Chapter I:
Introduction.

A) Overview.

Between Wisconsin's two largest (and rapidly growing) metropolitan areas lies a place that epitomizes the image that many residents and visitors have of Wisconsin's rural countryside. Rolling hills formed by glaciers are dotted with red barns and grazing cows. Green farm fields are mixed with wetlands, woodlands, lakes and meandering rivers. And sprinkled across this landscape are small cities and villages that balance character and charm with changing economic times. This area, centered primarily in western Jefferson County and including parts of Dane, Dodge and Rock counties, is the home of the proposed Glacial Heritage Area.

Given the area's easy access to Milwaukee, Waukesha and Madison, growth and its associated changes are occurring quickly here. Over the past decade, as population growth in the area has consistently exceeded even the highest projections, local and county governments have responded. Many have developed forward-thinking programs and policies to help ensure economic vitality, balance growth with the protection of farmland and open space, and provide natural resource-focused parks and preserves. This project proposes using these existing plans as the foundation of the Glacial Heritage Area.

Although being located between these large and growing cities presents challenges, it also presents opportunities that few other areas enjoy. In particular, the location combined with the natural resources present make the area uniquely situated to take advantage of the rapidly growing demand for nature-based recreation in rural settings. With the state's population becoming increasingly urban and suburban, more and more people are looking for readily accessible places to hike, bike, fish, watch wildlife, camp, hunt, ride horses, cross country ski, and participate in other outdoor activities.

B) Background and history.

The proposed Glacial Heritage Area project originates from the recently completed Wisconsin Land Legacy Report. The Legacy Report is the outcome of a three-year study led by the DNR to identify the places most important to protect to meet conservation and recreation needs over the next fifty years. The study ultimately identified 229 "Legacy Places" that are described in the report.

One of the highest priorities the Department heard from the public throughout the development of the Land Legacy Report was to protect places near where people live — not because they were necessarily the highest quality habitats, but rather to provide readily accessible opportunities for residents to connect with the outdoors. The public is increasingly seeking out places to hike, bike, watch wildlife, camp, hunt, fish, ride horses, study nature, and participate in environmental education that are close enough to one's residence to be able to get to after work or on a day trip. The GHA is in close proximity to a large portion of the state's population and as a result could help address this significantly increasing demand.

In evaluating the Legacy Places across the state for opportunities to provide some of the most popular nature-based outdoor recreation activities (wildlife watching, hiking, bicycling, fishing, hunting, camping, etc.) in close proximity to population centers, the Department looked at several factors. Included in this analysis were population distribution and relative accessibility, land use patterns, potential to provide a variety of recreation activities, average parcel sizes and acreage costs, existing local, state, and federal properties that could form the foundation of a network, and local land use plans and visions.

From this emerged the concept of creating a network of connected properties, rather than a single place, centered in northwestern Jefferson County that could collectively provide opportunities for a variety of low-impact outdoor activities. The initial area of interest included two Legacy Places (the Crawfish River-Waterloo Drumlins and the Upper Rock River) as well as a number of locally significant sites. This was subsequently expanded to include more State Wildlife Areas, the Jefferson Marsh Legacy Place, and part of the Bark and Scuppernong Rivers Legacy Place.

Before the Department can establish a new property (or in this case a network of properties), or can significantly expand an existing one, it must prepare a study on the area's characteristics and features to determine if the intended conservation and recreation goals can be met. This study, known as a "feasibility study," is used to determine whether it is practicable for the Department to establish, acquire, develop, and manage new property such as a State Park, Wildlife Area, Forest, or Natural Area. The feasibility study takes into account the area's physical and biological environment and its capabilities, the views of the public and landowners, and the availability of funding and staffing to successfully accomplish the project's purpose. Furthermore, the feasibility study presents a proposed boundary, alternatives, and general land management strategies.

As work on the feasibility study for the GHA was underway, a different group within the Department was also evaluating options to streamline the process the agency uses to complete property management plans. These plans, known as "master plans" determine how a DNR property will be managed, used and developed, how it will look, and what benefits it will provide. The master plan identifies the property's goals and objectives and defines future recreational uses and habitat management practices. Put simply, the master planning process is used to determine the best niche for the property based on its capabilities and regional and local context.

The outcome of that streamlining work was the creation of a "tiering" system that enabled the Department to group properties that shared ecological characteristics and supported similar recreational uses into one master plan. In response, the feasibility study effort was expanded to include the revision to the master plans for the eleven State Wildlife Areas within the study area. Although adding the master planning work to the feasibility study added some complexity to the effort, it increased overall efficiency, avoided public confusion that was expected from running two separate planning processes, and allowed the opportunity to adjust management and use of these state properties within the broader context of a network of strings and pearls.

All the additions and adjustments have clearly made the feasibility study and master plan work more complicated and drawn out. Yet, the two planning processes, although very much linked and interrelated, each have distinct needs and focuses. The potential establishment of the network of strings and pearls is focused in the initial (primary) study area, although some fall within the secondary study area.

This feasibility study and master plan also meets the criteria for an Environmental Impact Statement (EIS) as required by the Wisconsin Environmental Policy Act (WEPA, s.1.11, *Wis. Stats.*; NR 150, Wis. Adm. Code). WEPA is a state law designed to encourage environmentally sensitive decision-making by state agencies. WEPA spells out the state's environmental policy and requires the DNR and other state agencies to consider the environmental effects of their actions to the extent possible under their other statutory authorities. WEPA also establishes the principle that broad citizen participation should be part of environmental decision-making. WEPA imposes procedural and analytical responsibilities on the DNR and other agencies but does not provide authority to protect the environment.

WEPA requires the DNR and other state agencies to gather relevant environmental information and use it in their decision-making. Agencies must also look at appropriate alternatives to the particular course of action they are proposing. If the action is a "major action significantly affecting the quality of the human

environment", the law requires agencies to consult with other agencies about possible environmental impacts, prepare and circulate an environmental impact statement (EIS), and hold a public hearing.

While the Department is sponsoring this project, the development of this document and the resulting recommendations reflect the broad citizen participation required by WEPA. Participation by local governments, special interest organizations, citizens, and other state agencies make up the Glacial Heritage Area Advisory Team. The Advisory Team has operated with significant transparency by holding open Team meetings and hosting numerous informational open house meetings.

State Wildlife & Natural Areas

Of particular note are the eleven State Wildlife Areas and the twelve State Natural Areas within the project area. In total, they comprise over 25,000 acres of state land. Many of the Wildlife Areas were originally established in the 1940s to 1960s, and others significantly expanded in the last couple of years, provide important public hunting and wildlife watching opportunities. And, for the most part, these properties are bordered by farms that help improve both their conservation and recreation value.

These areas are primarily low, wet areas and many, at the encouragement of the federal government, were tiled and ditched to enable farming back in the 1930s and 1940s. Over time, changes in federal farm policy and the difficulties associated with farming such wet ground led many landowners to take these areas out of agricultural production. Large portions were subsequently purchased by the DNR and conservation groups and restored to a variety of wetland habitat types. Today they support a wide range of game and non-game species. First and foremost, the properties are intended to provide wildlife habitat and wildlife-based recreation in a largely undeveloped, primitive setting.

Given the important wildlife habitat and wildlife-based recreation provided on these properties, in addition to their overwhelming amount of wetlands, it would not be appropriate to attempt to provide a diversity of recreation opportunities throughout these properties. Although there are some opportunities to site trails, wildlife viewing platforms, or other facilities in the properties, it is more practical to locate higher-intensity trails and other recreation facilities near these properties (to take advantage of their scenic views and open space), but not within them.

As part of the planning process for the Glacial Heritage Area, the DNR has revised and created one master plan for the following State Wildlife & Natural Areas:

- Deansville State Wildlife Area
- Goose Lake State Wildlife Area
- Jefferson Marsh State Wildlife Area
- Koshkonong State Wildlife Area
- Lake Mills State Wildlife Area
- Lima Marsh State Wildlife Area
- Mud Lake (Dodge County) State Wildlife Area
- Prince's Point State Wildlife Area
- Rome Pond State Wildlife Area
- Storr's Lake State Wildlife Area
- Waterloo State Wildlife Area
- Red Cedar Lake State Natural Area

C) How implementation of the proposed Glacial Heritage Area project would integrate with farming, flood prevention, and land use.

The undeveloped rural landscape and farmland in the proposed GHA.

One of the defining features of the entire Study Area is the undeveloped landscape dominated by working farms. The area harbors some rich and highly productive farmlands that have supported prosperous farms for generations. In addition to dairy and grain farming, given the area's proximity to many urban centers (including the Chicago metropolitan area), there is a large market for locally grown produce, nursery goods, firewood, and other farm products grown on area farms. Together, these small and large farms underpin the local and regional economy and culture.

Unlike many other areas, the rural countryside here remains largely free from the scattered developments and subdivisions that fragment many parts of southern and eastern Wisconsin. As a result, the Study Area represents an important opportunity to integrate the protection of working farms with the proposed network of conservation parks, linking trails, river corridors and wildlife areas. Of course, **the lack of rural fragmentation and sprawl is due neither to serendipity or good fortune. Rather, in large part it is a product of the forward-thinking land use policies supported by citizens and enacted by local and county governments**.

Maintaining a vibrant farming community and the open rural landscape are critical to the success of preserving the setting within which the GHA network is proposed. Indeed, one of the goals of the GHA project is to complement the voluntary protection of working farms. Sustaining these open, undeveloped landscapes around the proposed and existing conservation parks, linking trails, river corridors and wildlife areas will be critical to these properties' ability to meet their recreation and conservation goals. The strong land use planning that has occurred here over generations has helped keep farming viable and enabled the proposed network to be a possibility.

The GHA proposal identifies a range of different lands to protect and restore in order to provide a diverse set of high quality, nature-based recreation opportunities and protect important habitats. Of course, ideally the area would still harbor enough native habitats to create the proposed network. But, through the efforts of settlers and residents over more than 200 years, nearly all farmable land has been converted. As a result, the proposed plan almost by definition would result in some lands being taken out of agricultural production.

The Department and External Advisory Team have struggled with this dilemma – supporting the preservation of farmlands yet needing to convert some farmlands back to native habitats to achieve the conservation and recreation goals of the project. To help resolve this issue, the proposed GHA project has been designed to minimize the amount of land needed to develop the network as well as minimize the amount of higher quality farmlands that would be affected. In addition, the Department and EAT have designed the project to provide flexibility for both landowners and the groups seeking to implement the project. One mechanism to this end is that for all of the conservation parks, river corridors, and linking trails proposed, the project boundaries incorporate a larger area of interest than the size of the proposed properties.

Although interest in protecting working farms in the Study Area is high, currently there are very few viable approaches or opportunities to permanently protect high value farms. The primary mechanism currently available to protect farmland is local land use policies. Of course, policies are subject to change over time as conditions and attitudes change.

A supplement to local land use policies is the set of programs administered by the federal Natural Resource Conservation Service that are part of the federal Farm Bill (Conservation Reserve Program, Wetland Reserve

Program, and Farm and Ranch Lands Protection Program). These programs provide various financial incentives to restore sensitive and erodible lands as well as to maintain lands in farming through easements and the purchase of development rights.

Although farmland protection options are limited now, they may expand in the near future. The state Department of Agriculture, Trade, and Consumer Protection's *Working Lands Initiative* is evaluating options to create a program that provides funding to protect critically important farmland. Similarly, Jefferson County is evaluating options to create a farmland protection strategy that would complement the state program. Their recently established *Farmland Preservation Commission* could provide a mechanism to help implement broader efforts to maintain farmland in the county.

Protecting farmland and ensuring the economic viability of farming are complementary to the GHA proposal. It is the Department's and External Advisory Team's hope and expectation that existing land use policies that seek to maintain the rural, farming-dominated landscape will continue and be further strengthened as conditions change over time. The wildlife area boundary expansions include a Rural Landscape Protection Area and agricultural production occurs on Wildlife Areas in the form of sharecropping. Yet, these issues are very complicated and multi-faceted and are outside the scope of the Department and the GHA project. As a result, the Department will rely on farmers, non-profit partners, local and county governments, and state and federal agricultural agencies to help maintain this exceptional landscape.

Flooding and lowlands.

During the spring and summer of 2008, many areas in southern Wisconsin experienced the worst flooding in their recorded histories. Fed by the melting of above average snowfall and repeated heavy rainfalls, the flooding culminated in June with several storm events that dropped over a foot of rain in many areas across the southern part of the state. As a result, all of the rivers and creeks in the Study Area experienced serious flooding with many waterbodies surpassing their "100-year flood" levels. Maybe most notably, the Crawfish River north of Milford flooded a huge expanse miles wide and damaged the crops on tens of thousands of acres of farm fields.

Whether flooding of this magnitude will occur again is, of course, unknown. Some climate modeling suggests that a warming climate may result in more concentrated, more intense storm events in the Midwest. If the region is subjected to more frequent flooding, even if not on the scale of the 2008 floods, then many riparian areas may be seriously adversely affected. Buildings in the floodplain may need to be moved and land may prove uneconomical to farm over time.

If approved, the proposed GHA project could provide a mechanism to help reduce the severity of future flooding and to alleviate some of the economic impact of flooding that does occur. Much of the land included in the Wildlife Area boundaries is floodplain wetland, and management and restoration of these lands will provide additional wildlife habitat in addition to flood mitigation. Narrow bands of permanent vegetation could be established along some riparian lowlands to help filter and slow run-off. Larger blocks of farmed wetlands along the major rivers and streams that are economically harmed by frequent flooding could be restored to lowland prairie habitats that would hold high water and as a result help reduce downstream flooding.

D) Explanation of Feasibility Study and Master Planning process and products.

The Department of Natural Resources periodically proposes to establish new properties (e.g., State Parks, Forests, or Wildlife, Fishery and Natural Areas) to meet growing conservation and recreation needs. Before the Department can establish a new property, or can significantly expand an existing one, it must prepare a study on the area's characteristics and features to determine if the intended conservation and recreation goals can be met. Also integral to the study is an assessment of public support. This study, known as a Feasibility Study, takes into account the area's physical and biological environment and its capabilities, the views of the public and landowners, and the availability of funding and staffing to successfully accomplish the project's purpose. Furthermore, a Feasibility Study presents a proposed boundary, alternatives, and general land management strategies.

If the Feasibility Study concludes that it is practicable for the Department to establish, acquire, develop, and manage a new property, and if the study is approved by the Natural Resources Board and the Governor, then the Department can offer to purchase lands only within a proposed property. It is the Department's policy to only purchase lands from willing sellers.

Master planning is a process used to determine how a property owned by the Department of Natural Resources will be managed, used and developed, and as a result, how the property will look and what benefits it will provide. The master plan identifies the property's goals and objectives and defines future recreational uses and habitat management practices. Put simply, the master planning process is used to determine the best niche for the property based on property's capabilities and regional and local context. In many cases, a Master Plan is developed shortly after a Feasibility Study is approved and the Department has been able to acquire a sizeable amount of land within the boundary.

Each property should be planned and managed to optimize its own inherent capabilities. Yet, no property is an entity in itself, each is a component of a larger landscape mosaic of pubic and private properties. The Department must consider the role of the property in the larger landscape and time frame and must evaluate how property management alternatives can best compliment the regional landscape. Similarly, short-term recreational market trends normally should not dictate long-term property development and management. Thus, ecological, social, economic and institutional issues must be considered on both regional and local scales.

Master plans and their planning process have the following purposes:

- To provide a sound basis for decision-making by Department staff, administrators, and the Natural Resources Board consistent with the Wisconsin Environmental Policy Act (WEPA).

- To establish a Department-wide plan, not simply a single program's plan. That is, the Master Plan assesses and incorporates all the relevant interests and needs of the Department, not simply one Division or Bureau (e.g., habitat and recreation issues as well as land and water issues are all included in the assessment and plan development).

- To set a long-range vision and goals for the management and use of Department managed properties and associated public waters consistent with property capabilities and regional and statewide needs. In addition, master plans establish management objectives and priorities necessary to meet individual property goals.

- To provide clear and specific direction on the management, development and use of the property for property managers, administrators, and the interested public. As such, the Master

- To provide consistency in the management of individual properties without loss of continuity due to personnel change, and to establish and maintain management consistent with the public's expectations.

- To give interested persons and other governmental units reasonable opportunities for involvement in the decisions on how properties will be managed and used.

- To set a long-range vision (typically 25 to 50 years) of the desired future condition.

The Feasibility Study and Master Plan processes also must meet the requirements of the Wisconsin Environmental Policy Act (WEPA) and its implementing codes. Certain DNR actions require an Environmental Analysis or a complete Environmental Impact Statement (EIS). Given the potential size of the proposed GHA, it warrants the completion of an EIS as required under NR 150 of Wisconsin's Administrative Code.

Importantly, the development of both the Feasibility Study and Master Plan are open processes offering interested persons and other governmental units meaningful opportunities for the discussion of information, ideas and concerns related to the establishment, management, and public use of a property. More information on the public involvement process is described in Appendix E.

The Department recently adopted a new, streamlined approach to master planning that includes grouping several similar properties into one overarching management plan. As part of the GHA planning process, the Department has developed one Master Plan that addresses the proposed future uses, habitat management actions, and boundary expansions of all eleven State Wildlife Areas and Red Cedar Lake State Natural Area in the Study Area.

E) Vision, goals, objectives of Glacial Heritage Area.

The following vision, goals, and objectives for the Glacial Heritage Area were developed by DNR staff and the GHA External Advisory Team (see the following section for more information on the team).

Vision.
Create a coordinated network of places and corridors that: enables and encourages a variety of compatible and sustainable outdoor recreation uses; preserves, restores, and protects significant habitats; benefits and integrates with local economic growth and farmland protection efforts; enhances the quality of life by maintaining and improving the land and water resources that underpin the economy; and helps residents and visitors maintain a strong connection to the natural world.

GOAL 1: Create exceptional outdoor recreation opportunities for residents and visitors — work with willing landowners to protect and link conservation lands in a network that collectively provides a wide variety of readily accessible, nature-based recreation opportunities that are compatible with and foster natural resource sustainability.

- OBJECTIVE 1A: Complete already approved conservation and recreation projects and establish new publicly-accessible areas to address outdoor, nature-based recreation needs in the region.
- OBJECTIVE 1B: Establish corridors and buffers that link public properties and increase recreation opportunities and maintain traditional uses.
- OBJECTIVE 1C: Establish connections between nearby cities and villages and the Glacial Heritage Area's network of properties.
- OBJECTIVE 1D: Provide facilities that encourage participation in a wide variety of compatible land-and water-based, non-motorized recreation activities.
- OBJECTIVE 1E: Incorporate educational opportunities, including environmental, cultural, and historical components, into outdoor recreational activities.
- OBJECTIVE 1F: Provide opportunities for people with diverse interests and abilities to engage in outdoor recreation activities that will facilitate their appreciation for, and connection to, the environment.

GOAL 2: Preserve wildlife and water resources — work with willing landowners to create a network of conservation lands and habitat corridors that help preserve and improve the quality and viability of wildlife and water resources.

- OBJECTIVE 2A: Protect, restore, and manage critical native prairie, savanna, woodland, and wetland habitats and other sensitive and unique areas and the wildlife that inhabit them.
- OBJECTIVE 2B: Help improve and preserve water quality and quantity in lakes, wetlands, rivers, and groundwater through various means, including protecting and restoring blocks of undeveloped shoreline habitat and groundwater recharge areas, and encouraging urban and rural landowners to utilize various conservation practices.

GOAL 3: Complement the voluntary protection of working farms — assist in maintaining the area's agricultural economy and rural character by coordinating with farmers on compatible land uses and work with local, state, and federal initiatives that seek to voluntarily preserve working farmlands.

- OBJECTIVE 3A: Encourage and help facilitate the protection of farms throughout the Glacial Heritage Area to maintain the area's open and rural landscape.
- OBJECTIVE 3B: Emphasize through educational materials the importance of farming to the quality of life in the Glacial Heritage Area and as an integral component of the "strings and pearls" network.
- OBJECTIVE 3C: Minimize conflicts to farm operations from adjacent land uses by helping to protect lands that buffer key farmlands.

GOAL 4: Combine ecology and economics to improve resident's quality of life — using existing protected lands as its foundation, create and integrate the Glacial Heritage Area with growth planning of local communities to maximize land use efficiency as well as provide financial, recreation, and conservation "returns."

- OBJECTIVE 4A: Coordinate and integrate the network of conservation and recreation lands with growth planning in the area, including local parks planning, to maintain and enhance the quality of life for future generations.
- OBJECTIVE 4B: Leverage the Glacial Heritage Area to help promote, expand, and diversify local economic development goals.

GOAL 5: Work collaboratively across jurisdictions — with input from a broad range of interests, create a coordinated project across political boundaries that turns the vision of the future of the Glacial Heritage Area into reality for future generations.

- OBJECTIVE 5A: Bring together rural and urban residents, landowners, local units of government, conservation groups, recreation users, businesses, elected officials, agencies, and others to develop and implement the Glacial Heritage Area project.
- OBJECTIVE 5B: Encourage and support local communities and organizations to collaboratively and collectively embrace a significant role in planning and implementing the Glacial Heritage Area.
- OBJECTIVE 5C: Develop one recognizable identity where the entire network of areas and corridors, regardless of ownership, is viewed by the public as one unified, seamless project.

F) Study areas and project boundaries.

When beginning a feasibility study, the Department first identifies a **study area boundary**. The study area boundary delineates the area within which a series of factors are evaluated to determine places that best meet the project's goals and objectives. The Department typically uses major roads or Town or County boundaries to establish a study area. A variety of data and information are gathered within this boundary to evaluate how and where various needs, opportunities, and threats exist. This evaluation subsequently leads to the development of a range of implementation options, including a proposed **project boundary**.

The proposed GHA project is unique in several ways; one being the study area boundary. Unlike most proposed projects, the study area boundary has two components — a core (or primary) area and a secondary area.

Core (Primary) Study Area.
The intent of the GHA project is to focus the identification and implementation of a large portion of the "strings and pearls" in the smaller core area, while recognizing that there are some opportunities to make key connections to communities, existing trails, and existing public properties outside the core area. The reasoning behind identifying a core area is as follows:

- Some of the best opportunities to establish a network of recreation and conservation lands appear to be concentrated in the vicinity of northwestern Jefferson County.
- The proposed network may benefit from a "critical mass" of strings and pearls that would be facilitated by a smaller core area (that is, an initial concentration of networked recreation opportunities would be more likely to draw residents and visitors to use the network).
- Given limited financial resources at both the state and local levels, the project will benefit from a tighter focus, at least initially.

The Core Study Area is centered around the Lake Mills/Aztalan State Park area and extends out about 10–12 miles (see Figure II.1).

Secondary Study Area.
The intent of the Secondary Study Area is to allow the evaluation of potential connections from a proposed network to several of the State Wildlife Areas that will have their management plans revised, as well as some key existing trails, communities and public properties that lie just outside the Core Study Area. Although it is likely that only a relatively small number of strings and pearls will be identified in this larger area, some may be very important. As with the Core Study Area, information on resources, natural features, recreation facilities, conservation needs and other factors will be gathered for the Secondary Study Area to use in the project evaluation.

The Secondary Study Area boundary is drawn based in the Town/Range/Section lines and is comprised of 26 townships (which closely match civil town boundaries).

Project Boundary.
The GHA project boundaries are a subset of the larger study area and are the areas within which the actual project is proposed. There would be different levels of protection within these project boundaries. For example, for the proposed expansions of the Wildlife Areas, there is a desire to eventually protect all the land within the proposed new project boundaries. In other project boundaries, for example the proposed conservation parks, the goal is to protect only a portion of the land within the boundary. For the proposed linking trails, the proposed project boundaries are simply represented as draft connections between cities, villages, and various conservation lands – the actual routes, envisioned as narrow strips of land, will be a function of landowner interest. The Project Boundaries are shown on the map in the Executive Summary (page vii).