agreement, or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this agreement if made with a corporation for its general benefit.

During the performance of this agreement, the participants agree to abide by the terms of Executive Order 11246 on nondiscrimination and will not discriminate against any person because of race, color, religion, sex, or national origin. The participants will take affirmative action to ensure that applicants are employed without regard to their race, color, religion, sex, or national origin.

Additional DNR Provisions

Nothing in this agreement shall affect or interfere with fulfillment of the obligations or exercise of the authority of the DNR or any other State agency to manage the lands along the Trail route (within the boundaries of areas they administer) and the programs under their jurisdiction in accordance with their basic land management responsibilities.

In connection with the performance of work under this agreement, the parties agree not to discriminate against any employee, applicant for employment, member, volunteer, or trail user because of age, race, religion, color, handicap, sex, physical condition, developmental disability as defined in s. 51.01(5), Wisc. Stats., or national origin. This provision shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay, or other forms of compensation, and selection for training, including apprenticeship. The parties further agree to take affirmative action to ensure equal employment opportunities. The parties agree to post, in a conspicuous place available for employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

Should the IATA at any time have paid employees working on the Trail on DNR lands, they shall furnish proof to the DNR of worker's compensation coverage in the form of a Certificate of Insurance indicating such for these individuals. The insurance policy shall contain a provision by which the insurer agrees to notify the DNR upon any lapse or change in coverage. Failure to satisfy the provisions of this paragraph will result in the voiding of this agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Memorandum of Understanding as of the last date written below.

/s/ Thomas L. Gilbert
Superintendent, Ice Age National Scenic Trail,
National Park Service

4/15/10
Date

/s/ Matthew Frank
Secretary, Department of Natural Resources

4/7/10
Date

/s/ Michael G. Wollmer
Executive Director, Ice Age Trail Alliance, Inc.

4/12/10
Date

Attachments:

Vision Statement and Attributes: Ice Age National and State Scenic Trail

Rev. 03-15-10

Ice Age National and State Scenic Trail

Vision Statement and Attributes

Ice Age Trail Park and Trail Foundation¹

Wisconsin Department of Natural Resources

National Park Service

I. Vision Statement:

The Ice Age Trail is a continuous footpath through diverse landscapes that:

- Provides superlative outdoor recreation experiences;
- Preserves and commemorates world renowned geological features formed during the Wisconsin Glaciation;
- Provides a natural corridor that protects habitat and enables the movement of wildlife;
- Serves as a lifelong educational resource;
- Provides quiet places for people to form and nurture a spiritual connection with the landscape;
- Promotes the health and vigor of users of all ages and abilities, and
- Links the history and diverse human cultures of the land that we call Wisconsin.

II. Attributes of the Ice Age Trail:

- A. **General Route**—The trail extends approximately 1,200 miles across the State of Wisconsin between Interstate State Park on the St. Croix River in Polk County and Potawatomi State Park in Door County.
- B. **Glacial Features**—The trail generally follows the terminal moraine, which provides the means for a continuous trail linking many other diverse glacial landscapes. A continuous, meandering trail maximizes the number and quality of diverse glacial landscapes incorporated into the Ice Age Trail, while minimizing the additional trail length required to include such landscapes. The trail will thus deviate from the terminal moraine to connect other geological, scenic and cultural resources into the Ice Age Trail.
- C. **Design of Corridor and Trail Route**—The trail and railway are designed elements within an overall planned and approved corridor of opportunity. The design of the

¹ At its annual meeting on April 25, 2009, the membership of the Ice Age Trail Alliance, Inc., voted to change their corporate name to the Ice Age Trail Alliance, Inc.

preferred trail route and trailway within the corridor is tailored to highlight regional landscape features and is intended to preserve or afford views of geologic, natural, cultural, scenic and/or biotic resources and provide a variety of educational experiences for visitors in regard to these resources.

- D. **Trail Development Philosophy**—The trail lies lightly on the land. It generally follows natural contours, is constructed of local natural materials, and is a maintained pathway.
- E. **Management Objectives**—The trail and the trailway are managed and maintained in order to enhance users' experiences. Trail quality, aesthetics, and vegetative management should be incorporated into the design and management of the trail and trailway. Areas with outstanding geologic or biotic features will be managed to preserve or restore those resources. Management plans and maintenance standards to achieve these objectives will be mutually agreed upon by the trail partners.
- F. **Trail Use**—The long-term goal is an off-road trail for public use on foot, providing scenic, aesthetic, educational and sensory experiences for users. The trail provides opportunity for non-consumptive recreation and a variety of challenge levels, including fully accessible segments. To provide essential connections for long-distance users, the Ice Age Trail might temporarily or permanently utilize portions of other trails that permit uses other than hiking.
- G. **Trailway Width**—The width of the acquired or protected trailway varies according to the character of the landscape through which it passes, and the need to either insulate visitors from a view or expose them to it. In urban areas, the trailway may be a sidewalk or other narrow trailway. In non-urban areas, it generally will average 200-1,000 feet, with occasional wider areas to protect a significant natural/cultural feature or viewscape.
- H. **Signs and Marking**—The trail is marked with a system that identifies the trail, regulates usage, provides directions and information, and interprets significant features.
- I. **User Support Facilities**—The Ice Age Trail will rely to a large extent on existing parks and forests, communities, and private sector enterprises to provide many of the basic user needs, such as parking, lodging, restaurants, etc. The trail will in many instances be deliberately routed to take advantage of these amenities. In other instances, connecting trails may be developed or utilized to provide access to these amenities.
- J. **Interpretation**—Major interpretation of the Ice Age and Wisconsin's glacial landscape will occur at Units of the Ice Age National Scientific Reserve, the companion project of the Ice Age National Scenic Trail. However, there are many outstanding glacial landforms and other natural and cultural resources along the trail that are deserving of and need high quality wayside exhibits or other appropriate interpretive media and programs to help trail users understand and appreciate them.

- K. **Use of Roads as Connectors**—The trail may also utilize road rights of way where necessary for continuous linkage. This utilization is temporary except where roadways provide the optimum trail experience or only possible long-term connection.
- L. **Intersection with Other Trails**—The Ice Age Trail will intersect or link with many other trails as it meanders across Wisconsin. New intersecting trails that allow uses other than hiking should be minimized. While such trails may allow uses other than hiking, their connections to the Ice Age Trail must be designed to prevent access of other uses onto the Ice Age Trail.

More specific guidance is found in ***Ice Age National Scenic Trail: A Handbook for Trail Design, Construction, and Maintenance.***

Agreement:

<u>/s/ Christine Thisted White</u>	<u>10/28/02</u>
Executive Director, Ice Age Trail Alliance	Date
<u>/s/ Darrell Bazzell</u>	<u>11/8/02</u>
Secretary, Department of Natural Resources	Date
<u>/s/ Thomas L. Gilbert</u>	<u>10/23/02</u>
Superintendent, National Park Service	Date

APPENDIX E:

**Programmatic Agreement
Between
the United States Department of the Interior,
Ice Age and North Country National Scenic Trails,
and
the Wisconsin State Historic Preservation Office**

**Programmatic Agreement
Between
the United States Department of the Interior,
Ice Age and North Country National Scenic Trails,
and
the Wisconsin State Historic Preservation Office**

Regarding § 106 of the National Historic Preservation Act
and Specific Provisions of the Advisory Council on Historic Preservation's
Implementing Regulations at 36 CFR Part 800

WHEREAS, the United States Department of the Interior, National Park Service, Ice Age and North Country National Scenic Trails provide financial assistance to private organizations, municipalities, counties, state, and other Federal agencies; and

WHEREAS, National Park Service (hereinafter “NPS”) has determined that with its administration of the its Ice Age and North Country National Scenic Trails (hereinafter TRAILS, undertakings may result in effects to historic properties as defined at 36 CFR § 800.16(l); and

WHEREAS, the NPS and the Advisory Council on Historic Preservation (hereinafter “ACHP”) have in place a Nationwide Programmatic Agreement (hereinafter “NPA”) constituting a program alternative as defined by 36 CFR § 800.14; and

WHEREAS, the NPS and the Wisconsin State Historic Preservation Officer (hereinafter “SHPO”) agree that this Programmatic Agreement (hereinafter “PA”) does not represent a Subsequent Agreement as described by Section IX of the NPA, but rather, this PA represents an expedited consultation process between the SHPO and the NPS, pursuant to 36 CFR § 800.3(g), and does not constitute a program alternative, per 36 CFR § 800.14; and

WHEREAS, the NPS and the SHPO agree that each has responsibilities under the National Historic Preservation Act (hereinafter “NHPA”) and the ACHP implementing regulations at 36 CFR Part 800 that are neither referenced in nor incorporated into this PA; and

WHEREAS, this programmatic agreement will apply to TRAILS undertakings throughout the state of Wisconsin; and

WHEREAS, the SHPO and NPS agree that this programmatic agreement does not pertain to any undertakings pursuant to the NHPA and the ACHP’s implementing regulations at 36 CFR § 800 over which a Tribal Historic Preservation Officer, established pursuant to § 101(d)(2) of the National Historic Preservation Act of 1966 and further described at 36 CFR § 800.2(c), retains jurisdiction; and

WHEREAS, the definitions given in 36 CFR Part 800.16 are applicable throughout this programmatic agreement; and

WHEREAS, "The Wisconsin NHPA § 106 Review Process" (located on the World Wide Web at: http://www.wisconsinhistory.org/hp/protecting/106_intro.asp, or such World Wide Web location as identified by the SHPO in writing to the NPS) (hereinafter "Wisconsin Process", Appendix II) is referenced in and applicable throughout this PA.

NOW, THEREFORE the NPS and the SHPO agree that the TRAILS undertakings shall be carried out in accordance with the following stipulations:

Stipulations

I. Personnel

- A. The NPS shall designate a single staff person for each trail (hereinafter "Staff") to coordinate per the Wisconsin Process, and to be the contact point with the SHPO for all matters concerning this programmatic agreement. The Superintendent of the Ice Age and North Country National Scenic Trails is the person responsible for ensuring that all provisions of the programmatic agreement are carried out. NPS Staff has designated cultural resources professional advisors to consult with at the NPS Midwest Region office in Omaha, Nebraska.
- B. The NPS shall notify the SHPO of any proposed Staff changes. If, at any time through the duration of this programmatic agreement, the NPS does not have Staff in place to carry out the review, then the NPS and the SHPO shall consult to develop alternative administrative procedures for implementing the programmatic agreement.

II. Review Process

- A. A list of undertaking determined not to have the potential to affect historic properties can be found in Appendix I.
- B. Corridor Planning Process -- The NPS shall consult the Wisconsin Archeological and Historical Resources Database (hereinafter "WisAHRD") and shall summarize the information derived from the WisAHRD into the specific corridor plan.
- C. Construction
 - 1. Ground-Disturbing Undertakings

- a. If NPS determines through consultation of the WisAHRD or through other means, that a known archeological site is located within the project area, then the undertaking must be submitted to the SHPO for review and comments pursuant to the provisions of the Wisconsin Process.
- b. The NPS shall ensure that trail construction personnel receive pertinent information derived from the WisAHRD, including specific historic property site location information, prior to any specific trail construction activity.
- c. For undertakings that are not noted in Appendix I, the NPS shall carryout the provisions prescribed in the Wisconsin Process.

2. Non-Ground-Disturbing Undertakings

- a. Prior to commencing any undertaking that may affect a property either listed on the NRHP or eligible for listing on the NRHP, the NPS shall comply with the provisions of the Wisconsin Process.
- b. If the property within the project Area of Potential Effect (APE) is recorded in the WisAHRD and has not been formally evaluated by the SHPO, then the NPS shall apply the NRHP criteria to determine whether the property is eligible for listing on the NRHP, and shall carryout the provisions prescribed in the Wisconsin Process.
- b. If a property is listed on the NRHP, or previously was determined eligible for listing on the NRHP, or is determined eligible for listing on the NRHP through NPS's evaluation, then the NPS shall continue with the project review pursuant to the terms prescribed in the Wisconsin Process.

- D. The NPS shall retain comprehensive project files for all projects so that it may provide adequate documentation of these undertakings should it receive a request for such documentation. Also, this documentation shall be made available to the SHPO upon request per Part IX.

III. SHPO Review of Project Submittals

- A. The SHPO shall review all project submittals pursuant to the terms outlined in this programmatic agreement and as prescribed in the Wisconsin Process.
- B. If the SHPO believes that a specific undertaking may affect a property that is eligible for listing on the NRHP, then it shall notify NPS. Upon receipt of such notice from

the SHPO, NPS shall review the project-specific undertaking pursuant to the terms of this PA and as described in the Wisconsin Process.

IV. Emergencies

From time to time, undertakings may be wholly or partially funded and/or carried out by or on behalf of NPS in response to natural and man-made disasters. Such undertakings may be exempt from Federal environmental review requirements, per 24 CFR 58.34(a)(10) being those instances which have been officially declared by the President or Governor resulting in conditions which may endanger lives or threaten property eligible for the National Register of Historic Places. If the NPS shall commence an undertaking resulting from such an emergency, then 36 CFR Part 800.12 shall apply beginning with immediate SHPO notification. An accelerated consultation process should be initiated as soon as possible for undertakings implemented within 30 days of the official declaration.

V. Inadvertent Discoveries

In the event that an archeological site (2 or more artifacts) is inadvertently discovered during an undertaking, work in that location should cease and SHPO be immediately notified. Work may not continue at that location until a determination of its eligibility for the NRHP is made. Work may continue 15 meters beyond the perimeter of the site.

VI. Human Burials

In the event that a human burial site may be affected, or is discovered during project construction, the Wisconsin Burial Law, Wis. Stat. § 157.70, shall be implemented including the immediate notification of the SHPO. The Wisconsin Burial Law has no standing on, or application to, Federal land where the Native American Graves Protection and Repatriation Act (NAGPRA) would apply.

VII. Documentation

- A. Documentation required by the SHPO for consultation per the provisions of this programmatic agreement may include written descriptions of the project and affected historic properties, reports demonstrating that properties are eligible for listing in the NRHP, and maps showing APEs.
- B. All documentation generated for review purposes under the terms of this programmatic agreement shall meet the requirements of the Wisconsin Process and the provisions of 36 CFR Part 800.11.

- C. Two copies of any archeological reports or historic property documentation generated under the terms of this PA will be provided to the SHPO for inclusion into the state-wide database.

VIII. Technical Assistance

The SHPO shall notify the NPS of training opportunities, provide technical assistance to the NPS, and help develop training for its partners in areas of mutual concern and need.

IX. Monitoring

- A. The NPS shall retain documentation concerning all undertakings carried out pursuant to this programmatic agreement for a period of 3 years from project completion.
- B. The NPS, when requested, shall provide the SHPO a report summarizing the undertakings carried out pursuant to this programmatic agreement.
- C. After providing reasonable notice to the NPS, the SHPO may monitor specific undertakings.
- D. The NPS shall make available to the SHPO upon request all historic-review related documentation for projects undertaken pursuant to the provisions of this programmatic agreement. This periodic review may be carried out to evaluate the adequacy of the provisions of this programmatic agreement and to assess NPS compliance with the terms of this programmatic agreement.

X. Other Laws, Rules, Regulations

- A. No provision of this programmatic agreement, whether expressed or implied, is intended or designed to exempt either the NPS or the SHPO from their respective obligations, duties and responsibilities pursuant to any provisions of the NHPA § 106 and/or the ACHP's implementing regulations at 36 CFR Part 800 not specifically referenced herein, or the provisions of any other Federal, state, or local law, regulation, rule or ordinance not specifically referenced herein.
- B. The NPS understands that it may be required to contact and/or consult with individuals, groups and/or units of government including Native American Nations or Tribes throughout the NHPA § 106 review process, consistent with and pursuant to provisions of the NHPA § 106 and the ACHP's regulations at 36 CFR Part 800 not otherwise referenced herein.

- C. It is the responsibility of the NPS and the SHPO independently to recognize, understand and carry out each of their respective obligations, duties and responsibilities under the NHPA § 106 and the ACHP's regulations at 36 CFR Part 800 not otherwise referenced herein.

XI. Amendments

This programmatic agreement may be amended if the NPS and the SHPO decide in consultation that the terms need to be revised, updated or changed for any reason.

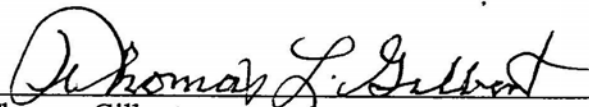
XII. Termination

- A. Either the NPS or the SHPO may terminate this programmatic agreement by providing written notice describing the reason(s) for termination to the other party. This programmatic agreement shall remain in effect for 30 days from receipt of notice to terminate. The NPS and the SHPO shall consult prior to actual termination to resolve the written reasons for termination and if possible, to amend the programmatic agreement accordingly or seek other actions that would prevent termination.
- B. In the event that this programmatic agreement is terminated, then NPS shall comply with the NHPA, 36 CFR Part 800 and the Wisconsin Process for any undertakings that may affect historic properties.

XIII. Sunset Provision

- A. This programmatic agreement shall remain in force for 10 years from the date of the final signature unless the programmatic agreement is terminated or superseded by another programmatic agreement.
- B. Within 6 months prior to the expiration of this programmatic agreement, NPS and the SHPO agree to meet to negotiate terms for a new programmatic agreement, extension of the terms of the existing programmatic agreement, or reversion to the specific provisions of the NHPA and 36 CFR Part 800.
- C. If neither party objects to the other in writing, the existing agreement (all of its terms in their entirety, except for provision XIII Sunset Provision section A), shall renew and shall remain in force for a period of 2 years from the date of expiration of the existing agreement.

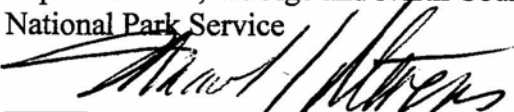
By:


Thomas Gilbert

Date: 8/30/10

Superintendent, Ice Age and North Country National Scenic Trails
National Park Service

By:


Michael E. Stevens

Date: Sept 2, 2010

Administrator, Division of Historic Preservation
Wisconsin Historical Society

Appendix I

Activities that do not have the potential to affect historic properties.

The following undertakings have been determined not to have the potential to affect historic properties pursuant to the ACHP's regulations at 36 CFR § 800.3 (a) (1). With respect to these undertakings, if the NPS finds reason to believe that a property may be eligible for or is listed on the National Register of Historic Places (hereinafter "NRHP"), then that individual undertaking shall be reviewed pursuant to other applicable provisions of this programmatic agreement. The NPS shall retain comprehensive project files on these undertakings so that it may provide adequate documentation should a request be received.

Certification of trail segments.

Activities associated with the layout and design of the trail, such as the use of marking tape and pin flags.

Blazing Trail: Trail marking and identification including painting on trees and affixing signs or other markers to trees.

Mowing: cutting vegetation growth to facilitate pedestrian use, including manual (scythe, slingblade) and machine (walk-behind or riding mower, tractor with mower deck, string trimmer) techniques.

Posts: Installation of posts for marking the trail (where blazing trees is not possible) or for marking property boundaries.

Fencing: Repairing of fences.

Vegetative Management: Pesticide application; prescribed burning; and the cutting, trimming, pruning, and harvesting of trees that does not involve removing stumps or roots.

Any undertaking that may disturb ground that has been disturbed previously to a greater extent than currently proposed is exempt.

Seed Bed Preparation/Prairie Planting: Restoring prairie from previously cultivated cropland and limiting the ground disturbance to the depth of the existing plow zone.

Fill placed on upland locations: Spreading of fill excavated from wetland restoration areas on upland locations, where there is no associated ground disturbing activity at the upland locations.

Undertakings that occur on "made land" of such a thickness as to preclude any reasonable undertaking from ever having the potential to impact the prehistoric resources which may lie beneath it. For example, former railroad grades or extensive fill may be considered "made land."

Actions in Hydric Soils: All actions that occur exclusively within hydric soils. Note: actions taken in wetland areas are restricted by other agencies.

Tile Breaks: Removing or disabling a section of drain tile in previously disturbed ground.

Ditch Plugs: Filling a ditch with soil that had been excavated previously from the ditch, or excavated from hydric soils.

Properties that are less than 50 years old are considered not eligible for listing on NRHP and are exempt from review under this programmatic agreement.

Undertakings that will only affect a property that is 50 years old or older but that previously (within 10 years from the date of the current project review) has been determined not eligible for listing on the NRHP are exempt from review under this programmatic agreement.

APPENDIX F:
Correspondence



United States Department of the Interior

NATIONAL PARK SERVICE

Ice Age and North Country
National Scenic Trails
700 Rayovac Drive, Suite 100
Madison, Wisconsin 53711

IN REPLY REFER TO:

D18(IATR)
Marathon/Langlade Counties

October 19, 2004

Ms. Patricia Leavenworth
State Conservationist
Natural Resources Conservation Service
8030 Excelsior Drive, Suite 200
Madison, Wisconsin 53717

Dear Ms. Leavenworth:

We request informal consultation with your agency to comply with the National Environmental Policy Act, as amended.

The National Park Service in cooperation with our two partners for the Ice Age National Scenic Trail (NST), the Wisconsin Department of Natural Resources and the Ice Age Park and Trail Foundation, is conducting a planning process in Marathon and Langlade Counties, Wisconsin, to identify a corridor within which the trail will be located. The purpose of this process is to identify possible route locations for the trail, define a boundary within which Federal and State monies may be used to acquire lands for the trail, and fulfill Federal and State environmental compliance requirements. Since all participation in the Ice Age NST project is voluntary, the trail's ultimate location will be determined by the willingness of landowners to sell lands or grant permission to cross their property. Eminent domain will not be used on this project. The proposed corridor is approximately 51 miles long and 1-5 miles wide. Within this "corridor of opportunity," the partners will work to secure lands, generally 200-1,000 feet wide, on which to establish the trail. The corridor transects the eastern half of Marathon County from south to north, crossing into Langlade County in a southwest to northeast direction before joining an existing section of the Ice Age NST near Mueller Lake Town Park.

The Marathon County portion of the trail will generally follow the undulating terrain of the Hancock, Almond, and Elderon moraines deposited 10-16,000 years ago. The Langlade County portion of the trail will generally follow the Hancock and Almond moraines. The proposed corridor already contains approximately 10 miles of existing Ice Age NST that takes the hiker north from the Mountain Bay State Trail near the Ringle area through the Dells of the Eau Claire County Park. The partnership is working to connect this existing trail segment to Portage County and to the existing segment in Langlade County.

The corridor passes through or near the communities of Galloway, Bevent, Elderon, Ringle, Hatley, and Antigo. Collectively, these areas provide support facilities such as trailheads, parking, water, lodging, and phones.

Glacial remnants include the three recessional moraines which are situated in the far eastern part of the county. Other glacial elements include boulder fields, kames, lakes, potholes, and kettle ponds. The Plover River, the county's largest trout stream, also runs through the proposed corridor. The corridor contains numerous public lands and has the potential to link state fisheries areas, three county parks, including Dells of the Eau Claire County Park and State Natural Area, and several county forest units.

At this time we are gathering information on Federally-listed species within the project area. Please send us a list of species that could potentially be affected by the project. This information will be used to evaluate potential impacts of various alternatives outlined within the environmental assessment.

Enclosed are maps of the proposed corridor and existing trail that fall within the following legal description:

Marathon County:

Franzen	T26N R10E, Sections 4-9, 15-17, 20-23, 25-28, 34-36
Bevent	T26N R9E, Section 1
Reid	T27N R9E, Sections 1-2, 11-14, 23-25, 35-36
Elderon	T27N R10E, Sections 6-7, 18-19, 30-32
Ringle	T28N R9E, Sections 1-2, 11-14, 22-27, 35-36
Norrie	T28N R10E, Sections 6-7, 18-19, 30-31
Easton	T29N R9E, Sections 12-13, 22-26, 35-36
Plover	T29N R10E, Sections 1-4, 7-11, 15-19, 30-31
Harrison	T30N R10E, Sections 24-26, 34-36

Langlade County:

Rolling	T30N R11E, Sections 1-3, 8-17, 19-22, 27-33
Norwood	T30N R12E, Sections 3-10, 17-18
Antigo	T31N R11E, Sections 12-13, 23-27, 33-36
Polar	T31N R12E, Sections 7-10, 15-22, 27-34

Statewide, the scope of this project consists of developing a hiking trail that generally follows the terminal and recessional moraines and other significant glacial features left by the last glacial advance some 10,000 years ago. Portions of the trail may be developed for cross-country skiing. However, uses such as horseback-riding or mountain bike-riding will not be allowed. The trail will consist primarily of a brushed footpath that is 2-4 feet in width. In sloping areas, side-hill construction will be utilized. Sapling-size trees and other understory brush will be cleared to a 4-foot width and 8-foot height. Where it is necessary to cross wetland areas, small boardwalks and bridges will be constructed. The standards that guide the development of the trail are contained in the "Ice Age National Scenic Trail Comprehensive Plan for Management and Use" and "Ice Age National Scenic Trail, A Handbook for Trail Design, Construction, and Maintenance."

We will appreciate your cooperation in this planning process and any input you can provide within your area of expertise and jurisdiction. If you have questions concerning the project, please contact Pam Schuler, Ice Age NST Manager at 608-441-5610 or pam_schuler@nps.gov.

Sincerely,

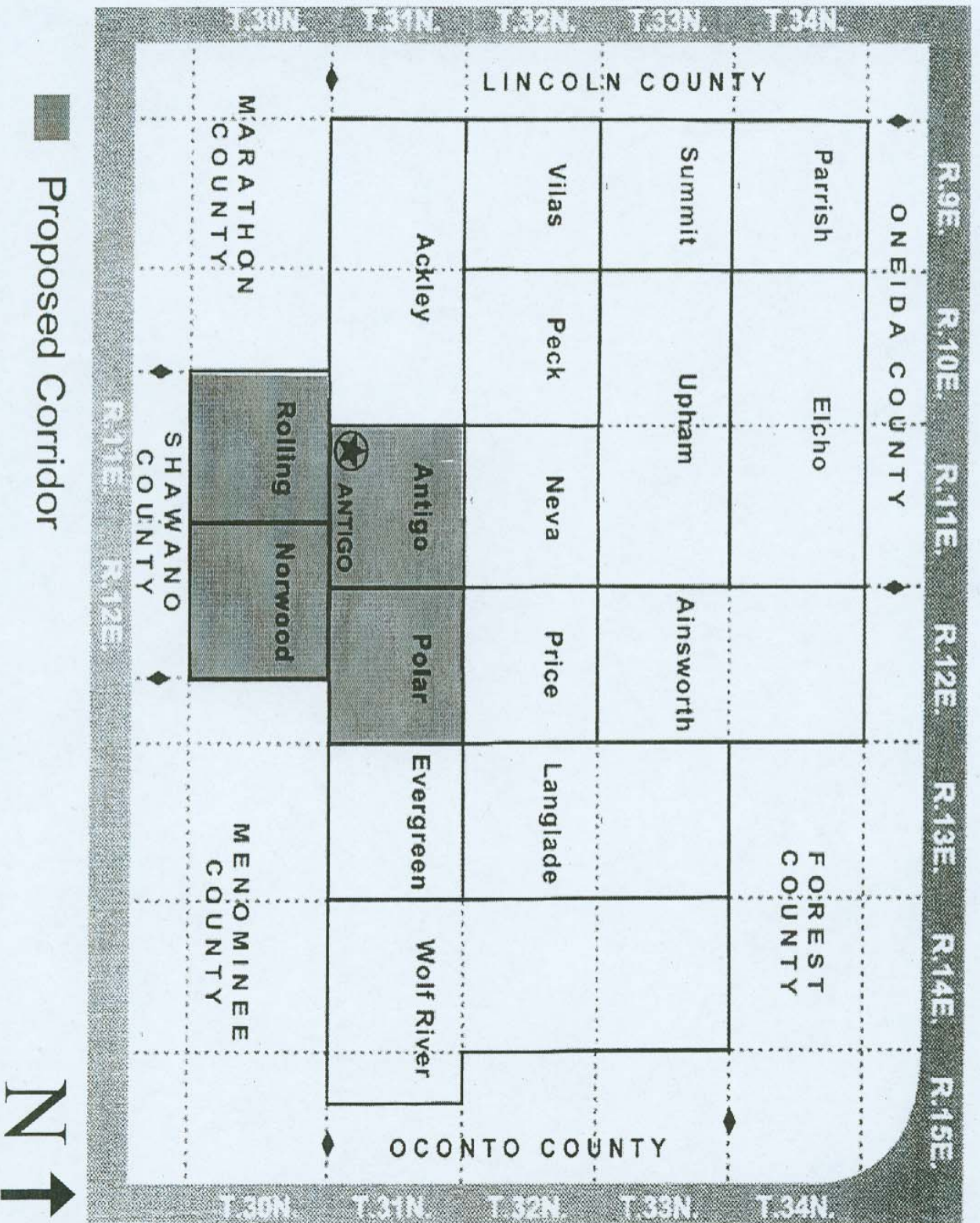


Pamela J. Schuler
Acting Superintendent

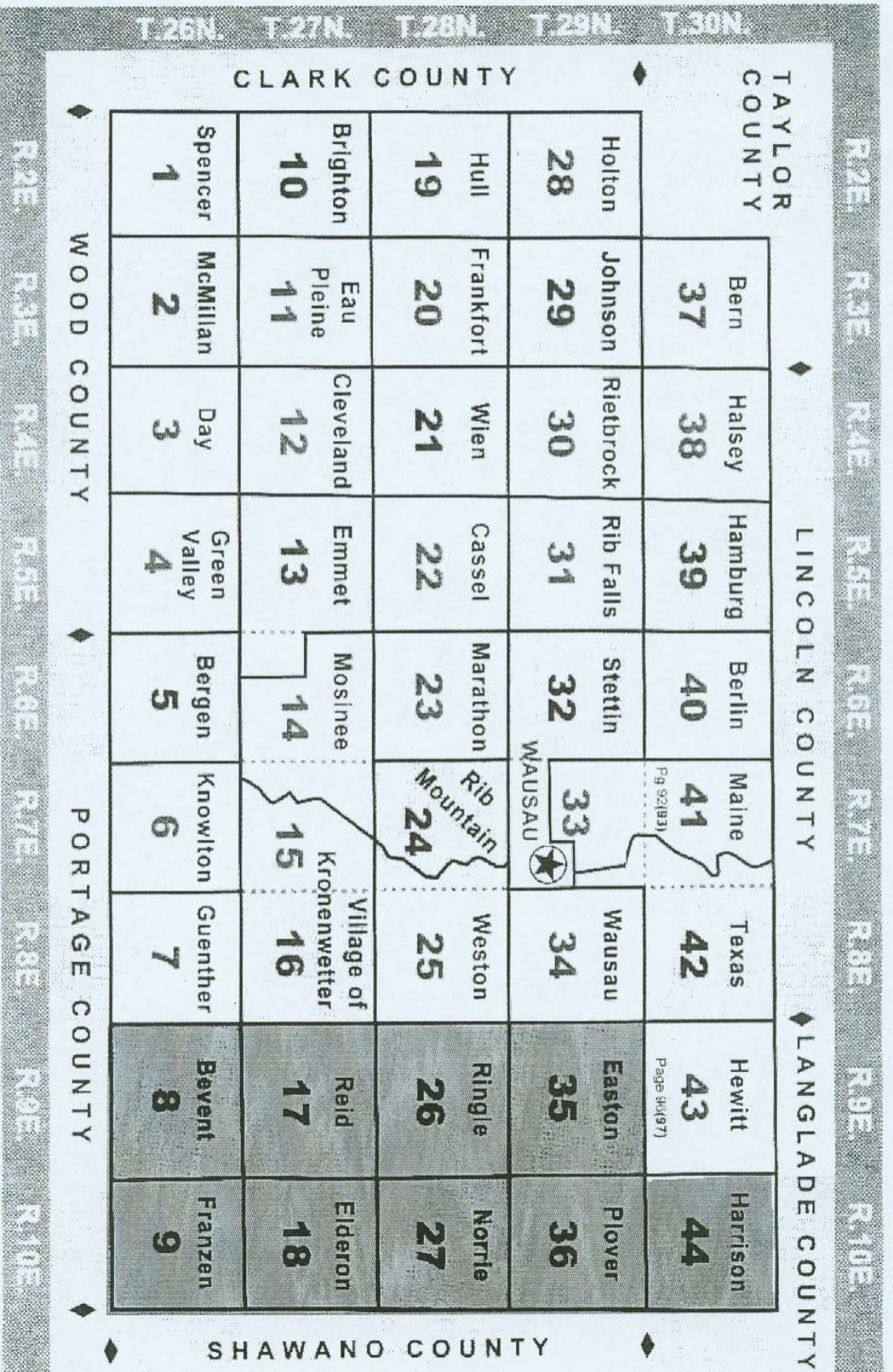
PJS:kk

Enclosures 2

Proposed Ice Age National Scenic Trail Planning Corridor- Langlade County



Proposed Ice Age National Scenic Trail Planning Corridor- Marathon County



Proposed Corridor



Also sent to:

Ms. Patricia Leavenworth
State Conservationist
natural Resources Conservation Service
8030 Excelsior Drive, Suite 200
Madison, Wisconsin 53717

Mr. Bharat Mathur
Acting Regional Administrator
Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604

Mr. Bruce Matzke
Division Administrator
Federal Highway Administration
567 D'Onofrio Drive
Madison, Wisconsin 53719

Mr. Charlie Peters
District Chief
U.S. Geological Survey
8505 Research Way
Middleton, Wisconsin 53562-3581

Mr. Michael Pfenning
District Commander
U.S. Army Corps of Engineers
190 5th Street, East
St. Paul, Minnesota 55101-1638

Ms. Jo Rywer
Acting Deputy Director of Planning
USDA Forest Service
626 East Wisconsin Avenue, Suite 100
Milwaukee, Wisconsin 53202



United States
Department of
Agriculture

Forest
Service

Eastern Region

626 East Wisconsin Ave.
Suite 800
Milwaukee, WI 53202

File Code: 1950/2350-3/2600-1

Date: NOV 02 2004

Ms. Pamela J. Schuler
Acting Superintendent
Ice Age and North Country National Scenic Trails
700 Rayovac Drive, Suite 100
Madison, Wisconsin 53711

Dear Ms. Schuler:

Thank you for your October 19, 2004 letter, requesting information for the proposed corridor for the Ice Age National Scenic Trail. Listed species information may be obtained from our website at: http://www.fs.fed.us/r9/wildlife/tes/tes_lists.htm. The corridor is adjacent to the Lakewood District, of Chequamegon-Nicolet National Forest; therefore, I have forwarded your letter to the district with a request that they provide any additional information. Future inquiries regarding federally listed species in the project area may be directed to Scott Anderson, Wildlife Biologist, Lakewood-Laona Ranger District at (715) 276-6333. The district mailing address is 15085 State Road 32, Lakewood, Wisconsin 54138. Please direct other inquiries related to this segment of the trail to Lakewood-Laona District Ranger, Harv Skjerven at the address.

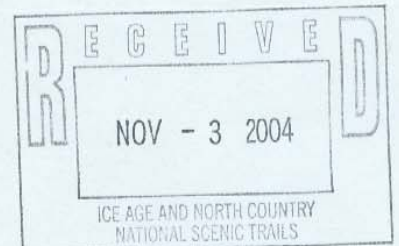
If you have any questions, please contact Jim A McDonald at (414) 297-3659 or jamcdonald@fs.fed.us.

Sincerely,

JO REYER
Deputy Director, Planning & Resource Information Management

cc:

Anne Archie
Donna Hepp
John Romanowski
Joel H Skjerven
Stephen Mighton





DEPARTMENT OF THE ARMY

ST. PAUL DISTRICT, CORPS OF ENGINEERS

190 FIFTH STREET EAST

ST. PAUL, MN 55101-1638

November 22, 2004

REPLY TO
ATTENTION OF

Project Management and Development Branch
Planning, Programs and Project Management Division

SUBJECT: D18(IATR), Marathon/Langlade Counties

Ms. Pamela J. Schuler
Acting Superintendent
National Park Service
Ice Age and North Country National Scenic Trails
700 Rayovac Drive, Suite 100
Madison, Wisconsin 53711

Dear Ms. Schuler:

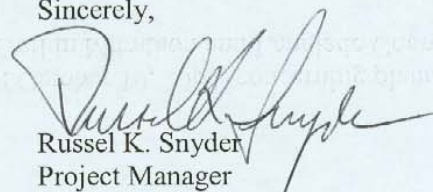
We are responding to your letter of October 19, 2004, concerning planning to identify a corridor for the Ice Age National Scenic Trail in Marathon and Langlade Counties, Wisconsin.

No St. Paul District real estate or current projects are located within the vicinity of the proposed trail corridor. Information on threatened and endangered species in the area can be obtained through coordination with the U.S. Fish and Wildlife Service.

You should contact the State Historic Preservation Office of the State Historical Society of Wisconsin about significant cultural resources sites in the trail corridor and whether a cultural resources survey is necessary.

The Corps of Engineers has regulatory authority over work in navigable waters under Section 10 of the River and Harbor Act of 1899 and over the discharge of dredged or fill material into waters of the United States, including wetlands and other aquatic areas, under Section 404 of the Clean Water Act. If the project includes the discharge of dredged or fill material into any water of the United States, including wetlands, a Section 404 permit would be required. The crossing of any navigable water of the United States would require a Section 10 permit. A description of any wetland or waterbody crossing should be submitted to the Regulatory Branch of the Corps of Engineers for review and determination of permit requirements. More information can be obtained from Mr. Robert J. Whiting, Chief, Regulatory Branch, St. Paul District, Corps of Engineers, 190 Fifth Street East, St. Paul, Minnesota 55101-1638, telephone (651) 290-5376.

Sincerely,



Russel K. Snyder
Project Manager



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

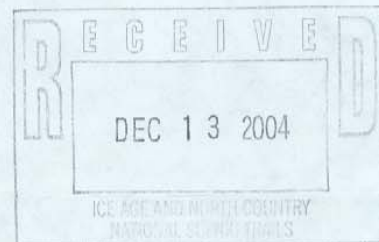
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

DEC 09 2004

REPLY TO THE ATTENTION OF:
R-19J

Pamela J. Schuler
Acting Superintendent
United States Department of the Interior
National Park Service
700 Rayovac Drive, Suite 100
Madison, Wisconsin 53711

Re: Ice Age National Scenic Trail



Dear Ms. Schuler:

Thank you for your letter dated October 19, 2004, which was received on November 23, 2004. The U.S. Environmental Protection Agency (U.S. EPA) agrees to cooperate with the National Park Service (NPS) for the Ice Age National Scenic Trail planning process, as you requested. Project proponents are attempting to identify possible route locations for the trail, define a boundary within which Federal and State monies may be used to acquire lands for the trail, as well as fulfill Federal and State environmental compliance requirements. The corridor transects the eastern half of Marathon County crossing into Langlade County before joining an existing section of the Ice Age NST near Mueller Lake Town Park.

U.S. EPA agrees to review documentation and address issues falling under our agency's jurisdiction with the expectation that the project will accurately reflect our views and concerns. This is a typical activity for our agency under Section 1501.6 of the Council on Environmental Quality's National Environmental Policy Act Implementing Regulations (40 CFR 1500-1508). U.S. EPA retains its independent review and comment function under Section 309 of the Clean Air Act. In addition, we have one tool which may be useful. The Critical Ecosystem Assessment Model evaluates the condition of Midwestern ecosystems using undeveloped land cover as of 1992. This program can be used in conjunction with other sources of information to assist in identifying a suitable corridor.

In your request letter, you asked the U.S. EPA to send a list of species that could potentially be affected by the project. Please contact the U.S. Fish and Wildlife Service, Green Bay Ecological Services Office, and the appropriate Wisconsin Department of Natural Resources office. These agencies, respectively, maintain lists of Federal and State listed threatened and endangered species and will be better suited to facilitate a full review of the effects of this project on listed species or areas designated as critical habitat.

We look forward to collaborating with the NPS on this project. My staff contact on this project is Kathleen Kowal, who can be reached at (312) 353-5206 or kowal.kathleen@epa.gov. Please do not hesitate to contact me if you need additional information.

Very truly yours,

Bharat Mathur
Acting Regional Administrator



United States Department of the Interior

NATIONAL PARK SERVICE

Ice Age and North Country
National Scenic Trails
700 Rayovac Drive, Suite 100
Madison, Wisconsin 53711

IN REPLY REFER TO:

D18(IATR)
Marathon/Langlade Counties

October 19, 2004

Ms. Deanne Bahr
NAGPRA Contact Representative
Sac & Fox Nation of Missouri in Kansas & Nebraska
305 North Main
Reserve, Kansas 66434

Dear Ms. Bahr:

We request informal consultation with your Nation to fulfill National Park Service responsibilities under Section 106 of the National Historic Preservation Act, as amended.

The National Park Service in cooperation with our two partners for the Ice Age National Scenic Trail (NST), the Wisconsin Department of Natural Resources and the Ice Age Park and Trail Foundation, is conducting a planning process in Marathon and Langlade Counties, Wisconsin, to identify a corridor within which the trail will be located. The purpose of this process is to identify possible route locations for the trail, define a boundary within which Federal and State monies may be used to acquire lands for the trail, and fulfill Federal and State environmental compliance requirements. Since all participation in the Ice Age NST project is voluntary, the trail's ultimate location will be determined by the willingness of landowners to sell lands or grant permission to cross their property. Eminent domain will not be used on this project. The proposed corridor is approximately 51 miles long and 1-5 miles wide. Within this "corridor of opportunity," the partners will work to secure lands, generally 200-1,000 feet wide, on which to establish the trail. The corridor transects the eastern half of Marathon County from south to north crossing into Langlade County in a southwest to northeast direction before joining an existing section of the Ice Age NST near Mueller Lake Town Park.

The Marathon County portion of the trail will generally follow the undulating terrain of the Hancock, Almond, and Elderon moraines deposited 10-16,000 years ago. The Langlade County portion of the trail will generally follow the Hancock and Almond moraines. The proposed corridor already contains approximately 10 miles of existing Ice Age NST that takes the hiker north from the Mountain Bay State Trail near the Ringle area through the Dells of the Eau Claire County Park. The partnership is working to connect this existing trail segment to Portage County and to the existing segment in Langlade County.

The corridor passes through or near the communities of Galloway, Bevent, Elderon, Ringle, Hatley, and Antigo. Collectively, these areas provide support facilities such as trailheads, parking, water, lodging, and phones.

Glacial remnants include the three recessional moraines which are situated in the far eastern part of the county. Other glacial elements include boulder fields, kames, lakes, potholes, and kettle ponds. The Plover River, the county's largest trout stream, also runs through the proposed corridor. The corridor contains numerous public lands and has the potential to link state fisheries areas, three county parks, including Dells of the Eau Claire County Park and State Natural Area, and several county forest units.

At this time we are gathering information on Federally-listed species within the project area. Please send us a list of species that could potentially be affected by the project. This information will be used to evaluate potential impacts of various alternatives outlined within the environmental assessment.

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Marathon County:

Franzen	T26N R10E, Sections 4-9, 15-17, 20-23, 25-28, 34-36
Bevent	T26N R9E, Section 1
Reid	T27N R9E, Sections 1-2, 11-14, 23-25, 35-36
Elderon	T27N R10E, Sections 6-7, 18-19, 30-32
Ringle	T28N R9E, Sections 1-2, 11-14, 22-27, 35-36
Norrie	T28N R10E, Sections 6-7, 18-19, 30-31
Easton	T29N R9E, Sections 12-13, 22-26, 35-36
Plover	T29N R10E, Sections 1-4, 7-11, 15-19, 30-31
Harrison	T30N R10E, Sections 24-26, 34-36

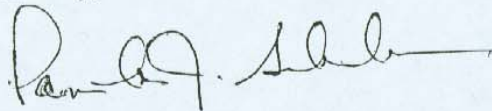
Langlade County:

Rolling	T30N R11E, Sections 1-3, 8-17, 19-22, 27-33
Norwood	T30N R12E, Sections 3-10, 17-18
Antigo	T31N R11E, Sections 12-13, 23-27, 33-36
Polar	T31N R12E, Sections 7-10, 15-22, 27-34

Statewide the scope of this project consists of developing a hiking trail that generally follows the terminal and recessional moraines and other significant glacial features left by the last glacial advance some 10,000 years ago. Portions of the trail may be developed for cross-country skiing. However, uses such as horseback-riding or mountain bike-riding will not be allowed. The trail will consist primarily of a brushed footpath that is 2-4 feet in width. In sloping areas, side-hill construction will be utilized. Sapling-size trees and other understory brush will be cleared to a 4-foot width and 8-foot height. Where it is necessary to cross wetland areas, small boardwalks and bridges will be constructed. The standards that guide the development of the trail are contained in the "Ice Age National Scenic Trail Comprehensive Plan for Management and Use," and "Ice Age National Scenic Trail, A Handbook for Trail Design, Construction, and Maintenance."

We will appreciate your cooperation in this planning process and any input you can provide within your area of expertise and jurisdiction. If you have questions concerning the project, please contact Pam Schuler, Ice Age NST Manager, at 608-441-5610 or pam_schuler@nps.gov.

Sincerely,



Pamela J. Schuler
Acting Superintendent

PJS:kk

Enclosures 2

Also Sent to:

Mr. Don Abney
Principal Chief
Sac and Fox Nation of Oklahoma
Route 2, Box 246
Stroud, Oklahoma 74079

Mr. Eugene Bigboy, Sr.
Chairman
Bad River Band of Lake Superior
Tribe of the Chippewa
P.O. Box 39
Odanah, Wisconsin 54861

Mr. Robert Chicks
President
Stockbridge Munsee Community
of Wisconsin
N8476 Mo-He-Con-Nuck Road
Bowler, Wisconsin 54416

Ms. Christina Danforth
Chairperson
Oneida Tribe of Indians of
Wisconsin
P.O. Box 365
Oneida, Wisconsin 54155

Mr. Raymond M. DePerry
Chairman
Red Cliff Band of Lake Superior
Chippewa
88385 Pike Road, Highway 13
Bayfield, Wisconsin 54814

Mr. Elmer "Jay" Emery
President
St. Croix Chippewa Indians of
Wisconsin
P.O. Box 45287
Hertel, Wisconsin 54845

Mr. Harold Frank
Chairman
Forest County Potawatomi
Community of Wisconsin
P.O. Box 340
Crandon, Wisconsin 54520

Mr. Larry Garvin
Repatriation Representative
Ho-Chunk Nation
P.O. Box 667
Black River Falls, Wisconsin
54615-0636

Ms. Sandra L. Rachal
Chairwoman
Sokaogon Chippewa Community,
Mole Lake Band
3086 State HIGHWAY 55
Crandon, Wisconsin 54520

Mr. Henry St. Germaine, Sr.
President
Lac Du Flambeau Band of Lake
Superior Chippewa
P.O. Box 67
Lac du Flambeau, Wisconsin
54538

Mr. Louis Taylor
Chairman
Lac Courte Oreilles Band of Lake
Superior Chippewa
13394 West Trepania Road,
Building 1
Hayward, Wisconsin 54843

Mr. Alex Walker
Tribal Chairman
Sac and Fox Tribe of the
Mississippi in Iowa
349 Meshwaki Road
Tama, Iowa 52339-9629

Ms. Lisa Waukau
Chairwoman
Menominee Indian Tribe of
Wisconsin
P.O. Box 910
Keshena, Wisconsin 54135

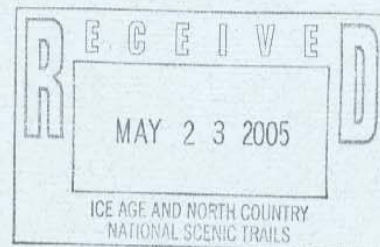


Sac & Fox Nation of Missouri in Kansas & Nebraska

305 North Main St., Reserve, KS 66434
Phone: (785) 742-7471 Fax: (785) 742-3785

May 19, 2005

Mary Tano
Ice Age NST Planner
Ice Age and North Country
National Scenic Trails
700 Rayovac Drive, Suite 100
Madison Wisconsin 53711



Dear Ms. Tano;

Thank you for your letter, which is in compliance with Section 106 of the National Historic Preservation Act, and Section 110. I apologize for the late response to your letter.

Project: D18 (IATR-Marathon County) Wisconsin

The Sac and Fox Nation of Missouri in Kansas and Nebraska NAGPRA department have determined the above project as:

No objections. However, if human skeletal remains and/or any objects falling under NAGPRA are uncovered during construction, please stop immediately and notify NAGPRA representative Deanne Bahr, at the address above.

There are two other bands of Sac and Fox that also need to be contacted, the Sac and Fox Nation of Oklahoma and the Sac and Fox of the Mississippi in Iowa.

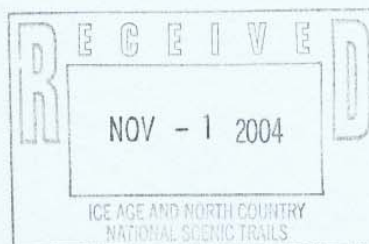
Johnathan Buffalo
Sac and Fox of the Mississippi in Iowa
349 Meskwaki Rd.
Tama, IA 52339-9629

Sandra Massey
Sac and Fox Nation of Oklahoma
Rt. 2, Box 246
Stroud, OK 74079

If you have any questions, please contact me at the number or address above.

Sincerely,

Deanne Bahr
Sac and Fox Nation of Missouri in Kansas and Nebraska
NAGPRA Contact Representative



Victoria A. Doud
PRESIDENT

October 29, 2004

Pamela J. Schuler
National Park Service
Ice Age Scenic Trails
700 Rayovac Drive, Suite 100
Madison, Wisconsin

Dear Ms. Schuler,

The Lac du Flambeau Band of Lake Superior Chippewa Indians welcomes the opportunity to be informed and participate in the planning of the Ice Age National Scenic Trail in Marathon and Langlade Counties. It is somewhat confusing in your choice of words requesting informal consultation with the Band to fulfill the National Park Service's responsibility under Section 106 of the National Historic Preservation Act. How is informal consultation defined and how will informal consultation influence how the trail is developed?

I also want to take the opportunity to inform the National Park Service the Lac du Flambeau Band has reserved hunting, fishing and gathering rights in the ceded territory located in Marathon and Langlade Counties. The Band will be very interested and determined to understand how these trails may impact our ability to exercise the treaty rights. The Band is particularly interested in whitetail deer, black bear, wild turkey, waterfowl, walleye, muskellunge, wild rice, white birch, cedar, sugar maple, sage and other medicinal plants. It is also important to contact Mr. Jim Schlender, Executive Administrator of the Great Lakes Indian Fish and Wildlife Commission at PO Box 9, Odanah, Wisconsin 54891. The Great Lakes Indian Fish Wildlife Commission will be able to provide more information on Chippewa Treaty Rights and a comprehensive list of species that the Ice Age National Scenic Trail may potentially affect.

Clearly it is understood the federal government and its agencies through Treaties and Executive Orders have a trust responsibility to federally recognized Tribes and subsequently a government-to-government relationship exists. Because of this special relationship, Treaty Rights along with culturally significant sites must be protected and preserved.

Please note Mr. Henry St. Germaine is no longer the Tribal President of the Band. Address all future correspondence to Ms. Victoria Doud, President, PO Box 67, Lac du Flambeau, Wisconsin 54538 (715-588-4206).

Sincerely,


Victoria Doud
President

**Lac du Flambeau Band
of Lake Superior Chippewa Indians**

P.O. Box 67 - Lac du Flambeau, Wisconsin 54538 • (715) 588-4205 • FAX (715) 588-2734



United States Department of the Interior

NATIONAL PARK SERVICE

Ice Age and North Country
National Scenic Trails
700 Rayovac Drive, Suite 100
Madison, Wisconsin 53711

IN REPLY REFER TO:

D18(IATR)
Marathon/Langlade Counties

December 8, 2004

Great Lakes Indian Fish and Wildlife Commission
Mr. Neal Kmiecik
P.O. Box 9
Odana, Wisconsin 54891

Dear Mr. Kmiecik:

Recently we began a corridor planning process for the Ice Age National Scenic Trail (NST) in Marathon and Langlade Counties, Wisconsin. As part of this process we contacted the Lac du Flambeau Band of Lake Superior Chippewa Indians. Tribal President Victoria Doud requested that we contact your office for additional information on Chippewa Treaty Rights and a comprehensive list of species that may be affected potentially by the trail.

The goal of the planning process in Marathon and Langlade Counties is to identify a corridor within which the trail will be located. The purpose of this process is to identify possible route locations for the trail, define a boundary within which Federal and State monies may be used to acquire lands for the trail, and fulfill Federal and State environmental compliance requirements. The National Park Service is leading this effort in cooperation with our two partners in the Ice Age National Scenic Trail (NST)--the Wisconsin Department of Natural Resources and the Ice Age Park and Trail Foundation. The proposed corridor is approximately 51 miles long and 1 to 5 miles in width. Within this "corridor of opportunity," the partners will work to secure lands, generally 200 to 1,000 feet wide, on which to establish the trail. The corridor transects the eastern half of Marathon County from south to north crossing into Langlade County in a southwest to northeast direction before joining an existing section of the Ice Age NST near Mueller Lake Town Park.

The Marathon County portion of the trail will generally follow the undulating terrain of the Hancock, Almond, and Elderon moraines deposited 10-16,000 years ago. The Langlade County portion of the trail will generally follow the Hancock and Almond moraines. The proposed corridor already contains approximately 10 miles of existing Ice Age NST that takes the hiker north from the Mountain Bay State Trail near the Ringle area through the Dells of the Eau Claire County Park. The partnership is working to connect this existing trail segment to Portage County and to the existing segment in Langlade County.

The corridor passes through or near the communities of Galloway, Bevent, Elderon, Ringle, Hatley, and Antigo. Collectively, these areas provide support facilities such as trailheads, parking, water, lodging, and phones.

Glacial remnants include the three recessional moraines which are situated in the far eastern part of the county. Other glacial elements include boulder fields, kames, lakes, potholes, and kettle ponds. The Plover River, the county's largest trout stream, also runs through the proposed corridor. The corridor contains numerous public lands and has the potential to link state fisheries areas, three county parks, including Dells of the Eau Claire County Park and State Natural Area, and several county forest units.

Enclosed are maps of the proposed corridor and existing trail that fall within the following legal description:

Marathon County:

Franzen	T26N R10E, Sections 4-9, 15-17, 20-23, 25-28, 34-36
Bevent	T26N R9E, Section 1
Reid	T27N R9E, Sections 1-2, 11-14, 23-25, 35-36
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Ringle	T28N R9E, Sections 1-2, 11-14, 22-27, 35-36
Norrie	T28N R10E, Sections 6-7, 18-19, 30-31
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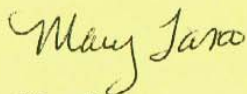
Langlade County:

Rolling	T30N R11E, Sections 1-3, 8-17, 19-22, 27-33
Norwood	T30N R12E, Sections 3-10, 17-18
Antigo	T31N R11E, Sections 12-13, 23-27, 33-36
Polar	T31N R12E, Sections 7-10, 15-22, 27-34

Statewide the scope of this project consists of developing a hiking trail that generally follows the terminal and recessional moraines and other significant glacial features left by the last glacial advance some 10,000 years ago. Portions of the trail may be developed for cross-county skiing; however, uses such as horseback riding or mountain bike riding will not be allowed. The trail will consist primarily of a brushed footpath that is 2-4 feet in width. In sloping areas, side-hill construction will be utilized. Sapling size trees and other understory brush will be cleared to a 4-foot width and 8-foot height. Where it is necessary to cross wetland areas, small boardwalks and bridges will be constructed. The standards that guide the development of the trail are contained in the "Ice Age National Scenic Trail Comprehensive Plan for Management and Use," and "Ice Age National Scenic Trail, A Handbook for Trail Design, Construction, and Maintenance."

We appreciate your cooperation in this planning process and any input you can provide within your area of expertise and jurisdiction. If you have questions concerning the project, please contact Pam Schuler, Ice Age NST Manager, at 608-441-5610.

Sincerely,



Mary Tano
Trail Planner, Ice Age NST

MT:kk

Enclosures 2

GREAT LAKES INDIAN FISH & WILDLIFE COMMISSION

P. O. Box 9 • Odanah, WI 54861 • 715/682-6619 • FAX 715/682-9294

• MEMBER TRIBES •

MICHIGAN

Bay Mills Community
Keweenaw Bay Community
Lac Vieux Desert Band

WISCONSIN

Bad River Band
Lac Courte Oreilles Band
Lac du Flambeau Band

Red Cliff Band
St. Croix Chippewa
Sokaogon Chippewa

MINNESOTA

Fond du Lac Band
Mille Lacs Band



January 6, 2005

Ms. Mary Tano
Trail Planner, Ice Age NST
700 Rayovac Dr., Suite 100
Madison, WI 53711



Dear Ms. Tano:

Thank you for your letter of December 8, 2004 in which you describe the planning process for the Ice Age National Scenic Trail in Marathon and Langlade Counties, Wisconsin. The Voigt Intertribal Task Force (Task Force) of the Great Lakes Indian Fish and Wildlife Commission (Commission) has authorized the submission of these comments regarding the Ice Age National Scenic Trail, which have been prepared by Commission staff.

The Task Force points out that its comments are submitted from the ceded territory perspective. These comments are not intended to preclude comments by individual tribes pursuant to their sovereign prerogatives. The Task Force encourages the National Park Service to solicit comments from tribes which may be affected by this trail.

The member tribes of the Great Lakes Indian Fish and Wildlife Commission enjoy retained usufructory rights within the territories ceded to the U.S. government in the treaties of 1837 and 1842. Hunting, fishing and gathering rights were retained in these two treaties in order to preserve the life way and cultural heritage of the Ojibwe Indians. During the exercise of these treaty rights literally hundreds of species of plant and animal are used. The proposed trail corridor passes through these ceded territories and thus may impact the exercise of these treaty rights.

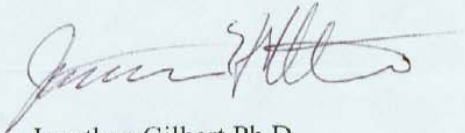
The Federal government has a unique trust responsibility to American Indian tribes, including the member tribes of the Commission. This trust responsibility has been recognized and acknowledged by various government agencies including the USDA Forest Service – Chequamegon-Nicolet National Forest and the National Park Service – Apostle Islands National Lakeshore. In the various planning documents prepared by these agencies, treaty rights have been preserved through the use of the phrase: "Nothing in this plan or its implementation is intended to modify, abrogate, or otherwise adversely affect tribal reserved or treaty-guaranteed rights". At the very minimum the tribes encourage the Ice Age National Scenic Trail plan to include the same language.

There may be opportunities for the tribes and Commission to work with the National Park Service – Ice Age Trail to enhance the exercise of treaty rights through ecosystem management

and the preservation of biodiversity. To this end I would like to request more information about the Ice Age Trail including the "Ice Age National Scenic Trail Comprehensive Plan for Management and Use" and "Ice Age National Scenic Trail, A Handbook for Trail Design, Constructions and Maintenance" and any other planning documents relating specifically to this trail.

Please do not hesitate to contact me if you wish to discuss these opportunities.

Sincerely,

A handwritten signature in dark ink, appearing to read "Jonathan Gilbert", with a stylized flourish at the end.

Jonathan Gilbert Ph.D.
Wildlife Section Leader

cc James Schlender, Executive Administrator
 James Zorn, Policy Analyst
 Neil Kmiecik, Biological Services Director
 Karen Danielsen, Ecologist

APPENDIX G: Legislation and Statues

This assessment serves to:

- A. Comply with all provisions regarding environmental considerations and public involvement required by NEPA and WEPA by carrying out an open, public planning process to determine the corridor for the trail, and to identify and address public issues and concerns.
- B. Comply with consultation requirements for Section 106 of the National Historic Preservation Act and Section 7 of the Endangered Species Act.
- C. Comply with Executive Order 11988 – Floodplain Management and Executive Order 11990 – Protection of Wetlands.
- D. Provide information on the physical and social environment through which the trail passes for local trail clubs and the county to use as they plan the physical location, construction, and subsequent maintenance of the trail.
- E. Foster public involvement in and support for development and management of the trail, including recognition of the trail by public and private land use planning groups.
- F. Comply with required state designations and approvals:
 - 1. The Natural Resources Board must approve land acquisition when an acquisition equals or exceeds \$150,000 (NR 1.41(1)(a), Wisconsin Administrative Code).
 - 2. Wisconsin State Statutes, Chapter 23.09 (2) d, gives the WDNR approval to acquire lands for the Ice Age Trail.
 - 3. Wisconsin State Statutes, Chapter 23.09 (2) c, gives the WDNR approval to provide grants for the acquisition of lands for the Ice Age Trail, through the Stewardship Program.
 - 4. Wisconsin State Statutes, Chapter 23.17, designates the Ice Age Trail, as provided for in 16 U.S.C. 1244(a)(10), plus the land adjacent to each side of that trail designated by the WDNR, as a State Scenic Trail, to be known as the "Ice Age Trail".
 - 5. Wisconsin State Statutes, Chapter 23.293, allows the transfer of land to the WDNR for the Ice Age Trail, through State Ice Age Trail area dedication.

6. Wisconsin State Statutes, Chapter 23.915(4), requires that the Joint Finance Committee must review a land acquisition when a Stewardship grant equals or exceeds \$250,000.

APPENDIX H

References Consulted

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Upper Wolf River Basin Priority Inventory Site Summaries 2000 (Including rare animal and plants documented in 1999-2000) Wisconsin Department of Natural Resources (WDNR). Appendix D

Water Quality Standards for Wisconsin Surface Waters. Wisconsin Administrative Code NR 102 Part 10 Sections (d)14, and (f)10, and Parts 11 Section (b)14 and (d)21. November 2006.

Wisconsin Department of Revenue Bureau of Equalization (TX28103) 2004 Statement of Assessments as reported on or before March 3, 2005 pages 1479, 1484, 1487, & 1489.

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<http://www.co.langlade.wi.us>

<http://langlade.uwex.edu/ag/documents/LangladeAgEconImpact.pdf>

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