

**PRELIMINARY PROJECT PROPOSAL  
HACKMATAACK NATIONAL WILDLIFE REFUGE  
McHenry and Lake Counties, Illinois and Walworth, Racine, Kenosha Counties, Wisconsin**

**Introduction:** The proposed Hackmataack National Wildlife Refuge would connect the disparate dots of conserved land in southeast Wisconsin and northeast Illinois into a cohesive picture of landscape-level conservation. The concept is to create a new national wildlife refuge that forms the nucleus of a cohesive regional conservation identity. A core conserved area owned and managed by the U.S. Fish and Wildlife Service (Service) as a national wildlife refuge would anchor this conservation initiative. Its far-reaching ecological and social impact would come from extensive partnerships with the many public and private landowners committed to furthering conservation in the region.

This new refuge and regional identity would, in turn, become an economic driver for local towns, as visitors travel to the region to recreate and experience restored native landscapes. Refuge proponents outside the Service have given this potential national wildlife refuge and surrounding network of conserved land the name Hack-ma-tack, a Native American word for the region's once-abundant tamarack trees.

For years, conservation organizations across the greater Chicago metropolitan area have worked to identify key lands for conservation, open space, and greenways. At the heart of their work lies a vision of sustainable communities that value and nurture healthy ecosystems, recreational opportunities close to home, and vibrant economies. In portions of McHenry and Lake counties in Illinois and Walworth, Racine, and Kenosha counties in Wisconsin, a coalition of residents saw an opportunity to take a big step toward that vision.

The study area encompasses 350,000 acres (Figure 1) and the proposed refuge would ultimately improve or restore from 10,000-30,000 acres of drained wetland basins, historic prairie and forest habitats and conserving habitat corridors between protected parcels so that the region functions ecologically as an interconnected whole.

**Ecosystem:** Eastern Broadleaf Forest (Continental) Province (Bailey's Ecoregions)

**Location and Size:** The study area is located in the northeast corner of Illinois and the southeast corner of Wisconsin. The study area is defined approximately by a 30 mile radius from the village of Richmond, Illinois on the state border. The Hackmataack study area is approximately 350,000 acres or 54 square miles in size. The study area boundary is approximately 20 miles from downtown Milwaukee and Chicago and is within the Chicago Metropolitan Statistical Area. As estimated by the U.S. Census for 2008, the population base within a two-hour drive of the Hackmataack study area is over 12 million.

**Description of Habitat:** The Wisconsin portion of the Hackmataack study area lies in the Southeast Glacial Plains Ecological Landscape. Historically, this landscape supported a mosaic of prairie, oak forests, oak savanna, and maple-basswood forests, marshes, and fens. The Illinois

portion lies within the Northeastern Morainal Natural Division. The landscape once consisted of wetlands, oak savanna, woodlands, and prairie. The region has a glacial history and sculpted remnants of moraines, kames, kettle marshes, and bogs are still found in some locations.

The State of Illinois reports that more than 90% of the state's wetlands have been lost to agriculture, development, and other land uses. Before settlement, prairie grasslands covered an estimated 21 million acres of the state. Now less than 2,600 acres of native prairie dot the Illinois landscape. Wisconsin has lost 47% of its wetlands, and most remaining wetlands occur in the northern third of the state. Wetland loss is most severe in southern Wisconsin, including the study area, where well over 75% have disappeared.

Agricultural and urban land use practices have drastically changed the land cover of the study area since Euro-American settlement. The current vegetation is primarily agricultural cropland (>50%). Remaining forests occupy only about 10% of the land area and consist of maple-basswood, lowland hardwoods, and oak.

**Major Wildlife Values:** The proposed study area provides habitat for 109 species of concern that include Federal and state threatened and endangered species and USFWS Birds of Conservation Concern. The list includes 49 birds, 5 fishes, 5 mussels, 1 amphibian, 2 reptiles and 47 plants.

Two habitat types account for most of the sensitive species in the study area-wetlands and grasslands. The glacial history of the study area has produced a rich variety of wetlands and water bodies including fens, bogs, marshes, swamps, ponds, lakes, and streams that attract abundant and diverse wildlife. One notable wetland species seen in the Hackmatack study area is the federally endangered Whooping Crane. As the eastern migratory population of Whooping Cranes expands, the wetlands of this region may become increasingly important to that critically imperiled species.

Many of the bird species that rely on prairie grasslands, including Henslow's Sparrow, Short-eared Owl, Bobolink, and Dickcissel, are threatened, endangered, or in steep population decline across their range. The Hackmatack study area presently conserves a patchwork of wetlands and grasslands which, if connected, could greatly enhance habitat for these species of conservation concern.

**Related Resources:** The proposed study area encompasses over 60 publicly and privately owned parks, preserves, and conservation areas with natural ecosystems totaling about 23,000 acres (Figure 2). Many of the parks and preserves in the study area primarily conserve natural ecosystems (as opposed to developed, multi-use recreational parks). Within the Hackmatack study area, the Lake County Forest Preserve District, McHenry County Conservation District, Illinois Department of Natural Resources (DNR) and Wisconsin DNR own and manage the bulk of these natural parks.

Collectively, the study area contains 24 State-designated natural areas totaling about 3,444 acres. Both Wisconsin and Illinois have programs that designate Natural Areas (WI) or Nature

Preserves (IL). These programs assist private and public landowners in protecting high-quality natural areas and the habitats of endangered and threatened species. The State Natural Areas protect outstanding examples of native communities, significant geological formations and archeological sites.

Significant lands and facilities within the study area include Chain O'Lakes State Park, Bong State Recreation Area, Glacial Park, Des Plaines River Trail and Greenway, Lakewood Forest Preserve, Moraine Hills State Park, Rollins Savanna Forest Preserve, and Bloomfield Wildlife Area. The Richard Bong State Recreation Area is one of the largest open, undeveloped areas left in southeast Wisconsin.

**Threats:** Less than two hours by car from both the growing urban centers of Chicago and Milwaukee, this region faces steady development pressure. The State Wildlife Action Plans for both Wisconsin and Illinois cite fragmentation as a leading threat to the integrity of this region's habitats. While this area has a strong conservation heritage and an excellent base of conserved lands, these conserved habitats are at risk of becoming islands in a rising sea of development. As these wildlands become increasingly fragmented and degraded, the wildlife and plants that depend on this habitat mosaic decline, as do the opportunities for experiencing these wild places.

The population of the seven-county Chicago metro area experienced a growth rate of 63 percent between 1950 and 2006, and that rate jumps to 261 percent by removing the city of Chicago from the equation. As Chicago-related development spreads into the rural regions that surround the city, farm lands, open space, and natural lands and wildlife are being threatened. Critical natural lands that surround Chicago such as Indiana Dunes, the Kankakee River, and the Hackmatack area are directly in the path of this surge. While the economic recession has slowed this rate of growth, it is likely to return to full force with economic recovery. Some land within the Hackmatack study area has already been slated for development.

**Justification and Relationship of Project to Ecosystem Goals and Objectives:** Data from both the McHenry County (IL) Conservation District and Southeastern Wisconsin Regional Planning Commission (SEWRPC) suggest that the Hackmatack study area supports richly diverse flora and fauna, including many species listed as state or federally threatened or endangered. In addition, the U.S. Fish and Wildlife Service has identified numerous local bird species as Birds of Conservation Concern, a designation meant to stimulate conservation efforts to prevent these species from becoming threatened and endangered.

In 2005, both Illinois and Wisconsin completed State Wildlife Action Plans. These plans inventoried the states' natural habitats and wildlife populations, and identified threats to those habitats and species, as well as conservation opportunities for keeping common species common and reversing the decline of sensitive species. These plans provide a scientifically rigorous ecological framework with which to assess the biological implications of creating Hackmatack National Wildlife Refuge.

Both the Illinois and Wisconsin State Wildlife Action Plans note that conserving sensitive species requires the protection and restoration of high-quality habitats. Connecting these high quality habitats helps sustain an interdependent web of species and natural communities. Chicago Wilderness (a consortium of 240 regional businesses, conservation organizations, and public agencies in Wisconsin, Illinois, and Indiana) and others have identified ecological corridors throughout the Hackmatack study area that will, if protected and restored, help ensure the long-term sustainability of local ecological systems and sensitive species.

**Ownership, Types of Acquisition And Authority:** The 350,000-acre (54 sq. miles) study area contains several thousand private and public land parcels. However, the focus of the proposed refuge would be to connect existing conservation areas through limited and strategic acquisitions. Refuge acquisitions would include some fee purchase of land but also incorporate conservation easements, donations, and cooperative agreements with state and local governments (10,000-30,000 acres total).

Lands acquired by the Service would be purchased under the authority of the Migratory Bird Conservation Act, the Endangered Species Act and Emergency Wetland Resources Act.

**Initial and Annual Costs:** Acquisition cost estimates are difficult to make as the amount of land to be acquired in fee or easement has yet to be determined. For purposes of this PPP, we will estimate that between 5,000 and 15,000 acres of fee title will be acquired prior to project completion. An average of \$3,000 per acre for agricultural and recreation land in the area would bring the anticipated full purchase price to \$15 – 45 million in 2010 dollars.

The refuge could be managed as a stand-alone refuge, as a satellite of Horicon NWR, by the Leopold Wetland Management District in Wisconsin or through a management agreement with the State or a nonprofit organization.

Annual management costs through the acquisition and restoration phase are difficult to estimate at this time. The amount of land to be acquired and actively managed by the Service has yet to be determined. However, at least during the initial years of refuge development we can look to the operating costs of an average small to mid-sized refuge in the Midwest. A rough estimate for annual operating costs is \$400,000 if staffed on-site or \$200,000 if operated as a satellite refuge of Horicon NWR or through the Leopold WMD. After full development, annual operating costs could rise depending upon the level of staff desired. If a visitor center was built and significant public use encouraged, the operating costs would need to reflect this activity. It is anticipated it would take 20 years to acquire strategic areas and restore all the degraded habitats unless a large allocation of funds were appropriated to accelerate the process.

**Contaminants:** No comprehensive review of possible contaminant sources has been conducted at this time. However, known hazardous waste sites or other contaminated areas would be avoided during refuge development. A Level 1 Pre-acquisition Contaminants Survey would be completed for each parcel prior to acquisition.

**Public Attitude:** The general attitude of local communities and landowners is unknown at this

time. However, a Friends of Hack-ma-tack Steering Committee has already formed and produced a feasibility study and promotional materials. Over a dozen conservation organizations have signed on as sponsors of the proposal. The Governors of Illinois and Wisconsin have sent letters of support for the proposal to the Director, U.S. Fish and Wildlife Service.

The potential audience base for the Refuge is an important consideration in determining economic viability. The standard drive time in many tourism assessments for a regional market is two hours. As estimated by the U.S. Census for 2008, the population base within a two-hour drive of the Hackmatack study area is over 12 million.

The Hackmatack National Wildlife Refuge vision involves a core NWR parcel, with a limited suite of recreational opportunities permitted under its management directives, working in concert with an interconnected network of publicly accessible lands that offer a broad range of recreation choices. Beyond improving the study area's biological integrity, the conserved corridors connecting larger conserved areas offer potential recreational corridors, allowing visitors a less fragmented experience of the natural world. Increased access to parks and open space can improve activity levels among both residents and travelers.

A vast audience of recreationists sits on Hackmatack's doorstep, literally millions of people who enjoy nature-based recreation. Both Illinois and Wisconsin have documented that opportunities for outdoor recreation are in short supply in the densely populated regions of northeastern Illinois and southeastern Wisconsin. Designating a national wildlife refuge in the Hackmatack study area would further diversify the region's recreational assets, protect quality natural habitats, and provide additional opportunities for environmental education.

Recommended:   
~~ACTING~~ Regional Director

1/25/10  
Date

Figure 1. Hackmatack Study Area

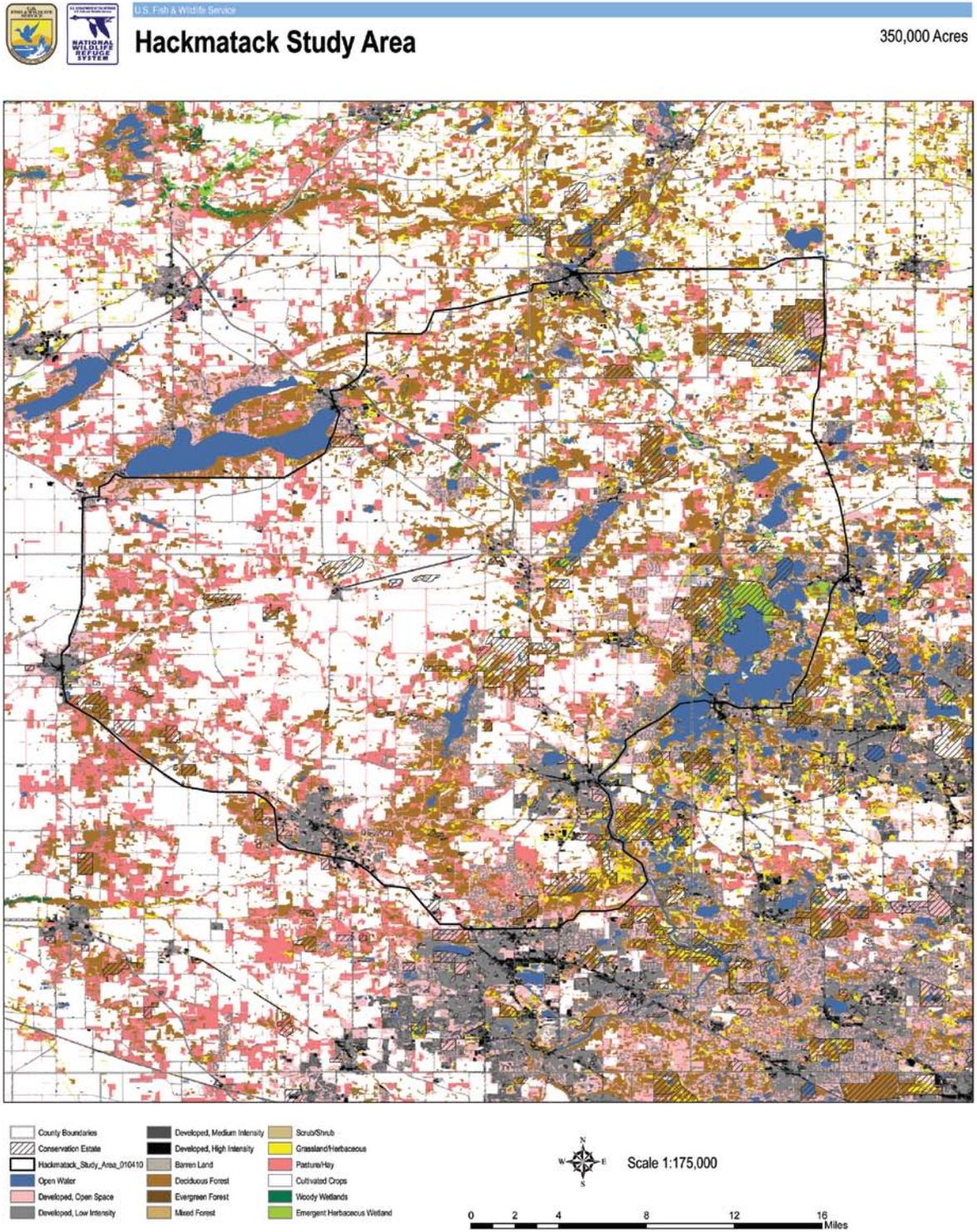


Figure 2. Hackmatack Study Area Conservation Areas

