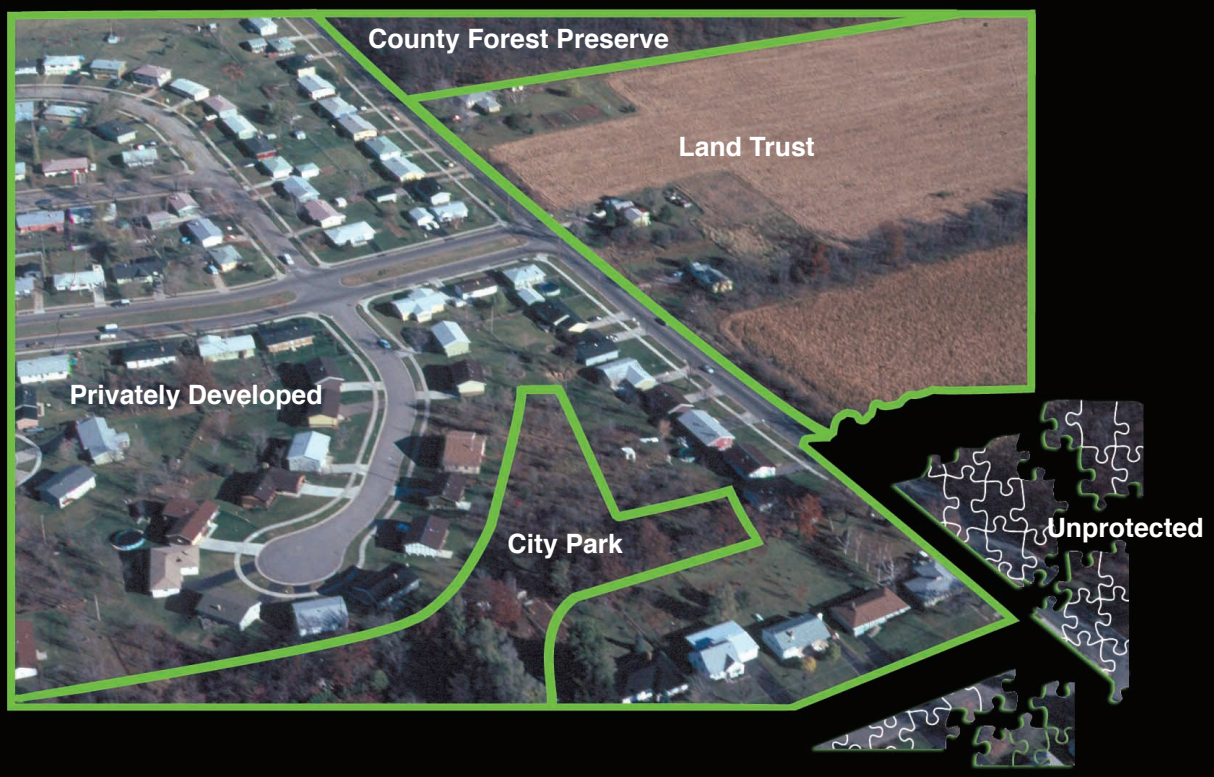
Niches in the Urban Forest

Organizations and Their Role in Acquiring Metropolitan Open Space



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ABSTRACT

As a response strategy to minimize the impacts of urban sprawl, public and private organizations are striving to acquire open lands that will contribute to a resilient and multifunctional urban forest. In the Chicago metropolitan region, we interviewed representatives of 15 organizations to understand the land acquisition process—the structures and functions of groups involved, their acquisition goals, and the cooperation among groups as they work to build metropolitan green infrastructure. Our findings reveal strength in diversity—a variety of groups working at different levels with complementary goals can help meet the complex challenges of land protection in rapidly urbanizing areas.

Keywords: open space; urban forestry; urbanization

Buy land. They're not making any more of it." This adage has never been more urgent for those concerned with protecting metropolitan open space. Across the United States, forest, agricultural, and other open land is rapidly being converted to residential and other developed uses (Gobster et al. 2000). In cities as far-flung as Portland, Maine; Atlanta, Georgia; Yuma, Arizona; and Boise, Idaho, rates of land conversion are far outstripping rates of population increase (Fulton et al. 2001). Such urbanization or "sprawl" can have significant impacts on forest management (Wear et al. 1999) and the environment (Johnson 2001). Fueled by the same economic boom that brought these development increases, public agencies and private groups in many metropolitan areas are protecting open space (defined here as land not currently devoted to urban development) to reduce the environmental impacts of sprawl, protect and restore important natural areas, provide public recreation opportunities, and shape metropolitan growth (Benedict and McMahon 2002; Hollis and Fulton 2002). One result of these ef-

Above: **Protecting open land is often compared to putting a puzzle together, but at the metropolitan fringe the variety of stakeholder groups and land protection goals makes coordination especially important.**

forts has been confirmed by recent analyses of residential property prices, which show that urban residents do indeed put a premium on neighboring open space (Palmquist 1992; Doss and Taff 1996; Ready et al. 1997), particularly permanent open space (Bockstael and Irwin 2000; Smith et al. 2002).

The Chicago region is a good place to observe land protection organizations in action. In the six counties that make up the core metropolitan region, acquisition efforts during the past century made significant progress toward protecting Chicago's critical natural resources *(fig. 1)*. But much work remains. Under pressure of current trends that threaten to double the size of the metropolitan area in the next 30 years and consume 1.25 million acres of open land (Openlands Project 1999), county forest preserve districts have in the past five years garnered nearly $500 million for new land acquisition. This activity is echoed to a lesser extent through nonprofit and municipal, state, and federal government initiatives.

In the Chicago region and elsewhere, a limited market of available properties, combined with stiff competition from developers and high land costs, have put serious constraints on land purchase choices. Within these boundaries, however, there are still important decisions about what lands to protect. Although there is a substantial literature on efficient reserve site selection in wildlands where biodiversity protection is a prime objective (Church et al. 1996; Snyder et al. 1999; Polasky et al. 2001), few studies address issues of planning and funding land protection in urban and suburban areas. As urban forests are increasingly viewed as the green infrastructure that provides important social and environmental benefits (Regional Planning Partnership 2001), it is critical that urban forest planners and managers better understand the structure and goals of the various organizations involved in metropolitan land acquisition.

In this article, we examine how lands are acquired for open space protection within the Chicago metropolitan region. Our study objectives are to (1) identify the structure of organizations involved, (2) understand the goals by which they choose and prioritize properties, and (3) assess how an organization's acquisition goals and strategies contribute to the collective protection of metropolitan green infrastructure. Although each metropolitan area is unique, by focusing on the Chicago region we hope to illustrate the diversity of groups and goals one might find in urban areas and in turn understand the range of challenges and opportunities urban forest managers might face. In particular, we find that, although each organization has an individual identity based on its goals and strategies, all of the organizations share a common understanding that land needs to be protected and that cooperation enhances progress toward protec-

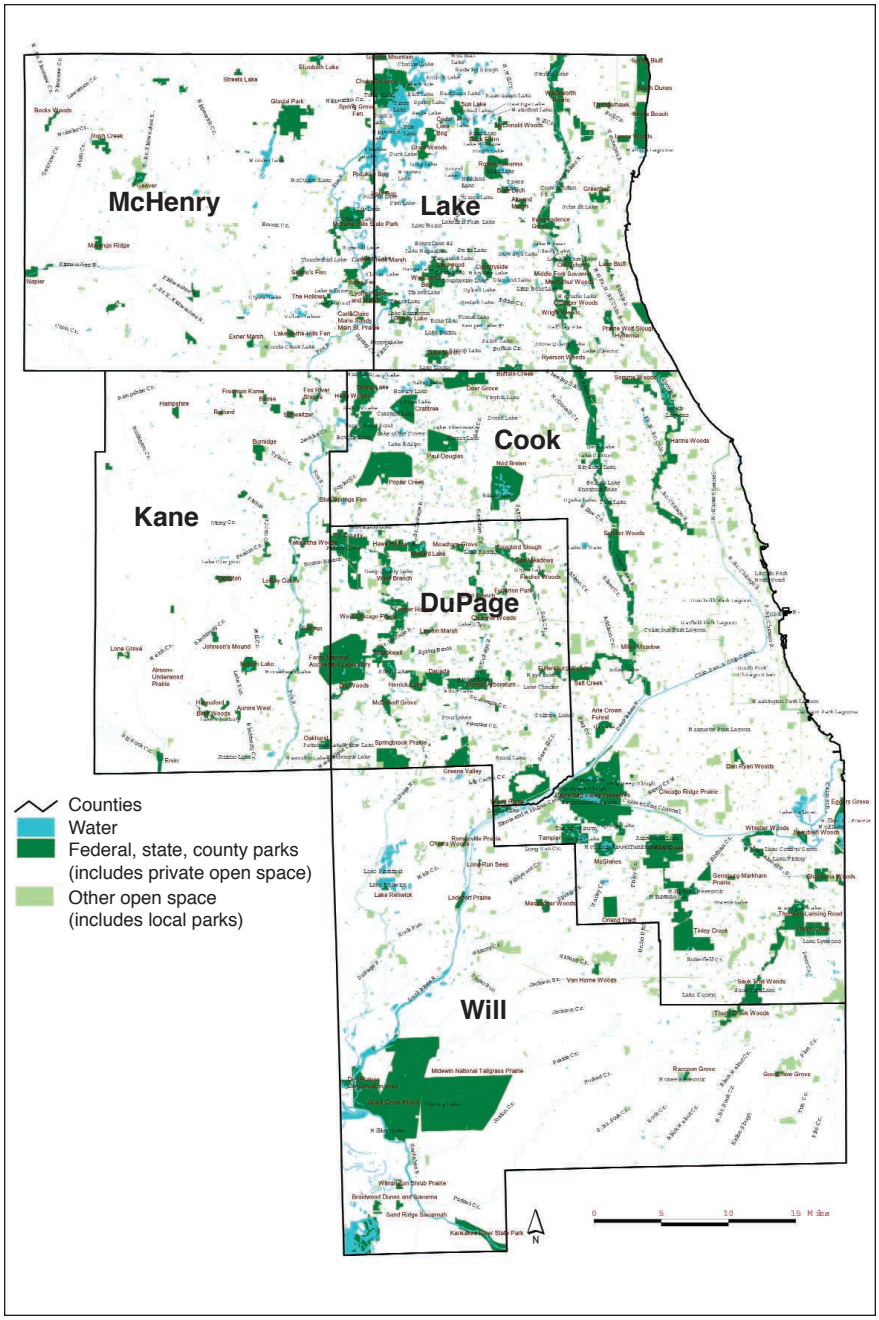

Figure 1. **Water and open space in northeastern Illinois, February 1999.**
Source: **Northeastern Illinois Planning Commission.**

Table 1. Structure and function of organizations interviewed.

Organization	Scope	Functions
Government organizations		
Lake County Forest Preserve District	County	Planning, acquisition, management, education
Kane County Forest Preserve District	County	Planning, acquisition, management, education
DuPage County Forest Preserve District	County	Planning, acquisition, management, education
McHenry County Conservation District	County	Planning, acquisition, management, education
Will County Forest Preserve District	County	Planning, acquisition, management, education
Illinois Department of Natural Resources	State	Funding, planning, acquisition, management
Northeastern Illinois Planning Commission	Region	Planning, coordination
Chicago Park District	City	Planning, acquisition, management
Chicago Department of Planning and Development	City	Planning, acquisition
Nongovernment organizations		
The Nature Conservancy	Global	Planning, acquisition, management
Conservation Fund	National	Acquisition, holding, transfer
Conservation Foundation	Regional	Acquisition, holding, transfer
CorLands	Regional	Acquisition, holding, transfer
Lake Forest Open Lands Association	Township	Acquisition, management, education
Citizens for Conservation	Subcounty	Acquisition, management, education

Table 2. Land holdings, acquisition goals, and acquisition budgets of counties in the Chicago region.

County	Total land area (1,000 acres)	Land area preserved (1,000 acres)	Land area preserved (%)	Goal additional acres (1,000 acres)	Acquisition 1997–2002 ($ million)
Cook	597	68.0	11.4	7.0	$ 10
DuPage	221	23.8	10.8	1.3	149
Lake	291	23.8	8.2	7.5	105
McHenry	397	14.5	3.7	27.5	83
Kane	337	9.8	2.9	3.5	70
Will	540	15.0	2.8	6.5	51
Total	2,383	154.9		53.3	$ 468

tion. Like plant and animal species, different organizations fulfill different niche roles in the urban forest, and by cooperating with one another they can contribute to more effective land protection at the metropolitan scale.

Methods

Our study data derives from a series of in-depth personal interviews conducted in 2000–01 with individuals in land protection organizations whose responsibilities include land acquisition. We supplemented this firsthand information with secondary data from reports and other documents to fill in missing details. Because of the large number and diversity of organizations involved in land acquisition in the Chicago region, it was necessary to interview a sample of individuals rather than to conduct an exhaustive inventory. We began with the county forest preserve districts, because they are the main organizations involved in acquisition, and sought out the principal staff person responsible for land purchase in each of the region's counties. From there, we looked at regional and state-level groups in the public and private sectors as well as selected local groups, relying on our familiarity with the actors in the region, tips from those we had already contacted, and documents highlighting current land acquisition activities.

We developed and pretested a protocol to help guide our interviews. Seven topics were addressed:

1. Background information on the individual and organization.
2. Philosophy and criteria used to select and prioritize land parcels.
3. Acquisition procedures and tools used.
4. Challenges of and differences in strategies between organizations working in the region.
5. Influence of constituencies or external groups in purchase decisions.
6. Current and anticipated budget for acquisition.
7. Types and availability of resource data used in parcel identification.

After scheduling an interview with an individual, we mailed a copy of the protocol so that the subject would be familiar with the questions and, if appropriate, could put together any documents or maps that might help answer our questions. Two members of the study team usually conducted the interviews, which were tape-recorded so that written transcripts could be made for analysis. In practice, most interviews were conducted face-to-face and lasted about one hour.

Using the transcripts and notes from the interviews along with pertinent secondary source materials, we extracted the information needed to address each of the above topics. Here, we focus on the structure and goals of the organizations and how their activities fit within a regional context.

Organizational Structure

Our study sample *(table 1)* illustrates the wide variety of land protection or-

ganizations that can operate in a metropolitan area and the scope and functions they serve. For the Chicago region, the core of this structure resides within the public sector at the county level. With state enabling legislation that dates back to 1913, the forest preserve districts levy a small property tax to "Acquire … and hold lands … and to restore, restock, protect, and preserve the natural forests and said lands … in their natural state and condition … for the purpose of the education, pleasure, and recreation of the public" (quoted in Wendling et al. 1981). Many districts' land acquisition budgets increased in the past five years as a result of voter-approved bond issues, where property taxes were increased to service the new debt. Land acquisition is now taking place to fulfill acreage goals *(table 2)*.

Other public sector organizations in the Chicago metropolitan area operate at the state, regional (multicounty), and municipal levels. At the state level, the Illinois Department of Natural Resources has the Open Lands Trust Fund and Conservation 2000 competitive grants program that provides major funding for land acquisition to local units of government. It is also a primary recipient and distributor of federal acquisition funds such as the Land and Water Conservation Fund. The department also conducts its own acquisitions to expand its limited holdings.

As the regional government planning body, the Northeastern Illinois Planning Commission (NIPC) does not hold taxing or regulatory authority, but it does plan and coordinate natural land protection. Its Northeastern Illinois Regional Greenways Plan, adopted in 1992 and updated in 1997, has been a major catalyst in the development of a regional system of trails and greenways that now encompass nearly 700 protected miles of riverways, abandoned railroad rights-of-way, and other linear corridors (NIPC and Openlands Project 1997).

With more than 260 municipalities and many hundreds of park districts, planning departments, and other local entities concerned with land protection, it was impossible to do more than scratch the surface with our interviews. To provide a contrasting perspective to the primarily suburban efforts of the other public groups we surveyed, we centered on the largest, most urban municipality and spoke with representatives of the Chicago Park District and the City of Chicago Department of Planning and Development. Both organizations are involved in major open space acquisition and development efforts, the most noticeable of which involves the purchase or transfer of several large brownfield industrial sites for cleanup and conversion to natural areas (City of Chicago 2002). But in a highly developed city like Chicago, large spaces cannot be the sole focus of such organizations; along with the Cook County Forest Preserve District, these agencies have also put considerable effort into a joint program called NeighborSpace that identifies, acquires, and transfers unused or tax-delinquent city lots to local groups that manage them for a variety of open space values (City of Chicago et al. 1998).

The nongovernment sector includes a number of nonprofit organizations that, like those in the public sector, vary widely in scope and the roles they perform within the metropolitan region. The largest of these is The Nature Conservancy, which has an international mission to preserve biological diversity and has identified globally significant ecosystems for protection within the Chicago area. Although land acquisition is one of its functions, its primary role in the Chicago region has been to help public groups plan, acquire, restore, and manage public lands for biodiversity. One of the premier efforts in this respect has been the establishment of a broad-based coalition for land protection called Chicago Wilderness (see "Chicago Wilderness: A Coalition to Protect Open Land and Biodiversity").

We also spoke with representatives of three organizations whose primary functions are to help transfer private land to public land-holding agencies for protection and management. These land trusts included The Conservation Fund, the Midwest office of a national group; CorLands, a Chicago regional land trust that is the real estate arm of the open space advocacy agency, Openlands; and The Conservation Founda-

Chicago Wilderness: A Coalition to Protect Open Land and Biodiversity

In April 1996, a small coalition of public and private groups in Chicago launched an ambitious initiative to coordinate land protection and restoration activities pursuant to the formation of a unique metropolitan bioreserve. With the paradoxical name Chicago Wilderness, the initiative has caught on like a prairie fire. The coalition has grown to more than 140 member organizations throughout the metropolitan region, the bioreserve amounts to more than 200,000 acres, and the ideas behind Chicago Wilderness have influenced strategic thinking about open-land protection at all levels of urban planning and development.

Perhaps most influential with respect to land acquisition has been the Biodiversity Recovery Plan, a document three years in the making that identifies critical ecosystems throughout the region, describes their importance and significance to the region and beyond, and lays out a long-term vision and goal for their recovery. With its official adoption by the Northeastern Illinois Planning Commission and other Chicago Wilderness members, the award-winning plan is helping to coordinate acquisition and other land protection activities across the metropolitan region. This recognition has also helped establish open-space and biodiversity values as a key part of urban infrastructure, and it has given Chicago Wilderness a place at the table along with more established economic development interests in directing future growth in the region. For more information on the Biodiversity Recovery Plan and other Chicago Wilderness programs, visit www.chicagowilderness.org.

Table 3. Goals and priorities of land protection organizations in the Chicago region.

Organization	Examples of land protection goals or priorities
Lake County Forest Preserve District	Acquires sites (some large) that provide recreational opportunities (such as trails), add to or link existing preserves, buffer sensitive sites, are hydrologically or biologically significant, provide spatial equity, or may contain sensitive wetlands.
Kane County Forest Preserve District	Acquires sites that have biological importance, recreational and restorative potential, complementary county use (i.e., storm water retention), or can connect or expand existing preserves.
DuPage County Forest Preserve District	Acquires sites that expand or connect existing preserves, increase public accessibility and usefulness, maximize potential for water resources management, have multiple resource benefit, provide recreational opportunities, or help shape urban form.
McHenry County Conservation District	Acquires sites that are close to population centers; support trail connections; have ecological, historical, or cultural importance; or connect or expand existing sites. Focuses on sites that maximize water resource management potential, preserve landscape diversity, or are large-scale resource restoration projects in different regions of county.
Will County Forest Preserve District	Acquires sites that have natural, biological, and cultural resources; provide scenic areas; aid in storm water management; and provide educational and recreational opportunities.
Illinois Department of Natural Resources, C2000 Program	Supports projects that focus on habitat improvement (especially for locally significant endangered species) integrated with water quality and flood and soil erosion control.
Northeastern Illinois Planning Commission	Provides plans for site protection that promote water, land, and air quality; "smart growth"; greenways; transit-oriented development; and natural area preservation.
Chicago Park District	Strives for equitable distribution of open space within the city and a diverse land portfolio that emphasizes trails and rivers corridors.
Chicago Department of Planning and Development	Focuses on equitable distribution of open space, especially filling open-space deficiencies, while emphasizing economic development.
The Nature Conservancy	Promotes biodiversity conservation, specifically through ecoregional planning and partnerships with other organizations active in the region.
Conservation Fund	Aids in the transfer of open space into permanently protected status.
Conservation Foundation	Aids in the transfer of open space and natural areas into permanently protected status, with priority given to land in selected watersheds and then high-quality natural areas.
CorLands	Aids in the transfer of open space into permanently protected status.
Lake Forest Open Lands Association	Acquires land that has high-quality natural landscapes and desirable aesthetics, is close to other existing open space, and has public access.
Citizens for Conservation	Focuses on natural area protection, preservation and restoration, primarily through stewardship, volunteerism, and advocacy.

tion, a regional land trust that operates in the west suburban counties. In addition to land acquisition, these organizations negotiate easements with landholders to protect open-space values of properties that are used for other purposes, including agricultural, residential, and industrial uses.

Finally, we interviewed representatives from two local land trusts, Citizens for Conservation and Lake Forest Open Lands Association, based in north suburban Lake County. These groups acquire land within limited geographic areas at the subcounty or township level and focus on environmental education and site restoration. Lake Forest Open Lands Association is distinguished by its efforts in conservation developments, a market-based tool through which the profits from the sale and restricted development of a portion of a parcel provides the funding to preserve the rest of the parcel.

Goals

Land protection organizations in the Chicago region pursue a variety of goals, focusing on at least one, and usually more, of the following topics: economic efficiency, biodiversity protection (often a long-term goal achieved by restoring degraded lands), open space preservation, watershed protection, passive recreation, natural resource education, storm water retention and flood control, equity and accessibility to natural places, and diversity among land holdings *(table 3)*. All of the representatives of the forest preserve and conservation districts wanted the biggest bang for the buck from available funding; with rising property values, increasing competition from developers, and time limits on the use of bond money, they were keen on negotiating acquisitions quickly. These economic goals, however, were shadowed by programmatic goals often defined by sophisticated procedures for identifying and prioritizing properties for consideration and subject to approval of a supervisory commission. The criteria for evaluating sets of sites

included protecting high-quality examples of important ecosystems or habitat for endangered species, expanding or connecting existing reserves, and locating reserves in each district or population center. Individual sites were weighted by qualities such as size, biological integrity, recreational potential, cost, and availability. Examples of programmatic goal statements were "to complete linkages between existing holdings along the Des Plaines River Greenway," "to establish a new forest preserve in the western portion of the county," or "to work toward development of a forest macro site of at least 3,000 acres."

The size and cost of parcels purchased by forest preserve districts varies with developmental stage and locational context. Most districts want to protect 10 percent of their county's land. A few counties (e.g., Cook and DuPage) have reached that goal, while some (e.g., Lake, Kane, and McHenry) have thousands of acres yet to be acquired *(table 2).* In counties closest to Chicago, the recent burst of funding for acquisition is seen as the last chance to secure key parcels of any size. For example, 70 parcels recently purchased in DuPage County averaged 7 acres each at $91,000 per acre. For the outlying counties whose districts are younger and where lands may be considerably less expensive, acquisition funds are viewed as opportunities to protect relatively large sites and create a lasting legacy for constituents. In McHenry County, for example, 23 recent land purchases averaged 98 acres each at $6,600 per acre.

Within other organizations, land protection goals are less diverse. For example, the Illinois Department of Natural Resources funds projects under the Conservation 2000 program with goals of improving wildlife habitat, flood control, and soil erosion prevention. The Chicago Department of Planning and Development considers open-land purchases with the goal of economic development, such as its plan for ecological and industrial revitalization of the Lake Calumet area. Here, the acquisition cost of brownfield lands is small compared with cleanup costs, and the department works with other agencies on rehabilitation efforts. In other cases, acquisition costs can be extraordinarily high: The department is currently considering a 1-acre riverfront parcel near downtown that would complete the final link in a major riverwalk development. The cost is $6 million, which would include relocating the business of the present landowner to a nearby off-river site.

The goals of land trusts are the most diverse. The Nature Conservancy focuses primarily on biodiversity protection. CorLands does a wide spectrum of open space projects, from natural areas to "tot lots," all within the broad goals of increasing quantity and quality of open space in northeastern Illinois. The Conservation Foundation works on small-scale projects that emphasize watershed protection. And at the smallest scale, Citizens for Conservation have few resources to purchase land and instead acquire most of their properties through donation. However, they pursue their goals to preserve open space and habitat for native plants through advocacy work with other local groups. They also restore and manage their own properties for natural, educational, and recreational goals.

Filling Niches and Pursuing Cooperation

Each group we interviewed has an individual role and identity based on its goals, classification, funding, geographical scope, history, and function. However, although each group has its own niche in the preservation landscape, the groups share a common assumption that certain lands need to be protected from development and that cooperation enhances progress toward protection. In our interviews, we noticed cooperation in four integral parts of land protection: planning, funding, land acquisition, and management.

Planning. Cooperation in planning can improve the overall quality, significance, and functionality of a network of preserved sites. Support from a broad-based plan, like the NIPC Greenways Plan or the Chicago Wilderness Biodiversity Plan, can assist in establishing a project's significance by showing how a site, or even a method of site management, fits into the larger scheme of land protection. Being part of a larger plan can also increase chances of funding, especially if a planning organization can assist by providing a wide variety of resources to aid in site assessment and project design. In this same way, organizations that are not actively seeking to add to their own holdings often use their knowledge to recommend sites to other organizations that are in the planning stages before acquisition. Finally, planning on a broader scale can help agencies with a smaller scope contribute to the larger picture. For example, explicit cooperation between the counties and other government agencies has led to extensive trail networks throughout the Chicago region and beyond.

Funding. Overcoming the high cost of land in the Chicago region was noted in most of the interviews as the greatest challenge in acquiring land, and thus it was also one of the key issues that facilitated cooperation. For example, one forest preserve district teamed with other local, regional, and national organizations to bolster the forest preserve's ability to raise money for land protection and negotiate and execute the land acquisition deals. Forest preserve districts arguably have the most potential for acquiring funds for protecting land because they have the authority to propose bond issues. All of the land trust organizations we spoke with have either been used in the past as consultants by the forest preserve districts or have volunteered their services to help with opinion polling, constituent outreach, and other strategies to promote passage of referenda.

Another difficulty related to funding is the ability to purchase land when it is available. Timing is a crucial issue in land protection. A forest preserve district may work closely with a land trust to purchase and hold a property on a temporary basis until funding becomes available and the title can be transferred and held permanently. This function provides a bridge in the transfer process to solve timing and financing issues that may preclude the protection of a parcel of land.

Land acquisition. Organizations often work together in the land acquisition phase. For example, many organizations share information about available parcels. When an available parcel

does not fit into one group's size or location goals, the group refers the donor to another organization. Another example of cooperation is the relationship between land trusts and public landholding agencies. Land trusts often negotiate the transfer or purchase of a site from a private owner to a public landholding agency. By contracting with a land trust on a case-by-case basis, the public agency does not need in-house real estate experts. In addition, landowners may prefer to work with a local land trust rather than a government agency, even though the land trust is working on behalf of the government.

Management. Once a property is purchased and protected, biological features must be restored and maintained, and organizations cooperate to fulfill this need. Many organizations recruit and train volunteers to work on their land holdings, and sometimes volunteers from a partnering organization help. For example, representatives from Citizens for Conservation, The Nature Conservancy, and Lake Forest Openlands mentioned that their volunteers participated in the restoration and maintenance of forest preserve district sites.

Conclusion

Although many metropolitan regions across the United States face considerable development pressures, they may also be well-equipped with land protection resources to handle the challenges. In Chicago, we found a rich array of such resources: diverse organizations, multiple funding sources, talented people in private and public positions who make land preservation a personal and professional mission, a wealth of volunteers, and of course, the natural resources themselves. The organizations have been around long enough to know who is out there and what role they might play. While each organization pursues its own goals, innovative approaches and partnerships are continually being created and used to protect the region's resources. Our examples of cooperation in planning, funding, land acquisition, and site management provide a snapshot of the whole network and suggest ideas and opportunities for other urban and rural regions seeking to protect important natural areas.

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