

## **Dedication**

The McHenry County Natural Areas Inventory is dedicated to the past, present and future citizens of McHenry County, in the firm belief that clean water, healthy ecosystems, abundant wildlife and stirring vistas are the birthright of each generation.

## **Acknowledgements**

No work of the complexity and magnitude of the McHenry County Natural Areas Inventory has ever been accomplished without the vision, dedication and skills of many individuals. These pages contain the work of literally dozens of professional and amateur naturalists, bird watchers, farmers and nature enthusiasts whose knowledge of the county's natural heritage proved indispensable to the process of locating, identifying and inventorying the 169 sites in the MCNAI. Those who cherish the natural world owe these individuals an immeasurable debt of gratitude.

Dr. Wayne Schennum served as the Natural Resource Manager of the District from 1985-2001. His vision of a comprehensive inventory of the county's biological diversity is reflected in the pages of the MCNAI. The 1986, 1989, 1994 and 1998 versions of this work are entirely Wayne's creation and have served as the blueprint for the fully digitized 2005 edition.

No project as comprehensive in scope as the MCNAI would be possible without strong financial support. The District's Board of Trustees authorized the use of special grant monies through the Kishwaukee Ecosystem Fund to finance much of this work. Similarly, the McHenry County Conservation Foundation, through a generous grant from the Oberweiler Foundation funded the remainder of the project. Without this support the MCNAI could not have been digitized and distributed to local libraries, municipal units of government and conservation organizations.

Finally, the commitment, creativity and hard work of the District staff, both within and outside of the Natural Resource Management Department, and of our many partners in conservation, has been the driving force behind the original MCNAI and each subsequent update. Special thanks are owed the entire resource staff, especially NRM's Database and GIS Specialists, Gail Drabant and Jackie Batson. To these two individuals fell the task of digitizing, updating and making user friendly thousands of individual pieces of biological information and maps. The easily accessible and searchable format of the MCNAI is a direct result of their efforts.

## Forward to the 2005 McHenry County Natural Areas Inventory

During a recent round of the game show *Jeopardy* one of the categories concerned United States Demographic Information from the 2000 census. The question asked: What is the fastest growing county in the United States? The answer turned out to be none other than, McHenry County, Illinois! Summed up in a trivia game show question is perhaps the most cogent realizations one can draw from the 2005 McHenry County Natural Areas Inventory. The county's unique natural heritage, those areas that reflect "the last of the least and the best of the rest" in terms of natural communities and rare species is in unprecedented danger.

The rolling glacial landscape of McHenry County, its high quality streams, relic grasslands, ground water fens and extensive wetlands are under siege from a growing ocean of new rooftops, shopping malls, ever wider roads and unparalleled demand for natural resources. Every thing from open ground, to gravel to groundwater is in short supply and must feed an ever expanding suburban population and the infrastructure necessary to support it. Yet despite the very real threats to the county's natural heritage, much progress continues to be made in preserving these unique areas. In 2001, the citizens of McHenry County voted to allow the McHenry County Conservation District to sell 68 million dollars in bonds to finance the acquisition of additional open space. That referendum has allowed the agency to protect an additional 5,000 acres of open space, including many sites identified as priorities by earlier editions of the MCNAI.

While some MCNAI sites, such as Emery Woods, Lotus Pond and Pingree Prairie have been destroyed, other sites have been protected by local units of government, the Illinois Department of Natural Resources, The Land Conservancy of McHenry County and perhaps most promising of all, by private landowners. Increasingly, private citizens are coming to see our county's landscape, and their own property, as not only a real estate investment, but a biological one as well. In two areas, the Boone Creek Watershed and the Alden High Point Area, these private citizens have banded together to literally take biological conservation into their own hands, restoring dozens of acres of land to ecological health in holdings ranging from under an acre to many acres in size. The MCNAI, recognizing the critical partnership between public and private interests has chosen to include these two areas as "Areas of Special Conservation Concern."

This same commitment to a new and stirring land ethic is occurring across the face of the county. It is reflected in elementary school prairie gardens, roadside landscaping with native plants, small scale privately owned native plant nurseries, and hundreds of acres of non-public land enrolled in Acres for Wildlife, state forestry programs, best farming practices and numerous other programs specifically designed to promote a more sustainable human and natural environment.

Much remains to be done. The powerful role that local units of government can play in incorporating the information included in the MCNAI as part of local zoning decisions cannot be overstated. Well crafted development plans and firm insistence by local planning commissions that known high quality natural resource areas be fully protected, can allow important green infrastructure to develop along side new schools, homes, businesses and roadways. In the MCNAI, these local units of government, as well as development interests, conservation organizations and private citizens have a powerful new tool to create a future that sustains both economic growth and quality of life.

## Methodology

To qualify as a McHenry County natural area, a parcel of land or water must possess at least one of the following criteria:

1. Remnant terrestrial or wetland natural communities professionally rated as possessing moderate quality (grade C) or better. Rating grades are determined by field assessment of native plant diversity, degree of disturbance by human land use practices and the subsequent effects of those impacts on the soil, hydrology and plant composition and distribution within a given natural community type.
2. Provide breeding habitat (animals) or sustainable soil/water conditions (plants) for one or more state endangered or threatened species. Records of endangered or threatened species must be reasonably extant sightings of breeding individuals or populations, or reliable written reports. The Illinois Endangered and Threatened Species List in force as of 2005 is the basis for species status assigned within this report.
3. Receive a stream classification by the Illinois Department of Natural Resources as unique (grade A) or high quality (grade B). Stream ratings are based on an evaluation of fish communities. Field survey data are used to compute an Index of Biotic Integrity (IBI), a numerically based quality system developed by aquatic ecologists at the Illinois Natural History Survey. The point values computed correspond to letter grades. Additional information taken into account for a stream's inclusion in the MCNAI includes fresh water mussel survey data.
4. Be classified as an ecologically unique area which contain natural heritage features recognized by professional geologists as outstanding examples of glacial landforms, or accepted by professional biologists as significant because they buffer or expanded habitat for these features.
5. Areas of open space currently being restored to natural communities or for which owner-approved management plans exist to facilitate and guide such restorations. In nearly all cases sites qualifying under this criteria typically meet other criteria for inclusion in the MCNAI as well, or they provide essential buffer or expanded habitat for these features.

All natural areas described in this report have been field evaluated at least once by professional ecologists, including staff of the McHenry County Conservation District, Illinois Department of Natural Resources, U.S. Environmental Protection Agency, U. S. Fish and Wildlife Service, and the Illinois Nature Preserves Commission. In every case, potential natural areas were first identified by aerial photo analysis and followed up by field evaluation. Possible locations were brought to the District's attention in many ways but most often from local naturalists, landowners, farmers, or other professional ecologists familiar with potential sites.

In 1996-1997, the Chicago Region U.S. EPA and U.S. Fish and Wildlife Service staffs, in partnership with the District's Natural Resource Management staff, conducted a countywide biological assessment of many McHenry County wetland and aquatic ecosystems. The project, known as the Advanced Identification of Wetlands or ADID, was a comprehensive aerial photo and field study that nearly doubled the number of natural areas documented in McHenry County prior to the study.

The 2005 MCNAI is the fifth edition of a project first initiated in 1986, field revised in 1989, 1994 and 1998, and finally updated into a digital format in 2005. The 1978 Illinois Natural Areas Inventory provided the initial source of information on natural area remnants within the county. Subsequent revisions of the Natural Heritage Database by the Illinois Department of Natural Resources and field investigations by McHenry County Conservation District staff added many sites as they were discovered and evaluated. In addition, subsequent re-evaluations of known sites during MCNAI updates resulted in modifications to site information as conditions changed over the course of 19 years. The 2005 MCNAI is the most comprehensive assessment of the county's natural heritage to date.

As comprehensive and thorough as the MCNAI is however, it is neither flawless nor ideal. Any scientific database, no matter how current is but a single temporal snapshot of a truly dynamic natural landscape. Changes are inevitable and to be expected. The site protection status and management problems recorded in the MCNAI change annually as new lands are acquired, others restored, still others degraded by development and sadly, as in the case of three of the areas documented in this report, destroyed beyond recovery.

## **Summary of the 1998 MCNAI**

The reader should note that the summary of the 1998 MCNAI is included in nearly complete form in this section. While many of the conclusions are dated and based upon the field conditions within the county at that time the natural history remains relevant even today. The reader is cautioned to remember that the numbers and occurrences of endangered and threatened species is based on the 1998 list. The current MCNAI is based on the 2005 endangered and threatened species list for the state of Illinois. An updated 2005 summary follows this section.

### **Summary Analysis of McHenry County National Area Inventory 1998** **By Wayne E. Schennum**

#### **General**

The results of the McHenry County Natural Areas Inventory indicate that the county contains a substantial acreage of native and restorable land and water of natural heritage value. Given the degree of agricultural conversion since being founded in 1838, and most recently the rapid pace of urban development, this conclusion seems a paradox. However, the word “substantial” as used here is a relative term. Compared with much more heavily urbanized Cook and DuPage Counties, and the more intensively agricultural Kane and Boone Counties, McHenry County is a veritable “Garden of Eden”. Rugged, recently glaciated topography, abundant gravel deposits, extensive areas of poor drainage, and groundwater maintained streams, well-buffered from urban storm water run-off, have contributed to the survival of so much relatively undisturbed land and water here.

McHenry County contains large portions of two of the 30 “Resource Rich Areas” identified by the Illinois Department of Natural Resources in its 1996 Critical Trends Assessment Project. The Fox / Nippersink Watershed in McHenry County is part of the “Chain O’ Lakes - Fox River Resource Rich Area”. This RRA has more natural heritage occurrences, 476, than any other Illinois RRA, and the second highest number of natural areas, 72, surpassed only by Southern Illinois’ Shawnee Hills. The COL-Fox RRA is noted for its diversity and abundance of wetland and lake communities, the Nippersink Creek stream ecosystem, glacial landforms, and high concentration of endangered / threatened species. Many of these features are found nowhere else in the state. The Kishwaukee Watershed in McHenry County is part of the second IDNR Resource Rich Area — the “Kishwaukee River RRA”. While primarily agricultural, this RRA is noted for its high quality stream ecosystems, including 15 miles of the very highly rated clear, coarse-bottomed Kishwaukee River. The Kishwaukee and its tributaries comprise one of Illinois’ three highest ranked stream systems, according to IDNR Division of Fisheries data gathered in the 1980’s.

The status and condition of McHenry County’s natural heritage components, as described in this document, are best summarized by the phrase “wetness is wildness”. The professional and amateur scientific knowledge base for the county, coupled with the listed and described set of natural areas presented in this 1998 inventory, clearly show that the

overwhelming majority of high quality, and even moderate quality, land/water areas in McHenry County are either stream or wetland community types. With the exception of a few small scattered dry to mesic prairie remnants, all other high quality (grade A or B), and most moderate quality (C), natural areas are marshes, sedge meadows, fens, lakes, and creeks/rivers, some of which at least have small areas of moderate quality savanna/woodland and lowland prairie associated with the primary wetland feature. These vast acreages of native wetlands and 183 miles of high quality streams are an exceptional natural legacy. However, their ultimate short and long-term protection is dependent on the preservation of equally large tracts of restorable uplands. It is these uplands which will buffer our wetland heritage from present and future degradation by urban development, allow incorporation of these wetland/aquatic communities into the complete upland — wetland ecosystem complexes of which they were once part, and enable McHenry County citizens to appreciate, enjoy, and immerse themselves in their natural heritage.

### **Fox River / Nippersink Creek Macropreserve (Watershed)**

The Fox River / Nippersink Creek Watershed makes up approximately one half of the Chain O' Lakes Fox RRA and covers one half of McHenry County. It is by far the richer of the two major ecological regions in the county. A total of 112 natural areas lie in this watershed, of which 43 are currently recognized as being of statewide significance through their inclusion in the Illinois Natural Areas Inventory. Additionally, there are 71.5 miles of high quality stream here. If this macropreserve is divided into at least two resolvable sub-watersheds, Fox and Nippersink, as was done in the McHenry County ADID study, the natural areas numbers and acreages are as follows: Fox —29.5 quality stream miles, and 66 natural areas, Nippersink, 42 quality stream miles, and 46 natural areas. This division is somewhat arbitrary since Nippersink Creek is a tributary of the Fox River and the two sub-watersheds are not directly comparable because the Fox sub-watershed is larger than the Nippersink. However, the separation of the data may be useful for planning purposes.

Considered individually, at least 24 of the 112 natural areas in the Fox / Nippersink Watershed could be considered highlights because they are either relatively large, contain a diversity of high quality (grade A or B) natural communities, or concentrations of endangered / threatened species, or some combination of these 3 features. Among aquatic communities the 9-mile **North Branch of Nippersink** is a grade A unique aquatic resource and the 31-mile **Main Branch of Nippersink Creek** a grade B high quality aquatic resource. Endangered / threatened mussels occupy both streams, and high fish and mussel species diversity is characteristic. Among the 22 remaining “highlight sites” are **Lyons Prairie & Marsh** — a 500-acre wetland with 4 high quality communities and 8 endangered / threatened plants and animals; **Lake in the Hills Fen**— a 450-acre site with 4 high quality communities and 21 endangered / threatened plants and animals; **Pistakee Bog**— a small high quality part of Lake County’s 1,800-acre high quality **Volo Bog** complex, **Pistakee Bog** has 10 endangered / threatened plants in its 100 acres; **Moraine Hills State Park**— 1,700-acres with 7 high quality natural communities, a considerable acreage of restored moderate quality savanna/woodland, and 24 endangered / threatened species; **Boone Creek Valley**— a 370-acre high quality spring fed wetland complex at the headwaters of **Boone Creek**, one of only two “cold water” creeks in McHenry County; **Stickney Run** — a 1,000-acre complex of mostly moderate quality wetlands supporting 5

endangered / threatened bird species; ***Black Crown Marsh***— a 350-acre marsh with breeding populations of 7 endangered / threatened birds; ***Cotton Creek Marsh*** — a 350-acre high quality marsh and sedge meadow complex; ***Sterne’s Fen***— a 200-acre spring fed wetland with 6 endangered / threatened plants; the ***Oakwood Hills Complex***— consisting of ***Bates and Oakwood Hills Fen*** natural areas; at nearly 900 acres, the largest high quality spring-fed peat land in McHenry County with 5 grade A or B natural community types, and 14 endangered / threatened plants and animals; ***Hickory Grove***— a 300-acre restored wetland/savanna ecosystem contiguous to ***Lyons Prairie & Marsh***; ***Bystricky Prairie***— 5 grade A or B communities occupy this small 18-acre prairie, the largest most diverse black soil prairie in the entire Fox River Valley; ***Hebron Peat Land***— a 540-acre restorable wetland with 4 natural communities, including a high quality fen; ***Genoa City Wetlands and Barrens***— a 360-acre remnant of 3 high quality wetland types along the upper North Branch of Nippersink Creek; ***Elizabeth Lake***- a 460-acre ecosystem with the county’s most pristine glacial lake, 7 A and B quality community types, and 20 endangered / threatened plants and animals, including 5 endangered / threatened fish species; ***Alden Sedge Meadow***— a 560-acre wetland at the headwaters of Nippersink Creek containing high quality spring fed fens and other wetland types and 8 endangered / threatened species, plus 1 unlisted plant known from only 2 Illinois locations; ***Glacial Park / Tamarack Farms***— at 4,500 acres the county’s largest restorable grassland/wetland complex containing scattered remnants of 5 high quality communities, a long segment of Nippersink Creek, 11 endangered / threatened plants, including the federally threatened eastern prairie white fringed orchid, 12 endangered / threatened animals, and the only protected concentration of rapidly declining grassland birds in the Fox River Watershed; ***Horseshoe Springs Fen***— a 180-acre high quality spring fed wetland feeding Nippersink Creek in Spring Grove, discovered during the ADID process; ***Nippersink Canoe Base Wetlands***— a 350-acre site with grade B spring-fed wetlands along Nippersink Creek near its juncture with the 6,000 acre ***Chain O’ Lakes State Park***; ***Greenwood Fen— Aavang / Lind Woods***— a 150-acre high quality spring-fed wetland and 60-acre woodland, part of a very scenic 2-3 mile segment of rapid flowing Nippersink Creek and adjacent undeveloped restorable stream-carved uplands; ***Slough Creek Wetlands / Standlee Fen***— a 260-acre wetland along a major tributary of Nippersink Creek, containing high and moderate quality communities discovered during the ADID process.

The 24 highlighted sites, when coupled with proximal or connected examples of moderate quality areas and themselves, form large complexes of natural and restorable land and water. These larger and connected / clustered areas have a greater chance for long-term ecological survivability (“bigger is better”) and public use. An examination of the Fox / Nippersink portion reveals at least 9 such ecosystem complexes in this watershed, some of which are contiguous with each other along the Fox River or Nippersink Creek. These “McHenry County Resource Rich Areas” include the following.

1. **Greenwood - Greenwood West:** along Nippersink Creek and its tributaries includes 4 small moderate quality areas northwest of Wonder Lake and several high and moderate quality areas, including ***Lind Woods, Greenwood Fen, Standlee Fen, Slough Creek Meadows, Bystricky Prairie*** along Slough Creek, and ***Silver Creek Marsh*** along Silver Creek.



1. **Alden - Nichols:** along the upper reaches of Nippersink Creek; includes **Alden Sedge Meadow** and **Bailey Woods / Nichols Valley**.
1. **Hebron Peatlands** — a cluster of five high quality community and/or endangered / threatened species areas along and near the Hebron Trail; includes 5 sites **Hidden Marsh, Hebron Peatlands, VanderPal Prairie, Lange Road Bog, and Goose Lake**.
- 2.
3. **North Branch of Nippersink Creek:** along this very high quality stream, a branch of it, and near portions of the Prairie Trail are the east portion of Glacial Park and 4 other sites — **South Richmond Sedge Meadow** - moderate quality, **Elizabeth Lake, Prairie Trail North Wetland** - moderate quality, and **Genoa City Wetlands and Barren**).
1. **East Main Branch of Nippersink Creek:** from **Glacial Park** to **Chain O' Lakes State Park**, the region's two largest public open space / natural areas, are a series of 5 additional smaller sites along Nippersink Creek, two of high quality, **Horseshoe Springs Fen** and **Spring Grove Fen**, and 3 of moderate quality, **Solon Mills Prairie, Solon Mills Fen, and Pease Fen**; collectively these seven areas, linked by additional wetlands and undeveloped open space along Nippersink Creek, form an important regional macropreserve.
1. **Bull Valley:** three high quality wetlands along **Boone Creek**, a grade B stream and its tributaries, **Boone Creek Valley, Gladstone-Boger Fen** and **Parker Fen**, imbedded in a matrix of largely rural uplands containing the largest tract of woodland remaining in the county.
1. **Volo Bog Complex:** on the western edge of the **Chain O' Lakes**, this area has high quality wetlands and a small lake, and includes **Weingart Road Sedge Meadow, Lac Louette** and the 1,800-acre **Volo Bog** ecosystem in Lake County, which includes **Pistakee Bog** in McHenry County.
1. **McHenry - Fox River:** this largest cluster of natural areas in McHenry County along and near the Fox River, now a low grade B river, corridor holds 10 natural heritage sites, including 2 high quality lakes, **Griswold Lake** and **Lily Lake**, 2 biologically diverse 1,000 to 2,000-acre sites, **Moraine Hills State Park** and **Stickney Run**, three other large areas with high and moderate quality wetlands and /or endangered species concentrations — **Black Crown Marsh, Cotton Creek Marsh, and Thunderbird Hunt Club**, and 3 smaller areas with high to moderate quality wetlands — **McHenry Park Wetland, Griswold Prairie, and Burnett Road Fen**.
1. **Oakwood Hills - Lyons Complex:** another very large cluster of high quality wetlands along the Fox River and "little" Silver Creek includes 3 biologically rich MCCC sites — **Oakwood Hills and Bates Fens, Hickory Grove, and Lyons Prairie and Marsh**, plus two recently discovered unprotected sites with high quality wetlands — **Detrana Fen / Triple R** and **Broken Oar Marsh**.

## Kishwaukee River Macropreserve (Watershed)

The Kishwaukee River Watershed makes up three quarters of the Kishwaukee River RRA, as currently defined, connects with Chain O' Lakes - Fox River RRA, and if extended westward along the Kishwaukee itself, connects to the Rock River Resource Rich Area. In a very real sense, this agricultural watershed is a biological link between these two larger and ecologically richer RRA's on the east and west. The Kishwaukee Watershed, like the Fox / Nippersink, covers one half of McHenry County.

A total of 57 natural areas lie in the Kishwaukee River Watershed, of which 12 are currently recognized as being of statewide significance through their inclusion on the Illinois Natural Areas Inventory. There are 111 miles of high quality stream here. The McHenry County ADID study separated the Kishwaukee into 3 sub-watersheds — the Kishwaukee proper, Piscasaw Creek, and Coon Creek. This is somewhat justified ecologically since the latter two streams join the Kishwaukee River in Boone County. However, for the purposes of ecological discussion and long range planning, a breakdown of acreage, stream miles and natural areas in these 3 sub-watersheds is unnecessary. Both Coon and Piscasaw Creeks are very high quality streams and will be treated in ensuing paragraphs. However, neither watershed was found to have much natural land. In fact, the Kishwaukee “sub-watershed” has nearly 90% of the native non-aquatic quality community remnants in the entire watershed.

Considered individually, 16 of the 57 natural areas merit some discussion as the “highlights” within the Kishwaukee Watershed because of their size, high natural quality, or uniqueness as a county or regional resource, or some combination of these three features. Refer to the individual texts of these areas for details.

The most outstanding natural feature of the entire watershed is its concentration and number of miles of very high quality streams. In fact 6 of the 16 “highlight” areas are streams. Collectively they make up one of the largest networks of high quality aquatic resources in Illinois. This is true despite the fact that the watershed and the streamside land itself lacks natural wetlands of even moderate quality, and that some of the stream segments are ditched. The five grade A streams are *Coon Creek*, the *Kishwaukee River east of Franklinville*, *Rush Creek*, *North Branch Kishwaukee River to Rte. 14*, and *Piscasaw Creek*. The *Kishwaukee River east of Franklinville* and *South Branch Kishwaukee River* are grade B high quality stream segments.

Other natural features distinguish the aquatic resources of the Kishwaukee River system. The grade A reach of the Kishwaukee's Main Branch supports a relatively diverse mussel fauna. Five streams and a sixth small headwater in Pleasant Valley have populations of the threatened Iowa darter. Finally, Piscasaw Creek, though showing declining fisheries ratings in its upper reaches in the past 2 years, is still one of two coldwater streams in McHenry County, and supports 14 pollution intolerant fish species and one endangered mussel.

Among the 10 remaining “highlight sites”, 6 contain high quality examples of remnant wetland or prairie communities. These are the *HUM Railroad Prairies*— 13 miles of linear grade A and B *Kishwaukee Valley Prairie* harboring 3 endangered / threatened plants,

including two separate populations of the federally threatened prairie bush clover; **Lakota Wetlands**— a 640-acre complex of moderate and some high quality wetlands and disturbed woodlands with 3 endangered / threatened animals; **West Woodstock Prairie** — a 262-acre site containing high quality wetlands and a rare high quality mesic prairie remnant, discovered during the ADID process; **Pleasant Valley** — a 520-acre area with high quality wetland, including wet prairie, and 3 endangered / threatened animals; **Kloempken Marsh** — a 400-acre restorable disturbed upland and marsh, some of the latter of high quality, along the South Branch of the Kishwaukee River; **Exner Marsh**— a 350-acre mosaic of high quality wetland communities and ponds supporting 7 endangered / threatened animals.

The four additional “highlight areas” are **Coral Woods**, the only large remnant of restorable maple-oak forest in the county, and recently a reported nesting site on forest edge for an endangered prairie/savanna bird, the Swainson’s hawk, now spreading its range northward from a traditional breeding area in Kane County; **Giugni / Kessler Wetlands**— a 280-acre privately-owned and managed complex of mostly moderate quality wetlands, including restored marshes now supporting sand hill cranes and other endangered / threatened birds; **Harvard Savanna**— 360 acres of rural and lightly developed land with moderate quality wetlands and very rare savanna community remnants adjacent to and along the main C&NW Railroad line; **Kishwaukee North Branch Wetlands**— a 700-acre area of disturbed but restorable wetlands and woodlands along the moderate quality segment of the Kishwaukee’s North Branch; the wetlands here support 2 endangered / threatened animals.

The Kishwaukee River Watershed, has few potential large complexes of clustered or connected “McHenry County Resource Rich Areas”, unlike the Fox / Nippersink Watershed. Certainly the extensive system of grade A and B streams form a network of interconnected aquatic ecosystems, even if they lack remnant native streamside vegetation. Three other relatively large sub-macropreserves are as follows:

- **Rush Creek - North Branch Kishwaukee: the largest in the watershed, this is an extensive cluster of 6 large moderate** quality areas and five smaller areas at the juncture of the headwaters of Rush Creek and the North Branch of the Kishwaukee River; the large sites contain moderate quality wetlands and savanna, disturbed restorable woodlands, and endangered / threatened animals on rolling moraine topography; they include (*Giugni / Kessler Wetlands*), *Harvard Savanna*, *Rush Creek Conservation Area*, *Irish Prairie*, *Kishwaukee North Branch Wetlands*, and *Lakota Wetlands*; the five small sites lie between the Kishwaukee North Branch and Rush Creek watershed components and contain moderate quality wetlands and some prairie; they include *Hegner Meadow*, *Paulson Road Sedge Meadow*, *Paulson Road Prairie*, *Weinstein Sedge Meadow*, and *Route 23 Sedge Meadow North*.
- **Woodstock Natural Areas** — along the headwaters of the Kishwaukee River and Franklinville Creek south and west of the Woodstock city limits; includes moderate quality wetlands, high and moderate quality prairie, and some restorable uplands; the 5 sites are *West Woodstock Prairie*, *Franklinville Creek Prairies*, *Dean Street Wetland*, *Woodstock Fen*, and *Woodstock Marsh*.
- **HUM Prairie - Kloempken Marsh** — along the South Branch of the Kishwaukee River; lay three areas with high quality black soil prairies and some moderate quality wetlands, including *Kloempken Marsh*, *HUM Sedge Meadow*, and *HUM Prairies*.

## Summary of the 2005 MCNAI

Seven years have passed since the 1998 summary portion of the MCNAI was written. In those seven years McHenry County has experienced unprecedented growth. Family farms have given way to sub-divisions; the county's population has expanded dramatically and the pressure on the natural areas identified in this report, both protected and unprotected has undergone a dramatic increase.

The slogan *wetness is wildness* still holds true for McHenry County's natural heritage and those Resource Rich Areas first identified in the MCNAI process continue to be high priorities for land protection. While much work lies ahead to insure these most important elements of our biological heritage survive into the future, great strides have been made since 1998. In the Fox/Nippersink RRA numerous important projects have begun or been completed in many of the ecosystem complexes first delineated in the 1998 MCNAI. These include:

1. **Greenwood Fen – Greenwood West Complex:** Protection of large segments of the Greenwood Fen complex and Lind Woods areas as well as protection of a large buffer to Bystricky Prairie.
2. **Alden Sedge Meadow Complex:** Protection of the entire basin of Mud Lake, the headwaters of Nippersink Creek. Acquisition of major portions of the Bailey Woods complex and adjoining areas between the two sites. Large scale efforts by private landowners in restoration/protection of additional lands
3. **Hebron Peat Lands Complex:** Enlargement of the Goose Lake Natural Area to include almost the entire historic basin of the lake.
4. **North Branch of Nippersink Creek Complex:** Protection of much of the Genoa City Wetlands and Barrens site, as well as large segments of the South Richmond Sedge Meadow site.
5. **Bull Valley Complex:** Protection of large portions of the Boger Fen site and creation/acquisition of the Boone Creek Conservation Area by MCCD. Large scale efforts by private landowners in restoration/protection of additional lands.
6. **Volo Bog Complex:** Protection of the Lac Loette site.
7. **McHenry – Fox River Complex:** Protection of portions of the Griswold Prairie and Black Crown Marsh.
8. **Glacial Park/Tamarack Farms:** Protection of several small additions to Glacial Park.
9. **Oakwood Hills Fen – Lyons Complex:** Protection of much of the Triple R site.

In the Kishwaukee River Resource Rich Area substantial progress has also continued on the protection of important natural heritage elements identified in the 1998 MCNAI. These include projects in the following ecosystem complexes:

1. **Pleasant Valley Complex:** Acquisition of nearly 2,000 acres in this diverse and biologically rich area of the Kishwaukee River watershed including the entire Pleasant Valley INAI site.
2. **Harvard Savanna Complex:** Protection of the largest single block of the natural area site identified in the 1998 MCNAI.
3. **Woodstock Natural Areas Complex:** Protection of the Dean Street Wetlands site, Woodstock Fen and portions of the West Woodstock Prairie.
4. **Kishwaukee River/Coon Creek Macrosite:** Protection of large blocks of restorable streamside habitat along Coon Creek and the main stem of the Kishwaukee River, buffering two high-quality Kishwaukee Watershed streams.

No single agency or organization has been responsible for the preservation of so much high quality natural land; rather it has been the efforts of many public and private entities in concert with state, federal and municipal partners. As acquisition dollars become scarce such partnerships are ever more necessary to complete the protection of the remaining lands in the MCNAI.

The protection of the MCNAI remaining sites, through a variety of methods, is the largest single conservation priority in the county, for these lands represent the finest remaining examples of the wilderness that was once northeastern Illinois and McHenry County. They are connections to a historic past and the foundations for a future that includes not only sound economic development and growth, but a highly desirable quality of life for the residents of the county.

It is the hope of the McHenry County Conservation District that the information contained in this document will facilitate the identification and long-term preservation of the remaining natural areas that make McHenry County such a desirable place to live, work and play.

## Using the MCNAI Site Information Pages

Each individual site assessment sheet contains important information on the location, quality and natural heritage attributes of the particular area identified as part of the MCNAI. The following information is found in most sheets:

**Site Identification Code Number:** Located on the upper right hand side of the page the site identification code number refers to the unique moniker assigned to each site. The code is composed of two parts. The township in which the site is located in is abbreviated with a letter sequence to begin the code. Hence RIC refers to Richmond Township, HEB to Hebron Township etc. The second portion of the code is numerical and simply refers to the number within the sequence of all natural areas identified within that township.

For example, RIC02 simply means the site is the second natural area identified within Richmond Township. RIC03 refers to the third natural area identified within the township and so on. The numbers are not related to priority but are simply a reflection of the number of sites within a township that have been identified and inventoried.

Sites will also have a former identification number listed in parentheses beneath the current code number. This allows users of the current edition of the MCNAI to compare information in older editions more easily.

Below the site code number will be the township all or the majority of the site is located in and the section numbers it occurs in.

**Site Name:** The site name refers to the name applied to the site during the inventory process. Site names can be reflective of many things, including local history, natural heritage aspects or ownership at the time of the MCNAI process. Often sites may have more than one name locally.

**INAI Site/ADID Site:** Each site information sheet identifies whether an area is an Illinois Natural Areas Inventory site or an Advanced Identification of Wetlands site in the upper left hand side of the page. These two studies identified important natural areas and wetland sites respectively and have been incorporated into the MCNAI. For more information on the nature of these studies and their relevance to the MCNAI please see the sections of this report that deal with this information specifically.

**Natural Community Counts, Special Animal and Special Plant Species:** This section of the sheet encapsulates at a glance for the reader the raw counts of important natural communities, special animal species and special plant species present on the site. Generally this information is a reflection of why the site is ecologically important enough to warrant its inclusion in the MCNAI.

**Watershed:** This section refers the reader to which of the two major watersheds in McHenry County the site is located in. The 2005 MCNAI did not break down sites by sub watershed, hence an area will either be in the Fox/Nippersink watershed or the Kishwaukee watershed. The reader is encouraged to seek additional information on sub watersheds that may fall within a site.

**Size:** Each natural area has map boundaries encompassing a number of acres. The reader should bear in mind when noting acreage sizes assigned to sites that the figure is reflective of many factors. These include the actual size of the high quality area itself, important degraded but restorable lands necessary for long-term protection of the site and necessary buffers to insure that the area can remain ecologically viable over the decades to come.

Site size will almost always be larger than the actual natural area identified. This is a reflection of not only the small amount of natural land remaining in the county, but also the recognized ecological need to expand core high quality areas to a size that can remain biologically viable over the long haul.

**Natural Heritage Information:** This section of the sheet contains detailed information on what natural heritage elements were identified that resulted in the site being placed on the inventory. This information is generally broken down into three categories. These categories include, natural communities, special animal species and special plant species.

Natural community information identifies those natural communities, native to McHenry county, that are found on the site. Communities altered by human impacts or composed of introduced exotic species are not identified. Each community is also rated in terms of its overall quality as either A, B or C. Communities falling below C quality did not qualify for inclusion in the MCNAI.

Rare plant and animal species are reflective of the presence of either endangered or threatened species or of species that have important ecological significance within McHenry County and the region of northeastern Illinois. In some cases the actual endangered and threatened species have been excluded by species name to prevent illegal poaching or collecting from the site. The reader is encouraged to contact the McHenry County Conservation District directly for information regarding the actual endangered and threatened species found on particular sites if such detailed information has been excluded.

**Management Problems and Threats:** This section identifies threats to the long-term stability and survival of these important natural areas at the time of the inventory process. Time is not often a friend to the quality of natural areas, especially those not under active management. Invasive species, lack of fire, and fragmentation from increasing development can destroy a natural community as completely as if bulldozers had stripped away the topsoil.

Many of the management problems identified in 1998 in association with the field inventories of MCNAI sites have continued to worsen. In some cases the ultimate threat to sites has occurred in the seven years since the 1998 surveys. Three sites have been completely destroyed by development. These sites have remained on the inventory, complete with the natural community and species information that was recorded for them as a reminder to the reader of the precarious existence of many of these last examples of the county's biological heritage. In these cases, the site page and map has been annotated with the appellation: *Station Destroyed*.

**Other Significant Features:** This section identifies other aspects of the site that may make it

significant from a county wide perspective. These may be historical, archeological, geological or some other aspect that contributes to a site's uniqueness. Hence, an important example of a geologic occurrence such as a kame or esker or an historic or archeological feature were deemed important enough additional attributes to note in addition to the natural heritage values of the site.

**Protection Status:** Some MCNAI sites are fully protected through conservation easements, fee simple purchase or some other legal means. Many are unprotected and vulnerable to destruction. Still others may be partially protected with additional portions of the site without legal protection. This version of the MCNAI has listed all relevant protection statuses known at the time of preparation.

### **Streams of McHenry County**

McHenry County is noted for containing not only some of the highest quality streams in the Chicago region, but statewide as well. Several stream systems in McHenry County are rated grade A and a significant number grade B. Few areas in Illinois have such a high concentration of valuable aquatic resources. Recognizing this, the District has considered the scientific study of these resources a priority since the early 1990's.

McHenry County's stream systems have been inventoried repeatedly over the past decade and a half to determine and monitor their biological integrity. The inclusion of a separate map for these high quality resources is a testimony to the critical position they occupy as part of McHenry County's biological heritage.

### **Fish and Mussel Lists**

Whenever possible the MCNAI has included species lists of the fresh water mussels and fish found in the county's streams. The information is based on comprehensive surveys conducted at regular intervals by MCCD staff. During these surveys specific segments of stream are sampled for fish at regular intervals along its course. The final list is a compendium of the species found in the entire stream as opposed to a single stream segment.

Fresh water mussels are inventoried in the same manner, by selecting stream segments along an entire watercourse and compiling a list for the entire system. In addition, because baseline information was lacking on many McHenry County streams, a more comprehensive list was established by teams traversing the entire length of the county's major stream systems.

### **Animal and Plant Lists**

The MCNAI includes species lists for both plants and animals that have been identified in biological surveys as occurring within the county's political boundaries. Over 1,700 biological surveys covering mammals, breeding birds, reptiles and amphibians and butterflies have been conducted on dozens of public and private sites since the District was formed in 1971. While the lists should not be viewed as complete they are compressive in scope and reflect a large percentage of the individual species known for McHenry County.



Similarly the plant species lists are also comprehensive, reflecting thirty-five years of botanical work in all sections of McHenry County. New plant species become established on a regular basis, both deliberately through landscaping and gardening activities and also accidentally as stow-a ways in topsoil, animal feed and hay. As these species become naturalized and discovered they are added to the overall county plant list.

## **MCCD Sites**

A comprehensive list of the publicly owned lands of the McHenry County Conservation District has been included. The majorities of sites are multiple use and open to the public. Other sites have not undergone the public planning process required to open them as of the publication date of the MCNAI. Smaller subsets are fragile natural areas that are open periodically for public programs.

Other open space agencies such as the Land Conservancy of McHenry County, the City of Woodstock and the Illinois Department of Natural Resources, as well as many private landowners and other public entities have protected MCNAI sites. The reader is referred to the section in the site information pages that deal with protection status.

## **Map Resources**

In addition to individual site maps for each MCNAI site, the 2005 edition includes several interesting maps produced at a countywide scale. These include the following:

- A map of McHenry County Conservation District holdings (current as of May of 2005)
- A countywide map delineating all sites identified in the 2005 edition of the MCNAI.
- A countywide map of all MCNAI sites overlain on prominent geologic landscape features.
- A countywide map overlain on the pre-European/American settlement natural communities. This map identifies the general location of wetlands, grasslands and wooded communities prior to the beginning of large-scale settlement in 1840.
- A countywide map identifying high quality stream segments that have been included in the 2005 MCNAI.

## **Areas of Special Conservation Concern**

Both the 1998 and 2005 MCNAI identified areas of McHenry County where “clusters” of important natural resources occurred. In many cases, although high quality MCNAI elements were known from these areas, other important natural features were also present. These features, while not qualifying individually for inclusion within the MCNAI, represented an

important conservation priority nonetheless. Concentrations of ephemeral wetlands, large grassland complexes, important headwater stream systems and large blocks of potentially restorable lands all presented significant opportunities for private/public partnerships and to buffer higher quality areas identified during the MCNAI process.

Since the completion of the 1998 MCNAI update, two such areas have seen rapid expansion of management and restoration efforts. These areas, located in the Boone Creek watershed and northwest of the rural crossroads village of Alden have been highlighted prominently in this report. In both cases, dedicated private citizens have partnered with public entities and non-profits to move forward a comprehensive conservation vision for the future. Hundreds of acres of private land are being managed for its biodiversity values due to the efforts of these citizens.

Classified as Areas of Conservation Concern the MCNAI recognizes and encourages sustainable development, creative zoning and other tools that will enhance and support the efforts of these local citizens to preserve and enhance the biological diversity that characterizes these resource rich areas.