

Illinois
Natural
Areas Plan

Preserve
Protect
Heritage

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During the past 150 years, man has plowed the Illinois prairies; drained the marshes; cut the forests; and built homes, factories, and highways. With increases in population and advances in technology, the pace of human activity and change in the landscape have quickened. Only a few natural communities of wild plants and animals still remain as they have existed, undisturbed through the ages. One by one these remnants too are being crushed by the blade of the bulldozer.

In this day of tremendous technological advancement there can be no question of the value of basic scientific research. Natural areas are resource materials from which new knowledge can be derived. As scientists learn more about the world of nature, they are increasingly aware of what we will lose with the impending annihilation of natural communities all over the world. The loss in real wealth from the extinction of living forms is beyond comprehension.

Natural areas can serve as check areas in studies relating to air, water, and soil pollution and to many aspects of land management. Gaining a greater knowledge of wild communities and populations can lead to a better understanding of some of the problems of human society, urban environment, and population control.

Plants and animals have evolved into a bewildering diversity of forms, varying in infinite detail with their adaptation to varying climates, soils, and living conditions. Researchers find that the wild relatives of domesticated species

are valuable sources of new genetic material. The plants and animals man uses are only a tiny fraction of the wild things that inhabit the earth. The potential usefulness of the others is unknown but doubtless enormous. We are constantly discovering new uses and products from wild plants and animals previously unexploited.

Natural areas serve as outdoor classrooms for students of all levels, from grade school through college. They provide a teaching resource to fill the need of contact with the world of nature.

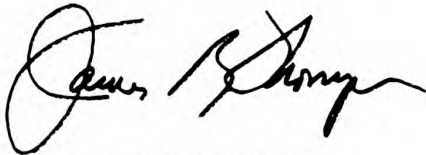
Many forms of life will perish from the earth if we do not spare bits of their native habitats as havens from the flood of civilization. Simply to keep on earth the awe-inspiring myriad array of living things is our obligation to future generations. We should also recognize that these creatures have a right to a place on earth.

Natural areas are sources of beauty and inspiration, both as scenery and in the more intimate sense of the form and color of individual groups of living things.

Natural areas also serve as living museums — examples of the rich and diverse natural world from which the pioneers built this country. They are historic memorials that serve as living links with the primitive past in such a way as to enhance our understanding and perception of the world in which we live.

Illinois Nature Preserves System
1977-1978 Report

It is time to do more to purchase and set aside some of our lands still in their natural state for the future use and enjoyment of our people. We have long deferred landbanking against the day when our fiscal condition would be strong enough to begin to invest in this natural heritage. This year, we can make a start.



Governor James R. Thompson
State of the State Message
January 9, 1980

To the Citizens of Illinois:

Illinois is well known as both a productive agricultural state and a center for transportation and industry. Fertile soil, flat topography, and central location have allowed the development of this strong economy. However, as a result, only scattered pockets of Illinois' rich natural heritage remain. The landmark Natural Areas Inventory identifies where these significant remnants of Illinois' early landscape can be found. Opportunities now exist to preserve and protect these unique places.

The Illinois Natural Areas Plan represents a commitment by the State of Illinois to preserve and protect our natural heritage for future generations. The Plan is a guide for the understanding of this heritage, its values, and its protection needs. Perhaps most importantly, it suggests how you can become involved in natural heritage programs.

The important task of preserving this heritage falls on our generation. The contributions of many individuals will be necessary to meet this challenge.



David Kenney
Director
Illinois Department of Conservation

Illinois Department of Conservation
Illinois Nature Preserves Commission
Illinois Endangered Species Protection Board
June 1980

**The Illinois
Natural
Areas Plan**

To Preserve
and Protect
Our Heritage



Illinois Prairie

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CHAPTER 1: The Living Landscape

In a broad historical sense, the natural heritage of Illinois is the living landscape that greeted the pioneers who settled the state. It includes the mammals, birds, reptiles, amphibians, and invertebrates native to Illinois, and it embraces native plants ranging from oaks to algae. Illinois' natural heritage is also the land and water upon which these organisms developed and survived. This complex interaction of living organisms with their environment is called a natural ecosystem.

The settlers of Illinois were concerned with their own survival. They farmed the land, logged the forests, navigated the streams, and built cities, railroads, and highways. The living landscape of Illinois was altered until what had begun as cultivation loomed as exploitation.

Eventually, actions were taken to preserve the natural heritage of the state. In 1925 the Illinois State Parks Program was created to set aside scenic areas and historic sites. The federal government established wildlife refuges to protect certain game species. The Nature Conservancy was begun in 1950 to preserve natural diversity through private means.

In 1963 Illinois became the first state in the nation to establish a formal program of legal protection for natural areas — precious areas of land and water that closely reflect presettlement conditions. Seventy-six areas are now permanently preserved as dedicated Illinois nature preserves. Since passage of the Illinois Endangered Species Act in 1972, 72 animals and 364 plants have been listed as endangered and threatened species in the state.

The widely acclaimed Illinois Natural Areas Inventory, a three-year project completed in 1978, was a milestone in the state's continuing program of natural area preservation. The Inventory documented where Illinois' remaining natural areas are, who owns them, and whether they are protected. It determined where vital habitat exists for endangered species and where to find outstanding geologic features. No state surpasses Illinois in the quality and quantity of information available on its natural areas.

Now is the time to follow information with action. Only seven-hundredths of one percent of Illinois' surface still reflects the natural conditions existing when settlement began some 150 years ago. The 1,089 natural areas identified in the Inventory represent elements of Illinois' original natural diversity and deserve special protection. Only about one in five of the Inventory areas can be recognized as safely preserved. Other areas are protected in some manner but lack permanent safeguards and proper management. Many are not protected in any way and remain vulnerable to human encroachment.

The Illinois Natural Areas Plan represents a public commitment by the Department of Conservation, Nature Preserves Commission, and Endangered Species Protection Board to act upon the needs revealed by the Illinois Natural Areas Inventory. The purposes of this joint effort are —

- To present a plan of action with commitments and recommendations for preservation and protection of natural areas (Chapter 2).
- To describe and illustrate the types of natural areas in Illinois (pages 8-9).
- To explain the critical need for proper management of natural areas (Chapter 3).
- To assess the ownership and preservation status of natural areas (Chapter 4).
- To summarize the programs and tools that can be used to safeguard natural areas (Chapter 5).
- To suggest ways for citizens to take part in land preservation (page 36).

To Preserve and Protect

The Illinois Nature Preserves System, endangered species protection program, Natural

The natural heritage of Illinois is the living landscape that greeted the pioneers who settled the state.

Areas Inventory, and the Illinois Natural Areas Plan are major components of the state's ongoing natural heritage program. An important goal of this program, and the aim of the natural areas plan presented here, is to *preserve and protect examples of the state's diverse natural features and species so that present and future generations have the opportunity to observe, study, appreciate, and benefit from the natural heritage from which Illinois has developed.*

Using legislation, information from the Inventory, support from the public, and commitment to the Illinois Natural Areas Plan, the state is achieving some important objectives of its natural heritage program:

- To preserve and protect as many of the state's natural areas as possible through a variety of existing programs and tools.

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- To maintain and expand a system of preserves with maximum permanence and protection.
- To manage natural areas to ensure their protection.
- To provide opportunities for the public to learn from, appreciate, and enjoy natural areas.

These objectives can be advanced through broad, cooperative support from government agencies, corporations, industries, private landowners, and interested organizations, and through effective use of the many state, federal, local, and private programs of preservation and protection.

Why Save Natural Areas?

Illinois' shrinking heritage of natural areas deserves to be preserved and protected for many reasons. Undisturbed natural areas serve as refuges to protect the diversity of plants and animals, some of which undoubtedly have values as yet unknown for medicine, agriculture, and industry. Many modern drugs have been derived from nature, and new medications will be derived from plants and animals with properties not yet discovered.

The Illinois Natural Areas Plan is a public commitment by the state to act upon the needs revealed by the Natural Areas Inventory.

Natural areas provide habitat to protect endangered and threatened species from extinction, which must be prevented to maintain the delicate balance of nature. The loss of a species from the web of life has unpredictable consequences, and the loss cannot be undone.

Natural areas provide opportunities for low-intensity recreation such as hiking and nature photography. They also serve as sites for environmental education, through which persons acquire a first-hand understanding of nature.

These also are areas for scientific studies that increase knowledge about specific organisms, their life histories, and their complex interactions with the environment. Protection of undisturbed natural communities is also important in historical studies in order to understand Illinois' presettlement vegetation and to guide restoration activities.

As important as natural areas are, it should be noted that many are small and are often miles away from similar areas. Large continuous tracts of natural land are needed to provide habitat for native Illinois species so that they do not become endangered. Although preservation of all native flora and fauna is beyond the scope of the Illinois Natural Areas Plan, many of the actions proposed in Chapter 2 should have a constructive effect on all aspects of our natural heritage.

There is strong citizen support for natural areas preservation in Illinois.* Concern for protecting remnants of Illinois' former landscape has mounted as more and more land is cultivated, developed, mined, and paved. A recent survey conducted by the Department of Conservation revealed that the loss of natural areas is a foremost concern of the public in the sphere of outdoor recreation and heritage preservation. The Statewide Comprehensive Outdoor Recreation Plan (SCORP) Panel of Advisors, composed of representatives from government agencies and from private conservation and recreation organizations, ranked "loss of natural areas" first among 20 recreation and heritage issues considered for inclusion in the 1980-81 SCORP Action Program.

Citizen concern is also revealed by extensive participation at resource conservation meetings. For example, the March 1980 Northern Illinois Prairie Workshop drew nearly 600 persons to discuss prairie management and preservation.

Citizen interest in natural areas preservation must be supported by action from agencies and organizations and called to the attention of the Illinois General Assembly.

Who is Responsible for Protecting Natural Areas?

Every level of government — federal, state, and local — has a role in saving Illinois' natural areas. Private organizations and individuals also play an important part in this effort. Implementation of the plan of action presented in Chapter 2 will require dedicated commitment from all these interests.

The leadership for preserving Illinois' natural areas rests with state government. The responsibility is shared by the Department of Conservation, Nature Preserves Commission, and Endangered Species Protection Board.

The Department of Conservation acquires, designates or dedicates, and manages natural areas of statewide significance. The Department advises other levels of government and private owners about managing natural areas,

allocates federal Land and Water Conservation (LAWCON) Fund grants to local governments, seeks legislation, and enforces laws and regulations to protect endangered and threatened species and nature preserves. The Department of Conservation also reviews proposed public construction projects to minimize harm to natural areas. Finally, the Department of Conservation keeps the Natural Areas Inventory data up to date and develops plans to preserve and protect the areas identified by the Inventory.

The Nature Preserves Commission identifies and evaluates candidates for the nature preserves system, approves all nature preserve dedications, and monitors the management of the areas. The Commission also develops guidelines for protection, management, and planning, maintains records on natural areas, and negotiates preservation with landowners.

The Endangered Species Protection Board designates threatened and endangered species of plants and animals in Illinois and regulates the possession and transfer of designated animals and animal products.

Other state agencies affect the status of natural areas in Illinois. The Department of Transportation controls several natural areas, primarily geologic sites. The Illinois Environmental Protection Agency carries out programs to reduce pollution and improve the quality of the environment, thereby affecting the quality of the state's natural areas. The Illinois Institute of Natural Resources sponsors environmental studies by the State Natural History Survey, Geological Survey, and Water Survey.

At the federal level, leadership rests with the Heritage Conservation and Recreation Service (HCRS) of the Department of the Interior. HCRS administers the National Natural Landmarks Program and distributes LAWCON funds to the Department of Conservation. HCRS is also responsible for drafting federal legislation and coordinating state natural heritage programs.

Federal agencies owning natural areas in Illinois include the Forest Service, Fish and Wildlife Service, Army, and Army Corps of Engineers. Each agency has its own program for managing these lands.

At the local level, all agencies that own and manage land are potential partners in the natural areas preservation effort. Illinois statutes specifically authorize participation in the Illinois Nature Preserves System for all departments, agencies, and instrumentalities of the state, including counties, municipalities, public corporations, authorities, districts, boards, commissions, universities, forest preserve districts, conservation districts, and park districts.

*See Appendix A for more information on public participation in the development of the Illinois Natural Areas Plan.

Illinois Natural Areas Inventory

The Illinois Natural Areas Inventory is the most systematic and thorough survey of its kind. The three-year project, completed in 1978, was carried out by the University of Illinois and the Natural Land Institute under contract with the Department of Conservation.

The Natural Areas Inventory provides the information long needed for an effective plan of action. In the past, it was often impossible to know whether a given area warranted an all-out effort for protection, or whether there were superior areas of the same type or more imminently threatened areas that deserved higher priority. The Inventory now makes it clear where limited resources of time and money should best be spent.

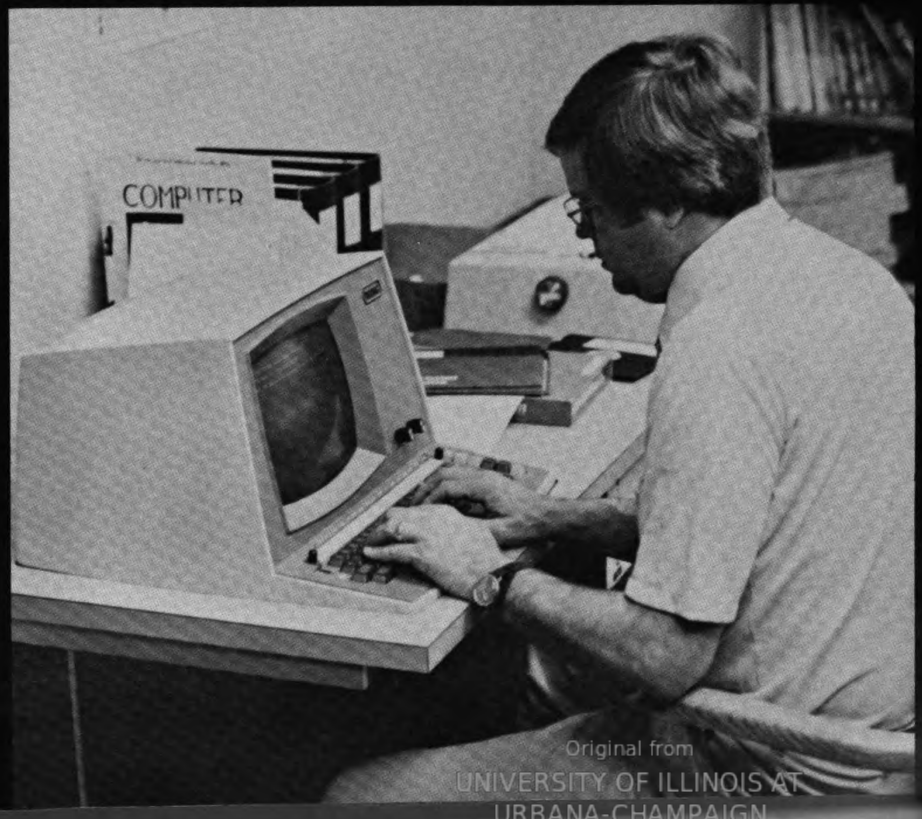
Over 200 persons participated as volunteers or staff members in the Inventory. Every acre of Illinois was studied with maps and aerial photographs. Field inspections were conducted; knowledgeable citizens were interviewed; agency files were examined. As many as 90 points of information were compiled for each significant site and entered into a computer-based system for storage and analysis.

The Inventory revealed that —

- No more than seven-hundredths of one percent (.07%) of Illinois' land reflects the original natural conditions before settlement.
- For every million acres of black-soil prairie that originally existed in Illinois, only 39 acres remain.
- 610 areas out of the 1,089 found are of the highest quality. These are examples of minimally disturbed natural communities.
- Only about one in five of the 1,089 areas can be regarded as preserved.
- Natural areas are not evenly distributed. The level farmland of central Illinois has the fewest sites. Most are in the hilly regions and in the river bottomlands along the borders of the state. Clusters of natural areas also exist in Cook County and other urban areas where they have been protected in parks and preserves.

A total of 208 examples of high quality natural communities (prairies, savannas, forests, and others) has been assigned high priority by the Department of Conservation for preservation. One hundred twenty-five of these areas are in private ownership.

An inventory of natural areas does not prevent their destruction. In the 18 months between autumn 1978 and spring 1980, Illinois lost 3 more prairies and 7 forests, while portions of 21 other natural areas were destroyed.



Nearly 100,000 pieces of information about Illinois' natural areas can be retrieved from the computer bank of information amassed through the Natural Areas Inventory.

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Our Natural Heritage:

The Lands and Waters of Illinois

What was Illinois like before corn and concrete, highways and highrises? A few precious areas remain to show us, but only one in five is preserved.

The Illinois Natural Areas Inventory established seven categories of natural areas. One of these categories, High Quality Natural Communities, is divided into eight groups. These represent relatively undisturbed areas while the other categories have important features that may exist in disturbed surroundings. Many of the Inventory sites, however, have a variety of features and are included in more than one category.

1 High Quality Natural Communities

Natural communities are groups of plants and animals that share a common environment. The eight classes of natural communities reflect differences in soils, water, geology, and biology. High quality natural communities are ones that are undisturbed or nearly undisturbed. These very special areas reflect natural conditions before settlement of the state.



a Forests About two-fifths of Illinois originally was forest. About one-quarter of the forest remains, but most of it has been logged or grazed. Only 13,500 acres have escaped serious disturbance or recovered from former uses of the land.



b Prairies Natural grasslands once covered about 55 percent of Illinois, but now nearly all of that land is farmed. Only about 2,300 acres of prairie remain relatively undisturbed, mostly on sites unsuited for farming, in old cemeteries, and along railroad rights-of-way.



c Savannas A savanna is a natural transition between forest and prairie — a mixture of trees, shrubs, and prairie vegetation with its own set of plants and animals. Savannas formerly occurred in every county, but as a result of grazing, farming, and the absence of fires, only 1,300 acres of high quality savanna still exist.



d Wetlands Cat-tail marshes, forested swamps, and peat bogs are characteristic wetlands. They were common throughout Illinois in presettlement times, but most have been drained. Only 6,000 acres of high quality wetlands remain in the state. These are lands that have not in the past been economical to drain or that have been maintained for hunting and fishing.



e Lakes and Ponds River backwaters, deep glacial lakes, and prairie potholes, once characteristic of Illinois, have for the most part been drained or seriously disturbed. The Natural Areas Inventory listed 2,000 acres of the best quality lakes and ponds, many of them part of larger wetland complexes.



f Streams There are 480 permanent streams in Illinois totaling over 13,000 miles. Half have been dredged, channelized, dammed, or directly altered in some way, and they suffer from pollution, siltation, and introduction of foreign fishes. Twelve streams have been identified as outstanding in the Natural Areas Inventory.

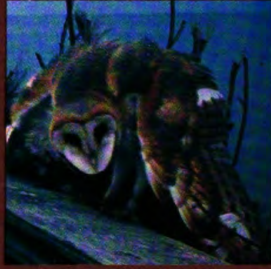


g Caves There are about 300 caves in Illinois, most of them less than a few hundred feet long. They occur primarily along the southern and western borders. Many have suffered from vandalism by visitors, but 30 caves have been listed as natural areas of statewide significance.



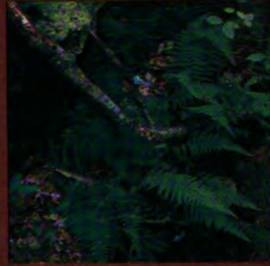
h Primary Successional Communities These include cliffs, rocky glades, beaches, and other communities with little or no soil. They remain at an early stage of succession. Most such communities occur along stream valleys and in hilly areas where bedrock and glacial materials crop out. They often have rare plants and animals.





2 Habitat for Endangered Species

The biggest threat to native species has been the destruction of habitat, particularly the loss of prairies and wetlands. Pollution, disease, and exploitation have also contributed to species becoming endangered. The Natural Areas Inventory identified 269 sites known to provide habitat for endangered species.



3 Habitat for Relict Species

A relict species is one that persists in a small colony, widely separated from its normal range. These species occur in special habitats with extremes in temperature and moisture, such as dry sand areas and cool, shaded bluffs. The Inventory listed 39 sites, many of them cliffs or bluffs, that support relict species.



4 Outstanding Geologic Areas

One hundred sixty sites were identified by the State Geological Survey to represent the diversity of geologic features in Illinois. They are areas that include various kinds of rocks and rock layers, have important fossil beds, and reveal how geologic processes have produced the existing land surface.



5 Nature Preserves and Natural Study Areas

This category includes the 251 sites that are formally designated as Illinois nature preserves or specifically set aside for research and nature study by schools and other groups. Some of these areas have been disturbed, but they are important natural areas because of their special use and protection.



6 Unique Natural Areas

Twenty-nine sites with unique characteristics that do not fit well under the other categories have been identified. For example, a cave with an exceptionally large colony of hibernating bats qualifies as a unique natural area even though the bats are not endangered or threatened.



7 Outstanding Aquatic Areas

The State Natural History Survey provided recommendations for lakes and streams to be listed in the Natural Areas Inventory regardless of disturbance to surrounding land. These outstanding aquatic areas were recognized for their water quality and fauna and include five lakes and segments of twelve streams.

County agencies such as conservation and forest preserve districts can develop regional natural area programs. Universities have authority to develop natural area programs to meet their educational needs, and some have done so.

Agencies of local government are potential buyers of privately owned land within their jurisdictions. Their purchases can contribute greatly to state and federal land acquisition programs with limited funds. Most local agencies are eligible for 50 percent cost reimbursement from the federal Land and Water Conservation Fund for such purchases.

Individual citizens have had a key role in determining what natural areas remain today. Many of Illinois' existing natural areas would be a cornfield or a subdivision if it were not for an owner who cared enough and could afford to preserve the land. Inasmuch as 44 percent of the natural areas in Illinois are privately owned, attitudes of landowners are pivotal to success in preserving these areas. Creating incentives to make land preservation and protection more appealing than development even in a time of inflation and high taxes is a challenge for Illinois.

Private organizations have provided direct assistance in acquiring land for the nature preserves system for many years. The Nature Conservancy and the Natural Land Institute are well known for purchasing areas. The Illinois Audubon Society has aided preservation through its sanctuary system. The Open Lands Project has been effective in preserving open space, primarily in the Chicago area. The numerous members of conservation and environmental organizations provide needed public support for natural areas preservation.

Many other preservation groups work in a particular county or region. For example, the Forest Park Foundation has set aside natural areas around Peoria, and the Prairie Preservation Society of Ogle County has organized and stimulated efforts to preserve one county's heritage. Other grass-roots citizen groups have been organized to save a local prairie, woods, or marshland. Their deep and active commitment has made many preservation efforts successful. Many of these local citizen groups, together with some statewide organizations, are listed in Appendix B.

Cooperation of industrial corporations, including railroads and public utility companies, is extremely important in preserving certain natural areas. For example, prairies along railroads are the only natural black-soil prairie remnants in 12 counties. Cooperation from industries and corporations is a major contribution to the public they serve.

If public and private elements work together constructively, a large portion of the unprotected natural areas will be saved. The plan of action presented in Chapter 2 sets forth the commitments and recommendations through which increased protection of natural areas can become a reality.



Public acquisition would help preserve unprotected natural areas like this prairie.

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Chapter 2: Plan of Action

Illinois' remaining natural areas are steadily being lost. The need to preserve them is clear but meeting that need is complicated. Intensive land use, combined with limited funds for acquisition and management, is a major obstacle to preservation. Government agencies are often responsible for administering a diverse spectrum of programs that are supported by a wide range of constituency groups. Consequently, these agencies must develop balanced programs to address all concerns, and preservation programs must compete for limited resources. With 38 percent of the total acreage identified in the Natural Areas Inventory privately owned, action to preserve privately owned areas is extremely important and complex.

The following discussion points out the major problems that affect preservation and protection of natural areas and identifies objectives. Commitments of the Department of Conservation, Nature Preserves Commission, and Endangered Species Protection Board are identified.* *Action* is needed now, by both public and private organizations, to address these problems and work toward preserving and protecting examples of natural features and species so that present and future generations have the opportunity to observe, study, appreciate, and benefit from Illinois' natural heritage.

Land Acquisition

Situation: Money for acquiring natural areas has been extremely limited in Illinois. Intense competition for available funds, combined with the lack of funding sources, has severely restricted the acquisition and preservation of natural areas. Prior to the Illinois Natural Areas Inventory, detailed information on the location and characteristics of the state's highest quality natural areas was incomplete. The Inventory revealed 208 highest priority sites for preservation, of which 125 are in private ownership. Purchasing these 125 areas would require approximately \$24,000,000.** Because funds are limited and the needs are great, it is necessary to develop ways to use money most effectively, to develop innovative techniques for preserving natural areas at minimal cost, and to seek new sources and higher levels of funding.

*Time schedules are not included in this plan. The Statewide Comprehensive Outdoor Recreation Plan's annual Action Program assesses high priority issues and describes actions and schedules for the year. The Action Program will be used as a framework for establishing schedules for natural areas activities. See Appendix A for more information on the annual Action Program.

**See page 24.

Objective: To obtain more money for buying natural areas.

Actions: • The Department of Conservation will propose a land acquisition program to the Illinois General Assembly based on findings of the Natural Areas Inventory and aimed at preserving elements of the state's natural diversity.

- The Department of Conservation will purchase critical habitat for endangered and threatened species with federal grants.

Objective: To acquire natural areas at little or no cost to public agencies by negotiating with private landowners.

Actions: • The Nature Preserves Commission will continue to contact private owners of natural areas and actively pursue donations, dedications, and bargain sales in cooperation with the Natural Land Institute and The Nature Conservancy. The Department of Conservation will cooperate with the Nature Preserves Commission, The Nature Conservancy, and Natural Land Institute in following up on these opportunities identified through the landowner contacts.

Objective: To involve all levels of government in the acquisition effort.

Actions: • The Department of Conservation will continue to give special consideration to local government grant requests for 50 percent reimbursement through the Land and Water Conservation (LAWCON) Fund for acquisition of natural areas. The state will encourage local governments with natural areas in their jurisdiction to apply for these grants.

- The Department of Conservation and Nature Preserves Commission will encourage Congress to amend the Land and Water Conservation Fund Act to clearly authorize the use of LAWCON funds for natural area acquisition and planning. Under existing law, LAWCON funds must be used to provide some opportunity for recreation.*

- The Department of Conservation and Nature Preserves Commission will recommend that the U.S. Fish and Wildlife Service acquire lands in Illinois that provide valuable wildlife habitat as part of the Unique and Nationally Significant Wildlife Ecosystems Program.

- The Department of Conservation and Nature Preserves Commission will inform local agencies of the locations of privately owned unprotected natural areas within their boundaries and urge them to buy these properties.

*See page 32 for further information on the use of LAWCON funds.

- The Department of Conservation will inform federal management agencies of the locations of privately owned natural areas in their jurisdiction and urge these federal agencies to acquire and manage the sites.

Uses of Land

Situation: Intensive use of land in Illinois contributes to the continual destruction of natural communities, endangered species habitat, and other types of natural areas. Siltation and pollution are additional problems resulting from intensive land use. Pressures upon Illinois' remaining natural areas are increasing, and land previously considered unprofitable now becomes vulnerable to development. Changing economics and land use practices mean that land formerly of marginal value for crops is being farmed, forests are being cleared, wetlands are being drained and filled, and land around cities is being lost to development. Over 75 percent of Illinois' land is devoted to agriculture, 6 percent is in urban development, and only 5 percent is in public ownership.

Objective: To expand existing programs and to develop new programs that will give long-term legal preservation to Illinois' natural areas.

Actions: • The Endangered Species Protection Board and Department of Conservation will seek legislation to authorize the designation and protection of critical habitat for state endangered and threatened species.

- The Department of Conservation and Nature Preserves Commission will seek legislation to create a state register that provides legal protection for registered natural areas.

- The Department of Conservation and Nature Preserves Commission will urge government agencies that own high quality natural areas to dedicate them as Illinois nature preserves where appropriate.

Objective: To prevent the degradation and to improve the quality of Illinois' streams.

Actions: • The Department of Conservation will inventory Illinois' streams, investigate water quality laws, and seek legislation if appropriate to ensure the preservation of streams through a system of protected streams or

• The Department of Conservation will recommend the designation of qualifying streams to the National Wild and Scenic Rivers Act.

- The Department of Conservation will urge full implementation of the 208 Clean Water Plan for Illinois to control sources of pollution.

- The Department of Conservation and Nature Preserves Commission will urge the Environmental Protection Agency to classify the highest quality streams, identified through the Natural Areas Inventory, as the streams meriting the highest level of protection under the 208 program.

- The Department of Conservation will urge Illinois landowners to practice wise stewardship to reduce erosion and consequent siltation of streams and will provide technical services to landowners.

- The Department of Conservation will work with the Department of Agriculture to guide the development of erosion control plans.

Public Awareness

Situation: Over the past decade, public concern has grown for preserving remaining examples of Illinois' native landscape. There is a need to nurture this concern and to direct the public interest in preserving natural areas. Environmental education and interpretive programs must be increased to build support and expand understanding of the values and uses of natural areas and the necessity for immediate action. Governor Thompson, in his budget message of March 5, 1980, pointed out the need for enhancing the environment and setting aside lands in their natural state. Support for setting aside natural areas must be strengthened in the Illinois General Assembly and among the public.

Objective: To expand public awareness of the need for preserving Illinois' few remaining natural areas and to build support for preservation programs.

Actions: • The Department of Conservation and Nature Preserves Commission will expand their role in informing the public about Illinois' natural areas and associated preservation and protection programs.

- The Nature Preserves Commission and Department of Conservation will sponsor periodic conferences to involve citizens in the preservation, protection, and interpretation of Illinois' natural heritage.

- The Department of Conservation will distribute *The Illinois Natural Areas Plan: To Preserve and Protect Our Heritage* throughout the state to tell citizens and government officials about Illinois' natural areas and the actions needed to protect them.

- The Department of Conservation and Nature Preserves Commission will develop educational materials, such as slide shows and publications, and will provide opportunities for the public to visit and learn about Illinois' natural areas.

- The Endangered Species Protection Board, Department of Conservation, and Nature Preserves Commission, in cooperation with the Illinois Office of Education, will develop materials on natural heritage and distribute them to teachers.

- The Department of Conservation and Endangered Species Protection Board will publish an educational booklet to accompany the endangered species poster "These Precious Few."

- The Department of Conservation and Endangered Species Protection Board will develop a newsletter to inform citizens about Illinois' prairie chicken sanctuaries and to develop public appreciation for these areas.

- The Department of Conservation and Nature Preserves Commission will assist federal and local agencies in providing appropriate facilities and interpretation at selected sites.

- The Nature Preserves Commission will work with landowners to make them more aware of the values of natural areas.

- The Nature Preserves Commission and Department of Conservation will organize volunteer activities and programs and will encourage volunteers to become involved in natural area preservation and protection.

- The Department of Conservation will publicize and seek citizen support for the concepts of the National Heritage Policy Act, which would provide needed federal direction for natural areas preservation programs.

Incentives

Situation: Private landowners lack adequate incentives to protect natural areas on their property. Increasing property taxes and inheritance taxes coupled with increasing land values often force owners to sell the land and its resources even though they would prefer to keep them intact. Financial incentives such as tax relief programs would help to prevent landowners from destroying natural areas for economic reasons. Other needed measures include a program of public recognition for individuals who protect the natural areas in their ownership. Without these and other incentives, more and more unique resources are likely to be destroyed.

Objective: To develop financial and recognition incentives for private landowners to protect the natural character of their property.

Actions: • The Nature Preserves Commission will work on an individual basis with willing landowners to determine the best way to preserve and protect the land while providing maximum benefit to the landowner.

- The Department of Conservation and Nature Preserves Commission will establish and administer an Illinois Natural Heritage Landmark Program to recognize landowners who voluntarily protect the natural areas on their property.

- The Nature Preserves Commission will seek legislation to create tax incentives for landowners who protect their natural areas.

National Direction

Situation: No unified and comprehensive federal policy exists for preserving and protecting natural areas. As a result, conflicts may arise between natural areas preservation and other programs for use of federal land. Policy on cooperation with state programs varies from one agency to another. With no coordinated national direction, federal agencies use a variety of programs to protect natural areas, each program operated independently of the others.

Objective: To establish federal policy and direction for the preservation of natural areas.

Action: • The Department of Conservation and Nature Preserves Commission will seek passage of federal legislation to create national policy and direction for natural heritage preservation, encourage state and federal agencies to cooperate, establish programs compatible among the states, and establish a national register of natural areas to recognize and protect areas of national significance.

Objective: To protect natural areas on federal property by designating and managing them through existing administrative programs.

Actions: • The Department of Conservation and Nature Preserves Commission will nominate areas and review proposals for potential National Natural Landmarks.

- The Department of Conservation and Nature Preserves Commission will urge federal landowners to establish Research Natural Areas, Special Interest Areas, and other administrative classifications that provide protected status.

- The Department of Conservation will urge federal agencies to recommend areas to Congress for inclusion in the National Wilderness Preservation System.

Cooperation

Situation: Increased cooperation is needed between all agencies, organizations, and individuals who own, manage, or are eligible to acquire natural areas in Illinois. Cooperation would reduce conflict between programs, ensure that limited financial resources are spent effectively, and minimize duplication and competition in preservation efforts.

Objective: To develop stronger cooperative ties among federal, state, local, and private interests for protecting natural areas.

Actions: • The Department of Conservation will use the natural heritage committee of the Panel of Advisors for the Statewide Comprehensive Outdoor Recreation Plan (SCORP) as a communication link between agencies and organizations with responsibilities for natural areas and as a review body for state proposals and actions.

- The Nature Preserves Commission and Department of Conservation will cooperate with private organizations in negotiating bargain sales and other charitable donations that benefit both the seller and the receiving agency.

- The Department of Conservation will cooperate with and encourage private organizations in their efforts to acquire lands on the market for later resale to a public agency.

- The Department of Conservation will review and comment on permits and environmental impact statements to minimize harm to natural areas.

- The Department of Conservation and Nature Preserves Commission will seek to improve cooperative preservation efforts by advising public agencies, planning commissions, and zoning boards about the location and significance of natural areas.

Management

Situation: Many natural areas, including dedicated nature preserves, are declining in quality because they are not properly managed. Management of vegetation, control of foreign species, and management of visitors are important concerns, regardless of ownership and the status of the area. Additional information is necessary to determine the best techniques for managing certain types of natural areas and habitats for endangered species.

Objective: To manage Illinois' natural areas properly to ensure their protection and perpetuation.

Actions: • The Department of Conservation and Nature Preserves Commission will carry out proper management practices on natural areas.

Changing economics and intensive land use patterns contribute to the destruction of natural areas.

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- The Department of Conservation and Nature Preserves Commission will encourage federal agencies owning natural areas to designate these areas in management plans in a manner that will ensure their protection.

- The Department of Conservation and Nature Preserves Commission will encourage local agencies and other state agencies to designate natural areas in management and use plans.

- The Department of Conservation, Endangered Species Protection Board, and Nature Preserves Commission will develop a program of research into the maintenance and restoration of natural communities and the ecology of endangered and threatened species as a management guide.

- The Endangered Species Protection Board will establish technical advisory committees to identify the most critical needs for the protection and management of endangered and threatened species.

- The Nature Preserves Commission, Department of Conservation, and Endangered Species Protection Board will continue to promote sound planning by maintaining up-to-date information on natural areas and occurrences of endangered and threatened species.

Priorities

The most critical need at the present time is to acquire and protect those unreserved areas identified in the Illinois Natural Areas Inventory. In response to this need, an initial proposal for land acquisition by the Department of Conservation has been submitted to the Illinois General Assembly for approval. First priority will be the acquisition of those areas most seriously threatened—high quality natural communities, endangered species habitats, aquatic areas, and unique natural areas—with less emphasis on geologic sites, which are generally less vulnerable to disturbance. Priority will also be given to features that are not already represented in a preserved or protected site, and to areas that are located in parts of the state that have the fewest preserved natural features (see Preservation Status and Needs, Chapter 4). Larger, more diverse, and more easily managed areas will be chosen where possible, but areas with very rare features will receive high priority regardless of size or ease of management.

Fire is an important part of the ecology of prairies because it stimulates seed production and controls woody vegetation.

There is not enough money to buy all of the most significant natural areas, and many are in private ownership; thus, expansion of the landowner contact program rates high priority. This program is aimed at securing preservation and protection of land through donations, conservation easements, nature preserve dedications, bargain sales, and other alternatives to preservation by purchase. Its goal is to achieve the greatest amount of protection consistent with a landowner's desire. The landowner contact program is conducted by the Nature Preserves Commission and Natural Land Institute in close cooperation with The Nature Conservancy.

Working with local open space agencies and dedicating nature preserves on public land will continue to receive major attention. Establishment of federal Research Natural Areas and other administrative designations will be sought when nature preserve dedication is not possible.

Preservation and research efforts for endangered and threatened species will focus on the plants and animals in greatest danger in Illinois and those species that the state has a major role in protecting. An example of the latter is the bald eagle, which winters in large concentrations in Illinois. Research to guide management and protection of a species will be a high priority of the endangered species program.

All available means will be used to monitor and regulate changes of land use on natural areas and adjoining lands, and new tools will be developed. In cooperation with other state agencies, special attention will be given to protecting and improving the water quality of outstanding aquatic areas identified in the Illinois Natural Areas Inventory.

Greater effort will be made to inform the public about the state's natural heritage program and to increase public awareness of the values and uses of natural areas. This will be achieved through cooperation with schools and, where appropriate, through on-site interpretive programs.

Management programs are important and will increase as more areas are preserved. New management techniques will be sought to increase efficiency, and research into the management needs of natural areas and endangered species habitats will be expanded.

More efforts will be made to work with other agencies and private landowners on preservation, management, and protection of natural areas. Passage of laws to clarify the role of federal landholding agencies in the natural heritage program is a high priority. The Statewide Comprehensive Outdoor Recreation Plan Panel of Advisors will be important in fostering cooperation among government agencies and citizen groups.

The Department of Conservation, Nature Preserves Commission, and Endangered Species Protection Board bear the major responsibility for the natural heritage program in Illinois. They recognize the importance of all the problems identified in this chapter and intend to carry out the actions listed.



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Chapter 3: Management and Protection

The long-term preservation of natural areas and endangered species requires continual management and protection. Acquisition, nature preserve dedication, or any other protected status does not ensure long-term preservation in the absence of proper management. The overriding objectives of management and protection for most natural areas are to prevent unnatural disturbances and to restore natural conditions to the extent possible.

Drastic changes in the landscape and environment have affected all natural lands in Illinois. Habitat destruction, overcollecting, pesticides, pollution, and siltation have altered plant and animal interrelationships everywhere and have led to local extinctions.

Many natural areas and endangered species habitats exist as isolated islands surrounded by farmland or urban development. Without surrounding tracts of wildland to provide opportunities for species to migrate, the chance for species to reproduce and recolonize areas after disturbance is very limited.

Fires no longer sweep over vast expanses of Illinois and play the role they once did in maintaining the prairie and preventing the encroachment of woody vegetation. The scattered remnants of prairie remaining today are not subject to the natural occurrences of the past. As a result, unnatural changes in vegetation are occurring in prairies and other natural communities.

Many natural areas could be restored to higher quality and could more accurately reflect Illinois' former natural character. Restoration of natural conditions is important in preserving Illinois' natural diversity and preventing further degradation of the areas. Removal of invading species and reintroduction of natural processes require careful planning, trained staff, and proper equipment.

Foreign species have an adverse impact on natural communities. For example, starlings and pheasants compete with native birds for nesting sites. Introduced plants such as sweet clover, buckthorn, Japanese honeysuckle, and purple loosestrife seriously degrade natural communities. Control of nonnative species often is difficult without damaging natural conditions. Special techniques are needed to remove these species and prevent reinvasion.

Information to guide management of endangered species is often sparse or even absent. Management may include maintaining present conditions or manipulating habitat to provide special breeding or feeding requirements. The life history, biology, and population trends of endangered species must be monitored and understood to determine proper management.

Collecting of rare or showy species for classroom use, transplanting, or sale continues to be a problem. Education and enforcement of rules and laws are needed to reduce this activity. Research studies must be closely monitored to ensure that collecting or disturbance has no lasting impact on natural conditions.

The reintroduction of native plants and animals, especially endangered and threatened species, into natural areas is being given increasing consideration. It may be desirable to reintroduce species where they once occurred. Guidelines are needed for determining methods of reintroduction, source of stock, and when reintroductions are appropriate.

Public visitation to nature preserves and other public natural areas for activities such as nature study, hiking, photography, birding, and, in a few cases, canoeing are generally com-

Objectives of management and protection are to prevent unnatural disturbances and to restore natural conditions.

patible with protection of natural areas. Trails, interpretive facilities, and parking are necessary at many sites. Use of areas with sensitive wildlife species such as eagles must be controlled during certain seasons. Protection of the natural features is the primary factor determining the allowable public use of a given area. The kind and amount of use depend on an area's size and durability. Use must be monitored regularly to ensure that the permitted activities are compatible with the site.

Trespass and abuse are serious problems at many sites. Off-the-road vehicles, overuse, and trampling can quickly destroy vegetation, cause erosion, damage geologic features, and harass wildlife. Continual surveillance is necessary to identify and control these problems. Controlling adverse uses requires barriers, fences, signs, and patrol. The public needs more education about the values and proper uses of natural areas and endangered species habitats through on-site interpretive programs and other means.

Air pollution, water pollution, radiation, and siltation can have serious impacts on a natural area. Some of the consequences are still unknown. Research and management programs to monitor and control pollution, soil erosion, and radiation emissions are vital in preventing damage. Efforts to control and improve environmental quality in general will aid in the long-term preservation of natural areas.

The use of adjoining land can seriously affect conditions of a natural area. Little can be done to govern the use of adjacent property except for enforcement of zoning ordinances and environmental regulations. There are few ways to control use of unprotected natural areas or habitats of endangered species other than the zoning review and hearing processes. Continual monitoring of land use and its potential impact is important. New tools are needed to control changes in land use that threaten natural areas and endangered species.

Limited staff and funds make management and protection difficult. Volunteer workers can contribute significantly to preserving and protecting natural areas through management work, surveillance, and monitoring plant and animal populations. Volunteer programs can provide considerable labor and other assistance and can stimulate the interest of many persons in preserving natural areas.



Chapter 4: Preservation Status and Needs

This chapter discusses the ownership, owner attitudes, preservation status, and preservation needs of Illinois' natural areas. Findings are based on the results and conclusions of the Illinois Natural Areas Inventory and follow-up programs to contact owners of inventoried sites. Some observations on trends come from the experiences of natural area biologists.

Ownership Status of Natural Areas

Natural areas in Illinois are owned by a broad spectrum of individuals, public agencies, private organizations, and corporations (Table I). The owners include colleges, universities, churches, cemetery associations, utilities, railroad companies, sanitary and drainage districts, airport and port authorities, soil and water conservation districts, cities, townships, counties, schools, private individuals, industries, and federal, state, and local governments.

The total acreage of natural areas identified by the Natural Areas Inventory is about 197,700 acres. Four hundred seventy-four areas, about 38 percent of the total acreage, are owned by private individuals. Federal agencies own the next greatest acreage of natural areas, 26 percent of the total.

There are 123 natural areas in state ownership totaling 30,242 acres, or 15 percent of the total natural area acreage. The Department of Conservation owns most, though not all, of these areas, and owns more natural areas than any other agency (Table II).

The remainder of the natural area acreage is divided among local open space agencies (8 percent), municipalities and other special taxing districts (3 percent), educational institutions (3 percent), charitable groups (2 percent), and corporations (4 percent).

Table II. Major Owners of Natural Areas*

Owner	Acreage	Number of Areas
Department of Conservation	29,865	109
U.S. Army Corps of Engineers	23,774	7
U.S. Forest Service	14,588	81
U.S. Fish and Wildlife Service	13,421	21
Cook County Forest Preserve District	6,769	23
Chicago Port Authority	3,145	1
University of Illinois	1,820	10
DuPage County Forest Preserve District	1,681	7
Columbia Quarry Corporation	1,577	8
The Morton Arboretum	1,421	1
The Nature Conservancy	1,332	19
McHenry County Conservation District	1,321	10
Macon County Conservation District	1,198	3
Westvaco Corporation	1,133	5
Lake County Forest Preserve District	1,018	7
Lewis Estate	803	5
Principia College	607	2
Metropolitan Sanitary District of Greater Chicago	560	5
Rockford Park District	496	4
Douglas Hart Foundation	433	1

* includes all categories of natural areas

The picture is somewhat different when one considers only the acreage of high quality, relatively undisturbed natural communities. Private individuals own about 46 percent of the acreage of these especially important areas. State government owns 22 percent, and federal agencies own 15 percent. The remainder is distributed among local open space agencies (6 percent), educational institutions (3 percent), corporations (4 percent), charitable groups (3 percent), and municipalities and other special districts (1 percent). These differences in ownership are illustrated in figures 1 and 2.

Among the federal agencies with natural areas in Illinois are the Forest Service, Fish and Wildlife Service, Army, and Army Corps of Engineers. State agencies owning natural areas are the Department of Conservation and Department of Transportation. Local open space agencies include forest preserve districts, park districts, and conservation districts. Of these local agencies, the Cook County Forest Preserve District owns the most areas.

Municipal and other special taxing districts include municipalities, sanitary districts, drainage districts, port authorities, and abandoned cemeteries. Few of these districts own more than one natural area. Among educational institutions, the University of Illinois owns the most areas.

The charitable group owning the most natural areas is The Nature Conservancy. Corporations include public utilities, railroads, and private companies. Many of the areas under corporate ownership are prairie remnants on railroad rights-of-way.

Landowner Contacts

Because the Natural Areas Inventory revealed that nearly four out of every ten acres of natural areas are privately owned, and because economic pressure is increasing upon landowners, a program was initiated to talk directly with owners about natural areas preservation. In 1979 the Natural Land Institute received a grant from The Joyce Foundation to assist the Nature Preserves Commission in contacting private owners to tell them about the significance of their land and to determine each owner's interest in preservation. Contacts have involved personal interviews and follow-up discussions of preservation alternatives.

The Nature Conservancy cooperated in the program and was responsible for contacting landowners in Kane, DuPage, DeKalb, and McHenry counties. Initially only owners of high quality natural communities and relict habitats were contacted, but the program will eventually include the owners of other types of natural areas.

The landowner contact program is being carried out in close cooperation with the Department of Conservation, U.S. Forest Service, Soil Conservation Service, and local open space and planning agencies.

Private landowners have been contacted to tell them about the significance of their land and to determine their interest in preservation.

Table I. Ownership by Category of Natural Area

	High Quality Natural Communities		Habitat for Endangered Species		Habitat for Relict Species		Outstanding Geologic Areas		Nature Preserves and Natural Study Areas		Unique Natural Areas		Outstanding Aquatic Areas		Total ² (All Categories)	
	Areas	Acres	Areas	Acres	Areas	Acres	Areas	Acres	Areas	Acres	Areas	Acres	Areas	Acres	Areas	Acres
Total ¹	(610)	105,540	(269)	118,490	(39)	8,498	(160)	16,707	(251)	77,984	(29)	24,583	(17)	*	(1,089)	197,681
United States	(45)	15,953	(44)	40,344	(11)	2,303	(12)	6,138	(26)	9,240	(5)	1,411	(5)	*	(108)	52,286
State of Illinois	(68)	22,771	(59)	23,911	(10)	5,267	(16)	4,248	(47)	18,305	(3)	397	(11)	*	(123)	30,242
Local Open Space																
Agencies	(52)	5,830	(20)	3,197	(0)	0	(3)	156	(57)	12,098	(0)	0	(2)	*	(96)	15,534
Municipal & Other																
Special Districts	(36)	1,300	(14)	1,254	(2)	161	(16)	221	(10)	923	(1)	3,145	(1)	*	(46)	5,529
Educational Institutions	(15)	3,407	(5)	534	(0)	0	(2)	267	(79)	6,693	(0)	0	(1)	*	(84)	6,905
Charitable Groups	(21)	2,943	(8)	818	(2)	147	(2)	704	(38)	4,932	(3)	225	(1)	*	(46)	4,401
Private Individuals	(314)	49,042	(106)	44,410	(13)	599	(83)	4,803	(8)	25,729	(15)	18,719	(14)	*	(474)	75,224
Corporations	(85)	4,294	(28)	4,022	(1)	21	(25)	170	(2)	64	(4)	686	(0)	*	(131)	7,560

¹Acreage of streams was not measured.
²Within any category of natural area, the total number of areas does not equal the sum of areas by owner because some areas have more than one owner. For example, the U.S. government and a private landowner may each own part of one area. For these jointly owned areas, however, acreage is distinctly specified for each owner.

²Totals (all categories) are not the sum of the individual categories of natural areas because any given area may have more than one significant feature and may be listed under more than one category. For example, a holding of a corporation may be an example of a high quality natural community and also a habitat for an endangered species and may be counted under more than one heading.

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Attitudes and Trends

Within the next few years, decisions made by private landowners will determine the fate of many of the remaining natural areas in Illinois. Changes in ownership, escalating land values, taxes, and development pressures will increasingly jeopardize these areas. The opportunity to preserve many natural areas is short-lived.

One important trend is that previously "worthless" land is now becoming valuable due to changing economics and land use patterns. Hill prairies, too steep to farm, are becoming prime home sites near large cities. Wetlands, once too expensive or difficult to drain, are being drained and farmed as crop prices and land values increase. What was once considered wasteland is being acquired for second homes and recreation developments. All land in Illinois is usable for some purpose under current economic conditions.

Demand for coal, oil, and other minerals directly threatens many areas. Twenty-four natural areas lie over or near strippable coal reserves, and many of these are being acquired by coal mining companies. Once the coal rights are sold, lands are often cleared of all the marketable timber well in advance of mining.

Nearly four out of every ten acres of natural areas are privately owned. About 40 percent of the private owners of high quality natural communities are over 60 years old.

Sand, gravel, and limestone quarrying threatens many hill prairies and glades.

Prices now being paid for high-grade timber, especially for shipment overseas, are making it more and more profitable for landowners to sell wooded natural areas. In some cases

the timber is worth more than the land. Only owners with a strong emotional attachment to the forest will be likely to preserve the land when such high prices are offered for the timber.

Selling land to pay taxes is another unfortunate trend. At least half of the natural areas in private ownership have been in the same family for more than one generation, many for over 100 years. Inheritance and property taxes are making it hard for these families to continue to protect their holdings. Selling the land or its resources often is the only way to pay inheritance taxes.

What Will Happen to the Land?

About 40 percent of the private owners of high quality natural communities are over 60 years old. This indicates the urgency of preserving these areas before the land is passed on to heirs who may not share the same respect and love for the land or who must sell it to settle the estate.

Property taxes are a constant concern of individuals and corporations. Even though most natural land in rural areas is already taxed at a low rate, the owners see that they are paying more and more taxes on land which provides

no income in return. Resistance to loss of property tax revenues by local governments hinders tax relief for owners of natural areas willing to agree to preservation.

Many landowners have indicated that they do not intend to change or disturb their land in their lifetime. Some are willing to discuss methods to ensure permanent preservation, which range from outright donation of land to dedication as a nature preserve while they retain ownership. Other landowners have declared that they want no government interference in their affairs. Although they may never exploit their land, owners who view it as "money in the bank" will probably not cooperate in any way that might restrict its future use or sale.

Government agencies that own natural areas acquired for other purposes are reluctant to commit the land to permanent preservation. Conflicting demands for all public lands create pressure on such agencies to change their use. Most agencies are willing to protect areas on a short-term or flexible basis.

Extent of Preserved Natural Areas

Natural areas are considered "preserved" if they are dedicated as Illinois nature preserves or are designated and managed as natural areas by a public agency or private organization. An example of the latter is a natural area zone designated in a Department of Conservation master management plan.

Figure 1: Ownership of All Categories of Natural Areas (percent of total acreage)

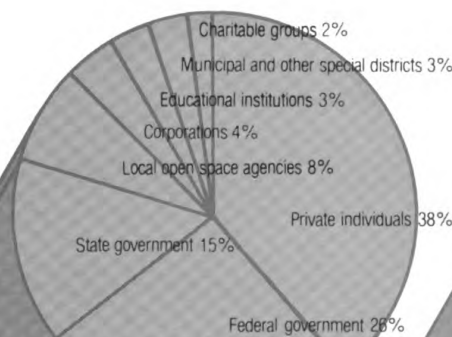


Figure 2: Ownership of High Quality Natural Communities (percent of total acreage)

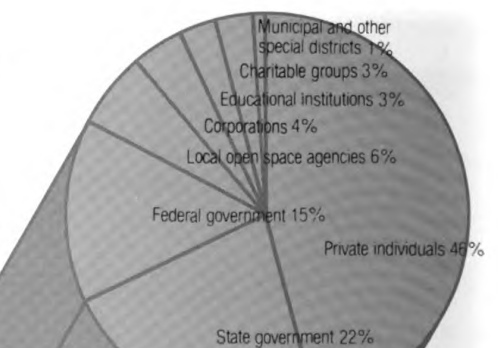
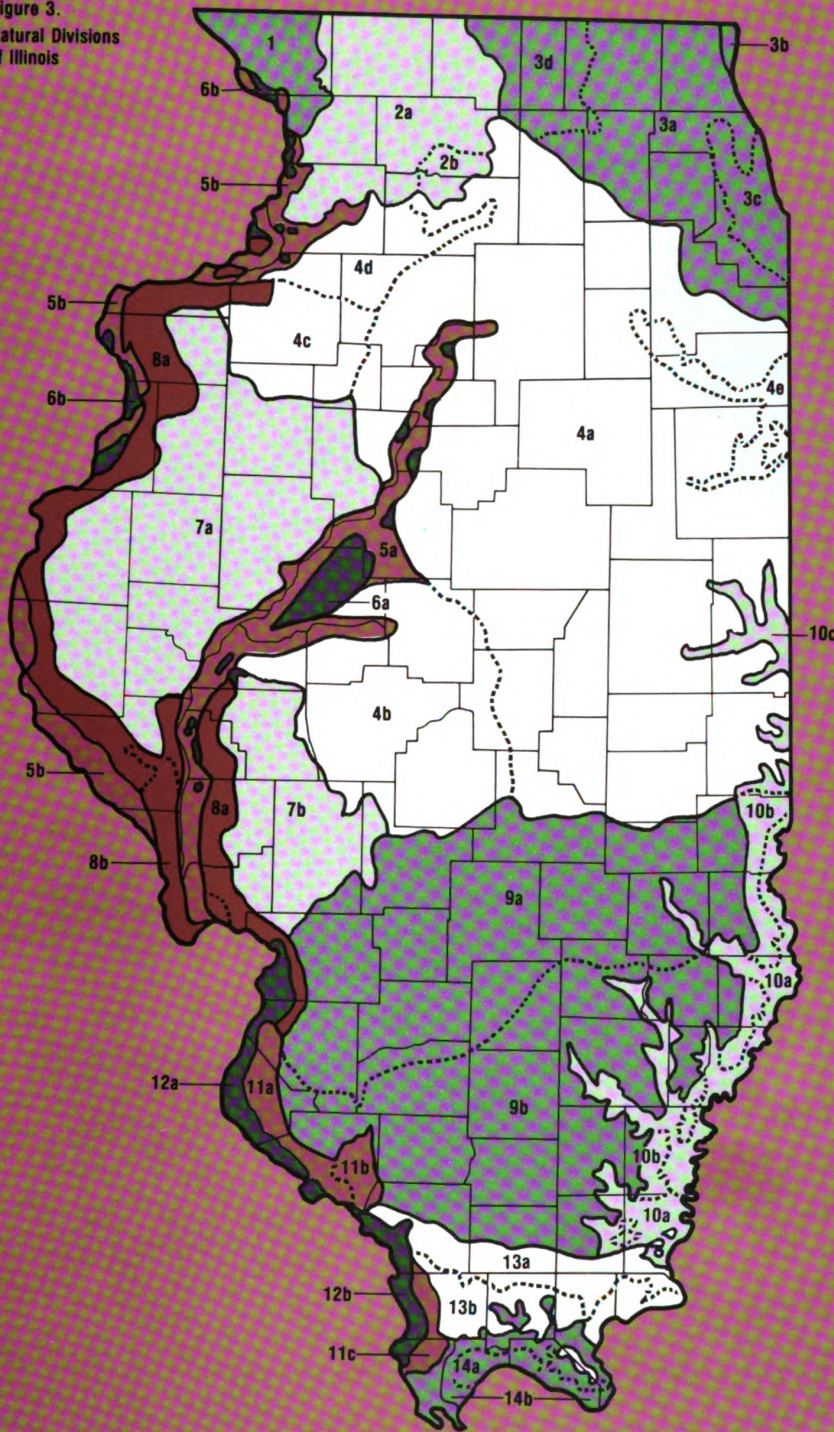


Figure 3.
Natural Divisions
of Illinois



- 1 Wisconsin Driftless Division**
- 2 Rock River Hill Country Division**
 - a Freeport Section
 - b Oregon Section
- 3 Northeastern Morainal Division**
 - a Morainal Section
 - b Lake Michigan Dunes Section
 - c Chicago Lake Plain Section
 - d Winnebago Section
- 4 Grand Prairie Division**
 - a Grand Prairie Section
 - b Springfield Section
 - c Western Section
 - d Green River Lowland Section
 - e Kankakee Sand Area Section
- 5 Upper Mississippi River and Illinois River Bottomlands Division**
 - a Illinois River Section
 - b Mississippi River Section
- 6 Illinois River and Mississippi River Sand Areas Division**
 - a Illinois River Section
 - b Mississippi River Section
- 7 Western Forest-Prairie Division**
 - a Galesburg Section
 - b Carlinville Section
- 8 Middle Mississippi Border Division**
 - a Glaciated Section
 - b Driftless Section
- 9 Southern Till Plain Divisions**
 - a Effingham Plain Section
 - b Mt. Vernon Hill Country Section
- 10 Wabash Border Division**
 - a Bottomlands Section
 - b Southern Uplands Section
 - c Vermilion River Section
- 11 Ozark Division**
 - a Northern Section
 - b Central Section
 - c Southern Section
- 12 Lower Mississippi River Bottomlands Division**
 - a Northern Section
 - b Southern Section
- 13 Shawnee Hills Division**
 - a Greater Shawnee Hills Section
 - b Lesser Shawnee Hills Section
- 14 Coastal Plain Division**
 - a Cretaceous Hills Section
 - b Bottomlands Section

This map is based on the configurations developed by John E. Schwegman

Overleaf:

This magnificent hill prairie—the largest of its kind in Illinois—is for the most part unreserved.

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On the other hand, "protection" denotes only temporary safeguards for natural areas. Land owned by a public agency but not officially recognized as a natural area in any management plan is considered protected but not preserved. Protected areas may include those sites safeguarded by a private landowner at present but subject to a change in status with a change in ownership.

Preservation of Areas

Of the 1,089 natural areas recognized by the Illinois Natural Areas Inventory, only 241—about one out of five—are preserved.* These areas contain about 43,300 preserved acres, or 22 percent of the state's total natural area acreage. Of these 241 areas, only 76 are dedicated as Illinois nature preserves, the greatest degree of preservation possible in the state.

The 241 preserved areas are not of uniformly high quality. One hundred thirty of these areas were included in the Inventory only because they already had preserved status and use—in many cases, as school natural areas. Only the remaining 111 preserved areas have outstanding biological or geological features as well as special status.



Of the 1,089 natural areas recognized by the Illinois Natural Areas Inventory, only 241—about one out of five—are preserved.



Eight hundred forty-eight natural areas — 78 percent of all the known natural areas in the state — remain unpreserved. The extent of unpreserved natural areas totals nearly 154,400 acres.

The 241 preserved areas occur in 73 of Illinois' 102 counties, which means that 29 counties have no preserved natural areas. Preserved areas are found in 13 of the 14 natural divisions of Illinois and 27 of the 34 natural sections. Figure 3 illustrates the natural divisions of Illinois.

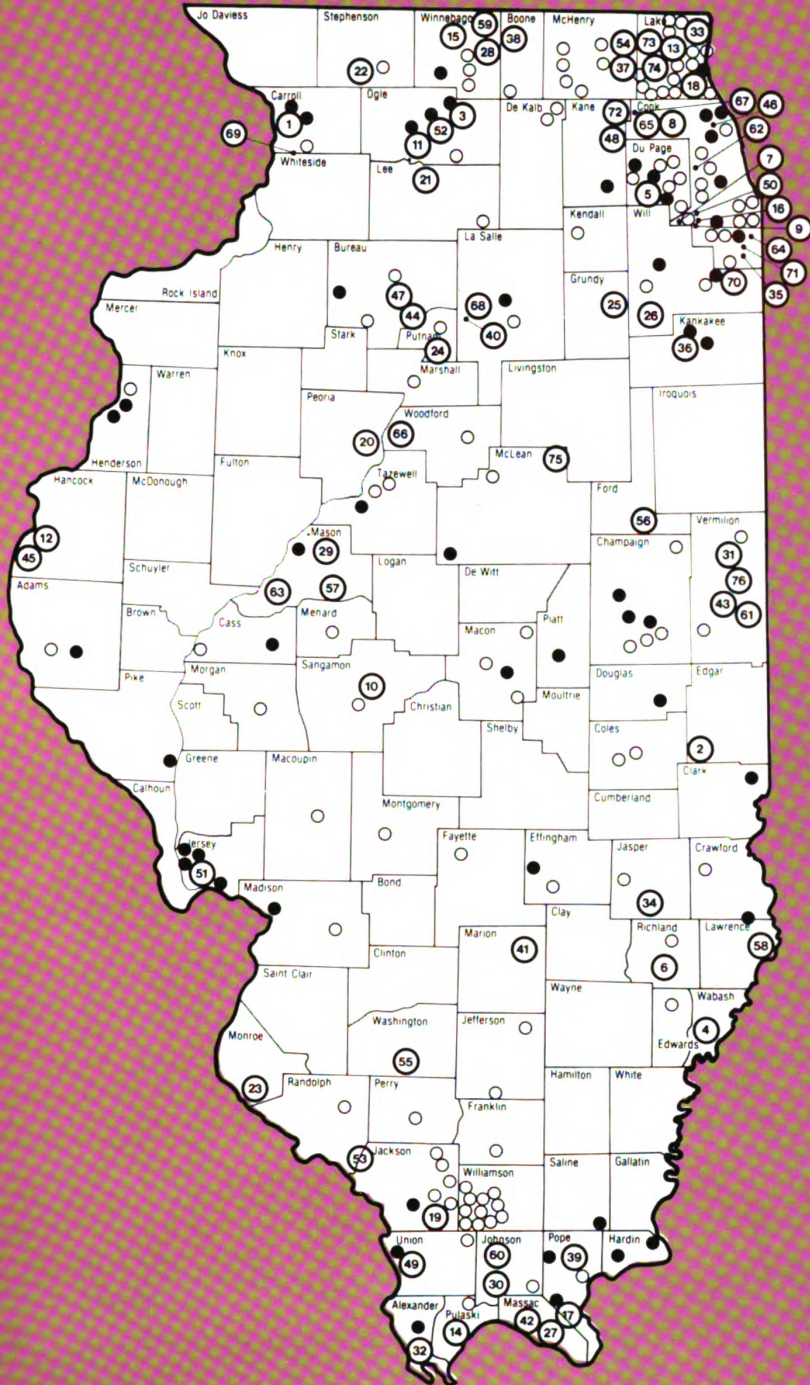
Figure 4 shows that preserved areas are concentrated in the northeastern and extreme southern parts of Illinois. Table III shows how much land is preserved for each category of natural area.

*For 56 areas, only part of the acreage is preserved.

Figure 4. Preserved Natural Areas in Illinois

- Preserved natural area with significant biological or geological features
- Preserved natural area without significant biological or geological features
- ① Dedicated Nature Preserve

Nature Preserve	County	Acres
1 Ayers Sand Prairie	Carroll	109
2 Baber Woods	Edgar	59
3 Beach Cemetery	Ogle	2.3
4 Beall Woods	Wabash	329
5 Belmont Prairie	DuPage	10.4
6 Big Creek Memorial Woods	Richland	40
7 Black Partridge Woods	Cook	80
8 Busse Forest	Cook	440
9 Cap Sauers Holdings	Cook	1,520
10 Carpenter Park	Sangamon	322
11 Castle Rock	Ogle	589
12 Cedar Glen	Hancock	145
13 Cedar Lake Bog	Lake	27.5
14 Chestnut Hills	Pulaski	212
15 Colored Sands Bluff	Winnebago	44
16 Cranberry Slough	Cook	372
17 Cretaceous Hills	Pope	240
18 Edward L. Ryerson	Lake	278.8
19 Fern Rocks	Jackson	170
20 Forest Park	Peoria	90
21 Franklin Creek	Lee	96
22 Freeport Prairie	Stephenson	5
23 Fults Hill Prairie	Monroe	498
24 George S. Park	Putnam	80
25 Goose Lake Prairie	Grundy	1,537.3
26 Grant Creek	Will	78
27 Halesia	Massac	14.7
28 Harlem Hills	Winnebago	53
29 Henry Allan Gleason	Mason	110
30 Heron Pond-Little Black Slough	Johnson	1,861
31 Horseshoe Bottom	Vermilion	51.8
32 Horseshoe Lake	Alexander	492
33 Illinois Beach	Lake	829
34 Jasper County Prairie Chicken	Jasper	407
35 Jurgenson Woods	Cook	120
36 Kankakee River	Kankakee	139
37 Kettle Moraine	McHenry	242
38 Kinnikinnick Creek	Boone	57
39 Lusk Creek Canyon	Pope	125
40 Margery C. Carlson	LaSalle	110
41 Marion County Prairie Chicken	Marion	160
42 Mermet Swamp	Massac	43
43 Middlefork Woods	Vermilion	75
44 Miller-Anderson Woods	Bureau, Putnam	258
45 Mississippi River Sand Hills	Hancock	45
46 Morton Grove Prairie	Cook	1
47 Myer Woods	Bureau	20
48 Norris Woods	Kane	62
49 Ozark Hills	Union	222
50 Paw Paw Woods	Cook	105
51 Pere Marquette	Jersey	297.4
52 Pine Rock	Ogle	59
53 Piney Creek Ravine	Randolph, Jackson	111
54 Pistakee Bog	McHenry	88
55 Posen Woods	Washington	40
56 Prospect Cemetery Prairie	Ford	5
57 Reavis	Mason	53
58 Robeson Hill	Lawrence	120
59 Rockton	Winnebago	67
60 Round Bluff	Johnson	53
61 Russell M. Duffin	Vermilion	160
62 Salt Creek Woods	Cook	245
63 Sand Prairie-Scrub Oak	Mason	1,460
64 Sand Ridge	Cook	70
65 Shoe Factory Road	Cook	9
66 Spring Bay Fen	Woodford	26.6
67 Spring Lake	Cook	560
68 Starved Rock	LaSalle	582
69 Thompson-Fulton Sand Prairie	Whiteside	37
70 Thorn Creek	Will	368
71 Thornton-Lansing Road	Cook	440
72 Trout Park	Kane	26
73 Volo Bog	Lake	161
74 Wauconda Bog	Lake	67
75 Weston Cemetery Prairie	McLean	5
76 Windfall Prairie	Vermilion	32



Preservation of Natural Features

Preserving Illinois' natural diversity is one of the prime goals of the state's natural heritage program. Progress toward the goal can be measured by the number of different types of natural communities and other significant features that are preserved.

Table IV details the preservation status of the remaining high quality natural communities in Illinois. A column with the estimated number of presettlement communities shows how much has been lost or severely disturbed. Many of the "lost" communities still exist as disturbed stands which may partly recover if preserved and managed.

Thirty-seven percent of the remaining high quality natural community types are preserved (23 percent in the nature preserves system). These include 46 percent of the forest types, 33 percent of the different kinds of prairie and savanna, and 47 percent of the wetland communities. Portions of 3 of the 17 inventoried high quality stream segments and lakes are preserved, but their long-term preservation depends upon maintenance of water quality involving factors outside the preserves. Overall, 4 of the 16 different types of lakes and ponds are preserved. Of the inventoried primary successional communities, 18 percent of the community types are preserved.

Many "lost" natural communities still exist as disturbed stands which may partly recover if preserved and managed.

For natural areas with features other than high quality natural communities, 7 percent of the geological areas, 36 percent of the relict habitats, 27 percent of the endangered species habitats, and 10 percent of the unique natural areas are preserved (Table III). Unlike natural communities which may have several examples to represent each type, all areas with these features are regarded as unique and in need of protection.

Preservation Needs

Although all types of natural areas are important, the greatest need is to preserve the state's remaining examples of high quality natural communities—the basic types of land and water that comprised presettlement Illinois. From the standpoint of geographic distribution, the greatest need for preserved land is in the south-central and western portions of the state. Figure 4 shows that 47 counties—nearly half the counties in Illinois—lack any preservation of high quality natural communities. Six natural sections of the state lack preservation of high quality natural communities or any other significant natural feature (Figure 5). The need is clear to preserve features in these sections to improve geographic distribution and to represent each natural region of the state.

The location of the preserved and unpreserved examples of various natural communities is shown in figures 6, 7, and 8. Figure 6 shows that the greatest need, and the greatest opportunity, to preserve forest types is in the southeastern tip and southwestern and western Illinois. Figure 7 reveals the need and the opportunity to preserve prairies and savannas throughout the state. Figure 8 depicts the scarcity of preserved wetlands except in northeastern and southern Illinois.

To preserve representatives of all the distinct types of natural communities in Illinois would require preservation of 208 more areas.

Table IV shows the need to preserve more high quality natural communities. Eleven of the natural sections of Illinois with high quality forests remaining have none that is preserved. No natural division of the state has all its prairie types preserved. Ten of the natural sections with high quality prairies or savannas have none preserved.

Each of the eight broad categories of natural communities can be further subdivided. For example, "prairies" include wet prairie, dry sand prairie, glacial drift hill prairie and many others. In addition, each natural section of the state has a distinct set of these natural community types. Consequently, to preserve representatives of all the existing and distinct types of natural communities in Illinois would require preservation of 208 more natural areas, containing 38,563 acres. Of these areas, 125 are in private ownership. Thirty-two, including railroad prairies and land owned by utilities, belong to charitable or other quasi-public groups, and 51 are in public ownership (Table V).

The total cost for acquiring the 125 areas in private ownership would be approximately \$21,000,000, based upon average costs for land acquired by the Department of Conservation for recreation and conservation during 1978. At least 10 percent of the land may be donated or protected by the owners in some way; thus, a total of \$19,000,000 would be necessary for state acquisition of high priority natural communities at 1978 prices. The longer the wait, the higher the cost. It is estimated that since 1978 when the Inventory was completed, the price of purchasing these natural areas has escalated 15 percent, bringing the amount of money needed to purchase the 125 areas to \$24,000,000. Because this much money is not available for land acquisition, it is necessary to use all existing programs and tools to protect natural areas. They are discussed in the next chapter.



Table V. Ownership of High Quality Natural Communities with High Priority for Preservation

Ownership Type	Areas	Acres
Private	125	11,178
Quasi-public	32	1,179
Public	51	26,206
Total	208	38,563

Table III. Preservation Status According to Category of Natural Area*

	All Natural Areas (1,089 areas)	High Quality Natural Communities (610 areas)	Habitat For Endangered Species (269 areas)	Habitat For Relict Species (39 areas)	Outstanding Geologic Areas (160 areas)	Nature Preserves and Natural Study Areas (251 areas)	Unique Natural Areas (29 areas)	Outstanding Aquatic Areas (17 areas)
Preserved Areas								
Illinois Nature Preserve	(76) 7%	(50) 8%	(42) 16%	(7) 18%	(5) 3%	(76) 30%	(1) 3%	(3) 18%
Formally designated natural area	(165) 15%	(45) 7%	(31) 11%	(7) 18%	(6) 4%	(130) 52%	(2) 7%	-----
Total Preserved Areas	(241) 22%	(95) 15%	(73) 27%	(14) 36%	(11) 7%	(206) 82%	(3) 10%	(3) 18%

*Some natural areas contain more than one type of significant feature and therefore are counted in more than one column.

Table IV. Preservation Status of Natural Community Types in Illinois

Natural Division' and Section	Presettlement Natural Communities	Extant High Quality Communities	Preserved High Quality Communities	Forests		Prairies and Savannas		Wetlands		Lakes and Ponds		Primary Successional Communities		Caves	
				Pr*	Unpr**	Pr	Unpr	Pr	Unpr	Pr	Unpr	Pr	Unpr	Pr	Unpr
1 Wisconsin Driftless Division	29	3	1	-	-	1	2	-	-	-	-	-	-	-	-
2 Rock River Hill Country Division															
a Freeport Section	38	14	4	1	0	2	6	1	1	0	1	-	2	-	-
b Oregon Section	35	5	3	1	0	0	1	1	1	-	-	1	0	-	-
3 Northeastern Morainal Division															
a Morainal Section	56	37	23	5	2	4	8	12	3	-	-	2	1	-	-
b Lake Michigan Dunes Section	22	15	11	-	-	6	3	3	1	-	-	2	0	-	-
c Chicago Lake Plain Section	39	18	8	1	0	6	6	1	3	-	-	0	1	-	-
d Winnebago Section	37	7	2	-	-	1	3	1	0	0	1	0	1	-	-
4 Grand Prairie Division															
a Grand Prairie Section	42	22	10	6	0	3	9	1	1	-	-	0	1	0	1
b Springfield Section	23	7	3	2	1	1	1	0	1	0	1	-	-	-	-
c Western Section	19	1	0	-	-	0	1	-	-	-	-	-	-	-	-
d Green River Lowland Section	30	3	0	-	-	0	3	-	-	-	-	-	-	-	-
e Kankakee Sand Area Section	31	20	6	0	3	4	7	2	4	-	-	-	-	-	-
5 Upper Mississippi River and Illinois River Bottomlands Division															
a Illinois River Section	13	9	4	2	1	0	2	1	2	1	0	-	-	-	-
b Mississippi River Section	14	9	1	0	2	1	3	0	2	0	1	-	-	-	-
6 Illinois River and Mississippi River Sand Areas Division															
a Illinois River Section	22	10	5	2	0	2	3	1	2	-	-	-	-	-	-
b Mississippi River Section	20	2	1	-	-	1	1	-	-	-	-	-	-	-	-
7 Western Forest-Prairie Division															
a Galesburg Section	28	14	0	0	3	0	6	0	2	-	-	0	3	-	-
b Carlinville Section	25	5	0	0	1	0	1	0	2	0	1	-	-	-	-
8 Middle Mississippi Border Division															
a Glaciated Section	32	10	3	0	2	1	4	-	-	-	-	1	0	1	1
b Driftless Section	28	10	3	0	2	1	0	-	-	1	0	0	5	1	0
9 Southern Till Plain Division															
a Effingham Plain Section	27	15	0	0	6	0	4	0	1	0	1	0	3	-	-
b Mt. Vernon Hill Country Section	26	12	2	0	6	2	0	0	2	0	1	0	1	-	-
10 Wabash Border Division															
a Bottomlands Section	12	5	3	2	0	-	-	1	1	0	1	-	-	-	-
b Southern Uplands Section	18	4	3	3	0	-	-	-	-	-	-	0	1	-	-
c Vermilion River Section	23	7	4	2	0	1	1	1	1	-	-	0	1	-	-
11 Ozark Division															
a Northern Section	26	9	1	0	4	1	0	-	-	-	-	0	3	0	1
b Central Section	25	2	0	-	-	-	-	-	-	-	-	0	2	-	-
c Southern Section	23	10	2	0	2	0	1	1	2	1	1	0	2	-	-
12 Lower Mississippi River Bottomlands Division															
a Northern Section	11	3	1	-	-	1	0	0	1	0	1	-	-	-	-
b Southern Section	22	3	2	-	-	-	-	1	0	1	1	-	-	-	-
13 Shawnee Hills Division															
a Greater Shawnee Hills Section	23	9	1	1	3	0	2	-	-	-	-	0	3	-	-
b Lesser Shawnee Hills Section	23	8	4	3	1	0	1	-	-	-	-	1	1	0	1
14 Coastal Plain Division															
a Cretaceous Hills Section	18	3	0	0	1	-	-	0	1	-	-	0	1	-	-
b Bottomlands Section	13	6	5	3	0	-	-	2	0	0	1	-	-	-	-
Totals	873	317	116	34	40	39	79	30	34	4	12	7	32	2	4

*Preserved Natural Communities
 **Unpreserved Natural Communities
 †See Figure 3

- 1 Wisconsin Driftless Division**
- 2 Rock River Hill Country Division**
 - a Freeport Section
 - b Oregon Section
- 3 Northeastern Morainal Division**
 - a Morainal Section
 - b Lake Michigan Dunes Section
 - c Chicago Lake Plain Section
 - d Winnebago Section

- 4 Grand Prairie Division**
 - a Grand Prairie Section
 - b Springfield Section
 - c Western Section
 - d Green River Lowland Section
 - e Kankakee Sand Area Section
- 5 Upper Mississippi River and Illinois River Bottomlands Division**
 - a Illinois River Section
 - b Mississippi River Section

- 6 Illinois River and Mississippi River Sand Areas Division**
 - a Illinois River Section
 - b Mississippi River Section
- 7 Western Forest-Prairie Division**
 - a Galesburg Section
 - b Carlinville Section

Figure 5. Preservation Status of High Quality Natural Community Types by Natural Divisions and Sections

Percent of Preserved Communities

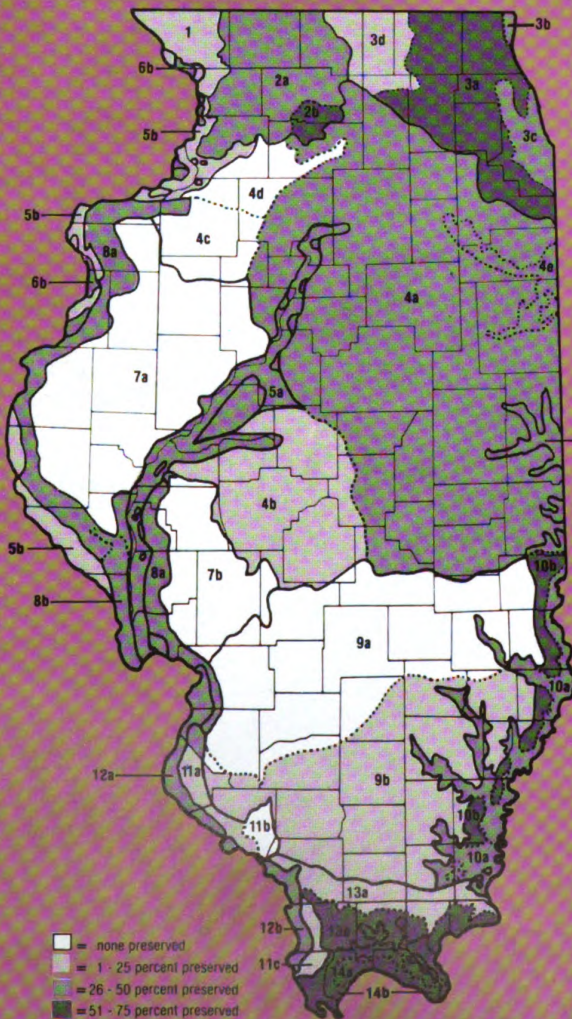
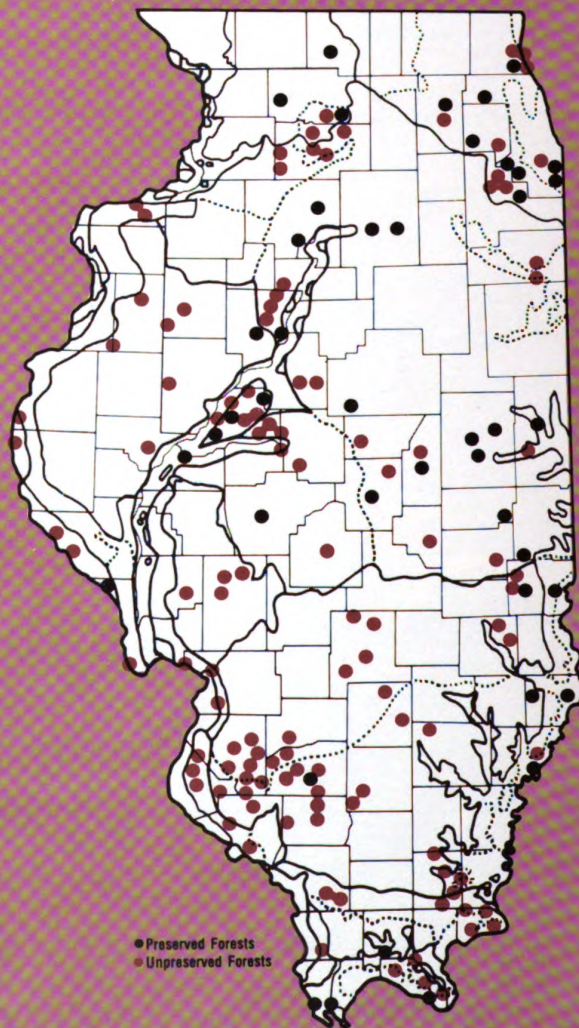


Figure 6. Distribution of Preserved and Unpreserved High Quality Forests in Illinois



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8 Middle Mississippi Border Division

- a Glaciated Section
- b Driftless Section

9 Southern Till Plain Divisions

- a Effingham Plain Section
- b Mt. Vernon Hill Country Section

10 Wabash Border Division

- a Bottomlands Section
- b Southern Uplands Section
- c Vermilion River Section

11 Ozark Division

- a Northern Section
- b Central Section
- c Southern Section

12 Lower Mississippi River Bottomlands Division

- a Northern Section
- b Southern Section

13 Shawnee Hills Division

- a Greater Shawnee Hills Section
- b Lesser Shawnee Hills Section

14 Coastal Plain Division

- a Cretaceous Hills Section
- b Bottomlands Section

Developed by John E. Schwegman

Figure 7. Distribution of Preserved and Unpreserved High Quality Prairies and Savannas in Illinois

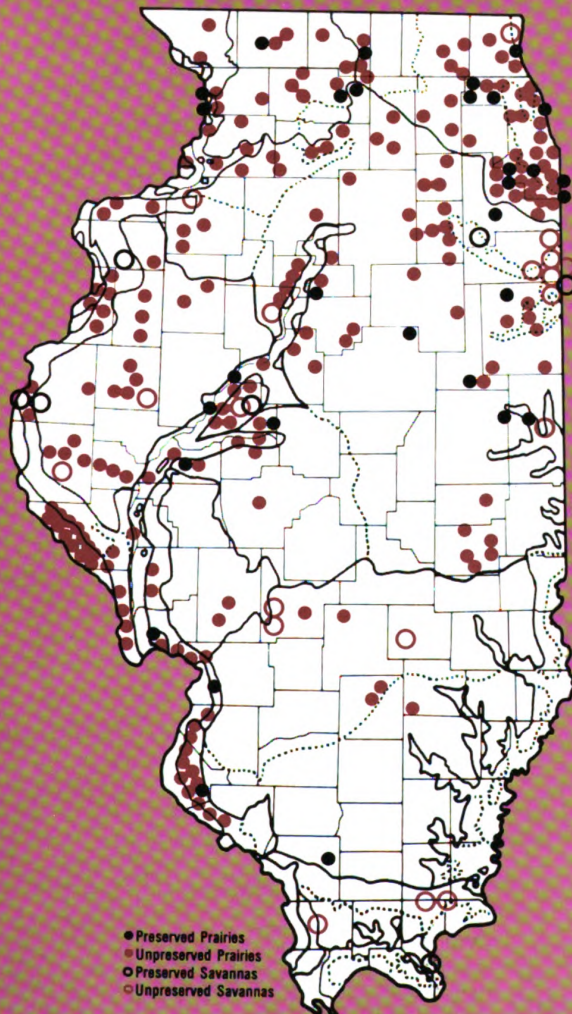
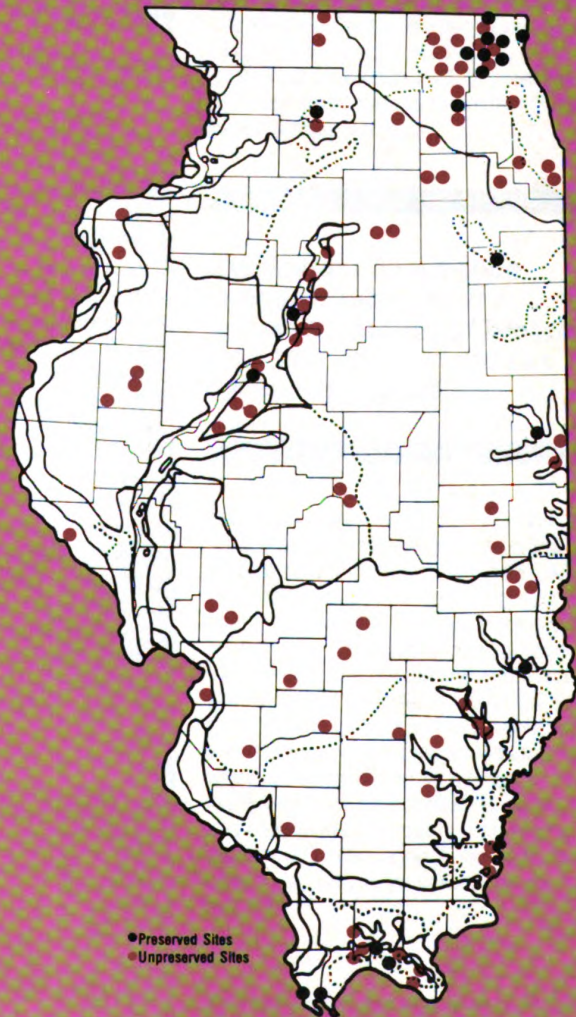


Figure 8. Distribution of Preserved and Unpreserved High Quality Wetlands and Aquatic Sites in Illinois



Chapter 5: Preservation and Protection Programs and Tools

Many programs and tools exist that affect the preservation and protection of natural areas in the state. The mechanisms vary in their effectiveness and permanence: some provide short-term protection while others afford perpetual preservation. No single program is applicable to every circumstance, and varying situations require the use of different programs and tools.

Techniques to provide short-term protection may be effective until legally binding long-term preservation can be obtained. Few programs and tools ensure preservation in perpetuity. Those affording the greatest amount of preservation should be used whenever circumstances allow.

Following is a discussion of federal, state, and local government programs; an overview of private conservation and preservation organizations; and an explanation of other tools, all of which affect the preservation and protection of natural areas in Illinois.

State Programs

Illinois Nature Preserves System

The primary means of preserving natural areas in the state is the Illinois Nature Preserves System, established by law in 1963. The Illinois Nature Preserves Commission oversees the system, which provides legal preservation for dedicated natural areas. A nature preserve, according to statute, is an area of land or water in either public or private ownership that is formally dedicated to maintenance in its natural state. It must retain its primeval character to some extent or must have unusual plant, animal, geological, or archaeological features of scientific or educational value. Uses of nature preserves must be in harmony with preservation. A major objective of the nature preserves system is to safeguard adequate and representative examples of all types of significant natural features occurring in Illinois. As of April 1, 1980, there were 76 dedicated nature preserves in Illinois totaling over 18,000 acres (Figure 4). Dedication as a nature preserve provides the greatest amount of protection that natural land can receive in Illinois; legal safeguards are the greatest benefit of the program.

The program is open to any owner of a natural area. Nature preserves have been dedicated by forest preserve districts, park districts, conservation districts, township governments, educational institutions, cemetery boards, corporations, and the Department of Conservation. Landowners retain management responsibility and control over the area if they wish, and they may receive tax reduction benefits.

Responsibility for administering the nature preserves system is shared by the Illinois Department of Conservation and the Illinois Nature Preserves Commission. The Department of Conservation purchases and manages areas of statewide significance for the system and owns 43 of the 76 preserves.

Illinois Endangered Species Protection Program

The Illinois Endangered Species Protection Act passed in 1972 protects species in danger of extinction from the state. The function of the Endangered Species Protection Board is to identify state endangered species, which are species in danger of extinction as natural populations in Illinois, and state threatened species, which include naturally occurring species likely to become endangered species within the foreseeable future.

The Endangered Species Protection Act prohibits the sale, transfer, or possession of any animals or products of animals that are endangered or threatened unless a permit is obtained from the Department of Conservation for zoological, educational, or scientific purposes. The greatest limitation of the act is that there is no authority for legally protecting plants or designating and legally protecting critical habitat of endangered species.

Although carrying no legal protection, a list of endangered and threatened vascular plants in Illinois has been approved by the Endangered Species Protection Board. The lists of endangered and threatened plants and animals are considered in preparing and assessing environmental impact statements and in reviewing permits for Department of Transportation and Army Corps of Engineers projects.

Through the endangered species program and a cooperative agreement with the Fish and Wildlife Service for the conservation of endangered species, studies have revealed previously unknown locations of endangered species and data on their life histories. This information will guide management for the preservation of these species.

Illinois Natural Heritage Landmark Program

The Department of Conservation and the Illinois Nature Preserves Commission are jointly developing an Illinois Natural Heritage Landmark Program. The purpose of the program is to encourage citizens to protect the natural characteristics of their land and to provide recognition to them for doing so. The program is designed to give owners a feeling of pride and an increased appreciation for their property.

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Owners of sites identified through the Natural Areas Inventory are being contacted to inform them of the natural significance of their land and to encourage them to protect their natural areas. In designating the area as an Illinois Natural Heritage Landmark, the landowner voluntarily agrees to protect the land and its natural features and to notify the Department of Conservation or the Illinois Nature Preserves Commission of any plans to change ownership or use. Participating landowners will receive an Illinois Natural Heritage Landmark certificate and sign. No restrictions are placed on the property upon designation; however, the owner may voluntarily agree to give the state the first right to acquire the land if it is to be sold.

This program will be an inexpensive means of securing protection for natural areas. However, designation does not ensure permanent preservation. Death of the owner, changing financial situations, or sale of the property could alter existing commitments to protect the land.

Heritage Wildlife Program

In 1972, the Department of Conservation initiated a "non-game" species program to determine population trends, distribution patterns, and management guidelines for native species of wildlife not commonly hunted by man. Information collected through this program is used to recommend areas for inclusion in the nature preserves system. Hundreds of volunteers participate in ongoing program studies which include the Spring Bird Count, Mid-June Birding Challenge, and seasonal surveys.

Master Management Planning Program

In addition to dedicating nature preserves, the Department of Conservation designates natural area zones—areas managed specifically for their natural characteristics within state parks and other properties. Designation is made through the master management planning process, which is conducted by a multi-disciplinary task force to guide acquisition, development, and use of Department properties. It is a significant means of giving administrative recognition to the natural values of an area and directing management to protect natural features. This process offers no legal protection, but it is an important mechanism for protecting an area where nature preserve dedication is not possible.

Federal Programs

The Land and Water Conservation Fund

The major federal source of money for the acquisition, planning, and development of recreation areas is the Land and Water Conservation (LAWCON) Fund, administered through the Heritage Conservation and Recreation Service of the U.S. Department of the Interior. In Illinois, natural areas that provide opportunities for low intensity recreation may be acquired with this fund. Approximately 60 percent of LAWCON money is allocated to the states, and 40 percent is used for federal programs. Since the creation of the Fund in 1965, states have received over \$1.5 billion. Illinois has received \$93 million through 1979.

To be eligible for LAWCON funds, the Department of Conservation must have an approved Statewide Comprehensive Outdoor Recreation Planning (SCORP) Program. The most recent Illinois SCORP is *Outdoor Recreation in Illinois*, a five-year policy plan published in December 1978. In addition, the Department prepares an annual SCORP Action Program (Appendix A).

LAWCON funds distributed to the states are in turn allocated to local agencies for planning, acquisition, and development projects. The Department of Conservation administers this program in Illinois. Local agencies eligible to apply for LAWCON funds include cities and villages, park districts, conservation districts, forest preserve districts, and other units of government that can acquire and develop lands for recreation. The grant reimburses 50 percent of the local government's cost. As a consequence of the Natural Areas Inventory, applications for buying natural areas are given special consideration.

The National Natural Landmarks Program

The National Register of Natural Landmarks is administered by the Heritage Conservation and Recreation Service (HCRS). The registry program was created in 1962 to preserve a variety of significant natural areas that illustrate the nation's natural history.

Dedication as a nature preserve provides the greatest amount of protection that natural land can receive in Illinois.

Landmark status is ascribed to public and private areas that best illustrate or interpret the natural history of the United States. After designation of an area as a landmark, the owner may voluntarily register the area. This is a formal but not legally binding agreement by the owner to protect the site and limit its use, and to consult periodically with HCRS about the condition of the site. No legal regulations are imposed on any designated landmark, whether registered or not. However, HCRS annually monitors the condition of each landmark and reports to Congress on any site that is threatened or damaged. Landmark status is also considered in the environmental review process.

Pride and concern of private landowners have saved many natural areas. Numerous options are available for individuals to formalize their commitment.

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There are 460 designated National Natural Landmarks in the United States. Illinois has 16 such sites: Allerton Natural Area, Forest of the Wabash (Beall Woods), Funks Grove, Heron Pond—Little Black Slough, Horseshoe Lake Nature Preserve, LaRue—Pine Hills Ecological Area, Mississippi Palisades State Park, Volo Bog Nature Preserve, Wauconda Bog Nature Preserve, Illinois Beach Nature Preserve, Giant City State Park, Lusk Creek Canyon, Busse Forest Nature Preserve, Bell Smith Springs, Button Land Swamp, and Little Grand Canyon.

Research Natural Area Program

The Research Natural Area Program is carried out by the Federal Committee on Ecological Reserves, an interagency committee composed of representatives from the major federal landholding agencies. Established in 1966, the Federal Committee encourages the identification and designation of natural areas on federal properties. The main objectives of the program are to preserve significant natural ecosystems for education and research and to provide habitat for endangered and threatened plants and animals. Research Natural Areas are administratively designated and are not legally protected.

Local governments can acquire natural areas using federal Land and Water Conservation Fund matching grants.

Endangered Species Conservation Program

The Endangered Species Conservation Program, under the jurisdiction of the Fish and Wildlife Service, was created as a result of the federal Endangered Species Act of 1973. This act was established to conserve, restore, and protect nationally endangered or threatened species and their critical habitat. The Endangered Species Act sets forth specific regulations and restrictions which legally protect endangered species; under the act it is illegal to import, export, sell, deliver, carry, transport, or ship any listed species.

Heron Pond—Little Black Slough Nature Preserve is one of 16 National Natural Landmarks in Illinois.

Although federal agencies cannot authorize, fund, or participate in any program or project that would jeopardize the critical habitat or continued existence of any species included on the federal list, state and local governments and the private sector are not similarly restricted under the act unless they seek federal funding assistance. However, inclusion of a species on the national endangered and threatened list alerts the public to the need for protection, and any proposed project that threatens an endangered species is likely to meet intense reaction from concerned citizens.

The U.S. Fish and Wildlife Service reviews public works projects to ensure projects will not jeopardize the continued existence of a listed species and also advises the Secretary of the Interior in matters of international trade in endangered species.

The Endangered Species Conservation Program provides federal funds to any state which has entered into a cooperative agreement to conserve endangered and threatened species. Illinois has recently completed a cooperative agreement with the Fish and Wildlife Service. Funds must be used for surveys, planning, management, research, land acquisition, protection, or public education related to a state or federally listed species. Two-thirds federal reimbursement is available for individual state projects, and if a cooperative project involves more than one state the reimbursement level is 75 percent.

The 208 Water Quality Planning Program

The federal Water Pollution Control Act, as amended in 1972, established a 1983 goal for making the nation's waters suitable for swimming and fishing. Under Section 208 of the act, funds are provided for developing management plans to control both point and non-point sources of pollution. Regional planning com-

missions along with the Illinois Environmental Protection Agency were responsible for developing these plans in Illinois. The plans have been incorporated into the State Clean Water Plan, recently approved by the Governor of Illinois and the U.S. Environmental Protection Agency. As part of implementing the Clean Water Plan, streams of the state are being classified according to use; if the highest water quality standards are required for the highest quality natural streams, the 208 classification procedure can provide some protection for aquatic areas.

National Wild and Scenic Rivers System

The National Wild and Scenic Rivers Act of 1968 created the National Wild and Scenic Rivers System to preserve rivers that possess outstanding scenic, recreational, geologic, fish and wildlife, historic, or cultural values. Three categories may be designated within the system: wild, scenic, and recreational. A *wild* river is free-flowing, is unpolluted, has a primitive shoreline, and is generally inaccessible except by trail. Motorized vehicles are restricted on the surrounding land, and minimal development is allowed. A *scenic* river has many of the same characteristics, but some reaches of the river may be accessible by road. Scenic rivers are managed to provide recreation in a natural environment. A *recreational* river may have some type of diversion or impoundment, may have some shoreline development, and is readily accessible by road. Recreational rivers are managed to protect and enhance recreational qualities.

Rivers designated as wild, scenic, or recreational are legally protected for their aesthetic, historic, scenic, archaeological, and scientific qualities. Projects such as dams, reservoirs, and powerhouses that would have an adverse effect on a protected river cannot be licensed on any river in the system.



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Rivers can be included in the system by federal legislation. In addition, if a state has its own river preservation system, the Governor may apply to the Secretary of the Interior for inclusion of state protected rivers in the federal system. There is no national wild or scenic river in Illinois; however, the Heritage Conservation and Recreation Service is carrying out a national stream inventory, and several Illinois rivers may eventually be designated.

National Wilderness Preservation System

The National Wilderness Preservation System was created by an act of Congress in 1964. Wilderness areas are designated by Congress and must be primitive federal land. Wilderness areas are legally protected for recreation, scenic, scientific, educational, conservation, and historic uses, and must be managed to preserve their natural character. Commercial enterprises, motorized vehicles and equipment, and permanent roads and structures are prohibited.

Under the Eastern Wilderness Act of 1975, areas which have had some disturbance but have recovered in recent decades may be designated as wilderness. Through the Roadless Area Review and Evaluation (RARE II) program, four roadless areas in the Shawnee National Forest in southern Illinois have been proposed for wilderness designation: Bald Knob, Clear Springs, Panther's Den, and Garden of the Gods. These areas have outstanding wilderness values such as primitive recreation, solitude, scenic qualities, historic and archaeological resources, inspiration, and research potential. There is one

designated wilderness area in Illinois, the 4,050-acre Crab Orchard Wilderness Area, managed by the U.S. Fish and Wildlife Service.

National Wildlife Refuge System

Administration of the National Wildlife Refuge System is a major responsibility of the U.S. Fish and Wildlife Service. Illinois has three of the nation's 375 national wildlife refuges: Crab Orchard, Upper Mississippi River, and Mark Twain, which includes Chautauqua. Major objectives of the National Wildlife Refuge System are to ensure the survival of plant and animal species in a natural environment and to protect habitat for all wildlife, particularly migratory waterfowl. Wildlife refuges have legal protection. They provide valuable wildlife habitat and can be used for research, education, and recreation.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act of 1934, amended in 1958, authorizes federal agencies such as the Army Corps of Engineers to acquire land for fish and wildlife as part of water resource projects. The act, under the authority of the Fish and Wildlife Service, requires federal agencies undertaking water resource projects to consult with the Fish and Wildlife Service and the Department of Conservation to ensure minimal impact on the fish and wildlife.

Unique and Nationally Significant Wildlife Ecosystems Program

The Unique and Nationally Significant Wildlife Ecosystems Program is a newly created program of the Fish and Wildlife Service. The pur-

pose of the program is to preserve and protect wildlife ecosystems through the cooperative efforts of federal, state, and local governments and private organizations and individuals. Potential areas are unique wildlife habitats with regional or national significance. The first step is to identify unique wildlife ecosystems in private ownership. The next step is to acquire the property or obtain easements to preserve the site. Permitted uses of areas acquired through this program are environmental education, research, and recreation such as hiking, nature observation, photography, hunting, and fishing when these activities are compatible with management objectives.

Special Interest Areas Program

The U.S. Forest Service can administratively designate natural lands on its property as Special Interest Areas. The main objective of the Special Interest Areas program is to protect areas with scenic, historical, geological, botanical, zoological, paleontological, or other special characteristics. Opportunities for public use, study, and enjoyment are provided where appropriate.

National Forest and Rangeland Renewable Resources Planning Act

In 1974 Congress passed the Forest and Rangeland Renewable Resources Planning Act

Many programs of federal land-managing agencies function to protect natural areas.

to develop a program for continual assessment of the renewable resources of forests and rangelands. Its main objectives are to formulate goals and develop a long-range program for the protection and management of national forest lands, cooperative and assistance programs with the state and private landowners, and research and planning.

Under this program the Department of Agriculture must assess resources every ten years to develop and direct both public and private forest and rangeland programs. Management of the National Forest System, cooperative assistance to states and private landowners, and research are assessed every five years. Natural areas in the Shawnee National Forest are included in the plan.

The Middle Fork of the Vermilion River is one of the 17 outstanding aquatic areas identified by the Natural Areas Inventory.



The National Environmental Policy Act

The National Environmental Policy Act of 1969 has had a significant effect on environmental protection. Under this act, every federal project must include a detailed assessment of the environmental impact of the proposed action, alternative actions, the relationship between local short-term use of the environment and maintenance of long-term productivity, and irreversible and irretrievable uses of resources.

This analysis does not preserve natural areas directly, but it ensures that they are considered in any federal program and in that way assists in protecting natural lands. For example, although National Natural Landmarks have no legal protection, an environmental analysis of a proposed project that would affect a National Natural Landmark must specify potential environmental damage, and designation as a National Natural Landmark might prevent approval of the project.

Section 4(f) Federal Highway Act

Section 4(f) of the 1969 Federal Highway Act permits the U.S. Department of Transportation to approve a federally funded highway project that would use public recreational and historic lands only if there is no feasible and prudent alternative to the use of such lands. A report which discusses alternatives to use of public

Local government agencies play a crucial role in acquiring and managing natural areas and dedicating nature preserves.

lands must be prepared and approved before the project can proceed. The U.S. Department of Transportation is the only federal agency that is required to prepare a 4(f) statement.

National Heritage Program (Proposed)

The proposed National Heritage Policy Act, which is now before Congress, would create a national heritage program administered through the Heritage Conservation and Recreation Service to identify, select, and protect both natural and historic resources. The bill would create a National Register of Natural Areas to parallel the National Register of Historic Places. Natural areas on the register would be outstanding and representative examples of ecologic and geologic resources with national, state, or local significance.

The existing National Register of Natural Landmarks would be incorporated into the National Register of Natural Areas. The National Heritage Policy Act would provide greater protection for National Natural Landmarks than now exists by requiring federal agencies to determine the probable effect of their planned activities on any National Natural Landmark. No action could be taken that would adversely affect the site unless there is "no prudent and feasible alternative," and only when every effort has been made to prevent adverse impact. The act would authorize and direct federal agencies to identify and nominate significant natural areas on their properties to the National Register and to cooperate with the states in efforts to locate and plan for the protection of natural areas. In addition, the act would create an independent body, the Council on Heritage Conservation, to review proposed federal actions and to work with the agencies to ensure that adverse consequences are mitigated. The National Heritage Policy Act would also authorize the use of Land and Water Conservation (LAWCON) funds for natural area identification and protection. In Illinois LAWCON money is now used to fund local government projects for natural areas where limited recreation is allowed, but this is not true in all states.

Local Agencies and Organizations

Local government agencies play a crucial role in acquiring and managing natural areas and dedicating nature preserves. Participating in these preservation efforts are the forest preserve districts, conservation districts, park districts, and numerous village, city, and township governments.

In addition to local government agencies, many local citizen interest groups have been instrumental in preserving natural areas in Illinois. The efforts of these volunteer organizations have been essential in raising both the money and the citizen support necessary to preserve natural areas.

Educational Institutions

Colleges and universities are important in acquiring significant natural areas and designating and protecting them for research and other educational purposes. Elementary and secondary schools also maintain sites that add to the diversity of preserved and protected natural areas in the state.

Private Organizations

Private preservation groups are numerous (see Appendix B), and their work is important. The efforts of the groups discussed in this section have statewide scope. Many similar groups limit their operations to specific parts of Illinois.

The Nature Conservancy

The Nature Conservancy is a national not-for-profit membership organization that works to preserve the ecological diversity of the nation by protecting natural areas. Since its inception in 1950, The Nature Conservancy has successfully preserved over 1.5 million acres in the United States. Activities of the group include identifying natural areas, preserving areas by donations or purchase, assisting government agencies through pre-acquisition for later sale to the agency, managing preserves, and increasing public support.





The Illinois Chapter of The Nature Conservancy has 5,000 members and is the second largest chapter in the nation. It has acquired tracts of natural land valued at over \$20,000,000. The Nature Conservancy plays a very important role in soliciting donations for preservation activities and in acquiring threatened areas that government agencies cannot immediately preserve due to the lengthy and cumbersome acquisition process. Acquisition by the Conservancy for later sale to government agencies or other organizations has proved an effective cooperative technique.

Natural Land Institute

The Natural Land Institute was formed in 1958 as a charitable not-for-profit corporation. Its goal is to preserve land of significant environmental quality and the diverse forms of life such land supports. The Natural Land Institute provides technical services to the Illinois Nature Preserves Commission and other agencies and organizations. These services include acquiring land, maintaining nature preserves, promoting proper planning and use of natural resources, carrying out research on natural communities, developing management techniques, and providing information.

The Natural Land Institute worked with the University of Illinois in conducting the Natural Areas Inventory for the Department of Conser-

Private preservation organizations are effective in helping government agencies acquire natural areas.

As a follow-up to the Inventory, the Institute is conducting a landowner contact program under a grant from The Joyce Foundation to encourage owners of natural areas to preserve their land (see Chapter 4). Many willing sellers and potential donors have been found through this program.

Another Institute effort supported by a Joyce Foundation grant is an endangered species project, which has identified endangered and threatened plants and vertebrate animals in Illinois and has obtained information for preserving and managing them. Through this project the Endangered Species Protection Board was provided recommendations that were the basis for the official state lists of endangered and threatened species. The Institute is preparing a final report on the project for publication.

Open Lands Project

The Open Lands Project, established in 1963, is a not-for-profit corporation that works with individuals, neighborhood groups, community organizations, and public agencies to preserve open space. The Project has about 600 individual and corporation members.

Primary functions of the Open Lands Project are to improve the amount and quality of open land for conservation, recreation, and education, and to increase public awareness of the need for public open space. The Open Lands Project operates primarily in the Chicago area, but has been involved elsewhere in Illinois and in Indiana.

In 1975 an affiliate, the Corporation for Open Lands (CorLands), was formed to function as a land bank. CorLands can purchase property and hold it for two to three years, then transfer it to a local open space agency. CorLands also can acquire conservation easements.

Illinois Audubon Society

The Illinois Audubon Society, founded in 1897, is one of the oldest conservation groups in the country. Its purpose is to promote the perpetuation of native flora and fauna and their habitats. The Society owns and leases wildlife sanctuaries and actively seeks donations and bequests of additional land.

The goals of the Society are to promote public awareness and appreciation of the natural world, to support programs that protect and enhance the natural environment, to register and maintain sanctuaries, to operate nature centers, to carry out education programs, and to accumulate data on birds and other wildlife.

The Society, in cooperation with the Department of Conservation, conducted a "Dimes for Eagles" project in 1976 and raised \$56,000 to buy two eagle roosting areas on the Mississippi River. The Illinois Audubon Society has also helped to buy other natural areas in the state through fund-raising campaigns, public education, and direct contributions of volunteers and money.

Other Preservation and Protection Tools

Land Acquisition

Acquisition of natural areas is a vital tool for preserving examples of the state's natural features. Purchase by a conservation agency or private organization helps to ensure that the land will be preserved in perpetuity. The main source of money for land acquisition by local agencies is the Land and Water Conservation (LAWCON) Fund, described earlier in this chapter.

Declining budgets, increasing land costs, and competition for LAWCON funds limit the ability of agencies to acquire and preserve natural areas. In addition, state land acquisition is a long process and often moves too slowly to save land under immediate threat of destruction.

Because acquisition money is limited, it is essential to use funds effectively and efficiently. Pooling available resources can be helpful. A prime example of how cooperative efforts can preserve a natural area is the purchase of Nelson Lake Marsh in Kane County. This 175-acre glacial lake remnant, the largest natural area in Kane County, is one of the best examples of natural lake succession in the state and provides habitat for threatened and endangered species such as the osprey, American bittern, American egret, and king rail. The Nature Conservancy acquired part of the marsh for \$160,000 using money from a variety of sources. A Kane County industry was fined \$100,000 for violations of pollution regulations, and this money was turned over to the Department of Conservation, earmarked for the acquisition and protection of natural or recreational land in Kane County. The Department allotted \$20,000 of the fine toward the purchase of Nelson Lake Marsh by The Nature Conservancy. Land Preservation, Inc., organized by Kane County citizens to help preserve the site, contributed \$3,000, and the Aurora Foundation donated \$10,000. The Nature Conservancy then sold the marsh to the Kane County Forest Preserve District for \$120,000. The Forest Preserve District purchased the property using a \$105,000 Land and Water Conservation Fund grant. Cooperative efforts such as this are effective in preserving natural areas when financial resources are limited and no one agency or organization has enough money for purchase.

Conservation Easements

Conservation easements place development restrictions on property to protect the natural character of the land while the owner retains title. This is an effective way to preserve natural areas without buying them. The restrictions are determined by the landowner and are perpetual. Conservation easements typically exclude industrial development, subdivision development, clearcutting, alteration of topography, mineral development, and dumping. The holder of the conservation easement must be a public agency or qualifying charitable organization. The owner of the property receives a federal income tax deduction equivalent to the fair market value of the easement.

Gifts of Land

Techniques that provide tax incentives have great potential for preserving natural areas. Through these techniques government agencies or not-for-profit organizations acquire property at a reduced cost or by donation, and the seller or donor benefits from tax deductions. The following are examples of these mechanisms.

Outright donation is the direct transfer of land to a government agency or not-for-profit organization. The donor receives an income tax deduction based on the fair market value of the property. Restrictions may be placed on the use of the area, but these may affect the fair market value. Tax advantages from donations may be more profitable than paying taxes on a sale of the property. Qualifying agencies may apply the value of the donation to receive 50 percent reimbursement through the Land and Water Conservation Fund.

Transfer in trust involves conveying the land in trust to a charitable organization, with restrictions concerning preservation and use. This is an effective means of ensuring that the donor's intent for the property is carried out in perpetuity.

Gift of land with reservation of life estate is a means of donating land and receiving a federal income tax deduction while continuing to live on the property. Reservation of the estate may be for the life of the donor or the life of the

donor's spouse or children. The amount of the tax deduction depends on the age of the persons retaining life tenancy of the estate.

Gift of land with reverter clause is a means of ensuring that donated land is preserved as the donor intended. If at some time the land is used for other than the intended purpose, a reverter clause transfers the property back to the previous owner or to a third party. If the donor might regain ownership, the federal income tax deduction may be affected.

Gift of land by bequest may involve any of the above alternatives that are written into a will. The value of the donated land is excluded from estate or inheritance taxes, thus providing tax advantages to the heirs.

Bargain sale is the sale of land to a conservation-minded organization at less than fair market value. The seller receives an income tax deduction for a charitable contribution based on the difference between the fair market value and the selling price. Participants in the Land and Water Conservation Fund program are eligible to receive 50 percent reimbursement based on the land's fair market value.

Planning

Agency planning encompasses a wide range of activities that help in preserving natural areas. Included are statewide comprehensive planning, developing management plans for

specific areas, preparing and reviewing environmental impact statements, reviewing permits for highway and water resource projects, and identifying specific problems and their solutions. By analyzing the status of natural areas, compiling current and reliable data on them, and establishing priorities and a plan of action, programs can be developed to guide the wise use of available resources.

Management Advice and Technical Assistance

The Department of Conservation and other organizations produce many publications about natural heritage and its protection. Providing advice and technical assistance to the public, especially to landowners, increases environmental awareness and leads to a greater commitment to environmental protection and improved management practices. One example of assistance provided by the Illinois Nature Preserves Commission and Department of Conservation is management advice for dedicated nature preserves.

Private Stewardship

Individual landowners have been extremely important in preserving and protecting natural areas in Illinois. Many areas remain today because of the conscious effort of private landowners to preserve their land.

Many areas remain today because of the conscious effort of private landowners to preserve their land.

Personal commitment is important because it protects areas without money being spent for acquisition. Private stewardship has limitations as a protection tool, though: protection is not permanent due to potential changes in ownership, the landowner's attitude, or financial status.

Private owners of natural areas will be encouraged to dedicate their properties as nature preserves, where appropriate, and to participate in the Illinois Natural Heritage Landmark Program. Because so many of the natural areas are in private ownership, there are many opportunities for individual landowners to participate in the preservation effort and determine what natural areas will still be in existence tomorrow.



We need to plan well so that children will have the chance to learn about plants and animals in their natural settings—a unique experience that makes textbook facts come alive.

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What You Can Do

The Illinois Natural Areas Plan: To Preserve and Protect Our Heritage is a summary of the steps to be taken by state government to save a part of our natural heritage. Although much of Illinois' natural character has been destroyed, outstanding areas remain. This is a time of opportunity. There are effective ways to preserve our vanishing natural areas, and you can help.

Here are some suggestions for putting your concern into action so that Illinois' natural areas can be enjoyed now and in the years ahead.

- Join a local or statewide group interested in natural areas preservation. Many are listed in Appendix B.
- Organize a volunteer group to adopt a preserve, watch over it, and assist in needed management. Contact the Nature Preserves Commission¹ for help.
- Arrange programs on preservation for groups in your community. "The Precious Few," a slide show prepared by the Nature Preserves Commission, may be borrowed free of charge by contacting the Nature Preserves Commission.¹ Another, "Preserving Our Natural Heritage," is available from the Department of Conservation regional offices. For more information, contact the Department of Conservation, Bureau of Natural Resources.²
- Write or call the Nature Preserves Commission or Department of Conservation for copies of natural areas publications, information on the natural heritage program, and answers to questions on how to preserve a unique natural area.
- If you own land with significant natural values, consider designating it as an Illinois Natural Heritage Landmark. Get in touch with the Department of Conservation or Nature Preserves Commission for more information on the program.
- Help the Department of Conservation gather more information on locations of endangered species by notifying the Department of any sightings of the species listed in Appendix C.
- Encourage a sense of environmental concern and stewardship within your community in whatever ways are open to you to develop concern and respect for our natural heritage.
- Support legislation in the Illinois General Assembly and in Congress that promotes natural areas preservation. Express your view in letters and calls to your elected officials.

¹Illinois Nature Preserves Commission
320 S. Third
Rockford, Illinois 61108
815/964-6660

²Illinois Department of Conservation
Bureau of Natural Resources
600 North Grand Avenue West
Springfield, Illinois 62706
217/782-2361

This virgin prairie is one of the 10 areas recognized by the Natural Areas Inventory that have been destroyed since the study was completed



Appendix A. Summary of Public Participation

The public had many opportunities to help develop the Illinois Natural Areas Plan. The Panel of Advisors for the Statewide Comprehensive Outdoor Recreation Plan (SCORP) reviewed the initial outline and proposal and commented on the draft Plan. The 200-member panel consists of representatives from state, federal, and local government agencies, the academic community, recreation groups, and private conservation and preservation organizations. Hundreds of other persons were invited to review the draft Plan. These people included participants at natural area conferences and those known to have an interest in Illinois' natural heritage. Many copies of the draft Plan were also distributed upon request. In response to this public review, the draft Plan was extensively revised and improved.

A major function of the SCORP Panel of Advisors is to assist the Department of Conservation in developing the SCORP Action Program prepared for each fiscal year. The plan identifies priorities in recreation and heritage preservation and establishes schedules for specific actions. Loss of natural areas continues to be a major concern in Illinois, according to the SCORP panel. As long as this is an issue, the Action Program will set forth actions to be taken each year to carry out the commitments of the Illinois Natural Areas Plan.

A natural heritage committee formed within the Panel of Advisors will be a sounding board in implementing the Illinois Natural Areas Plan, and a means of communication between government agencies and private groups involved in natural areas preservation and protection.

Appendix B. Organizations Contributing to the Preservation of Illinois' Natural Areas

The following list includes statewide organizations, local chapters of national organizations, and independent local groups. The list is representative but may not be all-inclusive. If you know of an organization that should be added, please inform the Department of Conservation.

Chicago Herpetological Society

2001 N. Clark St.
Chicago, IL 60614

CorLands

53 W. Jackson Blvd.
Chicago, IL 60604

DuPage Forest Foundation

881 W. St. Charles Rd.
Lombard, IL 60148

Eagle Valley Environmentalists

P. O. Box 155
Apple River, IL 61001

Field Museum of Natural History

E. Roosevelt Rd. & Lake Shore Drive S.
Chicago, IL 60605

Forest Park Foundation

4801 N. Prospect Rd.
Peoria, IL 61614

Friends of Ryder's Woods

P. O. Box 81
Woodstock, IL 60098

Friends of the Parks

53 W. Jackson Blvd.
Chicago, IL 60604

Garden Club of Illinois, Inc.

Thornhill Building
The Morton Arboretum
Lisle, IL 60532

Green Earth, Inc.

R. R. #2
Murphysboro, IL 62966

Illinois Audubon Society

P. O. Box 441
Wayne, IL 61084

Big Blue Stem Chapter (DuPage Co.)
Fort Chartres Chapter
Fort Dearborn Chapter (Chicago)
Great Rivers Chapter (Jersey Co.)
Henry-Mercer Chapter
Kane County Chapter
Kaskaskia Chapter
Kyte Creek Chapter (Ogle Co.)
Lake-Cook County Chapter
Lincoln Trail Chapter (east central Ill.)
McHenry County Chapter
Morgan County Chapter



Park Ridge Chapter
Quad Cities Chapter
Ridgeway Chapter (Richland Co.)
Schuy-Rush Chapter (Schuyler Co.)
Southern Illinois Chapter
Southwest Chapter (Edwardsville area)
Will County Chapter

Illinois Dunesland Preservation Society

2640 St. Johns Ave.
Highland Park, IL 60035

Illinois Environmental Council

407½ E. Adams St.
Springfield, IL 62701

Illinois Prairie Path

295 Abbotsford
Glen Ellyn, IL 60137

Illinois Wildlife Federation

Box 116
Blue Island, IL 60406

Izaak Walton League of America, Illinois Division

923 Hollywood
Des Plaines, IL 60016

Champaign County Chapter
Chicago Chapter
Chicago Heights Chapter
Decatur Chapter
Des Plaines Chapter
Dolton Chapter
Elgin Chapter
Geneseo Chapter
Havana Chapter
Homewood Chapter
Illinois All-State Chapter
Land-of-Lincoln Chapter
Mason County Chapter
Moline Chapter
Northbrook Chapter
Peoria Chapter
River Grove Chapter
Woodford County Chapter

Jane Addamsland Park Foundation

c/o Freeport Park District
Read Park
Freeport, IL 61032

Lake Forest Open Lands Association

999 E. Rosemary
Lake Forest, IL 60045

Max McGraw Wildlife Foundation

P. O. Box 194
Dundee, IL 60118

McHenry County Defenders

P. O. Box 503
Crystal Lake, IL 60014

Yellow-headed blackbird—an Illinois endangered species that cannot survive without expanses of marshland free from human activity.

The Morton Arboretum

Route 53
Lisle, IL 60532

The National Audubon Society

Central Midwest Office
990 Aullwood Road
Dayton, Ohio 45414

Champaign County Chapter
Chicago Chapter
Decatur Chapter
DuPage County Chapter
Kankakee Area Chapter
Kishwaukee Chapter (DeKalb)
Lake County Chapter
Musselman Chapter (Quincy)
North Shore Chapter
Northwest Illinois Chapter
Powell Chapter (Bloomington)
Prairie Woods Chapter (northwest Chicago suburbs)
Rend Lake Chapter
Round River Chapter (Belleville)
Sinnissippi Chapter (Rockford)
Thorn Creek Chapter (Chicago Heights)
Vermilion County Chapter

Natural Land Institute

320 S. Third St.
Rockford, IL 61108

The Nature Conservancy, Illinois Chapter

79 W. Monroe, Suite 708
Chicago, IL 60603

The Nature Foundation, Inc.

4433 W. Touhy Ave.
Lincolnwood, IL 60646

The Nature Institute

2900 Beltline Parkway
Alton, IL 62002

North Branch Prairie Project

1480 W. Byron
Chicago, IL 60613

Open Lands Project

53 W. Jackson Blvd.
Chicago, IL 60604

Parklands Foundation

Dept. of Biological Sciences
Illinois State University
Bloomington, IL 61761

Prairie Club of Chicago

6 E. Monroe, Room 1507
Chicago, IL 60603

Prairie Preservation Society of Ogle County

c/o Oregon Township Public Library
Oregon, IL 61061

Save the Prairie Society

10327 Elizabeth St.
Westchester, IL 60153

Save the Valley Association

Box 383
Lemont, IL 60439

Sierra Club, Great Lakes Chapter

53 W. Jackson Blvd.
Chicago, IL 60604

Des Plaines Valley Group
Heart of Illinois Group (Peoria)
Kaskaskia Group
North Suburban Group
Piasa Palisades Group (Alton)
Prairie Group (Champaign)
River Bend Group (Quad Cities)
Sangamon Valley Group (Springfield)
Shawnee Group (Carbondale)

Thorn Creek Preservation Society

P. O. Box 704
Richton Park, IL 60471

Appendix C: Endangered and Threatened Species of Illinois

Vertebrates

Endangered Fishes

Bigeye chub
Bluebreast darter
Bluehead shiner
Harlequin darter
Longjaw cisco*

Threatened Fishes

Cisco
Longnose sucker
Alligator gar
Pugnose shiner
Blacknose shiner
Bantam sunfish
Lake whitefish
Lake sturgeon

Endangered Amphibians and Reptiles

Dusky salamander
Silvery salamander
Spotted turtle
Slider
Illinois mud turtle
Broad-banded watersnake
Eastern ribbon snake

Threatened Amphibians and Reptiles

Illinois chorus frog
Western hog-nosed snake
Whip snake
Great plains rat snake

Endangered Birds

Double-crested cormorant
Snowy egret
Great egret
Little blue heron
American bittern
Black-crowned night heron
Mississippi kite
Cooper's hawk
Red-shouldered hawk
Swainson's hawk
Bald eagle
Osprey
Marsh hawk
Peregrine falcon*
Greater prairie chicken
Yellow rail
Black rail
Purple gallinule
Piping plover
Eskimo curlew*
Upland sandpiper
Wilson's phalarope
Forster's tern
Common tern
Least tern
Black tern
Barn owl
Long-eared owl
Short-eared owl
Brown creeper
Bachman's warbler*
Yellow-headed blackbird
Bachman's sparrow

*Species is also on the list of nationally endangered species.

Starved Rock Nature Preserve

Threatened Birds

Common gallinule
Bewick's wren
Veery
Loggerhead shrike
Swainson's warbler
Brewer's blackbird
Henslow's sparrow

Endangered Mammals

Gray bat*
Indiana bat*
Eastern wood rat
White-tailed jackrabbit

Threatened Mammals

River otter
Bobcat
Golden mouse
Rice rat

Plants

A list of 364 endangered and threatened plants has been approved by the Endangered Species Protection Board, but these species are presently not protected under the Illinois Endangered Species Act. Copies of the list of endangered and threatened plants are available from the Department of Conservation.

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Illinois Natural Areas Inventory Technical Report. Vol. I, "Survey Methods and Results," by John White. 426 pp. Vol II, "Information System," by Calvin C. Corbin. 13 pp. Performed under contract to the Illinois Department of Conservation by the University of Illinois Department of Landscape Architecture and Natural Land Institute. Urbana: November 1978.

Illinois Natural Areas Inventory Summary Report. 27 pp. November 1978.

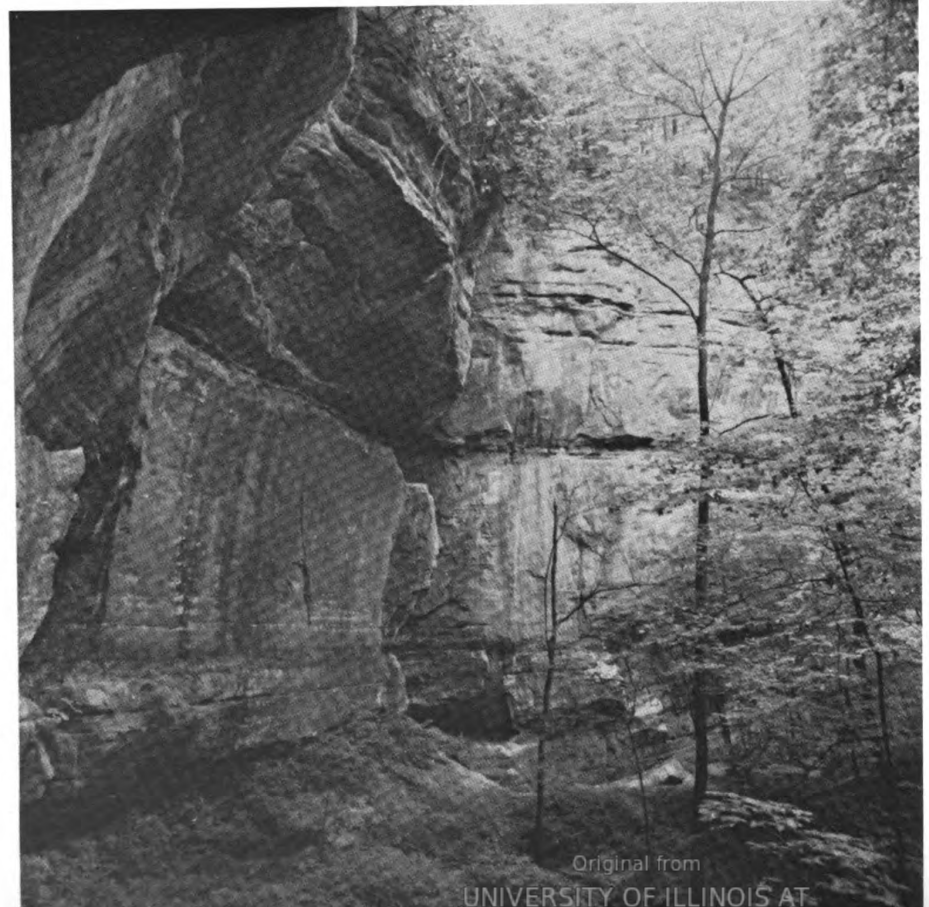
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The above publications are available upon request.

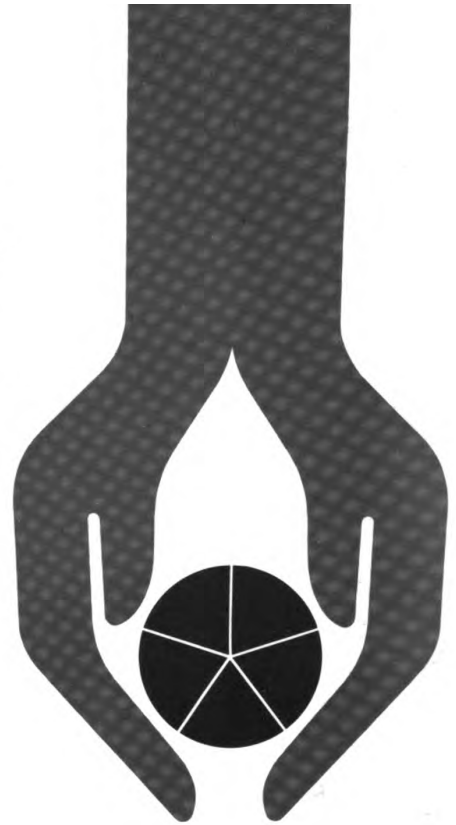


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Photography

- Ronn Altig, p. 9 (6)
- Marlin Bowles, pp. 36, 40
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- Robert Meyer, pp. 20-21, 33
- Gerald Paulson, p. 31
- John Schwegman, pp. 3, 7, 8 (a-f, h), 9 (3, 4, 5, 7) 32
- John White, p. 8 (g)
- Karen Ackerman Witter, pp. 14, 30

Cover

- 1 Pere Marquette Nature Preserve—
John Schwegman
- 2 Heron Pond—John Schwegman
- 3 Black tern—Carl Becker
- 4 Jackson Hollow—John Schwegman
- 5 Reavis Hill Prairie—Robert Schanzle

