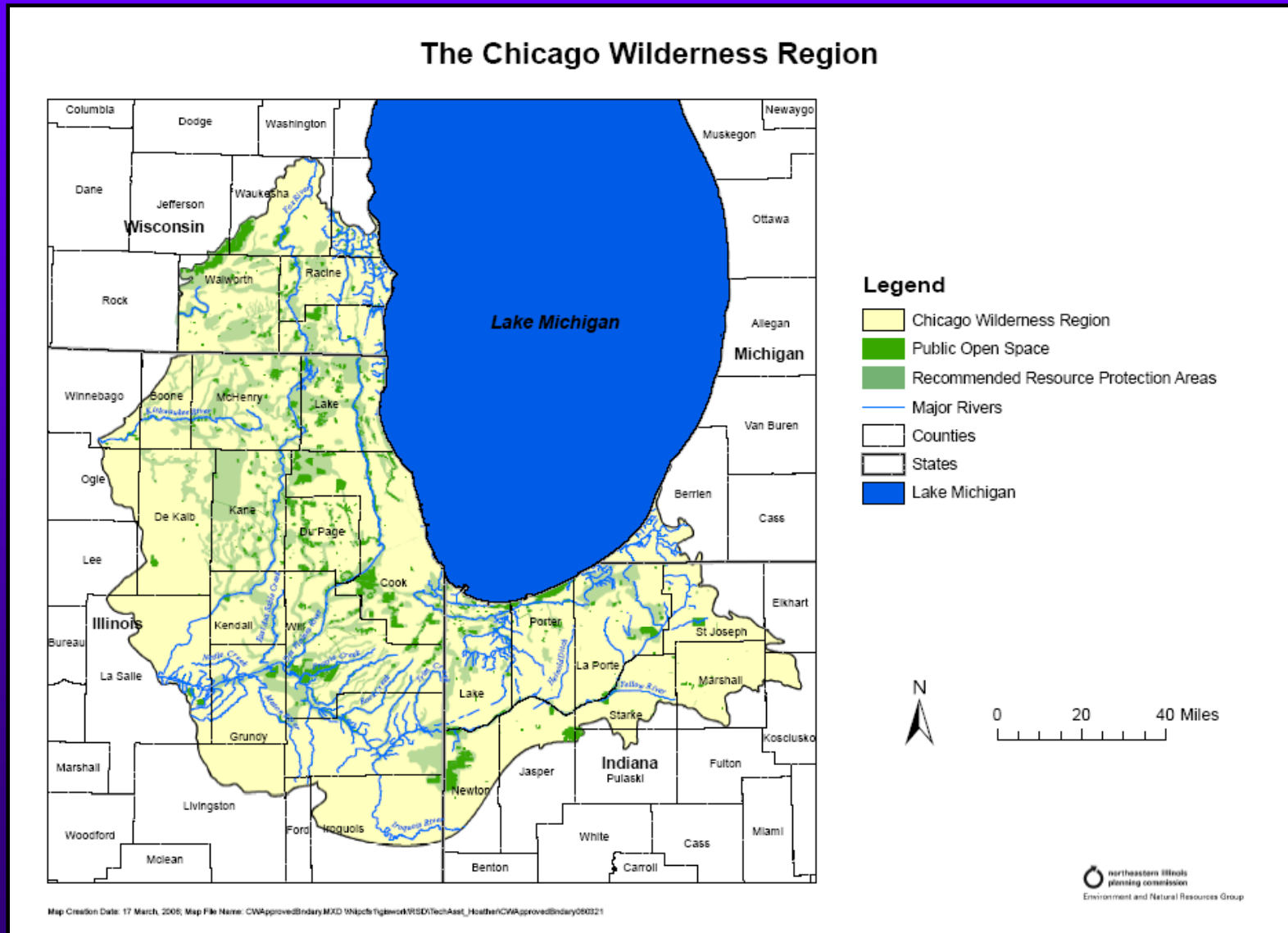


The image features a lush green landscape with tall grasses and wildflowers in the foreground, and a dense line of trees in the background. A white rectangular box with a black border is centered over the image, containing the text "Chicago Wilderness" in a green serif font. The word "Chicago" is on the top line and "Wilderness" is on the bottom line.

Chicago
Wilderness

The Chicago Wilderness Region over 360,000 acres



Public Conservation Land in Chicago Wilderness

County Forest Preserve and Conservation Districts

Municipalities and Park Districts

Federal Land

State Departments of Natural Resources

NGOs



Chicago Wilderness:

A powerful alliance for regional conservation

Our Members are:

- Land owners and land managers
- Local, state, and federal agencies
- Research and education institutions
- Conservation NGOs, large and small
- Regional Planning Agencies
- Faith-based initiatives
- Corporate Council

Over 230 members



Roles of Chicago Wilderness

- Develop common goals and principles to help guide the work of member organizations
- Catalyze new work and initiatives
- Increase partnering
- Share, build capacity
- Develop and disseminate tools
- Increase public involvement in local conservation



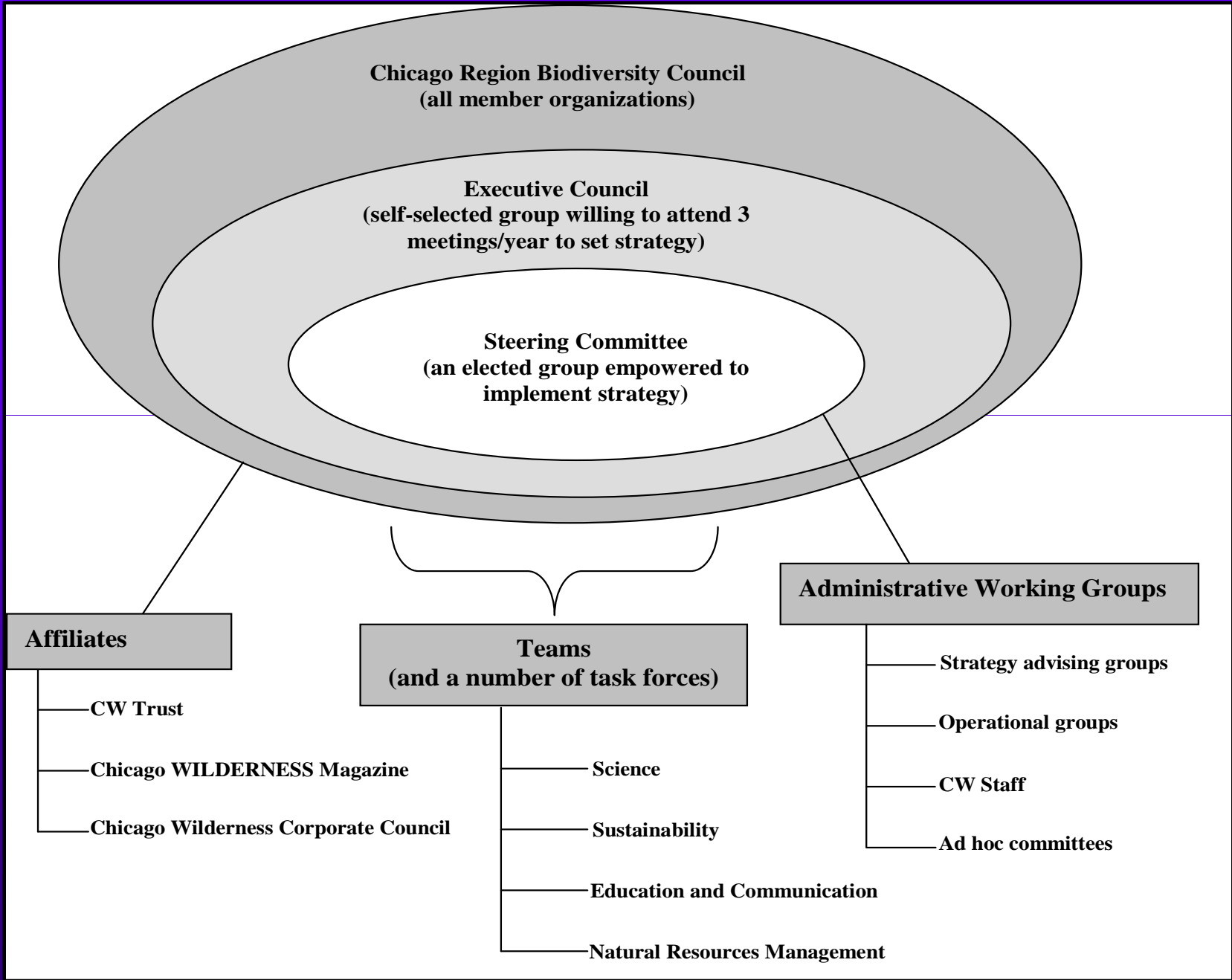
How is the alliance organized?

- **Policies & Procedures**

- the rights and responsibilities of membership
- the organizational bodies of the alliance
- the general policies
- the role of Congress
- application and admission procedures

- **Memorandum of Understanding (MOU)**

Signed by all CW members agreeing to participate in a voluntary network to achieve conservation goals through coordinated collaboration and cooperation



The CW Trilogy

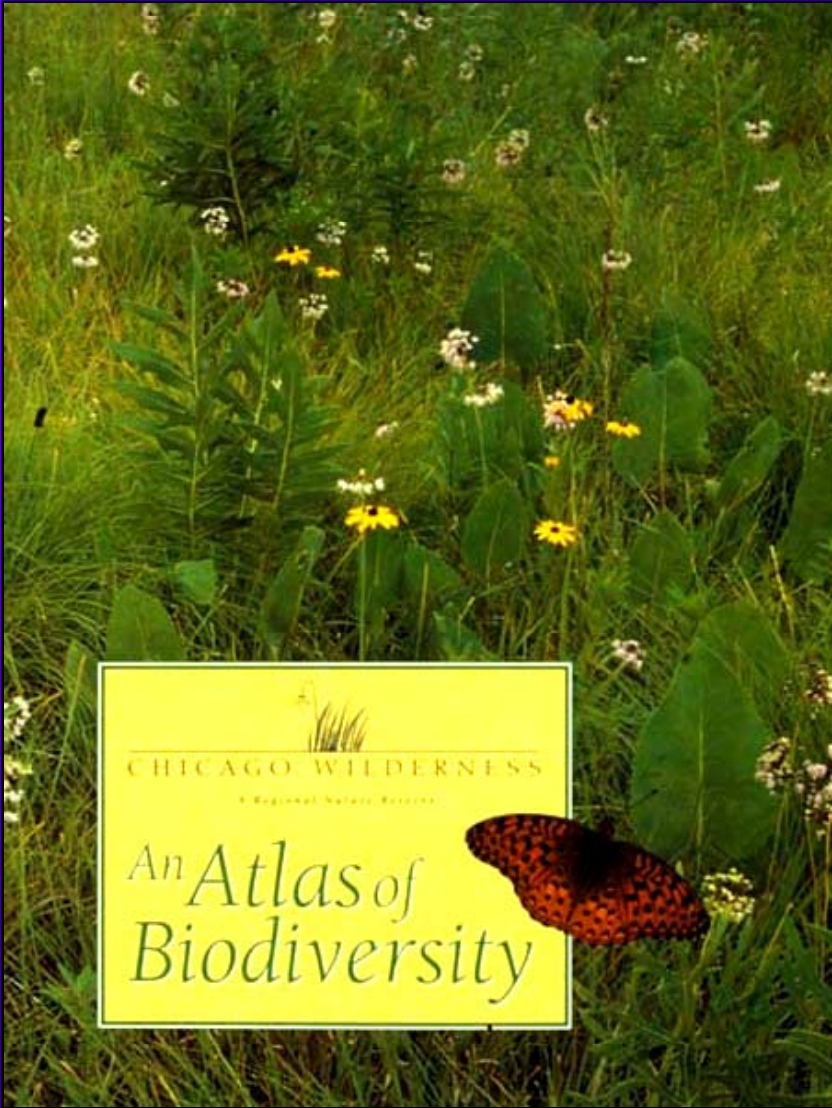
An Atlas of Biodiversity (awareness)

- Geology
- Living Communities
- People on the Land
- Restoration and Management

Biodiversity Recovery Plan (problem definition & needed actions)

- Present State
- Threats
- Tools
- Needed Actions

Report Card (tracking results & call for further action)



MOVING WATERS Streams and Rivers



The North Branch of the Chicago River is a peaceful stream in a wooded area. The stream is a popular spot for fishing and other recreational activities.

The rivers of the Chicago region have been subjected to the same kind of humanization as other rivers in major industrial, population, and agricultural centers. They have been used at times as open sewers. They have been dumping grounds for industrial wastes and been modified with run-off from paved areas. The Chicago in Illinois and the Grand Calumet in Indiana are the worst of this treatment, although no river escaped without some damage.

Over the last 25 years since the passage of the Clean Water Act and other legislative conditions have improved somewhat. Fish that have not been seen in a century have returned to the Chicago; lessons can be seen in the numbers along the Grand Cal. According to the Biological Stream Characterization of the Illinois Department of Natural Resources, some Chicago region streams qualify as "Chicago Aquatic Resources," Class A, or "Highly Valued Aquatic Resources," Class B. The lower Kankakee as it flows through Will County is a river whose no-damancy makes it of global significance.

The use of rivers by living things is largely controlled by physical and chemical factors. Physical factors include the size of the river

and the amount of water flowing through it, the consistency of the flow, the speed of the current, and the nature of the bottom. Chemical factors in our region are smooth about the entire of pollution.

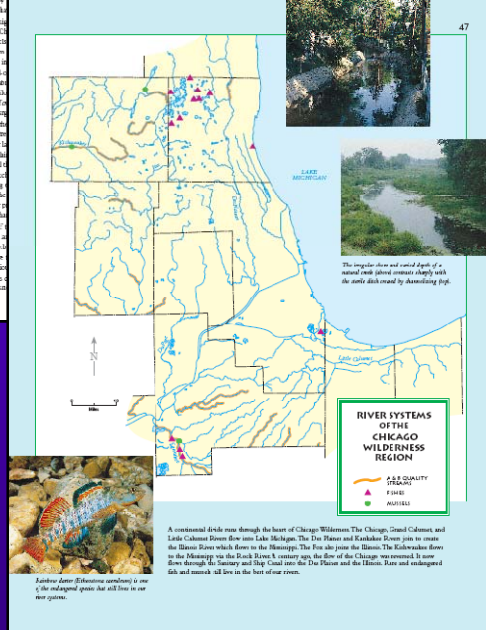
Biologists have divided the rivers of the Chicago region into four size categories. The smallest of these is the brookwater stream, a tiny creek that flows only occasionally. Brookwater streams have few species of fish, and most of these are minnows and other minnows.

Low order streams are small, to medium-sized creeks whose bottoms have been shaped by the waves of shallow water and pools, alternating sections of fast shallow water and deep water. Life in these streams often consists of minnows, sunfish and pool species. The creek breamhopper (*Lamprologus compressus*), an endemically found species, is an insect from the Kankakee and tributaries of the Kankakee, is a quiet water species. Among fish, the three-lined river minnow (*Hyphantopygia cinnamomea*) is a rarer species, while the commoner brown catfish (*Ictalurus nebulosus*) is a fish of quiet pools.

Many rivers in the Chicago region have been subjected to the same kind of humanization as other rivers in major industrial, population, and agricultural centers. They have been used at times as open sewers. They have been dumping grounds for industrial wastes and been modified with run-off from paved areas. The Chicago in Illinois and the Grand Calumet in Indiana are the worst of this treatment, although no river escaped without some damage.

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A continental drift river flows through the heart of Chicago Wilderness. The Chicago, Grand Calumet, and Little Calumet Rivers flow into Lake Michigan. The Des Plaines and Kankakee Rivers join to create the Illinois River which flows to the Mississippi. The Fox also joins the Illinois. The Kankakee flows to the Mississippi on the Rock River. A century ago, the flow of the Chicago was reversed. It now flows through the Sanitary and Ship Canal into the Des Plaines and the Illinois. Rare and endangered fish and mammals still live in the best of our rivers.

Redhead dace (*Etheostoma caeruleum*) is one of the endangered species that still lives in our river systems.

Biodiversity

RECOVERY PLAN



CHICAGO WILDERNESS

A Regional Nature Reserve

- Status of biodiversity in the region
- Overview of threats facing each natural community
- Recovery goals and strategies for species, communities, landscapes
- Recommended conservation actions and communication strategies

This recovery plan outlines the steps necessary to achieve the overall goal of the Chicago Wilderness collaboration. That goal, in summary, is to *protect the natural communities of the Chicago region and to restore them to long-term viability, in order to enrich the quality of life of its citizens and to contribute to the preservation of global biodiversity.*

To achieve this goal, the recovery plan identifies the following measurable objectives:

1. **Involve the citizens, organizations, and agencies of the region in efforts to conserve biodiversity.**
 - a. Obtain broad-based and active public participation in the long-term protection, restoration, and stewardship of the region's natural communities.
 - b. Strengthen local government support by communicating with and involving officials in planning efforts and conservation programs.
 - c. Build partnerships among organizations and agencies in support of biodiversity in the region.
 - d. Maintain and strengthen volunteer participation in stewardship and research.
 - e. Stimulate active private-sector involvement.
 - f. Integrate a broader range of stakeholders, including businesses and constituency organizations into biodiversity conservation efforts.
2. **Improve the scientific basis of ecological management.**
 - a. Increase knowledge of species, communities, and ecological relationships and processes.
 - b. Specify results to be achieved in biodiversity and increased sustainability, including reliable indicators, baselines, and targets.
 - c. Evaluate the results of restoration and management alternatives based on data in order to address those alternatives' effects on target species and communities.
 - d. Clearly identify conservation priorities.
 - e. Develop region-wide performance standards and monitoring techniques that can be implemented by land managers.
3. **Protect globally and regionally important natural communities.**
 - a. Identify priority areas and elements for protection based on an assessment of their contribution to conserving biodiversity at global and regional levels.
 - b. Protect high-quality natural areas in sufficient acreage to permit restoration and management for sustainability.
 - c. Maintain existing quality of publicly owned, high-quality natural areas.
 - d. Protect high-quality natural areas in private ownership.
 - e. Mitigate factors with negative impacts that occur outside of natural areas but within their watersheds or buffer zones.
4. **Restore natural communities to ecological health.**
 - a. Reestablish the ecological health of deteriorating high-quality natural areas.
 - b. Improve all natural areas, concentrating first on those that contribute most to global and regional biodiversity.
 - c. Provide corridors that link areas as needed.
 - d. Restore ecological processes that support sustainable systems.
 - e. Return natural communities to sufficient size for viable animal populations by restoring or recreating them. Fernside and Midewin are examples.
5. **Manage natural communities to sustain native biodiversity.**
 - a. Attain greater capability for ecological management within public entities.
 - b. Encourage sharing of experience and resources among natural area managers in different jurisdictions.
 - c. Monitor recovery progress and status of natural communities.
 - d. Demonstrate the feasibility of protection and restoration in fragmented, human-dominated landscapes, making use of such tools as prescribed burning, restoration of hydrology, and removal of invasive species.
6. **Develop citizen awareness and understanding of local biodiversity to ensure support and participation.**
 - a. Form educational partnerships among citizens, organizations, and agencies to promote awareness.
 - b. Build sufficient awareness of natural communities of the region and their global significance so that they become a recognized part of the culture of the region.
 - c. Develop educational programs to promote broad-based understanding of the global significance of the region's natural communities.

- d. Design educational strategies to meet the needs of all audiences at all levels.
 - e. Reach those not traditionally involved with education in natural history or conservation.
7. **Foster a sustainable relationship between society and nature in the region.**
 - a. Integrate conservation of biodiversity into ongoing development and planning for land use, transportation, and infrastructure.
 - b. Encourage major land users to adopt practices that promote biodiversity and its sustainability by integrating the beauty and function of nature into our neighborhood, corporate, and public lands.
 - c. Encourage inclusion of biodiversity goals in local planning and implementation.
 - d. Identify and address factors that lead to sustainable use.
 - e. Regularly monitor indicators of biodiversity and sustainability throughout the region.
 - f. Support and encourage efforts of citizen scientists working to conserve biodiversity.
 8. **Enrich the quality of the lives of the region's citizens.**
 - a. Enhance human health through improved air and water quality as well as protection from flooding by restoring and maintaining the ecological integrity of natural communities.
 - b. Increase opportunities for all citizens to experience the beauty and restorative powers of nature.
 - c. Identify strategies that promote economic growth while sustaining biodiversity.

A third audience includes all concerned and active citizens. Those who vote, speak out publicly and privately, and make choices of many kinds are crucial participants in the Chicago Wilderness collaboration. This third audience will be reached primarily through the plan's components of public participation and education, rather than through the plan directly.

1.1.5 How should different audiences use the plan?

This recovery plan is intentionally broad in scope, outlining the full range of actions needed across the entire region to conserve biodiversity. As a consequence, the plan is best viewed as a tool that provides general direction and illustrates the types of actions that can be taken to conserve biodiversity. The plan is a blueprint for action and a reference source for ideas. Because each decision or action that affects biodiversity will be made in a specific local context, and at times local priorities or unavoidable constraints will suggest a different path than might be suggested as a priority for the entire region, the plan is not intended as a set of mandates.

Nonetheless, the priorities and actions in the plan represent a regional consensus on the most important items for progress on biodiversity conservation. To be effective, those making decisions at the local level in the region should consider carefully the issues discussed in the plan and attempt to address them in their own planning processes. One lesson from the plan is that the region as a whole can sustain biodiversity that is not sustainable through local action alone. Success in this regard will only come if all actors in the region incorporate a broader regional view in their own decision-making, and if we cooperate across local jurisdictions.

1.2

The vision

For the past 200 years, the south end of Lake Michigan has been the setting of a classic drama. While building its economic and cultural wealth, Chicago, one of the nation's largest metropolises, has partially preserved the natural communities that had developed here since the retreat of the last glacier, approximately 10,000 years ago. As the metropolis continues to expand, its natural riches decline. Hence the vision:

To establish a broad policy of beneficial coexistence in which the region's natural heritage is preserved, improved, and expanded even as the metropolis grows.

1.1.4 Who are the plan's intended audiences?

One primary audience for the Recovery Plan includes the thousands of staff members and hundreds of thousands of members of Chicago Wilderness organizations. These organizations have accepted responsibility for helping to define and achieve the results contained in the plan.

Another primary audience is all persons who are responsible for making or shaping decisions that affect the region's land use, water-resource management, and biodiversity. Included here are local, state, and federal elected and appointed officials and private owners of large properties. Also included are key opinion shapers and recognized leaders in the region.

is to strongly encourage naturally vegetated shoreline zones, particularly in critical watersheds. The exceptional lakes are of particular importance to the conservation of the region's aquatic biodiversity. Therefore, rules and regulations to limit uses of the exceptional lakes and mitigate negative impacts warrant an additional discussion.

- ✓ **Integrate biodiversity concerns into laws, policies, and guidelines**
State laws, particularly those dealing with the use of pesticides and herbicides, need to be improved to integrate biodiversity issues. State policies on aquatic plant management should ensure that plant management both respects property rights and encourages diverse plant communities. Guidelines for land-use planning that recognize biodiversity and improve water quality should be developed. In general, biodiversity concerns need to be much more broadly incorporated into land-use and wastewater-treatment plans. Model ordinances for alternative development around lakeshores should be enhanced and promoted, and conservation easements around shorelines should be promoted. In short, alternative memos that reflect biodiversity needs should be enhanced and presented to the public. Additionally, Chicago Wilderness should work directly with municipal governments in lake areas.

- ✓ **Clarify ambiguous laws relating to lakes and their management**
One particularly problematic legal issue is Illinois's water law. How this law relates to water use, ownership, and management is unclear and inadequate. There are numerous legal interpretations of the law, and this confusion currently stands in the way of restorative issues and actions. It is recommended that Chicago Wilderness take a leading role in working to help resolve this issue.

- ✓ **Increase public understanding of lake biodiversity issues**
For the conservation of lake biodiversity, the most important action is to balance human uses with ecosystem constraints. Public recognition of the value of lake biodiversity and appreciation that lakes are a limited resource will be important to achieving conservation goals. Recreational and other human uses must not exceed what lakes can support. As a first step, the negative environmental impacts of development, recreation, and misuse should be documented, as well as the positive effect of management practices. Public information and education should make these well known, particularly to lake association members

and other potential supporters. Revisions to incentives, programs, laws, and regulations should then follow together with appropriate public hearings.

- ✓ **Increase public involvement in lake management and protection**
There are already a number of volunteer lake monitors and stewards, but their numbers should be expanded, not only to increase the amount of data collected and the number of lakes monitored, but also to create a broader network of people knowledgeable about lakes. It is recommended that Chicago Wilderness promote cooperation and communication among lakefront owners and users. Active lake users need to learn the full impacts of their collective uses of the lakes on biodiversity and realize the ecological limits to their use. Lake-use plans that offer a range of recreational uses consistent with a balanced, diverse ecosystem need to be developed. Development of these plans will require the input of knowledgeable citizens and consumers. Additional funding for biodiversity conservation and non-consumptive uses should be generated, at least in part, from consumptive uses of the lakes.

6.4

Near-shore waters of Lake Michigan

Lake Michigan is a vast aquatic ecosystem in its own right, and its near-shore waters in the Chicago Wilderness region function primarily as part of that system. However, they are an important part of Chicago Wilderness, both in their impact on adjacent ecological communities and intrinsically as an important ecological community. Lake Michigan provides climatic diversity and supplies sand to nourish its changing beaches and dunes. The seasonal and year-to-year changes in water level support lakeshore wetland communities. Its near-shore waters provide habitat for many fish and other aquatic species and are used by migrating waterfowl and shorebirds.

Much of the shoreline in the Chicago Wilderness area has been filled for buildings, parks, and marinas, eliminating coastal wetlands. The areas that remain in near-original condition tend to be beaches with relatively high-energy wave systems and relatively little organic substrate to support ecological communities. Structures installed to protect harbors and lakefront development have in many cases interrupted movement of sand or deflected it into deep water where it is lost from the beach-nourishment process.

The fish communities are in a state of flux due to many changes throughout Lake Michigan. Major factors include:

- historic invasion by lamprey and alewife and introduction of Pacific salmon
- excessive fish harvest
- recent invasion by zebra mussels, which are changing abundance and species mix of algae and zooplankton (including algae that create taste problems in drinking water)
- ongoing invasion by gobies and other species

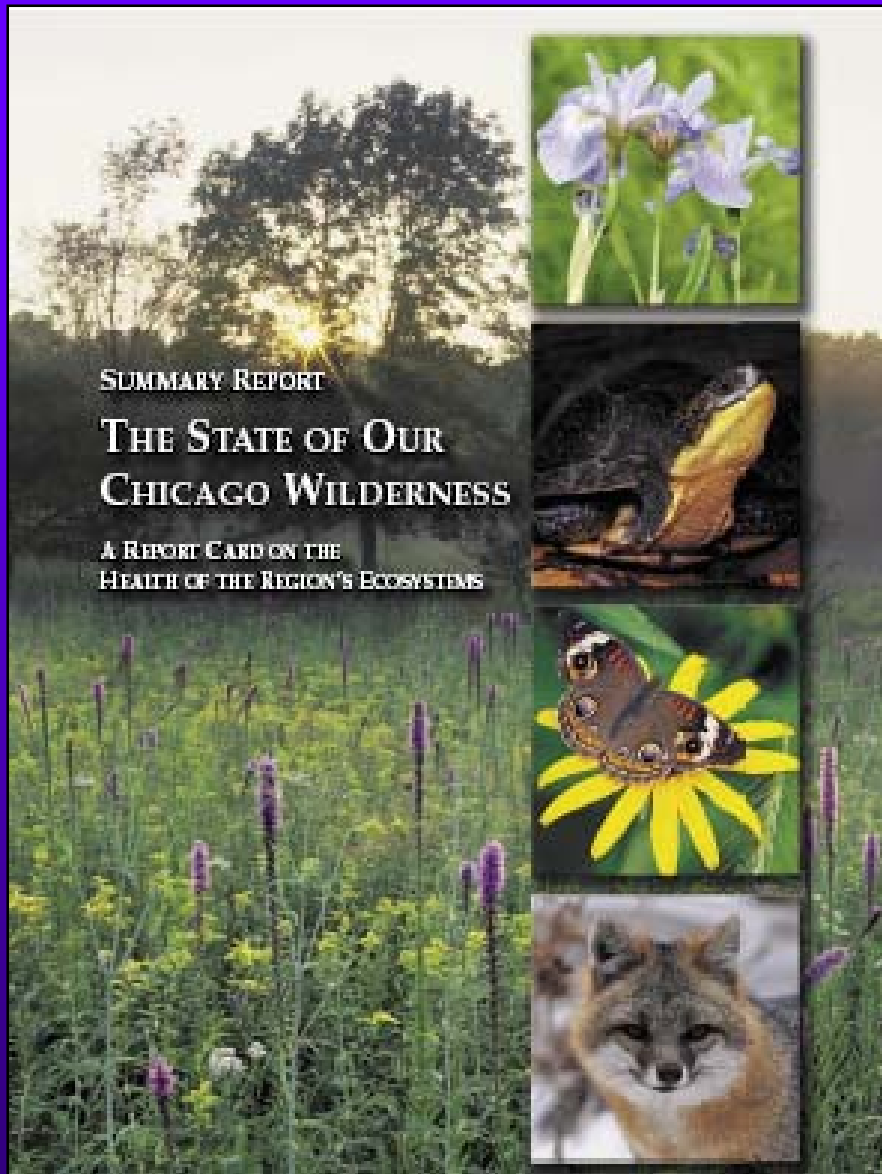
Historic problems with excessive nutrients, acute toxicity, and floating materials have been solved, but problems with persistent toxic substances that bioaccumulate in fish are still a problem for human health, although effects in the ecosystem are not apparent.

Wanted filling of shallow areas and gross pollution has ended, but care must be taken not to allow additional filling and not to allow structures that interrupt currents and supplies of sand. A major current fishery problem is the decline of lake perch, which is being addressed by the fish-management agencies in the respective States.

There are opportunities that should be addressed locally to restore aquatic habitat and biodiversity in some sheltered areas such as harbors, river mouths, and lagoons. Even intensely urban settings offer opportunities to create incidental habitat while designing projects focused on other purposes such as shore stabilization or brown-field redevelopment.

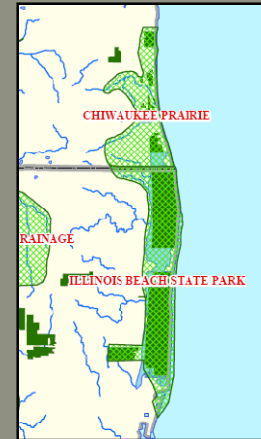
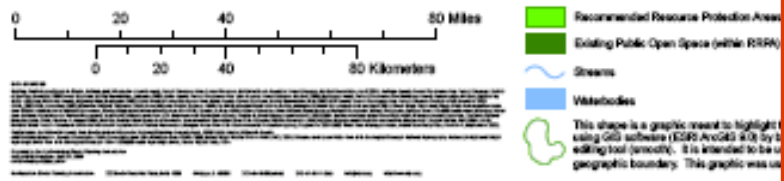
Recommended actions

- Identify information gaps concerning the Lake Michigan shoreline in the region with respect to surviving habitat, and opportunities for habitat restoration, so that practical goals can be developed.
- Identify key site-specific aquatic habitat restoration opportunities to support local and lake-wide biodiversity.
- Identify site-specific opportunities to provide shoreline protection that also provides improved habitat.



- Document condition and trends in biodiversity
- Assess progress in achieving *Biodiversity Recovery Plan* goals

Chicago Wilderness Green Infrastructure Vision



Illinois Beach State Park

Recommendations include:

- Protection of watersheds feeding into lake
- Acquisition and preservation in the upper watershed
- No new development within five miles of the lake



Lake Calumet Region



Recommendations include:

- Wetland and prairie restoration
- Greenway connections along the Calumet and Grand Calumet Rivers and to Wolf Lake
- Public land acquisition
- Industrial redevelopment utilizing conservation design approaches that fully mitigate hydrologic and water quality impacts.

Questions?

