Ice Age National Scenic Trail

Corridor Plan and Environmental Assessment for Langlade County

Finding of No Significant Impact

When Congress amended the National Trails System Act in 1980, it authorized the establishment of the Ice Age Trail as a National Scenic Trail (NST), but designated only a general route for it. This general route frequently identified 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 proposed route was then incorporated into the 1983 "Comprehensive Plan for Management and Use of the Ice Age National Scenic Trail" (Plan) with instructions that "Detailed planning for the location and construction of new trail segments needed to make the Ice Age NST a continuous off-road trail….begin as soon as possible." Over the years, independent efforts to establish the Ice Age Trail in Langlade County have been sporadic and have needed a professional analysis to identify a viable route.

Through the Corridor Planning Process, the National Park Service (NPS), Wisconsin Department of Natural Resources (WDNR) and Ice Age Trail Alliance (IATA), partners in the Ice Age NST project, identified and evaluated alternatives for establishing a "corridor of opportunity" within which the Ice Age NST would be developed across southern Langlade County. The "corridor of opportunity", which is approximately 3-5 miles in width, defines the area within which lands for the trail will be acquired or otherwise protected, but only on a willing seller basis. These protected lands known as the "trailway," average 200-1,000 feet in width, and it is on these lands that the trail is developed. The "corridor of opportunity" serves as a guide for federal, state, local, and private efforts to secure lands for the trail and as advisory information for town and county land-use planning. All participation in the Ice Age NST is voluntary.

The Purpose of the Ice Age NST 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 national scenic and historic resources.

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

To provide a superlative hiking trail 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.

The EA evaluated four alternatives: the No Action, Alternative 2, Alternative 3, and Alternative 4. The No-Action alternative is to not adopt a specific corridor for the trail. Alternative 2 showcases the terminal moraine and the Antigo Flats—the outwash plain to the west. 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. Alternative 4 combines the best of Alternatives 2 & 3, to adopt a specific corridor for the trail. A planning team was formed to investigate corridor and trail route options and conduct a public involvement process. A number of trail routes within the preferred alternative's corridor were also identified and evaluated.

Preferred Alternative

The preferred alternative will allow permanent protection of 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 public lands. Securing a trailway in public ownership will help maintain and promote existing wildlife and in some cases, will benefit threatened and endangered species by permanently protecting their environment. The preferred alternative will 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 preferred alternative would amend the route identified in the *Comprehensive Plan for Management and Use of the Ice Age NST* for Langlade County. Approximately 20 new miles of trail would be built through this county; 54 miles of the Ice age NST currently exist. The Ice Age NST's preferred alternative in Langlade County would follow the undulating terrain of the Hancock, Almond, Summit and Parrish Moraines left by the Green Bay and Langlade Lobes. It would also reveal the dramatic contrast between the hilly terrain of the forested moraines and the vast, nearly level, outwash plain called the Antigo Flats to their west. It would provide 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. The communities of Polar and Elmhurst, and the City of Antigo located immediately north of the proposed corridor, could collectively, provide support facilities such as trailheads, parking, food, water, lodging, and phones. Some of the outstanding natural resources found within the corridor include a white cedar-dominated seepage swamp, spring ponds, Class I trout streams, and deep kettle lakes.

The NPS decision is to adopt the corridor described as the "preferred" alternative in the "Ice Age National Scenic Trail Corridor Plan and Environmental Assessment for Langlade County, Wisconsin" (EA). This is also the "environmentally preferable" alternative.

Environmentally Preferable Alternative

As stated in Section 2.7.D of *Director's Order #12 and Handbook*, the environmentally preferable alternative is the alternative that will promote the national environmental policy expressed in the National Environmental Policy Act (NEPA) (Sec. 101 (b)). Thus, the environmentally preferred alternative is 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."

The preferred alternative—to adopt a continuous corridor through Langlade County in which to develop a high quality recreation trail as part of the Ice Age NST—is the alternative that best achieves the goals of the National Environmental Policy Act. It is also the alternative that maximizes the intent of the federal legislation relating to the trail as described in the "Purpose of the Ice Age NST." The preferred

alternative incorporates those geologic features that best tell the story of the last glacial event that occurred in this region of the state, optimizes the use of public lands and existing support facilities, and will provide an outstanding hiking experience that will take the user through a diversity of habitats, topography and cultural settings. The No Action alternative amounts to abandoning any coordinated, collaborative effort to attain these goals. Individually, neither Alternative 2 and Alternative 3 maximizes the diversity of geologic, biologic, cultural or scenic values found in this area that could provide an outstanding Ice Age Trail user experience.

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 townships. Outlined below are the results of our contacts:

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, provided information on the Corridor Planning Process, and responded to questions and concerns regarding the project. Similar presentations were made to the Langlade County Board on September 16, 2003; the Langlade County Forestry Committee on August 14, 2003, and February 9, 2009; and, 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 may affect 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 gape 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.

Both written and verbal comments were collected and noted. Some comments stated support for the trail, expressed interest in selling land or easements for the trail, and offered to help build some of the trail. Comments received opposing the trail were generally from landowners who did not want the trail on their property. Because of the wide nature of the "corridor of opportunity," landowners opposed to the trail can be avoided as trail alignments are developed. After reviewing all comments, it has been determined that no additional changes are needed to the "Preferred" corridor alternative for further development of the Ice Age NST.

Public Review and Comment for "Draft Ice Age NST Corridor Plan and Environmental Assessment"--
The NPS issued a "Draft Ice Age National Scenic Trail Corridor Plan and Environmental Assessment for Langlade County, Wisconsin" for public review and comment for a 30-day period ending XXXXXXXX Comments about the assessment were accepted until the end of the review period. All comments were supportive of the Ice Age NST and it development. Public comment was solicited throughout the planning process.

The Preferred Alternative and Significance Criteria

The environmentally preferred alternative would not have a significant impact on the natural and cultural environment, or the socioeconomic resources of the project area. As defined in 40 CFR 1508.27, the significance of the proposal has been evaluated using the following ten criteria.

1. Impacts that may have both beneficial and adverse aspects and which on balance may be beneficial, but that may still have significant adverse impacts which require analysis in an Environmental Impact Statement:

The NPS has determined that the environmentally preferred alternative can be implemented with no significant adverse effect to soils, air quality, water resources, floodplain, wetlands, fisheries, wildlife, threatened/endangered species, visual quality, aesthetics/recreation, cultural resources, and local economy. Implementation of the Preferred Alternative will actually produce long term beneficial effects for hikers and the environment.

The environmentally preferred alternative identifies a Corridor of Opportunity that is approximately 3-6 miles in width extending from north to south through Langlade County that would receive State and Federal approval. Within this corridor, a trailway that is approximately 200—1000 feet or more in width would be acquired for Ice Age NST purposes. A wider trailway 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.

A continuous trailway would connect islands of existing public lands allowing movement of wildlife and the perpetuation and enhancement of indigenous plant communities. Also, support facilities for hikers such as trailheads, water, parking, camping, and phones will be provided by the public lands and villages located within or adjacent to the corridor, thus saving major construction/development dollars.

Adoption of this corridor will allow the expenditure of federal and state monies to permanently protect lands for the Ice Age NST for future generations. Today much of the trail exists on handshake agreements and is vulnerable to changes in land ownerships. Acquisition of lands for the trail would restrict residential, commercial and extractive development thereby protecting existing natural resources such as wetlands, fisheries and wildlife habitat.

Possible adverse effects may include problems with litter, additional soil compaction and erosion, trespass onto private lands, and interruption to wildlife patterns caused by increased access to areas within the corridor. Experience has shown on existing segments of the Ice Age NST, and other long distance trails, that these impacts are minimal. Proper construction of trail, clear and sufficient signage, and ongoing monitoring of completed trail segments by volunteers, should alleviate use problems. It is possible that

some wildlife may be disturbed by the use of the trail, but this disturbance is short term and wildlife will become accustomed to the occasional presence of users.

Other adverse impacts include the possibility of increased residential development along the corridor, changes of land use from agricultural to conservation/recreation, and property tax implications of land acquisition for the trail. The Ice Age NST may act as an attraction and lead to residential development along the corridor. Securing lands for the trail may change land use. However, regardless of the trail, current land use and ownership patterns are changing, particularly adjacent to State Highway 29. The effect of the trail would be localized to areas directly adjacent to the trail corridor and is not significant on a larger scale. Presently, acquisition of lands for the trail is done primarily by the State of Wisconsin. The state pays property taxes, just like private landowners. Therefore, townships receive tax payments on state land with little or no demand for services to such lands. In March 2009, the National Trail System Act was amended to allow the federal government to purchase lands for long distance trails from willing sellers, although on the Ice Age NST it is yet to be utilized. If, in the future, the NPS does purchase lands for the trail, then this action would constitute a minor, adverse impact on the local tax base. None of these adverse impacts were determined to be significant.

2. The degree to which public health and safety are affected:

Development of the Ice Age NST will provide the public with many benefits. First, none of the activities associated with establishing the preferred alternative will have an effect on public health or safety. However, a long distance, continuous trail that links numerous state, county and local lands will provide many opportunities for the public to walk and hike for health and fitness purposes. Today in the State of Wisconsin 61 percent of adults are overweight. Establishment of the preferred alternative for the Ice Age NST may help the state reach the 2010 Center of Disease Control (CDC) goal of only 15 percent of adults being obese. It may also help the state meet an additional CDC goal of 30 percent of adults being physically active. The impact to local communities of additional emergency response requests along the trail will be minimal.

Possible adverse effects consist of potential conflicts with agricultural management practices implemented by adjoining landowners such as pesticide applications and manure spreading. Since the trailway typically provides a buffer between the hiker and the neighboring landowner, the impact is minimal.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas:

The preferred corridor alternative was selected because of its highly scenic, geologic, biologic and cultural values. 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 left numerous geologic features such as the terminal and recessional moraines, ice walled lake plains, kettle ponds, glacial drainage-ways, and outwash plains. The Ice Age NST's proposed corridor generally follows the Hancock and Almond Moraines deposited approximately 23,000 – 30,000 years ago. The vast outwash plain called the Antigo Flats lies adjacent to the moraines and is considered some of the state's best farmland. The hilly topography of the moraines contains a matrix of agricultural and forested lands. Northern mesic woodlands cover the moraine and consist primarily of sugar maple, yellow birch, basswood, white ash, eastern hemlock, and, to a lesser extent, American beech. There are several notable plant communities located in the proposed corridor including Demlow Lakes Swamp and Elmhurst Maples. The preferred alternative also has an abundance of water resources including springs and trout streams. Portions of the Wolf River, Eau Claire River, and Spring Brook, which are located within the proposed corridor, are designated Class I trout streams. Nine streams present in the corridor have been designated either

Exceptional Water Resources or Outstanding Resource Waters for their superior water quality and ability to sustain valuable fisheries.
There are currently no sites in the proposed corridor that are listed in the Natural Register of Historic Places, although there are records in the Wisconsin Historical Society's Architecture and History Inventory (AHI). The AHI contains information on historic buildings and districts, structures, sites, objects throughout the Wisconsin. The sites listed in the state inventory include a campsite/village in the Towns of Polar and Norwood, cemeteries in all four towns, and several old school buildings in the Town of Antigo.

The benefit of winding the trail through these areas is to provide a delightful hiking experience, educate the public about their significance, and through acquisition protect some of their scenic and natural values. Well-placed scenic overlooks could potentially provide dramatic views of the Antigo Flats and the Parrish and Summit Moraines.

Construction of trail through these areas may cause a slight amount of soil erosion. However, with proper layout of the trail on the landscape, erosion control techniques, planking or bridges, and trail monitoring, all potential impacts from constructing and using the trail can be mitigated to a non-significant level. Wetlands will be avoided where possible and where wetlands must be traversed, they will be crossed utilizing elevated structures to minimize impacts. There are no national wild or scenic rivers that would be affected.

4. The degree to which impacts are likely to be highly controversial:

There are no highly controversial effects on the quality of the human environment identified during either preparation of the EA or the public review period. Comments received from the public expressed concerns about the trail's proximity to residences and active agricultural fields, trail users trespassing on private property, snowmobile trespass, the trail's effect on property values and tax base, parking for trail users, disturbance of wildlife, and conflicts with hunters. Other comments stated support for the trail, expressed interest in selling land or easements for the trail, offered to help build the trail, and volunteered to host overnight camping for hikers. The impacts of this action are not highly controversial.

5. The degree to which the potential impacts are highly uncertain or involve unique or unknown risks:

There are no highly uncertain impacts to this action. The Ice Age NST is primarily an 18 inch - 30 inch-wide brushed or constructed footpath through meadows and woodlands. This action will not involve any unique or unknown risks.

6. Whether the action may establish a precedent for future actions with significant effects, or represents a decision in principle about a future consideration:

The Corridor Planning Process for the Ice Age NST is typically done on a county-by-county basis. Designation of this preferred corridor alternative in Langlade County will connect future trail with an approved Ice Age NST corridor in Marathon County. The location of connecting trail on its northern terminus is where the trail enters the Langlade County Forest. This action is not deleterious and will not have significant future effects. These connections have been well thought out in terms of significant glacial features regionally, linkage to public lands for support facilities, provision for a varied and scenic hiking experience, and preservation of natural features.

7. Whether the action is related to other actions that may have individual insignificant impacts but cumulatively significant effects:

Acquisition of land or easements by public agencies is often perceived by landowners or townships as threatening, detrimental, or resulting in loss of tax base. The local tax base should not be significantly affected by this action. If land is acquired by the state, property tax revenues on that land will be paid under provision of state law. If land is purchased by the IATA, a non-profit organization, a petition to exempt the land from property taxation may be filed. If the NPS acquires land for the Ice Age NST, taxes would be paid under the PILT program. This action would constitute a minor, adverse impact on the local tax base.

8. The degree to which an action may adversely affect historic properties in or eligible for listing in the National Register of Historic Places, or other significant scientific, archeological, or cultural resources:

On September 2, 2010, the NPS signed a Programmatic Agreement with the Wisconsin State Historic Preservation Officer (SHPO) that defines methods to identify and avoid impacts to cultural resources when designing and building the Ice Age NST. During the Corridor Planning Process, known archeological sites were identified that will be avoided during trail development. If any other historic properties are discovered during trail design and construction, the trail will be relocated or other mitigating measures will be taken in consultation with the SHPO, as required under Section 106 of the National Historic Preservation Act.

9. The degree to which an action may adversely affect an endangered or threatened species or its habitat:

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. This species had been de-listed in Wisconsin by the USFWS. A management plan has been prepared by the Wisconsin Department of Natural Resources (WDNR).

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.

The NPS,USFWS, and WDNR have a review process in place to avoid impacting threatened and endangered species with the construction of the Ice Age NST statewide including Langlade County. This process occurs in two phases. The first is a broad review of the alternative 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. In constructing the trail, best management practices are utilized. With these agreed upon processes and measures in place, the preferred alternative is unlikely to negatively impact threatened and endangered species in Langlade County. In the event that the NPS is not able to avoid adverse effects to listed species, formal consultation would be initiated with USFWS.

10. Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment:

The preferred alternative violates no federal, state, or local law, including environmental laws.

Impairment

After review of the impacts of the proposal, it has been determined that the alternative selected will not result in the impairment of resources and will not violate the NPS Organic Act. (See attached Impairment Statement)

Basis for Decision

The NPS selected the preferred alternative over the no-action alternative to ensure that the intent of the Ice Age NST's authorizing legislation, the National Trails System Act, is met. The preferred alternative is consistent with the Comprehensive Plan for Management and Use of the Ice Age NST, and will provide protection to cultural, historical and natural resources.

I find that the preferred alternative does not constitute a major federal action significantly affecting the quality of the human environment. Therefore, in accordance with the National Environmental Policy Act of 1969 and regulations of the Council on Environmental Quality (40CFR 1508.9), an environmental impact statement will not be prepared for the project.

Recommended:_____ _____

Superintendent, Ice Age National Scenic Trail **Date**

Approved: _____ _____

NPS Midwest Regional Director **Date**

DETERMINATION OF IMPAIRMENT

Ice Age National Scenic Trail
Langlade County Corridor Plan and EA

A determination of impairment is made for each of the resource impact topics carried forward and analyzed in Assessment for the preferred alternative. The description of the trail's significance in Chapter 1 was used as a basis for determining if a resource is:

- necessary to fulfill specific purposes identified in the establishing legislation of the trail, or
- key to the natural or cultural integrity of the trail or to opportunities for enjoyment of the trail, or
- identified in the trail's general management plan or other relevant NPS planning documents as being of significance.

Impairment determinations are not necessary for visitor experience, socioeconomics, public health and safety, environmental justice, land use, and park operations, etc., because impairment findings relate back to the trail's resources and values. These impact areas are not generally considered to be park resources or values according to the Organic Act, and cannot be impaired the same way that an action can impair park resources and values.

NATURAL RESOURCE TOPICS:

Geology

One of the primary objectives of the Ice Age NST is to preserve and protect significant geological features. The preferred alternative in Langlade County contains a diversity of geologic features and generally follows the undulating terrain of the Hancock and Almond Moraines of the Wisconsin Glacier's Green Bay Lobe, and the Summit and Parrish Moraines of the Langlade Lobe. The ice sheets 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.

Under the preferred alternative, an established trailway would be designated that would allow permanent protection of some of these resources from disruptive land uses which would be a beneficial impact. Development of a trail within this trailway 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. Some slight impacts from visitation could occur if visitation to geologic resources were to increase; however, these impacts are only slight and the "Preferred" alternative would not result in impairment.

Soils

Soil type, slope, and drainage all influence the suitability of an area to withstand the potential impacts of trail construction and use. The majority of soils found in the preferred alternative are represented by two associations: the Antigo-Pence (approximately 29%) and Kennan-Keweenaw (approximately 63%). The remaining soils are generally associated with wet areas on and behind the moraine and the small portion of the alternative's western boundary adjacent to the Antigo Flats, which is representative of the Antigo-Langlade Soil Association. According to the Natural Resources Conservation Service (NRCS), both associations have few limitations regarding trail development.

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. 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 whenever possible. Through the use of techniques as illustrated by the *Handbook on Trail Design, Construction, and Maintenance for the Ice Age NST*, the preferred alternative would not result in impairment.

Water Resources

The water resources within the proposed "Preferred" alternative are the direct results of glaciation, and are linked to the trail's geologic, recreational and interpretive significance. Rivers, streams, kettle ponds, marshes, and wetlands are some of these features. 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.

Following federal and state regulations, before trail construction occurs on any portion of the Ice Age NST, the NPS expects that the necessary permits to build structures over streams and wetlands be obtained. Trail construction within the preferred alternative may involve the construction of a few bridges and boardwalks to span streams and wetlands. Every effort would be made to avoid such areas. The construction of these structures may cause short term and long term adverse impacts. These impacts would be extremely localized and would be mitigated through sustainable design. Because there would be only minor, localized adverse impacts, the preferred alternative would not result in impairment.

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.

Under the preferred alternative, 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. Because trail construction and use would result in a negligible impact on the area's air quality, the preferred alternative would not result in impairment.

Visual Resources

As the Ice Age NST partners (NPS, WDNR, IATA) begin to create the Ice Age NST within the preferred alternative, lands put aside for the trail (trailway) would typically include an area greater than the width of the trail itself. This is to provide a visual buffer from the surrounding landscape. 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 recreate former communities such as prairie restorations, which may beneficially impact biodiversity. Selective pruning or cutting to improve views of geologic features or the landscape, both inside and outside the immediate trailway, would beneficially impact the trail.
Since any location within the preferred alternative is a potential homesite, 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. Regarding visual resources, land protection and management efforts associated with trail development would be a beneficial impact and the "Preferred" alternative would not result in impairment.

Ecosystem

The preferred alternative encompasses an intricate patchwork of native woodlands, pine plantations, Christmas tree farms, cropland, open grasslands, springs, and wetland areas. Among the natural resources found within the alternative are a white cedar-dominated seepage swamp, rich older second-growth forest, spring ponds, outstanding trout streams, and deep kettle lakes.

Development of the "Preferred" alternative in Marathon 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. Because of the linear nature of the trail, this greenspace will serve as a wildlife corridor, facilitating movement between areas of protected land. These are beneficial impacts and would not result impairment.

Fisheries

The Ice Age NST "Preferred" alternative includes waters that 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. 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.

Once we know where the trail will be located, with proper and effective trail design, erosion control during construction, proper placement of water crossings, etc., it is unlikely that there would be adverse effects to the fishery resources. 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. 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. Because of these protective efforts, there may be short term impacts but the preferred alternative would not result in impairment.

Wildlife

Wildlife inhabiting the proposed corridor for the Ice Age NST in Langlade County 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. Because of land use, edge species predominate.

Securing a continuous trailway 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. Because there would be no adverse effects, the preferred alternative would not result in impairment.

Special Status Species

The Endangered Species Act requires federal agencies to ensure that their activities would not jeopardize existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat of such species. Consultation with the U.S. Fish and Wildlife Service and Wisconsin Department of Natural Resources (DNR) identified a number of threatened, endangered, or species of concern that warrants the inclusion of this topic in this *Corridor Plan / Environmental Analysis Statement*.

According to the USFWS, the gray wolf is present in increasing numbers. A management plan has been prepared by the Wisconsin Department of Natural Resources (WDNR). There are several plant communities and one animal species found in and near the preferred alternative 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.

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. NPS also works closely with the Wisconsin DNR to avoid

species and habitat areas of special concern at the state level. In addition, as trailway lands are purchased, habitat restoration activities are possible. Land protection and restoration activities would have beneficial effects (no adverse effect) because such resources are protected. Because there would be no adverse effects, the preferred alternative would not result in impairment.

CULTURAL RESOURCE TOPICS

Archeological 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. Although archeological resources are not necessary to fulfill the purposes for which the trail was established, compliance activities associated with trail construction would have no adverse effect as such resources are identified and avoided. Because there would be no adverse effects, the preferred alternative would not result in impairment.

Historic Structures

Under the preferred alternative, historic structures could be identified, inventoried, and evaluated under National Register of Historic Places criteria. Compliance activities associated with Section 106 would have no adverse effects since such resources are identified and avoided as the trail is developed. Because there would be no adverse effects, the preferred alternative would not result in impairment.

Cultural Landscapes

Under the preferred alternative, potential landscapes could be surveyed, inventoried, and evaluated under National Register of Historic Places criteria. The National Park Service could encourage resource management policies that preserve the natural resource values and culturally significant character-defining patterns and features of listed, or determined eligible, landscapes. Some slight impacts from visitation could occur if visitation to cultural landscapes were to increase. Because of protective efforts, the preferred alternative would not result in impairment.

Summary

As described above, adverse impacts anticipated as a result of implementing the preferred alternative on a resource or value whose conservation is necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the trail, key to the natural or cultural integrity of the trail or to opportunities for enjoyment of the trail, or identified as significant in the trail's general management plan or other relevant NPS planning documents, would not rise to levels that would constitute impairment.