Chapter 7

CORRIDOR IMPACT ANALYSIS

This chapter presents the probable impacts to the natural, cultural, and socio-economic resources of the No Action and Preferred 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, adverse, or negligible. Beneficial impacts would result in a change that moves a resource toward its desired condition. Adverse impacts would result in a change that moves a resource away from its desired condition. A negligible effect would be a change that is so small that it would not be measurable.

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 the Preferred alternative. 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. Neither alternative would require actions resulting in impairment of natural, cultural, or social resources.

Ice Age NST construction standards call for a 24-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 then ½ acre per mile of trail construction. Generally, trail construction and maintenance would take place using hand tools and volunteer labor.

Differences between Alternatives

Despite similarities between the No Action and Preferred alternative, 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 Preferred alternative, 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 Preferred alternative, the 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 with the planning of the Preferred alternative, which identifies biological and cultural resources within the trail corridor. 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 Preferred alternative 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 trailway 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.

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.

Development in eastern Marathon County is concentrated in the Highway 29 corridor near Hatley and in the town of Ringle. In recent years, this has included a number of residential subdivisions as well as isolated homes on large lots. Such dispersed development can lead to the

landscape becoming increasingly fragmented, and may diminish the potential for securing a trail alignment that provides a quality experience. Gravel extraction is not considered desirable because it impacts the visual character of the landscape, but there are instances where it is occurring within the corridor. 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 both 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.

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 (e.g. on slopes less than 10 percent), 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 sidehill 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 Marathon County and creation of the trail affords the opportunity to preserve these water features and 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 the Preferred alternative.

Under both 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.

Under the Preferred alternative, it is estimated that one to three water-crossing structures would be constructed. A planned corridor and professional involvement in siting the water crossing structures would help minimize the number of these structures necessary and also minimize related negative impacts to water resources. Ongoing monitoring of existing Ice Age NST segments 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 effect.

Air Quality

Under both 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 Preferred alternative, the presence of a protected greenway would limit some development and therefore limit negative impacts to air quality. The

air quality of Marathon 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

The Preferred alternative over time would permanently protect land somewhere 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 such as prairie restorations, 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 trail corridor are known for their scenic beauty, they are especially threatened by scattered rural site development. Some of the most significant are the undeveloped kettle ponds, and tunnel channels, as well as portions of the terminal moraine north of Hatley and west of Galloway. 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.

Under the No Action alternative, the location of the trail would be more dependent on handshake 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 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 as well as on the public lands it connects. 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 ex-urban 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, residential development in Marathon County is based on larger market trends. In recent years new residential construction countywide has dropped off significantly after peaking in 2003 at roughly 400 it was only slightly more than 100 in 2009. Most development in the eastern part of the county was concentrated in subdivisions near State Highway 29. The trail could somewhat further increase the desirability of these areas for rural residential development. 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 Marathon County.

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 both alternatives, it is possible that a non-native species could be introduced within the trailway. Under the Preferred alternative, 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, the WDNR staff according to procedures will perform trail maintenance. 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 counsel'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 the Preferred alternative, securing a trailway would have no significant impacts on the wildlife within the proposed corridor. The area where the proposed corridor is located is rural with the dominant land use being agriculture interspersed with woodlands. The area north of State Highway 29 is primarily forested, while the southern area is more agricultural with the primary crops being field and sweet corn, soybeans, and alfalfa. Significant acreage is also allocated to the production of Christmas trees, especially in the northern sections of the county. Closer to the southeast corner of the county spray-irrigated potato production is the primary

agricultural activity. 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 the initial construction of the trail, and afterward when people are hiking it. 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 natural environment surrounding the trail, and take great precautions to preserve and protect it.

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 both 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 the Preferred alternative, 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), United States Fish and Wildlife Service (USFWS), and Wisconsin Department of Natural Resources (WDNR) have a review process in place to avoid impacting threatened and endangered species with the construction of the Ice Age NST statewide including Marathon 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). In constructing the trail, best management practices are also utilized. With these agreed upon processes and measures in place, the trail is

unlikely to negatively impact threatened and endangered species in Marathon County. (See Appendix D—U.S. Fish and Wildlife Correspondence)

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 County NSTs and the Wisconsin State Historic Preservation Officer).

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

Ideally, under the Programmatic Agreement, impacts to both 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 and impacts to resources.

D. IMPACTS TO SOCIO-ECONOMIC RESOURCES

Communities and Businesses

Establishment of the trail under both alternatives may attract users into the communities through which the trail passes. Under the Preferred alternative, 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 both 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 would 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 the northern part of the county, land that has been held in large-block industrial forest is being subdividing into smaller parcels, often for hunting purposes. The growth of residential subdivisions, especially in the Ringle and Hatley area, are also changing traditional land use patterns. 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 difficult 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 Preferred alternative, development is restricted and resources are protected. However, the trail maybe 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 Marathon 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 would provide links to the Plover River and Little Wolf State Fishery Areas, as well as Dells of the Eau Claire and Mission Lake County Parks. It will be used primarily for hiking as well as for bird watching, interpretive walks, and snowshoeing. This countywide 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, estimated at 10,000 recreation-days, primarily fishing and hunting, that are presently provided on DNR-owned 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 trailway 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 Preferred alternative. Potential impacts would therefore be the same.

Public Health

Within the State of Wisconsin, 61 percent of adults are obese or overweight. By providing a space for active outdoor recreation, the Preferred alternative 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. SCORP 2011-2016 states that "research has linked the presence of parks, trails, enjoyable scenery, and other people exercising to increased physical activity." Under Actions 2, 3, & 4, a plan to build a continuous trail through Marathon County will help reach this goal and result in beneficial impacts. 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 of Wisconsin'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. It is the current policy of the IATA to pay property taxes on all Ice Age NST lands it owns, however, this policy is subject to change.

Land Acquisition and Trail Development

Under the No Action, 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 Preferred alternative. The costs of developing the Ice Age NST under the Preferred alternative are discussed below.

Estimated Costs of Land Acquisition

Depending on the route selected, the Ice Age NST through Marathon County is expected to be 40-45 miles in length when completed. Today there are 15 miles of trail on the ground leaving approximately 28-33 miles left to construct. It is difficult to determine the exact cost of acquiring and developing 28-33 miles of trail through Marathon 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. These rolling tracts with their high scenic character offer the types of features that command a premium price over traditional agricultural lands. Recent property sales of land in the proposed Ice Age NST corridor have been upwards of $2,200 to $3,500 per acre for 40-acre parcels. This translates to about $26,400 to $42,000 per mile for each 100 feet of average corridor width acquired. For example, assuming that 30 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 $792,000 to $1,260,000. 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 2

COST OF TRAILWAY FOR ICE AGE NST
Assuming $2,200 to $3,500 per acre

Average Trailway Width	25 Miles	30 Miles	35 Miles
100 feet (12 acre/mile)	**$660,000 to $1,050,000**	**$792,000 to $1,260,000**	**$924,000 to $1,470,000**
200 feet (24 acre/mile)	**$1,320,000 to $2,100,000**	**$1,584,000 to $2,520,000**	**$1,848,000 to $2,940,000**
330 feet (40 acre/mile)	**$2,200,000 to $3,500,000**	**$2,640,000 to $4,200,000**	**$3,080,000 to $4,900,000**
660 feet (80 acre/mile)	**$4,400,000 to $7,000,000**	**$5,280,000 to $8,400,000**	**$6,160.000 to $9,800,000**

Estimated Costs of Trail Development

The majority of the trail built in Marathon County will be a constructed tread composed of mineral soil. Aside from the cost of tools, volunteers will provide the labor from the Ice Age Trail Alliance. There will be steep or wet areas that the trail will cross requiring sidehill construction or surfacing such as puncheon, turnpike, or boardwalk. For example, while the exact location of the trail is unknown at this time, placing the trail through the Plover River State Fishery Area may involve the construction of between 600 and 900 feet of puncheon. At an estimated cost of $12 per linear foot, this puncheon could cost between $7,200 and $10,800. However, it should be noted that the majority of puncheon, turnpike, or boardwalk likely to be constructed would be considerably shorter, generally spanning between 10 and 75 feet.

Depending on the trail's location, one to three bridges will be required on the Marathon County segment of the Ice Age NST. Although the trail is expected to encounter several intermittent streams and/or drainage swales (6-10), none will require a significant bridge. A reasonable estimate for bridge construction costs countywide is $35,000. This estimate assumes that three new bridges will be constructed at $10,000 each, and some minor construction cost ($5,000) may be required to span smaller swales and intermittent streams.

Parking is presently available at several locations within the proposed corridor and, depending on trail location, can minimize the number of new parking lots that need to be constructed. Existing parking can be found at the Dells of the Eau Claire County Park, Poplar Lane, the Hatley Community Center, Mission Lake, and Peterson County Parks and several WDNR State Fishery Areas located along the Plover and Little Wolf Rivers.

Based on available road crossings and an approximate spacing of three to four miles between trailhead parking areas, an additional 3-4 parking areas will need to be developed. These would be designed for approximately 2-5 vehicles, with larger parking areas located on public lands that accommodate other recreational activities. A total estimated cost of $28,000 is projected for constructing and improving parking areas. This is based on an average cost of $10,000 for one large lot and $18,000 for three smaller lots. Simple information kiosks will be placed at each parking area; three are presently in place and about six additional kiosks are expected to be needed. Based on an estimated cost of $700 per unit, the total cost for the new kiosks is estimated at $4,200.

Interpretive exhibits may be placed on a few public lands that have important stories regarding glaciation or the natural resources of the site. Depending upon the complexity and number of individual panels, these exhibits may cost between $4,000 and $5,000 each. For three sites, the cost is estimated to be approximately $12,000-15,000. Possible locations include the gorge at the Dells of the Eau Claire County Park, Mission Lake County Park, and the tunnel channel at Hatley.

The only camping currently available in the proposed corridor is located at the Dells of the Eau Claire County Park on County Road Y north of Sportsman's Road. Based on the approximate spacing of 10-12 miles, at least two additional opportunities for dispersed camping will need to be established. Since dispersed camping has no amenities, purchase of the land would be the cost.

E SUMMARY OF CUMULATIVE IMPACTS

The Ice Age NST Corridor Planning Process for Marathon County is part of the overall implementation of the trail across 30 counties. Statewide, of the projected 1,200 miles, approximately 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 essentially be "banked," since the land could 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 the Farmland Protection Policy Act covers only Federal projects that irreversibly convert farmland to non-agricultural uses.

- 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 non-profit 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 Marathon County would establish the location of the southwestern end of the trail in Langlade County and connect with the existing trail corridor in Portage County, where a 3.5-mile common boundary would be created. Since the Portage and Langlade Counties trail segments are not presently in place, flexibility would be retained in interfacing the 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 diminish the cost to any one agency or group.