

Chicago Wilderness Green Infrastructure Vision

Final Report March 2004

Project Overview

Goal/Purpose: A visionary, regional-scale map of the Chicago Wilderness region that reflects both existing green infrastructure -- forest preserve holdings, natural area sites, streams, wetlands, prairies, and woodlands – as well as opportunities for expansion, restoration, and connection. The broader goal of this effort is to bring the Biodiversity Recovery Plan to life in a more meaningful, visual, and accessible way for Chicago Wilderness members and outside audiences.

To state it another way, the Biodiversity Recovery Plan presents – in words – an ambitious, comprehensive set of recommendations to protect, preserve, restore, and manage biodiversity in the Chicago Wilderness Region. This project has developed a series of maps that are, in a sense, a visual interpretation of the BRP's broad recommendations for protection, preservation, and restoration at a macro scale.

Definition: For the purposes of this project, green infrastructure is:

The interconnected network of land and water that supports biodiversity and provides habitat for diverse communities of native flora and fauna at the regional scale. It includes large complexes of remnant woodlands, savannas, prairies, wetlands, lakes, stream corridors and other natural communities that have been identified in the Biodiversity Recovery Plan. Green infrastructure may also include areas adjacent to and connecting these remnant natural communities that provide both buffers and opportunities for ecosystem restoration.

The principal objective of mapping recommended regional-scale ‘resource protection areas’ is to draw more focused attention to the biodiversity needs and opportunities of CW. In particular, the products coming out of this project are intended to be visually stimulating in a way that can ultimately capture the attention of CW members, regional and local government decision makers, the media, and the public.

Further, while clearly not intended to be precise plans for protection or restoration areas, the mapping of large resource protection areas can stimulate the many ongoing local efforts at the community and watershed scale by offering the implicit support of the CW coalition for regional and local conservation actions. In fact, during the discussions of draft green infrastructure maps, there were recommendations for future Chicago Wilderness assistance in identifying *local* biodiversity protection needs and opportunities to complement the identification regional opportunities that were the focus of this project.

To summarize, it is important to reiterate in simple terms what this project is, and what it is not.

This project is an attempt to develop a first draft, map-based, regional-scale vision for biodiversity protection and restoration

This project is *not* a detailed, site-specific acquisition or conservation design plan for the region. Nor is it an attempt to identify the numerous additional small scale opportunities for biodiversity conservation that exist at the municipal and neighborhood scale.

Background and Procedures

Background: This project builds upon a March 1, 2002 all-day workshop between Chicago Wilderness members and Metropolis 2020. Chicago Wilderness (CW) members identified a series of recommended regional-scale “resource protection areas” throughout northeastern Illinois and extending minimally into Wisconsin and Indiana. The project concept and preliminary results were presented to the CW Steering Committee which provided a very favorable response. Some viewed it as a visual “action plan” (first draft) for the Biodiversity Recovery Plan that ideally could ultimately be officially adopted by CW. Also, the integrated, region-wide database coming out of this project could serve as a database for subsequent, more in-depth CW resource protection planning for the *entire* CW region.

Principal Tasks/Objectives:

- 1) A three-state, Chicago Wilderness regional *map* that identifies on-the-ground, regional-scale opportunities for biodiversity protection and restoration. These opportunities are mapped as recommended “resource protection areas.”
- 2) The identification of specific *protection techniques* for each resource protection area, including: acquisition, conservation easements, restoration, greenway connection, and conservation development.
- 3) The identification of simple *guidelines for conservation development*, recognizing that urban/suburban development inevitably will occur in or adjacent to many of the recommended resource protection areas.

Principal Investigators and Collaborators

The *principal investigators* were:

- Dennis Dreher, Project Manager and Principal Water Resources Engineer for the Northeastern Illinois Planning Commission
- Jennifer Welch, GIS Analyst for the Northeastern Illinois Planning Commission
- Laura Barghusen, Senior Environmental Analyst for the Northeastern Illinois Planning Commission

Several collaborators agreed to support and advise the project. These included:

Joyce O’Keefe, Openlands Project
Karen Hobbs, Senior Fellow, Center for Neighborhood Technology
Dale Engquist, Indiana Dunes National Lakeshore/National Park Service
Lucy Hutcherson, Director of Communications, Chicago Wilderness

Stephanie Folk, Media and Public Relations Representative, Chicago Wilderness

Key CW member participants in the original March 1, 2002 workshop with Metropolis 2020 reviewed the draft vision maps and provided suggestions for changes.

The proposed project was reviewed by the CW Sustainability Team, including the text that describes the conservation development principles and techniques needed to protect identified resource protection areas. An important recommendation coming from this team was to seek future funding to identify at the community/municipal scale opportunities for the identification and protection of local green infrastructure that is important to biodiversity. Such local efforts would complement the regional-scale green infrastructure vision recommended in this project.

The proposed project also was reviewed by the CW Science and Land Management Team. In particular, the SLM Team was asked to review final draft maps from a bio-geographic, regional perspective, as well as descriptions of resource protection polygons. The SLM members were very supportive of the geographic boundaries of this project, as well as the vision created by the interconnected network of resource protection areas. In particular, there was consensus that the SLM Team should pursue the official endorsement by the CW Council of its preliminary recommendations for new bio-geographic boundaries for Chicago Wilderness. Several team members also suggested that the mapping produced by this project could be helpful in garnering additional public support for county and regional land protection efforts and also could be used in soliciting support for land protection resources in state legislatures and Congress.

Relation to the Biodiversity Recovery Plan (BRP)

This project is supportive of several goal areas and objectives of the BRP.

Preserve more land with existing or potential benefits for biodiversity. Under this goal are numerous recommendations supported by the proposed project. For example, the BRP recommends that “Chicago Wilderness and the region’s land-owning agencies should develop a priority list of areas needing protection based on regional priorities for biodiversity conservation.” The BRP also lays out both general guidelines and some fairly specific quantitative targets (i.e., acreages) for protection of various communities – i.e., woodlands, prairies, savannas, and wetlands, as summarized below.

This plan recommends that a high priority be given to identifying and preserving important but unprotected natural communities, especially those threatened by development, and to protecting areas that can function as large blocks of natural habitat through restoration and management.

More specifically, the plan recommends the:

- Creation of large preserves,
- Creation of community mosaics,
- Protection of priority areas, especially remaining high-quality sites,
- Protection of any large sites with some remnant communities, and
- Protection of land that connects or expands existing natural areas.

The plan recommends that these areas be preserved where possible by the expansion of public preserves, by the public acquisition of large new sites, or by the actions of private land owners.

Some specific recommendations from the BRP that guided the identification of terrestrial resource protection areas in this project included the following.

Woodland:

- In total, it is thought that approximately 50,000–100,000 acres of healthy forest and woodland complexes are needed in the region to meet BRP goals.
- Ideally, as many as 20 good-quality sites larger than 500 acres would provide a rich diversity of amphibians and other species. Several 800- to 1000-acre sites, with appropriate landforms (slope, soils, and hydrology), are needed to maintain a variety of plants and woodland types.

Savanna:

- Sites need to be large enough that landscape-scale processes can occur. Development of relatively complete savanna communities will be most cost-effective on larger sites, though smaller sites are also valuable and can be healthy if well managed.
- Viable amphibian populations require sites of 200 to 500 acres in size. As with all amphibian and reptile assemblages, multiple sites with functional connections for dispersal to sustain meta-populations are recommended.

Prairie:

- It is thought that ten to twelve large sites throughout the region, each approximately 3000–4000 acres in size, are needed to sustain viable populations of grassland birds and other prairie species.
- These large sites should consist of native vegetation in mosaics of grasslands, savannas, and wetlands, in order to contribute to the conservation of all prairie-community elements. Core areas of high-quality remnants need to be included in larger sites to provide a basis for recolonization by prairie plants and insects.
- To conserve all of the region's reptiles and amphibians, it is recommended that we create as many medium-sized (500- to 1000-acre) grassland sites as possible. These sites should consist of core natural areas within a landscape that allows them to function as breeding habitat. A priority should be to expand as many existing 80- to 200-acre prairie remnants as possible into 500- to 1000-acre sites.
- As there are so few examples of gravel and dolomite prairies, all remaining examples should be protected, no matter how small. Beyond the rare prairie types, all remaining good-quality prairie sites (such as INAI grade C or above) should be protected and improved where possible.

Wetland:

- Based on scientific knowledge of habitat requirements of wetland birds, reptiles, and amphibians, a natural-area complex of approximately 1000 acres, with several marshes of 100 acres or more and with smaller wetlands and ephemeral pools, appears to be appropriate. There is the potential to create and restore around fifteen of these large wetland complexes in the region, and this number should allow sufficient acreage and diversity of condition to meet the habitat needs of breeding and migratory waterfowl.
- In addition, many more relatively small wetland complexes are needed throughout the region, but particularly in the southern and western parts, to connect existing wetlands.
- In particular, fens, sedge meadows, bogs, pannes, and seeps require continued protection of currently designated natural areas and protection of newly identified sites. Wetlands, particularly those fed by groundwater, require protection of their recharge areas as well as protection of their

plants.

Protect high-quality streams and lakes through watershed planning and mitigation of harmful activities to conserve aquatic biodiversity. Much of the focus of the resource protection area identification proposed in this project is tied to sensitive watersheds and stream-based greenway linkages.

Adopt local and regional development policies that reflect the need to restore and maintain biodiversity. The BRP contains an extensive focus on the need to involve local governments and regional policy makers in the preservation, management, and restoration of land and water resources. The BRP also contains the following objectives for local governments: inventory sensitive habitats and identify opportunities for open space preservation and restoration; modify comprehensive plans, ordinances, and engineering practices to consider the impacts of development on biodiversity; incorporate provisions for biodiversity protection and restoration in the design plans for new development and redevelopment.

Coordination with Related Chicago Wilderness Work

Attempts have been made to coordinate this project with several related CW activities. While this project is not intended to replace the ongoing conservation design process, it is at least complementary. Further, the regional GIS database of green infrastructure coverages created by this project is the first of its kind for Chicago Wilderness. This database can be used for future CW assessments and inventories done at the regional scale. More specifically, the database work being done in this project is directly related to the CW-funded wetlands assessment/modeling project entitled Wetland Conservation Strategy Model Development that extends from southeast Wisconsin to northwest Indiana.

This project also complements the project from the Sustainability Cluster to develop regional indicators/report card that relies on the creation of a green infrastructure database. And this project has been coordinated with an ongoing project of Openlands and the Center of Neighborhood Technology to develop regional green infrastructure mapping.

This project also has incorporated, by reference, the principles from the sustainable development roundtable process.

This project also has been coordinated with CW Communications Team staff since the development of an effective message delivery mechanism is critical to the success of the project.

Finally, this project recognizes two ongoing, related activities involving CW and/or its members. One is an effort spearheaded by the Lake Michigan Federation to assess biodiversity protection opportunities in nearshore areas of Lake Michigan. This project may inform future versions of the green infrastructure vision and, as such, the project maps include the following language.

"Chicago Wilderness member organizations are undertaking an effort to identify and prioritize sites for biodiversity protection and recovery along the Lake Michigan nearshore. This work will be proposed as an addendum to the Biodiversity Recovery Plan and is scheduled to be considered for adoption in 2004. Results should be integrated with a future version of the Green Infrastructure Vision."

Another is an effort being conducted by the City of Chicago to assess local biodiversity protection opportunities. The Chicago Biodiversity Recovery Plan process, informed by a number of Chicago Wilderness member organizations, involves an effort to identify sites for biodiversity protection and recovery in the City. The Chicago process is recommending the addition of a new zoning category to the Chicago Zoning Ordinance that will protect open spaces for nature preservation and restoration and has developed a Chicago Habitat Sites Inventory. Based on the City's draft work products, a meeting was held between Chicago and Chicago Wilderness representatives to assess the numerous large and small-scale habitat sites identified by the City. Based on this meeting, two additional regionally-significant biodiversity conservation areas were integrated into the Green Infrastructure Vision.

Work Methods

This project picked up directly on the work done in the CW/Metropolis 2020 workshop, expanded it geographically to the entire CW region, and developed several new products as indicated in the following task descriptions.

- Extend the underlying natural resource database: (done in cooperation with the previously mentioned Openlands/CNT project)

Relevant green infrastructure coverages and mapping were extended into the Indiana and Wisconsin portions of CW, as well as those relevant CW resource areas in Illinois beyond the six-county area. Base coverages included wetlands, floodplains, streams, rivers, lakes, woodland, grassland, natural areas, watersheds, publicly owned natural lands, major roads, and county boundaries, as well as those specific coverages available in individual states that added useful knowledge. A detailed listing of available data coverages used for mapping workshops in Wisconsin, Illinois, and Indiana are listed in Appendix 1. The underlying GIS database for northeastern Illinois used by Metropolis 2020, such as the coverage of current public natural lands, also was updated and corrected.

- Extend and complete the identification and mapping of recommended resource protection areas:

The existing GIS coverages, mapping labels, and text descriptions for the resource protection polygons in northeastern Illinois, as identified and digitized in the Metropolis 2020 project, were corrected and "cleaned up". For example, overlapping coverages that were identified by more than one mapping sub-group in the Metropolis workshop were combined and reconciled. A subset of the March 1, 2002 workshop participants was invited to verify and refine the vision map.

Resource protection polygons were identified in Indiana and Wisconsin, as well as the collar counties in Illinois outside the 6-county NIPC region: Boone, De Kalb, Kendall, Grundy, and Kankakee. Workshops were held in these areas following procedures similar to those used in the original CW/Metropolis 2020 workshop. For each of the referenced workshops, including the initial CW/Metropolis 2020 workshop, appropriate representatives of CW member organizations (e.g., those with a good knowledge of on-the-ground biodiversity resources) were invited to

participate. In total, approximately 80 individuals participated in these workshops. Listings of workshop participants are contained in Appendix 2.

The workshop procedures, which are detailed in Appendix 3, generally entailed identifying biodiversity protection and restoration opportunities, at the macro scale, consistent with the recommendations of the Biodiversity Recovery Plan. The approach emphasized some basic priorities for resource protection derived from the BRP: remaining high-quality sites, land that will connect or expand existing natural areas, and any large sites with some remnant communities. In this “macro” scale context, the participants were asked to focus on landscape complexes and corridors of at least 500-1000 acres. For each recommended “resource protection area” participants also were asked to identify recommended biodiversity conservation approaches.

On a parallel track, participants in the CW/Metropolis 2020 workshop identified regional recommendations for conservation development, on the assumption that substantial new development is forecast in the CW region and will undoubtedly affect the integrity of identified resource areas. These recommendations for conservation development are included under “Results and Recommendations” below.

The resultant map information was digitized and combined for the broader, three-state Chicago Wilderness region. The maps were customized into a series of regional and state-scale poster maps and map images useful for a PowerPoint presentation. Draft maps and results were presented to Sustainability and Science/Land Management teams, and the Steering Committee. Final products will be presented to the full Council for review and “endorsement” at its March 2004 meeting.

- Develop delivery mechanisms and begin to seek endorsement:

While an attractive, illustrated poster version of the vision map was originally identified as a desirable end product, it was not included in the approved budget. Alternatively, a PowerPoint slide presentation was developed. We also investigated the option of placing maps on an interactive web site (e.g., in conjunction with the CNT/OLP green infrastructure database project and/or link to IDNR’s Internet mapping servers) that will allow exploration of more detailed geographies and resources. Recommended options for internet access are made below but actual web site work will require additional funding in a future phase of this project.

Similarly, it will be desirable to encourage endorsement of the green infrastructure vision by other regional organizations such as NIPC, Campaign for Sensible Growth, Metropolis 2020, etc. While preliminary information sharing and discussions were begun with NIPC, NIRPC, and Metropolis 2020, it is strongly recommended that this be pursued in depth in a subsequent phase of this project.

Summary of Results and Recommendations

Based on the input of numerous Chicago Wilderness members and resource agencies, as described above, recommended resource protection areas were identified in a broad swath

extending from southeast Wisconsin, through northeastern Illinois and encompassing northwest Indiana.

Boundaries of Green Infrastructure Assessment Area: The geographic extent of identified resource protection areas was generally consistent with preliminary recommendations coming out of a group within the Science and Land Management Team that addressed the issue of “biogeographic” (versus “political”) boundaries for Chicago Wilderness. Specifically, in Wisconsin recommended resource protection areas extended through the South Unit of Kettle Moraine State Forest, the upper Fox River, and several important tributaries to Lake Michigan. In Illinois, the area of focus extended beyond the six-county NIPC region to include much of the Kishwaukee and lower Fox Rivers, Goose Lake Prairie, the Kankakee River, and Kankakee Sands. In Indiana, the area of focus extended south from the Indian Dunes to the Kankakee River corridor and east to the Galien River in Valparaiso County.

Results: In total, over 1.8 million acres of recommended resource protection area were identified and mapped within the broader 7+ million acre “Chicago Wilderness” assessment area. It is notable that nearly 360,000 acres of protected “natural” public open space already exist within this region. While maps not included explicitly in this report, a series of maps have been prepared. These include poster scale maps, PDF images, and PowerPoint images. The maps are produced at a three-state regional scale, along with blown up maps for the Wisconsin, Illinois, and Indiana portions of the broader region.

For each of the identified resource protection areas, workshop participants identified and recorded recommended conservation approaches. Recommended approaches addressed opportunities for acquisition, conservation easements, greenway connections, and restoration. Workshop participants also made recommendations about appropriate development within resource protection areas, ranging from no new development to limited conservation development. These detailed recommendations are contained in Appendix 4.

Conservation Development Recommendations: Recommendations also were developed for conservation development. The recommendations were developed by participants at the CW/Metropolis 2020 workshop and subsequently refined. The purpose was to identify recommendations for *how* projected development and redevelopment should be planned and designed to maximize preservation and restoration of biodiversity. This was done by expanding upon recommendations in the Biodiversity Recovery Plan.

The following individuals participated in this work group: Judith Stockdale, Gerry Wilhelm, Nancy Williamson, Phil Bus, Brook McDonald, Steve Albert, Jim Van der Kloot, and Steve Apfelbaum. The co-leaders were Will Humphrey and Dennis Dreher. Irene Hogstrom was the recorder.

It was observed that traditional land development approaches have generally ignored the natural functions of the landscape. In particular, development activities have fragmented ecosystems, disrupted natural hydrologic patterns, introduced invasive plant and animal species, and eliminated fire from the landscape.

The consequences are striking. Illinois has lost roughly 90 percent of its wetlands and over 99.9 percent of its tallgrass prairie ecosystems. In northeastern Illinois, over 40 percent of the stream and river miles have been channelized and almost none of our urban/suburban rivers support healthy, diverse fish communities. Average annual flood damages total about \$40 million. And new development threatens our surface and groundwater supplies.

In response, new and evolving development standards and ordinances promise to reduce additional adverse impacts. But with about 2 million new residents forecast in northeastern Illinois alone, our already degraded natural environment will continue to suffer. The group consensus was to reject this future scenario. It was felt that development, in order to be truly sustainable, *must not only protect beneficial environmental functions but must improve systems degraded by past disturbances*. It was observed that not only does the technology exist to achieve this objective, but that sustainable development will cost no more than conventional approaches. Further, sustainable development will reduce long term maintenance costs, enhance property values, and improve the quality of life in our communities.

Goal: All development shall protect and improve the natural environment.

If the biota, in the course of aeons, has built something we like but do not understand, then who but a fool would discard seemingly useless parts? To keep every cog and wheel is the first precaution of intelligent tinkering. **B Aldo Leopold**

Development Principles:

- 1) Minimize the total consumption of land, particularly the creation of impervious surfaces, by new development.
- 2) Utilize existing infrastructure by maximizing infill and redevelopment.
- 3) Maintain and reestablish functional natural systems: soils, plants, water.
- 4) Minimize disturbance of soil structure and topography.
- 5) Develop landscapes sustainably, utilizing a diversity of native plant species.
- 6) Manage precipitation as a resource close to where it falls, not as a disposable waste product.
- 7) Utilize the landscape to naturally filter and infiltrate runoff before it leaves the development site.
- 7) Eliminate adverse off-site and downstream effects of runoff and wastewater.
- 8) Maximize, interconnect, and restore natural open space.
- 9) Maximize opportunities for local access to open space.
- 10) Establish administrative and financial mechanisms for the long-term management of the natural elements of developed sites.
- 11) Assess cost-effectiveness of sustainable designs based on their long-term, life cycle costs.

Recommended techniques and approaches:

Conservation development:

- 1) Preserve natural topography, land forms, and views.
- 2) Avoid sensitive natural areas and hydrologic features, including seeps, springs, and organic/hydric soils when locating new developments and roads.
- 3) Utilize site designs that minimize the amount of impervious surface area.
- 4) Cluster residential development to minimize land disturbance and maximize natural open

- space.
- 5) Make roadway widths no wider than necessary to ensure public safety and to accommodate other modes of travel such as bicycling.

Natural drainage:

- 6) Utilize natural drainage as an alternative to storm sewers.
- 7) Use vegetated swales, filter strips, and perforated underdrains to maximize runoff filtering and infiltration.
- 8) ADaylight@ storm sewers by converting them to open swales.
- 9) Eliminate paved/sewered hydraulic connections, wherever feasible.

Stormwater detention:

- 10) Require stormwater detention that effectively controls the full range of flood events.
- 11) Design detention areas to minimize downstream flow variability for two-year storms.
- 12) Design detention to maximize removal and transformation of runoff pollutants.

Natural landscaping:

- 13) Use native plants as a preferred alternative to the default turf grass landscape.
- 14) Emphasize the use of deep-rooted native vegetation on the banks of streams and detention ponds and other areas that are susceptible to erosion.

Buffer strips and greenways along streams, lakes, and wetlands:

- 15) Avoid development in riparian areas, particularly avoiding environmental features such as wetlands, steep slopes, the 100-year floodplain, and wildlife corridors.
- 16) Protect or restore native vegetation in riparian buffers. Buffer widths may vary but the minimum average width should be fifty feet from the edge of the aquatic resource (e.g., wetland or stream), expanding to at least 100 feet for high quality aquatic resources.
- 17) Multiple-use riparian greenways should be established, following the recommendations of the Northeastern Illinois Regional Greenways Plan, accommodating trails and wildlife corridors wherever feasible.
- 18) Retain and/or restore emergent and near-shore vegetation at stream and lake edges.
- 19) Restore streamside wetlands.

Soil erosion control:

- 20) Develop and implement best management practices to control soil erosion and sedimentation during construction..

Sustainable wastewater management:

- 21) Utilize alternatives to new and expanded effluent discharges to high-quality streams -- e.g., route sewage flows to regional facilities or use land treatment.
- 22) Utilize effluent polishing, through constructed wetlands or land application, for all discharges to moderate- and high-quality streams.
- 23) Utilize treated effluent for irrigation and/or grey water uses as an alternative to direct discharge to surface waterbodies.

Other:

- 24) Develop programs to minimize use of pesticides and fertilizers on municipal lands through Integrated Pest Management policies or other means.

Mechanisms to achieve recommendations:

- 25) Designation of lands with conservation easements or dedication to local government at the preliminary planning stage.

Subsequent to the development of these recommendations, a separate Chicago Wilderness project developed a draft set of “Sustainable Development Principles for Protecting Nature in the Chicago Wilderness Region.” These principles, which are expected to be adopted in March 2004, are hereby adopted by reference.

The context for applying sustainable development principles is critical to the achievement of the goals of the green infrastructure vision. Three general situations should be addressed.

Development within recommended resource protection areas: For each identified resource protection area, specific recommendations were made regarding whether and how development should be accommodated. Where conservation development is the recommendation, the principles and techniques outlined above should be implemented to their fullest extent. In particular, development should be designed and tailored to the specific natural resource characteristics of the identified resource protection area. For example, if the resource protection area contains fens or other groundwater-fed aquatic ecosystems, particular emphasis needs to be placed on assuring the protection of pre-development groundwater quantity and quality conditions. A general recommendation for conservation development within resource protection areas is to limit development intensities, particularly impervious surfaces (like parking lots) or structures that would disturb sensitive habitats. Similarly, all attempts should be made to fully preserve all significant remnants of native vegetation (e.g., by creative site designs and clustering) and to provide natural landscaping buffers adjacent to remnant or restored natural habitats. Finally, it is essential that conservation designs include long-range plans for ecosystem management, including both financial arrangements and protective legal structures such as conservation easements.

Development within watersheds of high quality streams or lakes: The Biodiversity Recovery Plan, Chapter 6, identifies priority watershed of major stream and river systems based on the presence high aquatic biological diversity and/or species or features of concern. However, this prioritization was done for just northeastern Illinois. Nonetheless, it is critical that development in the watershed of any high quality or biologically sensitive stream or lake be done following stringent conservation development principles. Information on sensitive aquatic systems in Wisconsin and Indiana can be obtained from Wisconsin DNR and Indiana DNR and/or Department of Environmental Management. While all of the listed conservation development principles and techniques are important, several should be emphasized in the protection of high quality aquatic systems. For example, site design and stormwater management must be done in a manner that maximizes both natural recharge of rainfall and runoff and effective filtering of runoff pollutants. Construction site soil erosion and sediment control also are critical. Sustainable, alternative wastewater planning and treatment/discharge approaches are essential to protecting high quality systems. And protection/restoration of extensive naturally vegetated

buffers along the periphery of stream, lake, and wetland edges – at least 100 feet on all sides – is critical.

All other development: Throughout the broader Chicago Wilderness region, in urban, suburban, and rural edge settings, there are strong arguments for conservation development. Beyond the obvious biodiversity conservation benefits, conservation development approaches generally cost considerably less than conventional design, enhance property values and quality of life, help protect groundwater aquifers, and reduce problems and costs associated with flooding and water quality degradation. Depending on the intended land use and site characteristics and constraints, appropriate elements of conservation design can and should be selectively tailored to each individual property.

Recommended Delivery Mechanisms for Digital Maps and Data: There are several options for making the maps from the green infrastructure vision project available over the internet. These range from very simple and inexpensive to more complex. Below are listed several options that could be considered. All would require a funding source in a future phase of this project.

1. The final project maps could be posted on the internet in Adobe Acrobat (.PDF) format, allowing anyone with Adobe Acrobat Reader (which is available for free download from the Adobe site) to view, download, and print the maps, as well as to zoom into areas of interest.
2. ArcPublisher, an extension of ArcGIS, could be used to produce a project viewable with the free ESRI software ArcReader. Projects produced with ArcPublisher and viewed with ArcReader are interactive to the extent that the user can zoom in and out on the map and click on map features to query the information held in the attribute tables of the GIS layers, and create and print map layouts zoomed to different extents of the map. In order to produce an ArcPublisher project, an ArcGIS license with the ArcPublisher extension is necessary. Also, posting an interactive project on the internet would involve getting permission from the agencies that contributed data that appears on the map product, and possibly omitting some of the underlying layers if permission is not granted.
3. An internet mapping server such as ArcIMS could be used. This would allow users to zoom in and out of the project, query information in the attribute tables associated with the different map layers, decide which layers they would like to display and which to omit, and create and print map layouts. As with the ArcPublisher option, this would involve getting permission from the agencies that contributed data that appears on the map product, and possibly omitting some of the underlying layers if permission is not granted.
4. The resource protection area GIS layer that was created for the Green Infrastructure Vision Project could be made available for download in shapefile, coverage, or geodatabase format so that that GIS users could download and use the layer in their own GIS systems. The Illinois Department of Natural Resources has a geospatial data clearinghouse site, and The Great Lakes Information Network (GLINDA) also has a site where data can be downloaded. These and other sites could be investigated as possible places to make the data available.

The first option is the simplest. In fact, PDF versions of the draft maps have already been sent

out as email attachments to various project participants, including mapping workshop participants and members of the Sustainability and Science and Land Management Teams. NIPC is currently exploring the placement of PDF files on the Commission's website (<http://www.nipc.cog.il.us/>) as an interim arrangement until a final solution is explored and funded in a subsequent phase of this project. These PDF files also could be placed on the Chicago Wilderness website.

Appendix 1: GIS Data Layers for Mapping Workshops

Appendix 1: GIS Data Layers for Northeastern Illinois

GIS Layers Used to Delineate Recommended Resource Protection Areas	Data Source
Watershed boundaries	U.S. Department of Agriculture, Natural Resources Conservation Service's 2002 Vector Digital Dataset of 12-digit Hydrologic Units in Illinois, 2002
Streams and lakes	U.S. Geological Survey's National Hydrography Dataset
Wetlands	U.S. Fish and Wildlife Service, Illinois Department of Natural Resources, Illinois Natural History Survey's 1987 Illinois Wetlands Inventory in Illinois by County - Polygons Map, Version 1.0, April 1996
100 Year Floodplains	Federal Emergency Management Agency's National Flood Insurance Program Q3 Flood Data CD-ROM, Disc 6, September 1996
Special Designated Areas (<i>areas of environmental significance, but are not actively managed; may include state scenic and wild rivers, outstanding water resources and natural areas</i>)	U.S. Environmental Protection Agency, Region 5's 2001-2002 Rock River Special Designated Areas, Inland Sensitivity Atlas, Version 1, September 2002
Existing public open space	Cook County Forest Preserves from Forest Preserve District of Cook County's Forest Preserve District Boundaries, April 2001; DuPage County Forest Preserves from Forest Preserve District of DuPage County's 2003 Forest Preserve District Boundaries, February 2003; Lake County Forest Preserves from Lake County Forest Preserve District, 2003; McHenry County Forest Preserves from McHenry County Conservation District, digitized boundaries from McHenry County Highway Map, September 2002; Kane County Forest Preserves from Kane County Forest Preserve District Boundaries, May 2002; Will County Forest Preserves from Forest Preserve District of Will County's 2003 PINS_20031120, November 2003; Midewin National Tallgrass Prairie from Midewin Prairie Explorer 1999 CD-ROM with additional edits to reflect changes, April 2001; Illinois State Parks and Illinois State Conservation Areas from Illinois Department of Natural Resources, Illinois Geographic Information System CD-ROM, Volume II, May 1996
Sensitive Resource Areas	Illinois Department of Natural Resources, Natural Heritage Database's 2003 Sensitive Resource Areas
State Boundaries, County Boundaries and Major Roads	ESRI's 2000 Data & Maps Media Kit CD-ROM, CD 3, 2001
Woodland and grassland land cover	Illinois Department of Natural Resources' 1999-2000 Illinois GAP Analysis Project/Illinois Interagency Landscape Classification Project Raster Digital Data

Appendix 1: GIS Data Layers for Southeastern Wisconsin

GIS Layers Used to Delineate Recommended Resource Protection Areas	Data Source
Watershed boundaries	Wisconsin Department of Natural Resources' 1992 DNR Watersheds (polygon features) Map, 1998
Streams and lakes	U.S. Geological Survey's National Hydrography Dataset
Wetlands	Wisconsin Wetlands Inventory
100 Year Floodplains	Federal Emergency Management Agency's National Flood Insurance Program Q3 Flood Data CD-ROM, Disc 6, September 1996
Special Designated Areas (<i>areas of environmental significance, but are not actively managed; may include state scenic and wild rivers, outstanding water resources and natural areas</i>)	U.S. Environmental Protection Agency, Region 5's 2001-2002 Rock River Special Designated Areas, Inland Sensitivity Atlas, Version 1, September 2002
Existing public open space	Conservation Easements from U.S. Fish and Wildlife Service's 1995 Wetland Management District Conservation Easements - Region 3 Map, April 2001; Kettle Moraine State Forest - Southern Unit from Wisconsin Department of Natural Resources; Managed Areas from U.S. Environmental Protection Agency, Region 5's 1997-200 Western Lake Michigan Inland Sensitivity Atlas, Version 1, December 2000 and U.S. Environmental Protection Agency, Region 5's 2001-2002 Rock River Managed Areas, Inland Sensitivity Atlas, Version 1, September 2002; Public lands for Walworth County from Southeastern Wisconsin Regional Planning Commission's 1990 Public Lands, Walworth County
Environmental Corridors	Southeastern Wisconsin Regional Planning Commission's 1995 Environmental Corridors and Planned Environmental Corridors
State Boundaries, County Boundaries and Major Roads	ESRI's 2000 Data & Maps Media Kit CD-ROM, CD 3, 2001

Appendix 1: GIS Data Layers for Northwestern Indiana

GIS Layers Used to Delineate Recommended Resource Protection Areas	Data Source
Watershed boundaries	U.S. Geological Survey's 1999 Vector Digital Dataset of 14-digit Hydrologic Units in Indiana map, Version 1.0.0, August 1999
Streams and lakes	U.S. Geological Survey's National Hydrography Dataset
Wetlands	U.S. Fish and Wildlife Service's National Wetlands Inventory, downloaded from Lake Rim GIS
100 Year Floodplains	Federal Emergency Management Agency's National Flood Insurance Program Q3 Flood Data CD-ROM, Disc 6, September 1996
Special Designated Areas (<i>areas of environmental significance, but are not actively managed; may include state scenic and wild rivers, outstanding water resources and natural areas</i>)	U.S. Environmental Protection Agency, Region 5, Great Lakes Commission's 1998-2001 Northern Indiana Inland Sensitivity Atlas, Special Designated Areas Coverage, Northern Indiana Mapping Area, Final, Version 1, October 2001
Existing public open space	Nature Preserves from Indiana Department of Natural Resources' Nature Preserves digitized from 1:24,000 quad maps, downloaded from Lake Rim GIS; Managed Areas from Indiana Department of Natural Resources' 2000 Draft GAP Analysis Managed Areas and U.S. Environmental Protection Agency, Region 5, Great Lakes Commission's 1998-2001 Northern Indiana Inland Sensitivity Atlas, Managed Areas Coverage, Northern Indiana Mapping Area, Final, Version 1, August 2001
State Boundaries, County Boundaries and Major Roads	ESRI's 2000 Data & Maps Media Kit CD-ROM, CD 3, 2001
Woodland and grassland land cover	Indiana Department of Natural Resources' 2000 Draft GAP Analysis Land Cover

Appendix 2: Mapping Workshop Participants

Northeastern Illinois List of Participants at Chicago Wilderness/Metropolis 2020 Workshop, Prairie Crossing, March 1, 2002

Jerry Adelman – Openlands Project. Planning team coordinator and liaison to M2020
Steve Byers – Illinois Nature Preserves Commission (SLM Team)
Jim Anderson – Lake County Forest Preserves (SLM Team)
Steve Packard – National Audubon Society (CPC)
Stephen Pescitelli – Illinois Dept. of Natural Resources
Kent Taylor – Openlands Project
John Rogner – US Fish & Wildlife Service
Tim Sullivan – Brookfield Zoo
George Rabb – Brookfield Zoo
Lisa Haderlein – The Nature Conservancy
Suzanne Malec – Chicago Department of Environment (urban and Calumet perspective)
Kent Fuller – Biodiversity Recovery Plan “author” and local govt. official
Richard Mariner – Chicago Academy of Sciences
Ed Hammer – US EPA Region 5, Water Division
Dale Engquist - NPS/Indiana Dunes National Lakeshore
Wayne Vanderploeg - Forest Preserve District of Cook County
Leslie Berns - Forest Preserve District of DuPage County (cc: Dan Gooch)
Tom Hahn - Lake County Forest Preserves (cc: Steven Messerli)
Marcie DeMauro -- Forest Preserve District of Will County (cc: Mike Pasteris)
Ed Collins - McHenry County Conservation District

Dennis Dreher – Northeastern Illinois Planning Commission
Brook McDonald - Conservation Foundation
Ders Anderson - Openlands Project
Gerould Wilhelm – Conservation Research Institute
Jim Van der Kloot – US EPA (Sustainability Team)
Phil Bus - Kane County Development Department
Mary Ochsenschlager - St. Charles Park District
Will Humphrey, Conservation Fund

Jim Herkert – The Nature Conservancy
Maggie Cole – Illinois Dept. of Natural Resources
Jeff Mengler – US Fish & Wildlife Service
Jason Pettit – Kendall County Forest Preserve District
Nancy Williamson – Illinois Dept. of Natural Resources
Charlie Paine - Max McGraw Wildlife Foundation
Steve Albert – Naperville Plan Commission/Civil Design Group, Inc.
Jim Steffen – Chicago Botanic Garden
Judith Stockdale – Gaylord & Dorothy Donnelley Foundation
Chris Goebel – Geneva Lake Conservancy (WI)
Susan Greenfield – Caledonia Township Chairperson (Racine County, WI)
Laurel Ross – The Nature Conservancy
Steve Apfelbaum, Applied Ecological Services
Elizabeth Dietel, Liberty Prairie Reserve
Mike Sands, Liberty Prairie Reserve
Karla Kramer, USFWS
Christie Deloria-Sheffield, USFWS

Staff attendees:
Julie Smentek
Rebecca Blazer
Diane Trgovcich-Zacok
Irene Hogstrom
Lucy Hutcherson
Stephanie Folk

Subsequent to the main workshop with Metropolis 2020 that focused principally on the six-county NIPC region, meetings were set up on December 3 and 4, 2003 with CW members representing Illinois counties outside the six counties. Participants in these meeting were Jason Pettit of the Kendall County Forest Preserve District, Nathan Hill of the Natural Land Institute, and Steve Byers of the Illinois Nature Preserves Commission. At these meetings, resource protection areas were extended beyond the “political” six-county boundary into Boone, De Kalb, Kendall, Grundy, Kankakee, and Iroquois Counties, based on bio-geographic considerations and following the same protocol used in the six-county workshop.

**City of Chicago Biodiversity Recovery Plan
List of Participants at Mapping Workshops and Meetings**

A small group of volunteers from the Chicago Biodiversity Recovery Plan (CBRP) work group held a Chicago Green Infrastructure Mapping session on December 9, 2003. Proposals identified during this mapping session were approved by the CCRP on January 14, 2004.

Jerry Alderman – Openlands Projects

Kathleen Dickhut - City of Chicago Department of Planning and Development

Paul Heltne – Center for Humans and Nature

Anne Jaluzot - - City of Chicago Department of Planning and Development

Kristopher Lah – U.S. Fish and Wildlife Service

Eleanor Roemer – Friends of the Park

CBRP Work Group meeting, Chicago, January 14, 2004:

Jerry Alderman – Openlands Project

Judy Beck – U.S. Environmental Protection Agency

Joel Brown – University of Illinois

Robert Davis – Lincoln Park Zoo

Kathleen Dickhut – Department of Planning and Development

Don Hey – Wetlands Research Inc.

Pam Holy – Green Citizens

Martin Jaffe – Illinois- Indiana Sea Grant College Program

Kristopher Lah – U.S. Fish and Wildlife Service

Dick Lanyon – Metropolitan Water Reclamation District of Greater Chicago

Laura Perna – Illinois Department of Natural Resources

John Perrecone - U.S. Environmental Protection Agency

Becki Retzlaff – UIC, Great Cities Institute

Jill Riddell – Private Citizen

Joe Schuessler - Metropolitan Water Reclamation District of Greater Chicago

Sonja Tiegs – Shedd Aquarium

Mary Van Haaften – Chicago Park District

Catherine Werner – Chicago Department of Environment

Jeanne Zasadil – Wildflower Preservation Society

Finally, on February 6, 2004 a meeting was held to discuss proposed resource protection areas submitted by the Chicago Biodiversity Recovery Plan work group. This resulted in a narrowing of recommended areas to those having regional biodiversity significance. Participants included:

Laura Barghusen – Northeast Illinois Planning Commission

Kathleen Dickhut – City of Chicago Department of Planning and Development

Dennis Dreher – Green Infrastructure Vision Project Manager, Private Citizen

Lucy Hutcherson – Chicago Wilderness

Anne Jaluzot - City of Chicago Department of Planning and Development

Kerry Leigh - Northeast Illinois Planning Commission

John Rogner – U.S. Fish and Wildlife Service

Southeastern Wisconsin

List of Participants at Mapping Workshop, October 2, 2003, Elkhorn, WI

Mark Weaver, National Park Service
Angie Tornes, National Park Service
Brian Gumm, Citizen
Richard Acker, Openlands Project
Joyce O'Keefe, Openlands Project
John Pohlman, Wisconsin Department of Natural Resources
Cheryl Nenn, Friends of Milwaukee's Rivers
Pam Holy, Chiwaukee Prairie Preservation Fund
Fay Amerson, Walworth County Land Use and Resource Management Department
Neal Frauenfelder, Walworth County Land Use and Resource Management Department
Bill Huxhold, University of Wisconsin-Milwaukee
Ken Jenkins, University of Wisconsin-Milwaukee
Marianne Nowak, Walworth County Land Conservancy
Paul Ormson, Walworth County Land Conservancy
Chris Goebel, Geneva Lake Conservancy
Mark O'Leary Applied Ecological Services, Inc.
Steve Richter, The Nature Conservancy

**Northwest Indiana
List of Participants at Mapping Workshop, October 20, 2003, Portage, IN**

Diane Trgovcich-Zacok, Purdue University-Calumet
Young Choi, Purdue University-Calumet
Ed Pierson, Purdue University-Calumet
Jenny Kintzele, Indiana Department of Natural Resources
Tina Wilcox, Lake County Parks and Recreation Department
Joy Bower, Lake County Parks and Recreation Department
Chris O'Leary, The Nature Conservancy
Mark Reshkin, Northwest Indiana Forum Foundation, Inc.
Dale Engquist, Indiana Dunes National Lakeshore, National Park Service
Scott Hicks, Indiana Dunes National Lakeshore, National Park Service
Joy Marburger, Indiana Dunes National Lakeshore, National Park Service
Reggie Korthals, Northwest Indiana Regional Planning Commission
Dan Gardner, Northwest Indiana Regional Planning Commission, Little Calumet River
Commission
Mitch Barloga, Northwest Indiana Regional Planning Commission
Jennifer Gadzala, Northwest Indiana Regional Planning Commission
Ken Dallmeyer, Northwest Indiana Regional Planning Commission
Leslie Dorworth, Illinois-Indiana Seagrant
Richard Acker, Openlands Project
Paul Labus, The Nature Conservancy
Forest Clark, U.S. Fish and Wildlife Service
Elizabeth McCloskey, U.S. Fish and Wildlife Service
Marge Hefner, farm owner and Northwest Indiana Regional Planning Commission
Alex da Silva, Indiana Department of Environmental Management
Herb Read, Save the Dunes Council
Sandy O'Brien, resident

Appendix 3: Workshop Mapping Instructions

Northeastern Illinois Sub-regional Work Groups

(The relevant aspects of the directions for the CW/Metropolis 2020 workshop are summarized below.)

Purpose: The overall purpose of this sub-regional workshop exercise was to identify natural community preservation and restoration opportunities, generally at the macro scale, consistent with the recommendations of the Biodiversity Recovery Plan. The BRP identifies three general priorities for resource protection: remaining high-quality sites, land that will connect or expand existing natural areas, and any large sites with some remnant communities. The BRP also identifies protection/expansion goals by community type (see below).

Workgroup participants: Each sub-regional work group has been assigned a leader/coordinator who is familiar with the intended workshop planning process. Several other individuals have been “assigned” to workgroups based on their familiarity with the sub-regional landscape. Each group also has been assigned a CW staff member who will serve as the recorder for the exercise. Finally, several “floaters” will circulate among the groups to respond to process questions and encourage consistency in approaches.

Approach: The sub-regional groups are asked to identify, at the macro scale, both potential and existing areas for protection, expansion, restoration, and connection within and adjacent to their sub-regional area. They should focus on the broad community types identified in the BRP – i.e., stream corridors, wetland complexes, prairie, savanna, and woodland. The groups are asked to perform the following tasks. (*Note: while “macro” scale is not explicitly defined, the groups generally should be focusing on landscape complexes of at least 500 acres, and perhaps somewhat smaller in more urban settings.*)

- Initially, identify areas that have significant biodiversity components, based on personal knowledge supplemented with information on the base maps and other resource maps. (E.g., remnant woodlands, clusters of INAI or T/E sites, wetland complexes.) These initially should be marked on tracing paper overlain on the base maps.

- Next, identify protection, expansion, restoration, and connection areas and mark directly on the base map. Use broad-tipped fluorescent markers to identify “fuzzy polygons,” not specific ownership parcels. Identify the predominant community types (e.g., *woodland, savanna, prairie/grassland, wetland complex, and lake.*) and target large areas along the lines of the following rough guidelines derived from the BRP.

Woodland: >500 acres, >1000 acres

Savanna: >200 acres

Prairie/grassland: >500 acres, >3000 acres

Wetland complexes: >100 acres, >1000 acres

Lakes

- Describe/categorize each site. The following information will be briefly noted and transcribed by the recorder.

- List the existing and/or potential conservation values of the site, such as principal

community types, T/E presence, etc.

- What are the existing and/or expected site impairments to be protected against (e.g., existing or impending development-related threats)?
- What are the needed development controls and/or conservation management strategies for the polygon? (Note all that apply.)

A.) Development controls:

Category 1.) No new development can be tolerated within the polygon.

Category 2.) Some development can be tolerated in the polygon, but must be designed to have minimal impact.

Category 3.) Redevelopment is recommended in and around the polygon, incorporating conservation design principles.

B.) Conservation management approach. Choose among:

- *Protection*: when the identified area/site is comprised of at least 50% natural areas/remnants

- *Restoration*: when the area/site is comprised of less than 50% natural areas/remnants

- *Expansion/retrofit*: when a substantial area is being added or adjacent land uses are “buffered” at the periphery of an existing protected site

- *Functional Connection*: when a linkage is added between two natural areas

(Note: for many sites, several of these categories will be met.)

Wrap-up and Comparison: As the five sub-regional/regional sub-groups complete their assigned tasks, they should reassemble as a full group to present, compare, and coordinate their recommendations at the regional level. Sub-regional maps will be photographed, digitally linked, and overlain using GIS capabilities. Resultant images will be projected for review and comparison to the regional map. Sub-group recommendations should be coordinated both geographically and across community types. E.g., the cumulative recommendations for woodland, savanna, prairie, and wetland community types should be compiled and compared with BRP regional goals. Also, opportunities for inter-county land preservation and connections should be evaluated and added, as appropriate.

Appendix 3 Continued: Workshop Mapping Instructions

City of Chicago

The work was conducted by volunteers from the Chicago Biodiversity Plan Workgroup with special knowledge and/or interest in mapping Chicago natural features.

Approach:

The Chicago work group was asked to identify, at the macro-scale, both potential and existing natural areas for protection, expansion, restoration and connection located within the City of Chicago boundaries. To achieve this goal, the group was asked to proceed as follows:

- Select from the Chicago Habitat Site Inventory provided by the City of Chicago Department of Planning and Development natural areas that are pertinent at a regional scale.
- Identify additional restoration and connection opportunities.
- Describe/categorize each resource protection area. The following information was recorded:
 - Name
 - Existing and/or potential conservation values of the site
 - Existing and/or potential site impairments/threats to be protected against
 - Site management recommendation
- Present the recommended resource protection areas to project managers and advisors of the Chicago Wilderness Green Infrastructure Vision project to identify additions that were consistent with project criteria (e.g., regional-scale opportunities).

Appendix 3 Continued: Workshop Mapping Instructions

Northwest Indiana and Wisconsin October, 2003

Purpose: The overall purpose of this workshop exercise is to identify natural area preservation and restoration opportunities, generally at the macro/regional scale, consistent with the recommendations of the Chicago Wilderness Biodiversity Recovery Plan (BRP). The BRP identifies three general priorities for resource protection: remaining high-quality, biodiverse sites; land that will connect or expand existing natural areas; and any large sites with some remnant communities that could be expanded through restoration. These identified “resource protection areas” will be recommended to Chicago Wilderness and its members as special protection and growth management opportunities within a regional “green infrastructure vision.”

Approach: The participants are asked to identify, at the macro scale, both potential and existing areas for protection, expansion, restoration, and connection within northwest Indiana, principally within Lake, Porter, and LaPorte counties. You also are asked to identify appropriate connections to identified resource protection areas in Illinois. You should focus on the broad community types identified in the BRP – i.e., stream corridors, wetland complexes, prairie, savanna, and woodland. (*Note: while “macro” scale is not explicitly defined, the group generally should be focusing on landscape complexes of at least 500-1000 acres.*)

The group is asked to perform the following tasks.

- Review the base map. Participants will work from a very large base map. The group should first spend several minutes reviewing the map contents. In general, the map will include protected natural open space, wetlands, floodplains, remnant woodlands, and other natural features. (If any critical features or sites are missing, please note.)
- Identify regionally significant areas that have important biodiversity components warranting some combination of protection, expansion, restoration, and connection. This should be based on resource information on the base maps and any other relevant resource maps, supplemented with personal knowledge. Consider, in particular, large remnant woodlands, clusters of natural areas or T/E sites, wetland complexes, stream corridors.) If consensus is reached regarding the significance of any particular area, mark its boundaries directly on the base map. We will use broad-tipped markers to identify “fuzzy polygons,” not specific ownership parcels.
- Describe/categorize each resource protection area. The following information should be briefly noted and recorded.
 - Name the area (if appropriate). (e.g., Calumet River Corridor)
 - Identify the county.
 - List the principal existing and/or potential conservation values of the site, such as dominant community types (e.g., *woodland, savanna, prairie/grassland, wetland complex, stream corridor, and/or lake*). List any other distinguishing features, such as the presence of threatened or endangered species.
 - Identify, the principal conservation approaches recommended for the site. Consider:

A.) Development controls. In particular, recommend (a) no new development can be tolerated within the polygon or (b) some “conservation” development can be tolerated in the polygon (e.g., clustering around critical natural areas).

B.) Protection/Conservation measures. Identify some combination of:

- *Acquisition*: i.e., use “traditional” acquisition to place natural areas land into public ownership

- *Conservation easements*: i.e., work with private land owners to protect land

- *Restoration*: e.g., recommend the conversion of cropland or pasture to natural communities present in adjacent areas

- *Functional connection*: e.g., identify critical linkage between two proximate natural areas

- *Other*: (describe)

(Note: for most areas, several of these categories will be appropriate.)

Appendix 4: Meeting Notes from Mapping Workshops

Principal Conservation Features and Recommended Conservation Approaches for Identified Resource Protection Areas

Northeastern Illinois, CW/Metropolis Workshop: Four Sub-regional Groups
Northeastern Illinois, Outer Counties
Southeastern Wisconsin
Northwestern Indiana

Northeastern Illinois

Lake/McHenry/Wisconsin Border Sub-regional Group-REVISED JUNE, 2002

Facilitator: Tim Sullivan: 708-485-0263 x419; tisulliv@brookfieldzoo.org. Recorder: Julie Smentek: 312-580-2138; jsmentek@tnc.org.

General recommendations made for the entire Lake/McHenry/Wisconsin map which have not been drawn onto the base map are:

- 1) A 300 foot buffer for floodplains of all grade C or better streams.
- 2) Protection of all 100+ acre blocks of oak woodlands.
- 3) Protection of all 100+ acre blocks of drained or undrained hydric soils.
- 4) Areas where opportunities for large (500+ acre) grasslands exist should be assessed prior to new development.

Additions of existing preserves to the Lake/McHenry/Wisconsin base map made in black marker (these are numbered on the base map)¹

McHenry County	<i>Lake County</i>
1) North Branch Preserve (Probably new since the maps were made)	1) Ethels Woods
2) Lake Elizabeth additions (Nature Preserve)	2) Ravens Glen
3) Glacial Park additions (4)	3) Azinger added by Tom
4) Goose Lake addition	4) Rollins Savanna
5) Hebron Trail (to open soon)	5) Ray Lake Farm
6) Pioneer Fen	6) Epstein Lake
7) Boone Creek Fen Complex	7) Carroll property
8) Bystricky prairie addition	8) Singing Hills
9) Kishwaukee River Preserve	Lake Co just acquired two large parcels that should be added to the map. One is a 135-acre parcel in Grant Township in section 35, identified as the YMCA parcel, directly west of Fish Lake. I will send a map along.
10) Kishwaukee Headwaters (new site)	Another parcel is the Nippersink Preserve that is located in Avon township in section 29, 30 and 32 consisting of 223 acres.

Tracing paper colors

Pink outlines are large parcels of concern but not acquisition. Those are big picture areas of concern for development. Yellow is reserves (already protected) that we want to add onto.

¹ There are several sites that need updating on the NIPC maps. Perhaps the best thing would be for us to get together with NIPC to do so.

On to the base map

For each of polygons on the tracing paper we transfer and associate information with the polygons. Generally what is import, values to protect, general goal setting up for the polygon. Begin to ID general conservation strategy.

CHIWAUKEE PRAIRIE (AND SURROUNDING AREA)-ILLINOIS BEACH-SPRING BLUFF

Prairie and lots of wetland. Most important is large size, t/e, dunes. Grasslands sand dunes, black oak savanna, wetlands. Threats are lake shore erosion. Protection of watersheds feeding into it. Development of in-holdings. Acquisition and preservation in upper watershed. Protect hydrology of watershed. General conservation strategy. NO NEW DEVELOPMENT – CATEGORY - 1 within five miles of the lake. Outside of 5 miles, category 2 development.

KENOSHA SAND DUNES- Dunes, prairies, wetlands, sand savanna. Increase size of existing preserve. Protect hydrology of watershed. Category 1, no new development.

NEW PORT DRAINAGE

Important habitat: wetlands, stream corridors, savanna and potential prairie. Need to buffer Wadsworth savanna (Wadsworth savanna is category 1, no new development). No known E/T species. Provide protection to watershed and expand existing preserves. Build more wetland complexes. Minimize development as it affects hydrology of the area. No new development, category 1, for three miles within the floodplain buffer corridor of the New Port Drainage ditch (the black line is drawn on the map in this polygon). The rest of the polygon is category #2 development.

OLD MILL CREEK COMPLEX

High quality stream corridors; variety of t/e species; high quality wetland habitat; basin marsh; large tracts of significant woodlands and large restoration potential. If acquisition is not available look at conservation easements. Incredible wetland restoration potential large parcel ownership and significant public holdings already: Ethel woods (category 1); redwing slough (category 1) and mill creek corridor-300 foot buffer from the edge of the floodplain (category 1). All other area is #2 development. Large development threat; should incorporate conservation design principles whenever appropriate. In Wisconsin: several wetland areas: Cross Lake, Center Lake, Rock Lake, Bennet Lake, Lake Shangri-la. Restoration potential. Woodland complexes.

DES PLAINES RIVER CORRIDOR; LAKE CO. INTO WI, INCLUDING: STOPA FEN, PEAT LAKE, SILVER LAKE BOG

CRITICAL. Limit overall effects of development in the Des Plaines River corridor. Significant farmland acquisition and restoration. Would reduce flood flows of county; improve water quality. Restoration of stream side (riparian marshes) very important. Category 1- no new development in the entire corridor. Borders of this polygon were altered May 30 and wetland and woodland communities were added to the map.

LIBERTY PRAIRIE AREA- existing high quality preserve. Category 1- no new development. Savanna and wetland complex with several E/T species. Needs additional protection.

MIDDLE-FORK SAVANNA: savanna, wetlands, and prairie, but mainly savanna. Mostly high quality. Acquisition and restoration opportunities. No new Development tolerated; Category #1.

LAKE BLUFFS (AND RAVINES) - Overall, low density development (Category 2) to protect lake bluff ravine community, but no new development (Category 1) immediately adjacent to ravines. Protection of lake shore and ravine. Little land acquisition opportunity in area. Restoration of ravines potential. Improve stormwater management.

KEMPER PROPERTY; Protect existing fen. Land acquisition opportunities. Sensitive wetland. Hydrology protection. Category #2 some development tolerated minimal impact. Protect recharge areas.

ROLLINS SAVANNA: Much is protected already but key parts needed to be added. Lots of savanna and wetland restoration going on. In non-protected areas there is potential high quality wetland, grassland, E/T species. Category #1, no new development allowed.

GRANT/SUN/CEDAR LAKES

Two of highest quality lakes in Lake county plus wetlands and savanna. These are glacial lakes with T/E species. Category 1; no new development *around lakes*. Additional acquisition to buffer existing holdings and to protect lakes is necessary. Connection between Red Wing Slough and existing Forest Preserve District (public) holdings. There is potential for acquisition. Category #2 development with minimal impact in *other areas*.

CHAIN O'LAKES AREA INCLUDING WI

Category #2 development generally, but no new development (Category #1) around lakes, plus, Category #3 development in already developed areas. There is potential wetland restoration north of the park. Protection and restoration of open space and shoreline is important.

ALONG FOX RIVER INTO WI

Need to minimize development impacts (Category #2) on watershed and use BMP on agricultural lands. Improve stormwater management. Lots of acquisition in WI. Grasslands, Lulu Lake complex. Want to keep as rural, but it's major area of growth now. Large potential for wetland restoration. Large grassland at Bong grassland area (10K acres).

LAKE WOOD

High quality existing wetland and woodland preserves and prairie community. Great potential for restoration in north half. Limited development (Category #2) with expansion of existing preserves and creation of new large wetland grassland complexes.

GRAYSLAKE

Not much existing protected, but excellent potential for wetland/grassland restoration. Want wetland and potential wetland sites protected. Limited development (Category #2) around them. Protect Liberty Prairie connection. Not high quality, but is an important corridor between Liberty Prairie and Black Crown area.

PISTAQUA (Formerly Black Crown cluster)

Wetlands, Savanna, Grasslands. Overall development recommendation is Category #2, with some exceptions. There are a number of existing protected sites: Moraine Hills, Black Crown State Park, and Volo Bog. Singing Hills is a new preserve added to the map (added above). Connecting up Moraine hills thru agricultural land. Functional connections. Wetland restoration between the clusters (that is “Golden Oaks”)

Continue to buffer moraine hills with acquisition.

Pistaqua includes: Golden Oaks, Singing Hills cluster, Fish Lake cluster, Volo: Some acquisition and low density development is OK. Moraine Hills is a new addition to the Pistaqua cluster is #1 development control.

SILVER CREEK

Category #2 development. Large wetland complex, significant oak woodlands Fox River shore line. Further development is managed for conservation.

STICKNEY RUN

Woodlands and Wetland complex. Category #2 development. Fox River endangered wetland birds, large woodland/wetland complex, and important geologic features. Target for protection is 1000 acres of fee simple. Development must be limited to conservation residential and commercial only no industrial. No further mining. No further fragmentation from new roads.

SPRING CREEK (MCHENRY CO PORTION)

High quality aquatic habitat. Maintain current levels of development impact. No fee simple purchases

TAMARACK FARMS- GLACIAL PARK-GENOA-PELL LAKE MACROSITE

**** MOST CRITICAL SITE IN UPPER FOX**

The map notations have been divided according to 3 zones. In zone 1, category #1 development. **See map.**

High concentration or rare e/t communities and species. Large extant wetlands and grasslands; large pops of declining grassland birds; high quality A & B streams; Huge concentration of headwater tributary streams to North Branch and Nippersink creek. Silt intolerant fish; restorable

shallow water lake; tamarack bogs; fens and seeps; oak savannas; geologic features; large road less area. Target: 5-7K acre, fee simple.

Dev: NO Development in core zones; conservation commercial and residential in buffers. No further fragmentation by new roads; protection of geologic features from mining.

COON CREEK WETLAND COMPLEX

Category # 1 development. Large potential restorable wetland. Maintain rural farming and allow cluster development in non-sensitive portions of watershed.

KISHWAUKEE RIVER, PRAIRIE AND WETLAND MACRO SITE

Category #1 development. Site features large restorable sand prairie complex, grade A stream with silt intolerant fish; large road less area. Prairie/grassland 1,500-2,000 acres; wetlands 2,000-2,500 acres potential. Target is 5-7K acres fee simple in public ownership. Development- NO further industrial; retain farming in surrounding zone; no fragmentation by new roads.

KISHWAUKEE RIVER – UPPER CORRIDOR OF THE MAIN STEM

Development #2. Otherwise similar recommendations to lower Kishwaukee corridor.

MOKELER CREEK

Wetland restoration. Include buffers. Development #1.

MARENGO RIDGE OAK WOODLAND

Category #2 development Residential Only. Dry mesic oak woodland. Target 1,000 acres oak woodland in public ownership. No industrial development. Conservation development in surrounding zones.

CORAL WOODS

Category #2 development. Residential Only. Dry to mesic woodlands; historic maple grove. Target 500-700 acres oak woodland some potential, some existing. Development: restricted conservation development in surrounding zones.

PISCASAW CREEK CORRIDOR

Category #2 development. High Q stream A. Protect in public ownership stream corridor. Continue in rural agricultural mixed with conservation residential.

TRIBUTARIES OF THE MAIN STEM OF THE KISHWAUKEE

Includes: Piscasaw, Mokeler, Lawrence, North Branch, and South Branch. Wetland and buffer restoration. Development #1.

BROOKDALE OAK WOODLAND AND WETLAND COMPLEX

Category #2 development. North branch Kishwaukee: Large potential woodland and wetland complex (1500 acres), potential dam removal: large extant wetlands. Development Strategies: continue rural agriculture with conservation residential.

NIPPERSINE SINK/LAWRENCE CREEK EPHEMERAL POND AREA

Category #2 development. Residential Only. Numerous ephemeral wetlands, numerous headwater areas to Lawrence and Nippersink Creeks. Large restorable oak woodlands. Target 1,000 acres of woodland and ephemeral wetlands through easements and purchase. Development Strategies - small scale residential (5 acre) and conservation; No industrial development.

ALDEN SEDGE MEADOW BAILEY WOODS MACROSITE

Category #1 development. Large restorable basin marsh, oak savanna, 1000-2000 acre potential grassland and 1000 acre wetland. Large extant natural wetlands of high quality. Shallow water lake, headwaters of Nippersink creek. Target 3-5K ac fee simple protection. Development Strategies- NO industrial; conservation development in surrounding zones; no fragmentation by new roads; road widening & underpasses to accommodate species movement.

PLEASANT VALLEY SAVANNA/GRASSLAND/WETLAND MACRO SITE

Category #1 development. Actual and potential 3000-4000 acres split evenly among all three community types. Large restorable area. Large segment of Kishwaukee that can be re-meandered with 700+ acre adjoining marsh important grassland bird habitat; large road less area.

Target: 3-4K acre fee simple protection

Development Strategies: No industrial; conservation development in surrounding zones. No fragmentation by new roads.

TOMERA/KLOEMPKIN MARSH

Category #2 development. Residential Only. Extant wetlands; S Branch Kishwaukee River; RR prairie remnants. Target: 800-1000 acre wetland and prairie potential and actual. Fee simple. Conservation easements Dev: conservation residential and no further fragmentation by roads.

CRYSTAL LAKE RECHARGE AREA

Existing extant wetlands; large restorable wetlands; high q lake

Target: 1000 ac fee simple and easements

Development: conservation residential; no heavy industrial.

BOONE CREEK WATERSHED

Large woodlands; high quality fens; high quality, cold-water stream with silt intolerant fish. Large restorable wetlands on hydric soils.

Target: 800 ac fee simple and easements. Protect and restore headwater streams. Identify and protect ground water recharge zones for fen wetlands.

Development Strategies: No industrial development; small scale, low-intensity conservation residential only. In lower watershed, hydric soil zones, no development and encourage wetland restoration. In kettle hole recharge area (upper watershed), low-intensity conservation development only.

SQUAW CREEK

Wetland restoration. Development #1

QUEEN ANNE PRAIRIE MACROSITE

Category #1 development. Wooded and graminoid fens, high quality stream with endangered mussels; high quality woodland/savanna large restorable grassland/wetland complex; numerous tributary streams to Nippersink; silt intolerant fish.

Target: 2000-4000 acre, fee simple

Development Strategies: NO industrial; conservation development in surrounding zones. No fragmentation with new roads; widening of existing roads to facilitate species movement; protection of tributary streams

NIPPERSINK CREEK CORRIDOR, WEST

Zone 1, Category 1 development; Zone 2, Category 2 development.

B quality stream, endangered mussel species; otter; extant high quality streamside wetlands

Target: protect stream corridor and restore drained streamside wetlands

Development Strategies: continued rural agriculture; acquire streamside easements. No industrial development; limited conservation residential

NIPPERSINK CREEK CORRIDOR 2 EAST

Category 2 development. B quality stream; large mussel diversity extant streamside wetlands.

Target: protect stream corridor

Development Strategies: NO further commercial residential in immediate stream corridor; conservation residential.

HEBRON PEAT LANDS/ GOOSE LAKE

Zone 1, Category #1 development. Zone 2, Category #2 development. Large restorable and extant wetland and grassland complex 1000-1500 ac; endangered wetland birds; declining grassland bird pops. Large road less blocks Target: 1000-1200 Ac fee simple acquisition.

Development Strategies: limited conservation development for residential; NO industrial; continued rural agriculture. No fragmentation from new roads.

RUSH CREEK

Zone 1, Category #1 development. Zone 2, Category #2 development. A Quality Stream; otter

Target: protect stream corridor and restore drained streamside wetlands.

Development Strategies: continued rural agriculture; acquire streamside easements. No industrial development; limited conservation residential

LAKE ELIZABETH WISCONSIN/ILLINOIS WETLANDS

Category #1 development. Large extant wetlands; high quality lake. Endangered bird and plant and fish cluster; oak woodlands, archaeological feature cluster.

Target: 500-1000 Ac fee simple

Development Strategies: no Development in core. Conservation residential in outer zones.

WISCONSIN (note there was no Wisconsin base map at the workshop). These sites were noted as significant areas by participants and generally were subsequently identified/mapped by participants in the October 2003 Wisconsin workshop.

WALWORTH COUNTY

1) Nippersink Creek Genoa city north to Lake Ivanhoe

Wetlands 1,000 acres to be protected. McHenry Co. Tie in. Very same types of natural features as found at Glacial Park

2) Geneva Lake Watershed

High quality spring fed lake; protection of groundwater recharge; steeply sloped environmental corridors.

3) White River watershed

Savanna, woodland, grassland. Probably 200 ac savanna; buffer strips, BMPs on agricultural lands.

4) Turtle Creek Watershed

Wildlife habitat, wetlands, 1000+ ac wetlands; some major restorations

5) Sugar Creek Watershed

Savanna, woodland, and wetland

6) Kettle Moraine

Geologic features, ground water recharge, watershed protection

7) Lulu Lake watershed

Wetland, endangered species habitat Cooperative project with Wisconsin TNC

8) Prince Agricultural Lands

Economic, open space values.

Additional Wisconsin notes on protected areas

Kenosha sand dunes and low prairie primary environmental corridor. 86 acres protected, 13 acquired by WI DNR

Carol Beach, Low prairie and panne. Natural areas (village of Pleasant Prairie) Environmental Corridor. 29 acres protected. Acquire 10 ac WI DNR.

Chiwaukee prairie. Primary environ corridor. 242 acres protected. 67 TNC acquired.
Hamilton woods 17 acres
Bong recreation area 4894; 246 WI DNR acquisition
Karcher Sedge corridor (?) Racine co. No. Des Plaines 214 protected. 21 WI DNR acquisition
Brighton-Dale woods. Town of Brighton. Kenosha. 164 acres protected.

Wisconsin concerns:

Racine, Milwaukee flood plain protection. Root River (Build on land preserved, conserved),
Pike, Des Plaines, Nippersink (large wetland bank which extends 5-6 miles).
White river, Lake Michigan, Chiwaukee Prairie, Lake Geneva, Fox River,
SEWRPC has gone thru border counties and has printed planning reports which include natural
resource, endangered species, and environmental corridors.
Many small lakes. Many small wetlands to enhance, fens to protect.
Nicholson Wildlife preserve should be added onto.
Racine, Kenosha, Walworth – prime farmland being threatened. P 384 of report is a map of
identified valuable acquisition. Kettle Moraine is critical for surface water protection – stop
development in next couple years. Western reaches of upper Des Plaines watershed has several
fens to protect.
Threat of new retreat development.

FINAL NOTE REGARDING THE POLYGONS: It would be good to identify additional,
important connecting corridors. We did some of this but it would be good to step back and do an
exercise looking for these connections.

Northeastern Illinois

NW Cook, DuPage, and Kane Counties – 3/1/02

Group members:

- Leader: Lisa Haderlein (lhaderlein@tnc.org)
- Leslie Berns
- Mary Ochsenschlager
- Steve Pescitelli
- Jason Pettit
- Maggie Cole
- w/ input from Wayne Vanderploeg, Steve Byers, Phil Bus
- Note taker: Rebecca Blazer (rblazer@tnc.org)

Site categorization and description:

<i>SITE #1: BIG ROCK CREEK</i>	
1. Existing and/or potential conservation values of the site:	<ul style="list-style-type: none"> ▪ One of the highest quality tributaries to Fox River. ▪ Woodlands. ▪ Endangered mussels (spike mussels). ▪ Undeveloped agriculture. ▪ Fish species of concern. ▪ Retains a lot of hydrologic characteristics. ▪ Watershed plan already in place.
2. Existing and/or expected site impairments/threats to be protected against:	<ul style="list-style-type: none"> ▪ Development. ▪ Proposed highway.
3a. Needed development controls: 1. no new development 2. some minimal impact development 3. redevelopment using conservation design principles	<ul style="list-style-type: none"> ▪ #2: Minimal impact development
3b. Needed conservation management strategies: 1. protection 2. restoration 3. expansion/retrofit 4. functional connection	<ul style="list-style-type: none"> ▪ #1: Protection. Important to acquire wetlands immediately for restoration. ▪ #2: Restoration. Potential grassland/wetland complex of 8,000 acres. ▪ Encourage farm BMPs.
NOTES:	<ul style="list-style-type: none"> ▪ Corridor protection needs to continue into Kendall County – all the way to the Fox River.

<i>SITE #2: BLACKBERRY CREEK</i>	
1. Existing and/or potential conservation values of the site:	<ul style="list-style-type: none"> ▪ Mussel diversity. ▪ Existing watershed plan and staff. ▪ Good aquatic diversity. ▪ Potential for stream restoration. ▪ Connecting corridor. ▪ Wetlands. ▪ E/T wetland bird habitat.

	<ul style="list-style-type: none"> ▪ Potential herps. ▪ Opportunities still exist for preservation.
2. Existing and/or expected site impairments/threats to be protected against:	<ul style="list-style-type: none"> ▪ Development, especially due to stormwater runoff. ▪ Possible bad agriculture practices? ▪ Highway corridor.
3a. Needed development controls: <ul style="list-style-type: none"> 1. no new development 2. some minimal impact development 3. redevelopment using conservation design principles 	<ul style="list-style-type: none"> ▪ #2: Some low-density development.
3b. Needed conservation management strategies: <ul style="list-style-type: none"> 1. protection 2. restoration 3. expansion/retrofit 4. functional connection 	<ul style="list-style-type: none"> ▪ #1: Protect the corridor along Nelson Lake/Lake Run Creek. ▪ #2: Restoration. Potentially 1500 acres of wetland, grassland, stream restoration. ▪ #3: Encourage agriculture BMPs. ▪ #3: Cherry Hills could be re-developed.
Notes	<ul style="list-style-type: none"> ▪ Important for downstream protection in Kendall Co. ▪ Dam removal needed downstream.

<i>SITE #3: WESTERN AGRICULTURAL ZONE</i>	
1. Existing and/or potential conservation values of the site:	<ul style="list-style-type: none"> ▪ Agriculture land that needs to be preserved as ag land. (kept from development) ▪ Grazing lands are useful for habitat. ▪ Upper Kishwaukee River. ▪ Hemmer-Klemkin ▪ Potential for a 300-acre grassland. ▪ Wetlands.
2. Existing and/or expected site impairments/threats to be protected against:	<ul style="list-style-type: none"> ▪ Development, urbanization. ▪ Row cropping.
3a. Needed development controls: <ul style="list-style-type: none"> 1. no new development 2. some minimal impact development 3. redevelopment using conservation design principles 	<ul style="list-style-type: none"> ▪ #2: Minimal development. ▪ Encourage smart growth in Burlington.
3b. Needed conservation management strategies: <ul style="list-style-type: none"> 1. protection 2. restoration 3. expansion/retrofit 4. functional connection 	<ul style="list-style-type: none"> ▪ Implement farm BMPs, esp. encouraging more grazing. ▪ #1: Wetland protection in Kishwaukee headlands. ▪ #3: Retrofit. Keep agriculture, but change crops into grazing.
NOTES	<ul style="list-style-type: none"> ▪

<i>SITE #4: KAME/KETTLE/TYLER CREEK</i>	
1. Existing and/or potential conservation values of the site:	<ul style="list-style-type: none"> ▪ Kame/kettle area – important glacial topography. ▪ Tyler Creek corridor – high quality stream. ▪ Species of concern – rainbow darter, endangered mussels. ▪ Extensive wetlands, hydric soils.
2. Existing and/or expected site impairments/threats to be protected against:	<ul style="list-style-type: none"> ▪ Development, especially the sewer to be built that will dump into Tyler Creek.
3a. Needed development controls: <ul style="list-style-type: none"> 1. no new development 2. some minimal impact development 	<ul style="list-style-type: none"> ▪ #2: Minimal cluster development on appropriate soils.

3. redevelopment using conservation design principles	
3b. Needed conservation management strategies: 1. protection 2. restoration 3. expansion/retrofit 4. functional connection	<ul style="list-style-type: none"> ▪ #1: Some additional protection of wetlands. ▪ #2: Wetland and stream restoration in upper watershed. ▪ Will need to pay special attention to new sewer discharge – nutrient controls.
NOTES	<ul style="list-style-type: none"> ▪

<i>SITE #5: FOX RIVER FEN COMPLEX</i>	
1. Existing and/or potential conservation values of the site:	<ul style="list-style-type: none"> ▪ High quality streams (Poplar Creek, Brewster Creek, Ferson Creek, Stoney Creek). ▪ Lots of streamside wetlands. ▪ Currently there is low-density development. ▪ Oak woodlands ▪ Morrison Woods Nature Preserve ▪ Fens, unique fen plant communities. ▪ Endangered species: Sandhill crane nesting; Blanding’s turtles in Brewster Creek.
2. Existing and/or expected site impairments/threats to be protected against:	<ul style="list-style-type: none"> ▪ Development.
3a. Needed development controls: 1. no new development 2. some minimal impact development 3. redevelopment using conservation design principles	<ul style="list-style-type: none"> ▪ #2: Minimal low-density development.
3b. Needed conservation management strategies: 1. protection 2. restoration 3. expansion/retrofit 4. functional connection	<ul style="list-style-type: none"> ▪ Dam removal ▪ Wetland restoration (esp. drain tile removal) ▪ Restoration of channelized areas in stream corridor. ▪ Protection: continue purchasing (some is already protected). ▪ Identify and protect fen recharge areas. ▪ Grassland & oak woodland restoration.

<i>SITE #6: POPLAR CREEK DIVISION</i>	
1. Existing and/or potential conservation values of the site:	<ul style="list-style-type: none"> ▪ Existing protected land; core protected area. ▪ Glacial lakes/wetlands. ▪ E/T birds/fish/plants. ▪ Multiple wetland E/T specials. ▪ Fen communities in Poplar Creek basin, including endangered fish, mussels, emergent plants, endangered reptiles. ▪ Spring Creek basin, including endangered species. ▪ Expansive grasslands, home to uncommon to rare birds, incl. Henslow’s sparrow. ▪ Woodlands/forests – some high quality, with herps.
2. Existing and/or expected site impairments/threats to be protected against:	<ul style="list-style-type: none"> ▪ Polluted water draining into basin (road drainage, siltation). ▪ Urbanization. ▪ Hydrologic modifications are resulting in flash flows, lower oxygen. ▪ Impervious surfaces.
3a. Needed development controls: 1. no new development 2. some minimal impact development 3. redevelopment using conservation	<ul style="list-style-type: none"> ▪ Some of all three: some areas need no new development, some will tolerate minimal development and several areas could be redeveloped and retrofitted. .

design principles	
3b. Needed conservation management strategies: 1. protection 2. restoration 3. expansion/retrofit 4. functional connection	<ul style="list-style-type: none"> ▪ Restoration of hydrology on existing protected land. ▪ Add new protected land. ▪ Restoration of most communities: woodlands, wetlands, grassland, mixed communities.

<i>SITE #7: EAST & WEST BRANCH DUPAGE RIVER CORRIDOR</i>	
1. Existing and/or potential conservation values of the site:	<ul style="list-style-type: none"> ▪ Connection to Fox River Fen complex. ▪ Lots of wetlands. ▪ High quality oak woodlands. ▪ Oak savanna. ▪ Morainal wetlands. ▪ High quality streams on lower part of West Branch. ▪ Fens along West Branch. ▪ Some poor quality aquatic communities, but buffers are already protected. ▪ Spring Brook preserve – 1000 acre grassland.
2. Existing and/or expected site impairments/threats to be protected against:	<ul style="list-style-type: none"> ▪ Development. ▪ Water quality. ▪ Sewage treatment plants on stream.
3a. Needed development controls: 1. no new development 2. some minimal impact development 3. redevelopment using conservation design principles	<ul style="list-style-type: none"> ▪ Some areas of protection where there is no development. ▪ Some compatible development to protect water quality – low-density development.
3b. Needed conservation management strategies: 1. protection 2. restoration 3. expansion/retrofit 4. functional connection	<ul style="list-style-type: none"> ▪ Purchase and protection. ▪ Stream restoration on East and West Branches. ▪ Dam removal, modification, reconnection to West Branch. ▪ Woodlands, grassland, wetland restoration.

<i>SITE #8: FERMI</i>	
1. Existing and/or potential conservation values of the site:	<ul style="list-style-type: none"> ▪ Large grasslands, with some woodlands & some wetlands. ▪ Macrosite potential. ▪ Grassland bird habitat. ▪ Publicly owned.
2. Existing and/or expected site impairments/threats to be protected against:	<ul style="list-style-type: none"> ▪ Proposed road will cut through land. ▪ Potential change in land use by Fermi. ▪ Potential building of cell towers, etc.
3a. Needed development controls: 1. no new development 2. some minimal impact development 3. redevelopment using conservation design principles	<ul style="list-style-type: none"> ▪ No additional commercial development. ▪ Big Woods south of Fermi – should encourage low-density development with emphasis on strong woodland habitat and urban forestry.
3b. Needed conservation management strategies: 1. protection 2. restoration 3. expansion/retrofit 4. functional connection	<ul style="list-style-type: none"> ▪ Protection of woodland area adjacent. ▪ Continue restoration of natural communities, esp. prairies.

<i>SITE #9: BUSSE/SALT CREEK</i>	
1. Existing and/or potential conservation values of the site:	<ul style="list-style-type: none"> ▪ Corridor to connect existing preserved areas: Busse & Beemis. ▪ Salt Creek Greenways plan already developed. ▪ Already funded redevelopment plan for stream restoration.

2. Existing and/or expected site impairments/threats to be protected against:	<ul style="list-style-type: none"> ▪ Already very polluted. This is almost a brownfield redevelopment project.
3a. Needed development controls: <ol style="list-style-type: none"> 1. no new development 2. some minimal impact development 3. redevelopment using conservation design principles 	<ul style="list-style-type: none"> ▪ No additional development. ▪ Redevelopment using conservation design principles.
3b. Needed conservation management strategies: <ol style="list-style-type: none"> 1. protection 2. restoration 3. expansion/retrofit 4. functional connection 	<ul style="list-style-type: none"> ▪ Retrofit Salt Creek. ▪ Stream restoration/dam removal.

<i>SITE #10: FOX RIVER CORRIDOR</i>	
1. Existing and/or potential conservation values of the site:	<ul style="list-style-type: none"> ▪ Connector to a lot of areas – Lower to Upper Fox River. ▪ Fish & mussel species in river. ▪ Corridor protects river, controls urban runoff. ▪ Trout Park contains a rare forested fen.
2. Existing and/or expected site impairments/threats to be protected against:	<ul style="list-style-type: none"> ▪ Continued growth in Fox Valley: sewage, non-point runoff. ▪ Exotic species.
3a. Needed development controls: <ol style="list-style-type: none"> 1. no new development 2. some minimal impact development 3. redevelopment using conservation design principles 	<ul style="list-style-type: none"> ▪ Protect remaining natural areas along river. ▪ Kendall County: no new development in natural areas. ▪ Redevelopment.
3b. Needed conservation management strategies: <ol style="list-style-type: none"> 1. protection 2. restoration 3. expansion/retrofit 4. functional connection 	<ul style="list-style-type: none"> ▪ Dam modification/removal. ▪ Restoration of mussel & fish communities. ▪ Preservation of fen recharge areas. ▪ Restoration of Kendall Co. seep areas.
NOTE	<ul style="list-style-type: none"> ▪ Continue corridor into Kendall County ▪ Fens and seeps exist between Kendall and LaSalle County line.

<i>SITE #11: MILL CREEK CORRIDOR</i>	
1. Existing and/or potential conservation values of the site:	<ul style="list-style-type: none"> ▪ E/T species (Blanding's turtle) ▪ Unusual plant communities in rare ravine topography. ▪ Much land already preserved. ▪ Nice quality stream, good potential for restoration through reconnection to Fox (dam removal). ▪ Some smart growth already present.
2. Existing and/or expected site impairments/threats to be protected against:	<ul style="list-style-type: none"> ▪ Development. ▪ Sewer discharge.
3a. Needed development controls: <ol style="list-style-type: none"> 1. no new development 2. some minimal impact development 3. redevelopment using conservation design principles 	<ul style="list-style-type: none"> ▪ #2: Some minimal impact conservation development.
3b. Needed conservation management strategies: <ol style="list-style-type: none"> 1. protection 2. restoration 3. expansion/retrofit 	<ul style="list-style-type: none"> ▪ Stream restoration ▪ Dam removal.

4. functional connection	
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<i>SITE #12: AUX SABLE CREEK (Kendall Co.)</i>	
1. Existing and/or potential conservation values of the site:	<ul style="list-style-type: none"> ▪ INAI site. Portions of creek are Class A, the rest are Class B. ▪ Important fish, mussels. ▪ Biologically significant stream.
2. Existing and/or expected site impairments/threats to be protected against:	<ul style="list-style-type: none"> ▪ Stiff development pressure. ▪ Potential sewage treatment plant.
3a. Needed development controls: <ol style="list-style-type: none"> 1. no new development 2. some minimal impact development 3. redevelopment using conservation design principles 	<ul style="list-style-type: none"> ▪ #2: Minimal conservation design development.
3b. Needed conservation management strategies: <ol style="list-style-type: none"> 1. protection 2. restoration 3. expansion/retrofit 4. functional connection 	<ul style="list-style-type: none"> ▪ Preserve creek corridor. ▪ Minimize stormwater runoff. ▪ Selected stream restoration.

Northeastern Illinois

North Cook, Chicago, Indiana – 3/1/02

Group leader: Suzanne Malec <smalec@cityofchicago.org>. Recorder: Stephanie Folk <STFOLK@brookfieldzoo.org>.

Notes on how the map is marked:

Areas recommended for conservation-compatible development are contained within the polygons and indicated by crosshatching.

Red crosshatching indicates compatible industrial development.

General recommendations

Work with major land-owners on compatible land uses. This particular applies to cemeteries, golf courses, and MWRD land.

Work with owners of golf courses and cemeteries to make them more compatible with habitat and protect against re-development to intensive urban use.

More, higher-level protection in existing forest preserves and other protected lands.

Work with major landowners on transition landscape types—pay particular attention to MWRD.

Look for opportunities to un-develop land in flood plains, particularly the upper Des Plaines and Des Plaines.

Look for opportunities for in-fill development (compatible industrial development) that is compatible to surrounding ecology. Particular issues are stormwater, landscape contributions to adjacent ecological spaces.

Recommendations and issues in particular areas

North Branch Cluster

This area contains significant, high quality remnant/restored communities (woodland, savanna, prairie, wetland, and stream corridor) and major opportunities for restoration.

Recommendations

Continue/expand ongoing restoration work in Forest Preserve District and related public holdings.

Use golf course and cemeteries, working with private landowners for biodiversity benefits.

Protect land through methods such as zoning areas as environmentally sensitive.

MWRD property, cemeteries, and golf courses, other private lands are key opportunity areas.

The entire North Branch needs to be looked at as a whole.

There are not many new acquisition/protection opportunities, so the focus should be on management and work with private land owners and preservation/restoration of currently protected lands.

Issues

Needed forest preserve restoration work has been constrained in recent years by resources and rules.

Cemeteries can be developed as open space.

Connections will be very fine scale.

These areas cross political boundaries.

Questions

Check ownership of the golf courses

Who owns this land, how can we do enhanced management?

Des Plaines

There was a committee through the IDNR looking at flood control. This includes looking at opportunities to do restoration to reduce run-off.

Army Corps was considering building levies to reduce flooding in the area from Lake Ave to Milwaukee Ave. This would have built a lake on top of an existing population of endangered species. The intention was to protect properties that are going to flood. The IDNR killed this plan. The group recommends ensuring that the levy plan is not reintroduced.

Most new areas that could be added to protected lands are small parcels of 100 acres or less.

Recommendations

Buy properties and do restoration on that land in order to reduce the threat of floods.

Look at places where land in this area could be undeveloped and restored.

In particular, un-develop land in the flood plain.

Middle Des Plaines/Robinson Woods has some extremely important archeological sites.

Protect the area around Belmont and Indian Boundary Golf course. There is an ecologically significant area south of the cemetery that could be protected/restored. This area fits the guideline of around 500 acres.

Beck Lake Area

Beck Lake area harbors some endangered species.

The central mud minnow is a key species in this area.

This was a marsh before it was dug out for the expressway. The back end still has some natural marsh, which is habitat for an endangered darter. There are also good prairie and wetland remnants.

Recommendations:

Work to protect and restore land around Oakton Community College and ensure that development is limited in this area.

Lower Des Plaines/Salt Creek to Palos

Recommendations:

Look for connection opportunities and opportunities for compatible for redevelopment, in-fill and restoration along 55/Sag Valley.

Focus on compatible development and ensure environmentally sensitive stormwater management.

Look for opportunities for protection, restoration and compatible industrial development along the Cal Sag Corridor.

Palos to Tinley Creek

Protect tree cover in residential areas between Palos and Tinley Creek Forest Preserves.

Tinley Creek has high quality natural areas that need nature preserve designation.

Make sure that development in this area supports the corridor function between these two natural areas.

Look for ways that residential neighborhoods can support conservation goals.

Tinley to Indian Boundary Prairies

Recommendations

Look for opportunities to connect these preserves.

The creek is a key corridor.

Combine un-development with flood control.

Cal City Prairie has high quality savanna that should be protected.

The Burnham Greenway should be a key focus (Calumet Watershed/Calumet region re-development)

Wolf Lake area

Recommendations: Acquire additional land for conservation and restoration.

Kikapoo

Recommendation: Look into use of the rail yard north of this area.

Question: Are there opportunities to make this rail yard and surrounding land more ecologically sound?

Calumet region

Notes:

City of Chicago and State of IL are purchasing land in the Lake Calumet area.

A TIF plan looks at the entire Lake Calumet region including 4000 acres of industrial space and 4000 acres of protected open space. This does not include Lake Calumet.

Recommendations

Industrial properties offer opportunities for in-fill development This should be done without increasing stormwater problems. This means no direct discharge into the Calumet River or Wolf Lake.

Look for opportunities to develop and create grasslands.

Develop migratory and nesting places for birds along the southern Lake Calumet area.

Key Parcels in Calumet:

Cluster sites of 300 acres could be restored to convert former industrial to grassland/prairie.

Convert land along Lake Calumet from former industrial land to shoreline and wetland habitat

This area contains approximately 600 acres that would be appropriate for in-fill development.

7-mile stretch along the Calumet River connecting to the lake

There is a lot of abandoned industrial land. Develop abandoned industrial property and include buffers along the river.

Port Authority property (around 3000 acres)

They are planning to set aside the west shore and not develop. This is a good place for shore birds and should be protected.

Calumet river redevelopment

Connect the Calumet TIF to USX redevelopment.

There are areas that do not have infrastructure so there are opportunities to create green infrastructure/environmentally sound infrastructure in these areas.

Calumet region/Burnham greenway

Look for redevelopment opportunities

Improve management and use of existing open spaces and ensure that these continue to be managed for conservation purposes.

Acquire developed properties and use these for recreational facilities instead of converting natural habitat to recreational parks.

Create Grand Calumet corridor connections into Indiana.

Wolf Lake/Lake George

Notes:

The management of this area is divided between IN and IL.

This area has great ecological significance.

Recommendations:

Protect a greenway connection from Wolf Lake IN to IL and north to Egars and Powderhorn (forest preserves).

Address conservation issues along Indian Creek.

Indiana

Lake County IN

North and east of Hobart Prairie grove is the Hobart Marsh west of I-65. 800 to 1000 acres of major marsh and wetland restoration as mitigation planned and starting. This owned by nature preserves and private conservation organizations.

Moraine Nature Preserve/ Coffee Creek

There is a conservation development in that area.

This is an area of ecological significance that deserves attention.

Valporaiso Moraine

This area includes perched kettle lakes and significant undeveloped land.

Boreal Flatlands

This area contains 800 to 1000 acres of significant, unique habitat.

It is flat and has poorly drained soils and includes boreal forests with beach and maple trees.

Important watersheds in Indiana that connect to Illinois conservation areas

Some drainages in Indiana

Grand Calumet River

Little Calumet River

Salt Creek (Tributary to the Little Calumet in Porter County IN) This is mostly agricultural and needs protection.

There is potential for habitat restoration along the little calumet river along the border of Lake and Porter Counties in IN.

Dune Swale area near Hammond

This area contains a variety of unique species and habitats.

Ivanhoe and Clark and Pine preserved areas currently exist in this area.

Look at post-industrial areas for in-fill development.

Lake Michigan Shoreline

Management is the key issue but there could also be redevelopment opportunities.
This is key habitat for migratory birds.

Recommendations

Look for Redevelopment opportunities at Meigs Field, USX and south along the lakeshore.
Preserve bird habitat along the lake front.
Look for a diversity of landscape types along the lakeshore.

Northeastern Illinois

South Cook and Will Counties - 3/1/02

Group leader: Steve Byers <sbyers@dnrmail.state.il.us>. Recorder: Diane Trgovcich-Zacok zacok@calumet.purdue.edu

Post-Workshop Map Comments/Clarifications

AREA: Southern Cook County/Will County-

1. *Italic comments are from the Workshop March 1, 2002*

2. Marked in red are the additions:

- a. Stream corridors were identified as important and state as such in the text. The red overlays are an attempt to show these corridors on the map.
- b. Omission: ground water protection zone for Lockport Prairie
- c. Omission: linkages in the Southwest quadrant to Goose Lake Prairie
- d. Clarification: linkage Southeast of Palos

A. Palos Region/Waterfall Glenn- Woodland/Savanna/Wetland)

1. Forge connection along Des Plaines River Corridor
2. Protect groundwater recharge/discharge zones along river (Hines Emerald Dragonfly habitat)
3. Maintain current levels of residential development along borders that still retain mature oak overstory and thereby buffer large woodland components.
4. Eliminate/reduce fragmentation in publicly held lands.

B. Lockport/Romeoville Prairie- High-quality prairies, watershed and groundwater protection

1. Identify/protect ground water recharge zone in watershed. (discharge zones in Nature Preserve are already protected)
2. Restore prairies in recharge zone.
3. *Dolomite prairie-Lockport-ground water issues becomes retrofit area high density residential surface water 40 seeps all dry in summer aquifer recharge illustrates ground water recharge could potentially be very large, needs recharge, shallow aquifer groundwater pumping, clean water issues*

C. Long Run Seep- High quality wetland (fen); watershed (and groundwater) protection.

1. Identify/protect ground water recharge zone in watershed.
2. Protect open space along Long Run Creek; create buffers along creek consisting of natural landscaping
3. *Long run Creek watershed, b-stream (is it on the NAI?) under siege by development falls under functional connection to make sure base flow are maintained*

D. Pilcher Park/Higinbotham/Hickory Creek- woodlands/watershed protection

1. Protect Integrity of large woodland tracts. Reduce/minimize further fragmentation
2. Maintain open space character of adjacent properties/maintain mature tree canopy cover in future developments.
3. Protect/maintain natural resource values of Hickory Creek. Protect/restore riparian corridor.

E. High quality Streams in Will County- aquatic resources; watershed protection

1. Protect riparian corridors/restore and manage (according to IAW and NIP guidelines) native landscaping along corridor.
2. Protect/restore wetlands at headwaters of creek.
3. Identify sub-watershed/limit pattern/density of development and type of development to reduce adverse impact on streams.

4. Forge linkages of open space with Midewin National Tallgrass Prairie/Joliet Training Area DOD.
5. *Issues: to protect headwater streams, 355 extensions, Peotone airport, All tributaries of the Kankakee are A/B quality –should ensure stay that way provisions development in watershed, amount of impervious surface, best management practices*
6. *Recommendations: 15 % max impervious surface development, buffers along streams, maintain large ag areas, Far SW corner sand prairie and sand savanna complex goal is to link 4 state nature preserves, Protected corridors extending out of Midewin, protect Grade A streams, , protect headwater region, maintain contact zone Valparaiso moraine, large buffer zones, wetland restoration*

F. Islands of Woods in Cook/Will County- large woodlands

1. Forge landscape linkages/or maintain current levels of low density that protect mature overstory canopy trees.
2. Reduce/eliminate fragmentation from road/picnic ground, etc. In publicly held woodlands.

G. Indian Boundary Prairies- high quality grasslands

1. Further consolidate protection; reduce inholdings and fragmentation.
2. Protect from changes in surface hydrology from off site.

H. Riparian Corridors along Des Plaines River- (general)

1. Protect existing, publicly held open spaces.
2. Maintain open space corridors to greatest extent possible. Incorporate passive recreational/economic opportunities. Redevelopment opportunities abound that ‘mix’ open space infrastructure with redevelopment of brown fields, excellent opportunities for infill development that is sensitive to existing open space, river front.

I. Calumet Area- general comments

1. *Grand, Little Cal, Cal Sag create recreational greenway, shoreline enhancement, access, riparian habitat, add bike trail, liner open space that will contribute to the revitalizations of existing neighborhoods*
2. *Forge recreational greenway linkages NE Des Plaines east along Cal Sag and to Little Cal*

Map comments:

- Will Co. FPD holdings are not accurate may also include proposed acquisition
- None of Will FPD acquisitions in last three years shown
- Hickory Creek mislabeled as Spring Creek not shown doesn’t show all publicly protected areas along spring creek
- Fort Creek not shown about 700 acres
- Like wise Midewin shows more that actually acquired at this time
- ButterfieldCreek Greenway includes major acquisitions that is not represented on map
- Grundy should be included at least out to Goose Lake Prairie and down to south to Kankakee
- What to do about built areas of S. Cook, look carefully at stream corridors and flood plain areas from an open space perspective

Resource Protection Area Recommendations

Northwest Quadrant

Area: DuPage, part of Lower Des Plaines, Lily Cache Creek, Spring Creek, Hickory Creek

Major Issues: Surface water, Groundwater, Associated water use issues/changing use:

T/E: Hickory Creek Slippershell, Hines Emerald, 3 fed listed, 4 state listed

- Palos-Argonne region issues are is the model, serves as unique large, intact, forested and seep system
- Des Plaines has Hines emerald dragonfly, groundwater issues
- Continued fragmentation along edges forge linkages along Des Plaines along riparian corridors to south

- Dolomite prairie-Lockport-ground water issues becomes retrofit area high density residential surface water 40 seeps all dry in summer aquifer recharge illustrates ground water recharge could potentially be very large, needs recharge, shallow aquifer groundwater pumping, clean water issues
- Long run Creek watershed, b-stream (is it on the NAI?) under siege by development falls under functional connection to make sure base flow are maintained
- Id most sensitive areas
- Waterfall glen
- Romeoville prairie - all built out
- North and east linkages to Tinley
- North/west Palos maintain canopy continuity on low density development areas

Recommendations

- Forge functional landscape linkage between Palos and Waterfall Glen
- Potential for retrofit industrial complex
- Palos to east to Tinley Unit could potentially find corridors to Markham to Indian Boundary
- Dolomite prairie-Lockport-ground water issues becomes retrofit area high density

Northeast Quadrant

Contains: Dune and swale, Lake Calumet wetland birds, migration corridors along Lake Michigan, Indian Boundary
Area: Palos east to Lake Michigan, lower Calumet, south to Butterfield Creek

- Along Calumet archeological importance
- Wolf Lake, eggers woods, Lake Calumet
- Indiana Gary area dune swale rare habitats not all protected
- Restoration along Canal more quality of life than biodiversity issues, recreational greenway, shoreline enhancement, access, riparian habitat, add bike trail, liner open space, revitalizations of existing neighborhoods
- Stony creek corridor very little there very urban

Recommendations:

- forge functional landscape linkages SE Tinley/Vollmer
- Forge recreational greenway linkages NE Des Plaines east along Cal Sag and to Little Cal
- Restoration along Canal more quality of life than biodiversity issues can create recreational greenway, shoreline enhancement, access, riparian habitat, add bike trail, liner open space that will contribute to the revitalizations of existing neighborhoods

Southeast Quadrant

Contains both Calumet River and Kankakee River tributaries: (Kankakee and tributaries contain A class reaches with several T/E fish and mussels)

Resources: Herpafauna assemblages, Massasauga, otters, eastern deciduous woodlands

- Issues to protect headwater streams, 355 extensions, Peotone airport, 15 % max impervious surface, buffers along streams
- Thorn Creek (+1000 acres) minor tributaries, Deer Creek
- new Thorn Creek restoration council potential large site, Thorn is 1000 acres in Will and Cook
- Plum Creek 2000 acres to headwaters
- large intact forested systems (eastern deciduous), lots of unprotected forest that is good quality
- Massasauga snake habitat mostly on private land and no interest in selling, massasauga require open habitat
- opportunities for wetland restoration, blue spotted, four toed salamander
- large wetlands complexes to IN
- herpafauna design considerations, other herps require empheral ponds,
- Trim Creek (high quality), Black Walnut (B class), Exline, Rock Creek and another Rock Creek: maintain natural character of riparian/stream corridor
- Eagle Lake has been drained but was high quality with pre-settlement cranberries

- All tributaries of the Kankakee are A/B quality –should ensure stay that way provisions development in watershed, amount of impervious surface, best management practices, protect headwater region, maintain contact zone Valporaiso moraine, large buffer zones, wetland restoration
- Valporaiso moraine high biodiversity
- Indiana Corridor drains into Kankakee
- Raccoon Grove NP: grassland birds, short eared owls, northern harriers greater than 500 acres

Recommendations:

- 15% max impervious surface development
- implement best management practices
- protect headwater region
- protect and restore streams through watershed efforts (e.g., Thorn Creek watershed planning committee)
- maintain contact zone Valporaiso moraine
- have large buffer zones
- opportunities for wetland restoration
- maintain large agricultural areas

Southwest Quadrant

T/E Jackson Creek: Slippershell

Midewin, Mickey Woods, Prairie Parklands

- Forked creek Will C. focusing on prime quality
- Manhattan Creek
- Jackson Creek
- Prairie, Manhattan, Jackson, Grant Creeks
- Forked and Jackson are higher quality
- Midewin watershed includes Jackson, Manhattan, and Prairie
- Midewin acquiring more land
- Forked Creek Greenway
- Ravine systems that go into lower DuPage, Ma King Woods
- Des Plaines river conservation areas
- Wetland opportunities along the DuPage -Rock Run, existing corridor open space already
- Provides foraging for rookery
- Spring Brook/DuPage west branch

Recommendations

- 15% max impervious surface development
- Wetland opportunities along the DuPage -Rock Run
- Far SW corner sand prairie and sand savanna complex goal is to link 4 state nature preserves
- Protected corridors extending out of Midewin
- protect and restore streams through watershed efforts (e.g., Prairie Streams watershed planning committee)
- protect Grade A streams

Polygon Identifiers and Descriptions

Identify sub watersheds

Prioritize (reference Recovery Plan) sub watershed, apply recommendations listed above, id hydric soils

1. Stream Corridor Polygon encompasses SE and SW quadrant for high quality stream corridor ~20,000 acres
2. Laughton Forest Preserve for Prairie Grove ~1000 acres
3. Raccoon Grove Polygon for grassland avifauna ~500 acres

4. Black Walnut Polygon for wetland restoration ~500 acres
5. Plum Creek for headwaters and wetlands restoration, forested fens, protects large contiguous forest habitats, herpafauna ~3000 acres
6. Thorn/Deer Creek for forest interior birds ~2000 acres
8. Deer Creek for headwater 500-1000acres
9. Thorn Creek Cook County functional landscape linkages Thorn Creek in Will in south and to the north, forest interior bird, 2000acres
10. Wolf/Eggers/IN for shoreline migration birds, wetlands function, dune and swale extending to south extend riparian Grand Calumet into large dune and swale
11. North IN complex Dune and swale, migratory bird ~1500 to 2000 acres
12. South IN Complex wetlands ~1000acres
13. Sand Ridge for dune and swale links to Wolf, S. Cook Co.
14. Lake Calumet for wetland birds, restored wetlands, Lake Michigan corridor revitalization
15. Indian Boundary Prairie for dune swale high quality prairie and associated wildlife assemblages link to FP to the west ~350
16. Vollmer: oak savanna remnant high quality oak prairie ~ 4000 acres
17. Tinley: for forest interior birds links to Vollmer, linkages to Palos, ~ 3800acres
18. Grand, Little Cal, Cal Sag create recreational greenway, shoreline enhancement, access, riparian habitat, add bike trail, liner open space that will contribute to the revitalizations of existing neighborhoods
19. Rock Run Corridor protect existing wetland prairies and foraging areas for wetland birds and protection of rookery lots of potential for wetland and prairie restoration ~1000 acres
20. Lower Des Plaines-DuPage forest habitat burial mounds, I&M canal
21. DuPage River for forested ravines and wetland restoration
22. Palos the large intact system linkage with Waterfall Glen~15000 acres
23. Lockport north to Palos for groundwater recharge and tributary issues ~500 acres
24. Long Run Creek for watershed protection same as others, groundwater recharge
25. Lake Renwick Rookery for wetland restoration for foraging areas~800 acres
26. Hickory Creek Corridor outlined
27. Spring Creek contiguous forest by restoration and large scale wetland restoration over the aquifer ~1500 acres
28. Hickory Creek contiguous forest habitat forest birds, forest fens ~2500
29. Eagle Lake wetlands ~500 acres

30. Upper Mainstem DuPage River: connectivity issues, outlines existing, protected or in need of protection and potential connections ~1000 acres

NE Illinois Outer Counties

from December 3-4, 2003 Meetings

Meetings were held with CW members representing the outer collar counties of NE Illinois. The principal participants were Jason Pettit of the Kendall County Forest Preserve District, Steve Byers of the Illinois Nature Preserves Commission, and Nathan Hill of the Natural Land Institute and Kishwaukee River Ecosystem Partnership. The geographic focus of these meetings was on the ring of counties immediately outside the NIPC region: Boone, De Kalb, Kendall, Grundy, and Kankakee. The focus in terms of resource protection area identification was on extending to a logical bio-geographic (vs. political) terminus those corridors and areas initially identified in the CW/Metropolis 2020 workshop, as well as the Wisconsin and Indiana workshops. Several new resource protection areas also were identified. In a few instances, there were opportunities to extend recommended resource protection corridors out into another tier of counties – e.g., extending the Kishwaukee River into Winnebago County or the Fox River into LaSalle County. Based on discussions with the mentioned participants, it was decided not to make these extensions during this phase of the project.

Kishwaukee River – Boone County

Principal Conservation Features and/or Community Type(s):

River and riparian wetlands

Class A stream

Recommended Conservation Approaches:

Conservation development

Acquisition, conservation easements, restoration, and greenway connection

Coon Creek Corridor – Boone County

Principal Conservation Features and/or Community Type(s):

High quality creek, wetlands

Recommended Conservation Approaches:

Conservation development

Acquisition, conservation easements, restoration, and greenway connection

Piscasaw Creek Extended – Boone County

Principal Conservation Features and/or Community Type(s):

Creek (Class A, in part), wetlands

Recommended Conservation Approaches:

Conservation development
Acquisition, conservation easements, greenway connection, and restoration

Beaver Creek – Boone County

Principal Conservation Features and/or Community Type(s):
High quality creek, riparian wetlands

Recommended Conservation Approaches:
Conservation development
Acquisition, conservation easements, restoration, greenway connection

Fern Hill Complex – Boone County

Principal Conservation Features and/or Community Type(s):
Woodland, savanna, grassland

Recommended Conservation Approaches:
Conservation development
Acquisition, conservation easements, greenway connection to Coon Creek

South Branch Kishwaukee River – De Kalb County

Principal Conservation Features and/or Community Type(s):
River, riparian wetlands, and woodland

Recommended Conservation Approaches:
Conservation development
Acquisition, conservation easements, restoration, greenway connection

Little Rock Creek – De Kalb, Kane, and Kendall Counties

Principal Conservation Features and/or Community Type(s):
High quality creek, woodland

Recommended Conservation Approaches:
Conservation development
Acquisition, conservation easements, restoration, greenway connection

Hollenback Creek – Kendall County

Principal Conservation Features and/or Community Type(s):
Creek, riparian wetlands, woodland

Recommended Conservation Approaches:
Conservation development

Acquisition, conservation easements, restoration, greenway connection to Fox River

Reservation Woods Complex – Kendall County

Principal Conservation Features and/or Community Type(s):

Woodland, wetland, and grassland (Bobolink habitat)

Recommended Conservation Approaches:

Conservation development

Acquisition, conservation easements, restoration (esp. wetland), greenway connection

Aux Sable Creek – Kendall and Grundy Counties

Principal Conservation Features and/or Community Type(s):

High quality creek, riparian wetlands, woodland

Class A stream

Recommended Conservation Approaches:

Conservation development

Acquisition, conservation easements, restoration, greenway connection to Illinois River

Nettle Creek – Grundy County

Principal Conservation Features and/or Community Type(s):

High quality creek, riparian wetlands

Recommended Conservation Approaches:

Conservation development

Acquisition, conservation easements, restoration, greenway connection

Kankakee River Tributaries – Kankakee County

Several Kankakee River tributaries originating in Will County were extended to their terminuses with the Kankakee River. These included (from west to east) Rock Creek, Black Walnut Creek, Exline Slough, and Trim Creek. Brief descriptions and recommended conservation approaches are contained in the notes for the South Cook/Will sub-group.

Kankakee River/Momence Wetlands – Kankakee County

Principal Conservation Features and/or Community Type(s):

River, wetlands, woodland

Numerous natural areas, Class A river

Recommended Conservation Approaches:

Conservation development

Acquisition, conservation easements, restoration, greenway connection

Kankakee Sands Complex – Kankakee, Iroquois, and Newton Counties

Principal Conservation Features and/or Community Type(s):

Woodland, savanna, prairie macrosite

Numerous natural areas

Recommended Conservation Approaches:

Conservation development

Acquisition, conservation easements, restoration, greenway connection (to Kankakee River)

NE Illinois – City of Chicago Additions
from Chicago Biodiversity Recovery Plan Process

Chicago River/Canal System

- Existing and/or potential conservation values

The Chicago River provides a greenway from outlying forest preserves into the inner core of the city and to Lake Michigan. As such, it provides habitat for fish and other aquatic species, and it provides a migratory path for birds, mammals, amphibians and other animals that use either the water or the shoreline or both.

- Existing and/or potential site impairments/threats to be protected against

Erosion, pollution, poor water quality, development, locks and dams (which block migration of fish), and inadequate amounts of shallow water and other natural river features necessary for wading birds and other species.

- Site management recommendations

Chicago Lakefront

- Existing and/or potential conservation values

The continuous succession of parks that borders Chicago shoreline connects a valuable series of natural communities such as the dunes and swales at Montrose Point, 63rd St. Beach, South Shore Nature Sanctuary, and Rainbow Beach; grasslands and woodlands at Montrose Point Bird Sanctuary, Bill Jarvis Bird Sanctuary, McCormick Bird Sanctuary, Paul H Douglas Nature Sanctuary, and South Shore Nature Sanctuary; and wetlands at Lincoln Park's North Pond and South Pond and Jackson Park Lagoon. The lakefront is of global importance for biodiversity for the habitat it provides to tens of thousands of migrating birds in spring and fall.

- Existing and/or potential site impairments/threats to be protected against

Erosion and development. Though much is protected as open space, further protection is necessary for the natural habitat sites, as they could be developed for active recreation.

- Site management recommendations

Southeast Wisconsin

from October 2, 2003 Workshop, Elkhorn, WI

Several resources were extremely valuable in the identification of resource protection opportunities in southeast Wisconsin. These included:

- *Wisconsin Land Legacy Report: An Inventory of Places Critical in Meeting Wisconsin's Future Conservation and Recreation Needs*. Presented to the Wisconsin Natural Resources Board, February 2003. Wisconsin Department of Natural Resources, Madison.

In this report, over a dozen sites in the Chicago Wilderness workshop area were designated as State Legacy Places. All are recommended below as resource protection areas.

- *A Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin*. 1997. Southeastern Wisconsin Regional Planning Commission (SEWRPC), Waukesha.

This plan identifies natural area and critical species habitat sites throughout southeast Wisconsin and also designates areas as *primary environmental corridors*. The vast majority of the following recommended resource protection areas are at least partially designated as primary environmental corridors by SEWRPC.

Delavan Lake and Wetlands, S. Walworth County

Principal Conservation Features and/or Community Type(s):
Primary environmental corridor: lake, wetlands, prairie, fishery
Two designated natural areas

Recommended Conservation Approaches:
Conservation development
Acquisition and conservation easements

Turtle Creek Corridor/Oak Woods, S. Walworth County

Principal Conservation Features and/or Community Type(s):
State Legacy Place
Primary environmental corridor: stream, woodland, wetland
Major recent/ongoing WDNR acquisitions
Several designated natural areas

Recommended Conservation Approaches:
No development or some conservation development
Acquisition, conservation easements, and continued restoration

Southern Kettle Moraine, Walworth County

Principal Conservation Features and/or Community Type(s):

State Legacy Place

Primary environmental corridor: lakes, wetlands, woodlands (incl. Whitewater, Rice, and Turtle Lakes)

Several natural area and critical species habitat sites

Recommended Conservation Approaches:

Conservation development

Public acquisition and conservation easements

Kettle Moraine, Southern Unit, Walworth, Jefferson, and Waukesha Counties

Principal Conservation Features and/or Community Type(s):

State Legacy Place

Primary environmental corridor: woodland, prairie, wetland

Major ongoing restoration efforts

Numerous natural area and critical species habitat sites

Recommended Conservation Approaches:

Conservation development

Acquisition, conservation easements, continued restoration

Petite Lake/Wetlands, S. Walworth County

Principal Conservation Features and/or Community Type(s):

Primary environmental corridor: aquatic habitat, linkage to McHenry Co.

Recommended Conservation Approaches:

Conservation development

Conservation easements, greenway connection (to Illinois)

Peterkin Pond, S. Walworth County

Principal Conservation Features and/or Community Type(s):

Pond noted as birding area, waterfall

Recommended Conservation Approaches:

No development

Acquisition and conservation easements recommended

Bloomfield Prairie/West Branch Nippersink Corridor, S. Walworth County

Principal Conservation Features and/or Community Type(s):

Primary environmental corridor: prairie/sedge meadow; stream corridor

Designated natural area

Recommended Conservation Approaches:

No development or some conservation development

Acquisition, conservation easement, and greenway connection to McHenry Co. Conservation District

Four Seasons Prairie/Wetlands, S. Walworth County

Principal Conservation Features and/or Community Type(s):

State Legacy Place

Primary environmental corridor: prairie, sedge meadow, diverse wetland communities

Several designated natural areas and critical species habitat sites

Recommended Conservation Approaches:

No development

Acquisition and conservation easements

Ivanhoe and Pell Lakes Wetland Complex, S. Walworth

Principal Conservation Features and/or Community Type(s):

State Legacy Place

Primary environmental corridor: diverse wetland communities/aquatic habitat

Several designated natural areas and critical species habitat sites

Recommended Conservation Approaches:

No development or limited conservation development

Acquisition and conservation easements

Geneva and Como Lakes Watersheds, S. Walworth County

Principal Conservation Features and/or Community Type(s):

Primary environmental corridor: lake, wetlands, fishery, woodlands, prairie, and headwaters of White River

Several designated natural areas

Recommended Conservation Approaches:

Conservation development

Acquisition and conservation easements

White River Corridor and Tributaries, S. Walworth County

Principal Conservation Features and/or Community Type(s):

State Legacy Place

Primary environmental corridor: stream and wetlands

Recommended Conservation Approaches:

No development or some conservation development
Acquisition and conservation easements

Sugar Creek Corridor, Walworth and Racine Counties

Principal Conservation Features and/or Community Type(s):

State Legacy Place

Primary environmental corridor: stream, various wetland communities, woodland

Numerous natural area and critical species habitat sites

Recommended Conservation Approaches:

No development or conservation development

Acquisition (Price County Park exists), greenway/trail connections to Turtle Creek corridor and Kettle Moraine south

Lauderdale Lakes, Walworth County

Principal Conservation Features and/or Community Type(s):

Primary environmental corridor: lakes, wetlands, woods

Several designate natural areas, critical species habitats, and critical lakes (Wandawega and Pleasant)

Recommended Conservation Approaches:

Conservation development

Acquisition and conservation easements

Mukwonago River/Jericho Creek Corridor, Walworth and Waukesha Counties

Principal Conservation Features and/or Community Type(s):

State Legacy Place

Primary environmental corridor: river, wetland, woodland

Numerous natural areas and critical species habitats

Outstanding river designation (largest assemblage of native mollusk species in WI)

Recommended Conservation Approaches:

No development or conservation development

Acquisition, conservation easements, and greenway connections

Beulah Lake/Bog – Walworth County

Principal Conservation Features and/or Community Type(s):

Primary environmental corridor: lake and various wetland communities

Several natural areas and critical species habitats

Recommended Conservation Approaches:
No development or conservation development
Acquisition and conservation easements

Spring Lake, Waukesha County

Principal Conservation Features and/or Community Type(s):
Primary environmental corridor: lake, wetlands, woodlands
Designated natural area and critical species habitat

Recommended Conservation Approaches:
No development
Acquisition

Vernon Marsh, Waukesha County

Principal Conservation Features and/or Community Type(s):
Primary environmental corridor: various wetland communities, prairie, woodland
Several designated natural areas and critical species habitats

Recommended Conservation Approaches:
No development or conservation development
Acquisition, conservation easements, and greenway connection

Twin Lakes (Elizabeth and Marie), S. Kenosha County

Principal Conservation Features and/or Community Type(s):
Primary environmental corridor: lake, wetlands, woods
Two designated natural areas or critical species habitat sites

Recommended Conservation Approaches:
Conservation development
Acquisition and conservation easements

Fox River – Kenosha, Racine, and Waukesha Counties

Principal Conservation Features and/or Community Type(s):
State Legacy Place
Primary environmental corridor: river, wetlands, woodland
Some segments rated outstanding waters
Numerous designated natural areas and critical species habitats, 7 E&T species

Recommended Conservation Approaches:
Conservation development
Acquisition, conservation easements, and numerous corridor connections

Trevor Creek Complex – Kenosha County

Principal Conservation Features and/or Community Type(s):
Primary environmental corridor: creek, wetlands, lakes, wet prairie
One critical species habitat area

Recommended Conservation Approaches:
Conservation development
Acquisition, conservation easements, and corridor connection to Chain O'Lakes

New Munster State Wildlife Area, Kenosha County

Principal Conservation Features and/or Community Type(s):
Primary environmental corridor: wetland, lake
Two designated natural areas and critical species habitats

Recommended Conservation Approaches:
Conservation development
Acquisition, conservation easements

Burlington Woods, Racine County

Principal Conservation Features and/or Community Type(s):
Primary environmental corridor: woodland, prairie
Two designated natural areas and critical species habitats

Recommended Conservation Approaches:
No development or conservation development
Acquisition and conservation easements

Dyer Lake/Bohner Lake, Kenosha and Racine Counties

Principal Conservation Features and/or Community Type(s):
Primary environmental corridor: lake and various wetland communities
Several designated natural areas and critical species habitats

Recommended Conservation Approaches:
No development or conservation development
Acquisition, conservation easements, greenway connection

Des Plaines River Corridor, Kenosha and Racine Counties

Principal Conservation Features and/or Community Type(s):
State Legacy Place
Primary environmental corridor (in lower reaches): river, wetland, prairie
Several designated natural areas and critical species habitats

Recommended Conservation Approaches:
No development or conservation development
Acquisition, conservation easements, greenway connections, restoration

Bong Recreation Area, Kenosha and Racine Counties

Principal Conservation Features and/or Community Type(s):
State Legacy Place
Primary environmental corridor: prairie (one of the largest contiguous grasslands in SE Wisconsin), wetland, and woodland
Several designated natural areas and critical species habitats

Recommended Conservation Approaches:
No development or conservation development
Acquisition, conservation easements, greenway connections to Fox and Des Plaines River corridors

Chiwaukee Prairie, Kenosha County

Principal Conservation Features and/or Community Type(s):
State Legacy Place
Primary environmental corridor: prairie, wetland, creek, Lake Michigan dunes (swell and swale)
Numerous designated natural areas and critical species habitats

Recommended Conservation Approaches:
Conservation development
Acquisition, conservation easements, greenway link to Illinois

Pike River, Kenosha and Racine Counties

Principal Conservation Features and/or Community Type(s):
State Legacy Place
Primary Environmental corridor (in lower reaches): river, woodlands, wetlands
Several designated natural areas and critical species habitats

Recommended Conservation Approaches:
Conservation development
Acquisition, conservation easements, greenway connections

Root River, Racine and Milwaukee Counties

Principal Conservation Features and/or Community Type(s):
State Legacy Place
Primary environmental corridor: river, woodlands, wetland
Numerous designated natural areas and critical species habitats

Recommended Conservation Approaches:
No development or conservation development
Acquisition, conservation easements, greenway connections, restoration

Lake Michigan Lakefront/Seminary Woods, Racine and Milwaukee Counties

Principal Conservation Features and/or Community Type(s):
Primary environmental corridor: lake, ravines, woodland, fens
Numerous designated natural areas and critical species habitats

Recommended Conservation Approaches:
No development or conservation development
Acquisition, conservation easements, and restoration

Oak Creek/Root River Connector, Milwaukee County

Principal Conservation Features and/or Community Type(s):
State Legacy Place
Primary environmental corridor: creek, woodland, wetland
Several designated natural areas and critical species habitats

Recommended Conservation Approaches:
Conservation development
Conservation easements, greenway connection

Wind Lake/Fox River Floodplain, Racine County

Principal Conservation Features and/or Community Type(s):
Primary environmental corridor: lake, wetlands
Numerous designated natural areas and critical species habitats

Recommended Conservation Approaches:
No development
Acquisition, conservation easements

Big Muskego Lake, Waukesha County

Principal Conservation Features and/or Community Type(s):
State Legacy Place
Primary environmental corridor: lake, wetland, and grassland
Designated natural area

Recommended Conservation Approaches:
No development or conservation development
Acquisition, conservation easements, greenway connection to Wind Lake area, restoration

Northwest Indiana

from October 20, 2003 Workshop, Portage, IN

One specific information source was particularly valuable in identifying resource protection area opportunities. The Sensitive Species Inventory (from the Inland Waterways Spill Response Mapping Project, Natural Heritage Programs) identified locations of sensitive aquatic, terrestrial, and multiple species. The presence of clusters of such species locations greatly improved the likelihood that areas would be identified within the recommended resource protection area polygons that are described below.

Hammond Marina (connected to Wolf Lake/Lake George/Eggers polygon) – Lake County

Principal Conservation Features and/or Community Type(s):
Migratory bird trap, Black Crown Night Heron
Several sensitive species sites

Recommended Conservation Approaches:
No new development
Conservation easements and greenway connection (to Illinois)

Grand Calumet Corridor – Lake County

Principal Conservation Features and/or Community Type(s):
Stream, dune and swale, prairie, wetland, and savanna complex
Numerous sensitive species sites

Recommended Conservation Approaches:
Conservation development
Acquisition, conservation easements, restoration, and greenway connection (to Illinois)

Lower Little Calumet Corridor – Lake and Porter Counties

Principal Conservation Features and/or Community Type(s):
River, sedge meadow, white oak swamp, marsh, and fen
Several sensitive species sites

Recommended Conservation Approaches:
Limited conservation development
Acquisition, conservation easements, greenway connection (to Illinois and Indiana Dunes), and restoration

Hoosier/Oak Ridge -- Lake County

Principal Conservation Features and/or Community Type(s):

Prairie, wetland, savanna complex; remnant lake plain

Numerous sensitive species sites

Recommended Conservation Approaches:

Limited conservation development

Acquisition, restoration, greenway connection

Deep River/Hobart Marsh and Prairie Grove -- Lake County

Principal Conservation Features and/or Community Type(s):

River, riparian corridor, climax forest, savanna, prairie, and wetland

Several sensitive species sites, two state nature preserves

Recommended Conservation Approaches:

Limited conservation development

Acquisition, restoration, greenway connections

Oak Savanna Trail – Lake County (connecting Oak Ridge Prairie to Deep River/Hobart Marsh and Prairie Grove – no polygon)

Principal Conservation Features and/or Community Type(s):

Recommended Conservation Approaches:

Greenway connection

West Creek Corridor – Lake County

Principal Conservation Features and/or Community Type(s):

Creek, wetland, woodland

Several sensitive species sites

Recommended Conservation Approaches:

Conservation development

Acquisition, conservation easement, greenway connection

Deep River Headwaters – Lake County

Principal Conservation Features and/or Community Type(s):

Wetland, woodland

Recommended Conservation Approaches:

Limited conservation development

Acquisition, restoration, greenway connection

Lemon Lake/Cedar Lake/Hawkinson Marsh – Lake County

Principal Conservation Features and/or Community Type(s):

Lake, wetland, woodland

Two sensitive species sites

Recommended Conservation Approaches:

Limited conservation development

Restoration and greenway connection

Stoney Run – Lake County

Principal Conservation Features and/or Community Type(s):

Climax forest, stream

Two sensitive species sites

Recommended Conservation Approaches:

Limited conservation development

Restoration and greenway connections

Kankakee River/LaSalle Fish and Wildlife Area/Kankakee Sands Connection – Western Lake and Newton Counties

Principal Conservation Features and/or Community Type(s):

River, wetlands, prairie, savanna, floodplain forest

Numerous sensitive species sites and T&E species

Recommended Conservation Approaches:

Conservation development

Acquisition, conservation easements, restoration, greenway connection

Kankakee River/Grand Kankakee Marsh Complex – Eastern Lake and Newton Counties

Principal Conservation Features and/or Community Type(s):

River, wetlands, floodplain forest

Several sensitive species sites, T&E species

Recommended Conservation Approaches:

No development

Acquisition, conservation easements, restoration (fish and wildlife habitat), greenway connection

Kankakee River/Kankakee Fish and Wildlife Area/Aukkiki – Porter, LaPorte, Starke and Jasper Counties

Principal Conservation Features and/or Community Type(s):
River, wetlands, prairie, floodplain forest, woodlands
Several sensitive species sites, T&E species

Recommended Conservation Approaches:
No development
Conservation easements, greenway connection (fish and wildlife management and flood mitigation)

Kankakee River/Kingsbury Fish and Wildlife Area – LaPorte County

Principal Conservation Features and/or Community Type(s):
River, wetlands, woodland, prairie
Several sensitive species sites and T&E species

Recommended Conservation Approaches:
Conservation development
Acquisition, conservation easements, greenway connection, restoration/flood mitigation

Kankakee River/Little Kankakee/Mill Creek – LaPorte County

Principal Conservation Features and/or Community Type(s):
River, wetlands, woodland, fen
Numerous sensitive species sites and T&E species

Recommended Conservation Approaches:
Conservation development
Acquisition, conservation easements, greenway connection

Indiana Dunes – Lake, Porter, and LaPorte Counties

Principal Conservation Features and/or Community Type(s):
Dune and swale, forest, savanna, prairie, and wetlands
Numerous sensitive species sites
Indiana Dunes National Lakeshore, Indiana Dunes State Park, and Little Calumet River connections

Recommended Conservation Approaches:
Limited conservation development
Conservation easements, greenway connection

Upper Little Calumet River Corridor – Porter and LaPorte Counties

Principal Conservation Features and/or Community Type(s):
River, wetlands, sedge meadow, woodlands, fen, and lakes
Several sensitive species sites and T&E species

Recommended Conservation Approaches:
Limited conservation development
Acquisition, conservation easements, restoration, and greenway connections

Salt Creek Corridor – Porter County

Principal Conservation Features and/or Community Type(s):
Creek and wetlands
Several sensitive species sites

Recommended Conservation Approaches:
Limited conservation development
Acquisition, conservation easements, and greenway connections

Upper Salt Creek – Porter County

Principal Conservation Features and/or Community Type(s):
Creek, lakes, wetland, grassland, woodland
One sensitive species site

Recommended Conservation Approaches:
Conservation development
Conservation easements, greenway connections

Coffee Creek Corridor – Porter County

Principal Conservation Features and/or Community Type(s):
Creek, wetlands, woodlands, and grassland
Numerous sensitive species sites

Recommended Conservation Approaches:
Limited conservation development
Acquisition, conservation easements, restoration, and greenway connections

Galien River Headwaters – LaPorte County

Principal Conservation Features and/or Community Type(s):
Stream, wetland, woodland, grassland
Numerous sensitive species sites

Recommended Conservation Approaches:
Limited conservation development
Acquisition, conservation easements, greenway connection

Trail Creek/Karwick – LaPorte County

Principal Conservation Features and/or Community Type(s):

Stream corridor, wetlands, woodland

Several sensitive species sites

Recommended Conservation Approaches:

Conservation development

Acquisition, restoration, greenway connection (to Lake Michigan)

Trail Creek Watershed East/West – LaPorte County

Principal Conservation Features and/or Community Type(s):

Stream, woodland, and wetlands

Numerous sensitive species sites

Recommended Conservation Approaches:

Conservation development

Acquisition, conservation easements, restoration, and greenway connections

White Ditch/Amber Flatwoods Complex – LaPorte County

Principal Conservation Features and/or Community Type(s):

Boreal flatwoods, wetlands

Numerous sensitive species sites

Recommended Conservation Approaches:

Conservation development

Acquisition, conservation easements, restoration, and greenway connections

LaPorte Urban Forest – LaPorte County

Principal Conservation Features and/or Community Type(s):

Woodland, wetlands, and lakes (Soldiers Memorial Park)

Numerous sensitive species sites (former black tern nesting)

Recommended Conservation Approaches:

Conservation development

Acquisition, conservation easements, greenway connection

Horseshoe/Fishtrap Lakes – LaPorte County

Principal Conservation Features and/or Community Type(s):

Lakes, wetland (bog), and woodland

Numerous sensitive species sites (former black tern nesting)

Recommended Conservation Approaches:

Conservation development

Acquisition, conservation easements, greenway connection