Open Space Protection:
Conservation Meets Growth Management

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ABSTRACT

Programs to protect open space from development are some of the most popular strategies designed to manage urban growth in the United States. Although states and metropolitan areas have been preserving open space for a variety of purposes since the mid 19th century, they have been adopting open space initiatives in near record numbers in the last decade. With the rapid growth of many metropolitan areas, the link between open space policies and growth management is becoming clearer than ever before. However, the impact of open space preservation on metropolitan development patterns is not yet well understood. In fact, open space programs have rarely been examined as overt growth management tools. This paper provides an overview of the nature, quantity and objectives of open space programs in the U.S. and, utilizing existing literature, begins to describe how they affect the shape and form of metropolitan areas.

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I. INTRODUCTION

During the economic boom of the last decade, programs to protect open space grew in popularity throughout the United States. Even after the tragic events of September 11, 2001, and the economic downturn that followed, American voters continued to overwhelmingly support spending for open space protection programs.

In the November 2001 election, 86 of 115 state and local open space spending measures were passed by voters, providing more than $1.2 billion in public funds for open space protection efforts (Trust for Public Land and Land Trust Alliance 2002). In March 2002, California voters approved a $2.6 billion bond issue for parks and open space (Rodgers 2002). These electoral victories continued a decade's worth of public support for open space protection programs. Since 1991, most states have initiated or greatly expanded their programs. Regional and local programs have increased in size and number, and the impact of private land trusts has doubled as well. Furthermore, the debate surrounding the impact of the federal government as an owner of open space is starting to intensify - particularly in the West.

In short, open space protection efforts – federal, state, regional, local, and private – have become a centerpiece of American land use policy and are functioning in concert with efforts to manage urban growth more than ever before. There is little doubt that the motivation behind many efforts to protect open space is to alter urban growth patterns – either to save certain pieces of land from development, to suppress the overall amount of growth in a particular area, or to redirect growth away from environmentally sensitive areas. But although open space protection programs are entering the mainstream debate about Smart Growth and growth management, their impact in shaping urban and metropolitan growth is not well understood. Little scholarly literature of recent vintage has even discussed open space protection as metropolitan growth management. And there has been virtually no systematic examination of the role open space protection has played in determining the spatial patterns of American metropolitan areas.

As a first step in examining open space protection as a form of growth management, this paper seeks to provide an overview of open-space protection programs in U.S. states and begin to describe how they might affect metropolitan growth patterns in the United States. This paper provides a number of assessments:

1. A review of recent literature dealing with farmland and open space protection programs and their relationship to growth management efforts.
2. A review of open space protection programs in all 50 states, as well as a review of news accounts and other recent policy summaries that discuss the impetus and consequences of these programs.

3. A review of statistics available regarding the quantity of open space protected under existing programs, including federal land ownership data and information from the federal Natural Resources Inventory, the Land Trust Alliance, the American Farmland Trust, and similar organizations that track land acquisition and protection.

Because this paper scans existing literature and information we can, at this point, only pose questions about the impact of open space programs on urban and metropolitan growth patterns. However, we hope that by drawing together the available information, we can bring clarity and focus to the policy debate as it moves forward.

II. WHAT IS OPEN SPACE AND HOW IS IT PROTECTED?

As Governor Mike Leavitt of Utah has observed, “Open space means different things to different people.” (Western Governors’ Association 1997). This paper refers to “open space” as land that is not devoted to urban development, especially if that land is located in a metropolitan region. However, the actual uses of lands that are set aside for “open space” are quite varied.

In a recent report on the land and water conservation “system” in California, the California Resources Agency identified four different purposes for which land is set aside (California Resources Agency 2001). These are:

1. **Conservation for Production** (sometimes known as “Working Landscapes”): Land is often set aside to ensure continued production of economically valuable commodities, including timber, fish, grazing, and food. This land includes privately owned agricultural land, but also a great deal of federally owned land with commodity value.
2. **Conservation for Human Use**. Land is also set aside to protect its value for human recreational use. Though parks are the most obvious example, the conservation of fish, fowl, and game for recreational hunting purposes is another. Indeed, many state fish and game departments are focused primarily on this latter goal.
3. **Conservation of High Value Natural Areas (or “the Crown Jewels”).** Land managed by the National Park Service and state parks departments, in particular, is set aside because it represents a spectacular example of scenic beauty or an important ecosystem.
4. **Conservation of Natural Systems**. Many state and federal agencies are required to set aside land to encourage systematic conservation of whole ecosystems, watersheds, or habitat systems, often to maintain wetlands or to ensure the survival of specific plant and animal species.

This list provides a useful typology of the range of uses contained in areas that are typically lumped together under the term “open space.” Such land, meanwhile, may be protected using a variety of tools, including:

1. **Purchase of the property** (often known as “acquisition of fee title”), either by a public agency or by a non-profit land conservation organization.
2. **Purchase of the development rights** on the land by a public agency or a non-profit land conservation organization. A “conservation easement,” as this type of tool is often called, permits working landscapes to remain in the hands of private landowners while removing the threat of converting such land to urban development.
3. **Favorable tax treatment of private property**, or payments to private property owners, if land is retained in some form of open space. For example, landowners often obtain favorable tax treatment if they retain their land in agricultural cultivation, rather than pursuing urban development on that land. The U.S. Department of Agriculture has two large programs for agricultural landowners, while the largest state program is a favorable tax treatment program in California.

4. **Regulation of private property** to prohibit certain uses and encourage others, such as urban growth boundaries, rural zoning, and similar tools.

This paper deals extensively with purchase of land and development rights, and, to a lesser extent, with payments and favorable tax treatment. Regulatory tools are part of a larger discussion and are not addressed explicitly in this paper.

It is important to note that all these tools do not necessarily protect open space from environmental degradation or from all forms of human manipulation – nor from controversies about how land should be used. Working landscapes, by definition, continue non-urban forms of human land use, as do many federal lands and virtually all recreational land. In the regulatory context, the question of how much human use to allow (either in terms of resource extraction, construction of rural buildings, or other purposes) is the subject of considerable controversy. What all these tools have in common, however, is that they prevent most forms of urban development on the property in question.

III. The Role of Open Space in Shaping Metropolitan Areas

A. Historical Background

In the United States, open space protection has long been used either to shape metropolitan growth or to give urban residents access to non-urban settings. In the 19th century, urban designers such as Frederick Law Olmsted advocated the development of regional systems that included large urban parks, parkways, playgrounds and nature preserves (Garvin 2000). They succeeded in designing and at least partially implementing such systems in some cities including New York, Chicago and Boston. In 1902, Charles Eliot, who worked with Olmsted on the design of Boston's parks, proposed that open space serves two fundamental purposes – providing structure to the city, and maintaining the functions of natural processes in the urban environment (Wiese 1987).

Around World War I, Benton MacKaye, a forester and preservationist, observed that Eastern cities were growing beyond their former boundaries and merging into a metropolitan "conurbation," in the process developing the rural land that had previously surrounded and separated them. MacKaye realized that planning for urban development and land preservation were part of the same process, and should take place at the regional level. Partly for this reason, MacKaye proposed what is now the Appalachian Trail, running from Maine to Georgia. His conception was that the trail would be the backbone of a linked system of parks and nature preserves in each region, protecting wilderness and also shaping the East Coast conurbation. MacKaye later joined with others, such as Clarence Stein and Lewis Mumford, to propose theories of regional planning that rested heavily on open space as the backbone of regional form (Stein 1957).[1]

Throughout the 20th century, various policy initiatives sought to increase the amount of park and recreational space in urban areas, and to protect ecosystems and farmland on the metropolitan fringe. In some cases, these efforts have been promoted by federal policy. The long list of federal policies that have promoted conservation of open space – especially within metropolitan areas – includes the Land and Water Conservation Fund, the Endangered Species Act, the Clean Water and Safe Drinking Water Acts, the North American Wetland Conservation Act, and the National Environmental Policy Act. In many cases, however, open space protection has been secondary to the environmental goals of these programs.

Partly for this reason, most strategies to use open space to consciously shape metropolitan form have been initiated by states or localities. For example, efforts in the city of Boulder, Colorado have protected close to 30,000 acres of land since the late 1950s and have been successful at limiting development (Lorentz and Shaw 2000). Communities in the San Francisco Bay Area in California have also been active in preserving open space since the 1950s – often following MacKaye's philosophy of using open space protection to consciously shape metropolitan growth patterns. The states of New Jersey (beginning in the 1960s) and Florida (beginning in the 1970s) have long provided funding for local governments to acquire open space land in metropolitan areas. Many states that have been active in open space acquisition – including Maryland, Florida, and New Jersey – have also been active in

[1] See especially the introduction by Lewis Mumford, which traces the history of these ideas.

creating growth management systems that have consciously sought to shape metropolitan growth. These two impulses have often been intertwined but they have not always been consciously implemented together, and the combined impact of these two policy trends on metropolitan form is not well understood.

In recent years, many commentators and policy advocates have promoted the idea that open space of all kinds should be consciously used to shape our metropolitan areas. For example, in June 2001, the American Farmland Trust and the U.S. Conference of Mayors announced the formation of a coalition to promote city reinvestment along with farmland preservation. Noting that "urban-influenced farmland" yields a significant portion of U.S. grain and livestock – and most domestic fruit, vegetable, and dairy products – the two organizations argued that the protection of farmland is one tool in creating a comprehensive "smart growth" plan for metropolitan areas (U.S. Conference of Mayors 2001).

This initiative is just one example of a new and more integrated philosophy that is emerging about planning for open space. In 1991 the National Recreation and Park Association, noting a change in philosophy, recommended the use of a "systems" approach to open space planning (McMahon 2000). During the 1990s several states completed innovative state plans such as statewide greenways plans in Florida and Pennsylvania and a new "BioMap" in Massachusetts (Daley 2001). State level assessments have formed the basis for new open space initiatives in Maryland (GreenPrint Program) and Georgia (Greenspace Program).

In August 1999,The Conservation Fund joined with other national leaders to form the Green Infrastructure Working Group. The group developed a set of principles to guide open space planning at the state, regional and local levels. These include "green infrastructure" or a system of interconnected green space systems as the framework for conservation; the design and planning of green infrastructure prior to land development; and green infrastructure as a primary public investment, with dedicated funding (Benedict 2000).

At the same time that state open space planning is becoming more sophisticated and comprehensive, groups like the Trust for Public Land and The Conservation Fund are helping communities through the U.S. to develop local and regional plans for systems of open space. The Conservation Fund estimates that "30 of the nation's 50 largest metropolitan areas have developed or are in the process of developing regional greenspace plans." (McMahon 1999). Given the newness of these efforts, it remains to be seen if such plans will succeed in their multiple goals of preserving open space, protecting resources, and shaping urban form.

B. Recent Research and Scholarly Work

Although the concept of open space protection as a driver of metropolitan form is deeply embedded in the literature of American urban planning, recent research and scholarly work has not focused on the connection between open space and managing metropolitan growth. As a result, little is known empirically about the impact open space programs have had on metropolitan form.

Most scholarly work on growth management deals primarily with the role of land use regulation, rather than open space acquisition as a shaper of metropolitan form (see: Stein 1993; Bollens 1992; Kelly 1993; DeGrove 1993). The existing literature focuses on describing the tools and techniques of growth management regimes, rather than empirically measuring their effect. In his book on managing growth on the metropolitan fringe, Daniels (1999a), a well-known scholar of farmland preservation techniques, devotes one chapter to the topic of "Blending Regulations and Incentives to Manage Fringe Growth." This work asserts that growth at the metropolitan fringe is creating sprawl and describes farmland preservation incentives and land acquisition techniques as tools that could be used in an overall growth management system. However, other than advocating the use of these techniques to deflect growth, the chapter does not critically examine the relationship between farmland preservation and growth management. In another paper, Daniels (1999b) describes the interplay between agricultural easements and regulatory preservation of agricultural land in Lancaster and Chester counties in Pennsylvania. He notes that both counties have extensive purchase of development rights programs but that Lancaster has urban growth boundaries while Chester does not, though it has been proposed. He briefly discusses the development patterns in Lancaster County, but relates them to the growth boundaries, not to the farmland preservation efforts.

Two recent journal articles attempt to link open space programs and growth management conceptually. Ryder (1995) examined four states with growth management programs and citizen efforts to create "greenways" – linear parks generally owned by the public or by nonprofits – and sought to make a connection between the two. While she concluded that greenway efforts are compatible with growth management – and did provide some anecdotal evidence that greenways were helping to implement growth management in the State of Washington – she found that the greenways and growth management were not overtly linked in the growth management system in place in three of the four states (Florida, Georgia, and Washington). Only in Oregon did a direct policy link exist between growth management policy and greenways.

Steelman (2000) examines Colorado's open space acquisition program, Great Outdoors Colorado (GOCO), in the context of growth management regimes. Drawing upon growth management literature, she outlines GOCO as a "land use protection" program and concludes that "land use protection decisions have been split between a centralized agency (GOCO) and decentralized local governments and organizations throughout Colorado." While treating GOCO as part of a growth management regime, she stops short of laying out a conceptual framework to consider open space acquisition programs as part of an overall growth management system. She also does not consider the actual impact of GOCO on land use patterns in Colorado.

Among recent contributions, only a few seek to examine the impact of open space acquisition on urban form. Several pieces (Morson 1999; Lorentz and Shaw 2000) describe the impact of the Boulder area programs. In total, the city and county of Boulder have purchased land or development rights for about 73,000 acres surrounding the city as a "greenbelt." The literature suggests that most new urbanization has taken place outside the greenbelt; 55 percent of the city's workforce lives outside the city limits. However, the city has also pursued regulatory slow-growth mechanisms that restrict housing development, so it is impossible to tell from existing research how much of the impact is due to open space acquisition by itself and how much is due to regulatory restrictions inside the city.

Hollis (2000) seeks to estimate the impact of open space acquisition on urban development opportunities. Examining open space programs in the Delaware Valley region of New Jersey[2], the Treasure Coast area of Florida's Atlantic Coast, and Maricopa County, Arizona, she concludes that land acquisitions under these programs will not significantly affect the supply of vacant land available for housing. Along the Treasure Coast, for example, she notes that although the region's goal is to preserve 55,000 acres of land by 2010, the vacant land supply exceeds 170,000 acres, and only 30,000 acres would be required to meet housing demand during this period, even at existing densities (two units per acre and below) which are fairly low. She found a similar land "cushion" in New Jersey, and a much bigger cushion in Arizona.

As the issue of "working landscapes" has grown in importance, some recent scholars and commentators have sought to analyze the effectiveness – and the cost-effectiveness – of programs designed to preserve them. This literature suggests that most farmland preservation programs are created with an emphasis on open space protection rather than agricultural economics. It also finds that the purchase of development rights is more cost-effective than tax credits.

Blewett and Lane (1988) used an economic model to suggest that tax credit programs, which provide farmers with lower tax assessments in exchange for keeping their property in farming, essentially "leases the development rights of farmland at an excessive rental rate" since "most of the tax reductions go to landowners during periods when they would not have converted anyway." They conclude that it would be preferable to purchase development rights for farmland actually at risk since that would "compensate landowners only for those rights actually given up" and provide a permanent, rather than temporary, solution. Commenting on California's Land Conservation Act of 1965[3], Svete (1994) reaches a similar conclusion, noting that most farmland that is not being re-enrolled in the program is in urban counties and, therefore, likely to be developed. He concludes that this program is little more than an indicator of where future urban development will occur.

Drawing on experience from Europe as well as the United States, Alterman (1997) distinguishes between farmland protection and protection of "countryside." "Agriculture and countryside preservation are two separate goals: economics, which has traditionally united them, will increasingly divorce them by making farmland unlucrative," she writes. "The principal lesson that land-rich countries can learn from European counties is the need to honestly recognize that agricultural economics may be good for the agricultural production but not for countryside preservation." The best way to protect the countryside, she concludes, is "not by protecting farmland but by containing urban growth."

Daniels and Nelson (1986) reach a similar conclusion in their analysis of farmland preservation in Oregon by stating: "Until farmland preservation and commercial farm viability policies can be consciously linked, state and local farmland policies probably will be more concerned with preserving open spaces than with preserving the economic viability of the working rural landscape." As agricultural economies struggle with worldwide competition and high costs, especially in areas adjacent to metropolitan areas, this conflict may become more significant in the future.

[2] The counties of Burlington, Camden, Gloucester and Mercer.
[3] Also known as the Williamson Act, this program allows landowners to restrict their land uses in exchange for lower tax assessments.

It is hard to summarize these scattered research results in any kind of consistent way. It is clear that no matter what the political motivations for creating or funding open space protection programs, there is rarely a formal link to growth management policies that overtly shape metropolitan form. Combining Hollis's research about Arizona, Florida, and New Jersey with the research on Boulder would suggest that open space acquisition, in and of itself, does not severely restrict urban development potential; rather, it is just as important to examine regulatory policies regarding land that remains on the private development market. And the research on farmland preservation suggests that, while these techniques are often used to deflect urban development, they do not always take into account the industrial processes and economic pressures that agriculture itself faces, especially in the vicinity of metropolitan areas. As stated above, however, there has been no research that directly addresses the question of how open space protection programs affect metropolitan form.

IV. THE ROLE OF THE FEDERAL GOVERNMENT IN OPEN SPACE PROTECTION

The federal government is perhaps the nation's most important player in protecting open space. But this significance is not derived from just one program or just one role. Rather, federal agencies play a wide range of roles all over the nation in shaping how open space interacts with metropolitan growth. These include federal land ownership practices, land acquisition programs, federal policies that promote metropolitan open space acquisition, and federal policies that promote conservation of privately owned resource land. This section describes these activities individually.

A. Federal Land Ownership

The federal government is the largest landowner in the United States. The four major federal agencies that deal with public land - the Bureau of Land Management (BLM), the National Park Service (NPS), the U.S. Forest Service (USFS), and the U.S. Fish & Wildlife Service (USFWS) - own and manage approximately 600 million acres of land, or 27 percent of all the land in the nation.[4]

Virtually all of this land can be regarded as "open space" of one sort or another. However, federal land management agencies are required to pursue a variety of non-urban missions. The NPS is focused not only on protecting the "crown jewels," but also in making them accessible for recreation. The USFS and BLM permit a wide variety of resource extraction and recreational activities. Of these four agencies only the USFWS is charged primarily with protecting wildlife habitats. However, because of the National Environmental Policy Act's requirements[5], all federal agencies must now take the impact of their activities on ecosystems and wildlife into account in their management practices (California Resources Agency 2001).

As Chart 1 and Map 1 show, federal land ownership is highly skewed toward the Western states. Federal agencies own approximately half the land in the Western states, compared with only 5.7 percent of the land in the rest of the nation. Most federal land in the west is located in rural areas far from metropolitan growth. However, these landholdings are beginning to have an impact on growth patterns in some metropolitan areas, especially in the Southwest and the Rocky Mountain areas. Two-thirds of the Los Angeles region is owned by the federal government for conservation purposes (Southern California Studies Center 2001). The Las Vegas metropolitan area is ringed almost entirely with BLM and other federal land holdings, which effectively creates an "urban growth boundary" around the region (see Map 1). [6]

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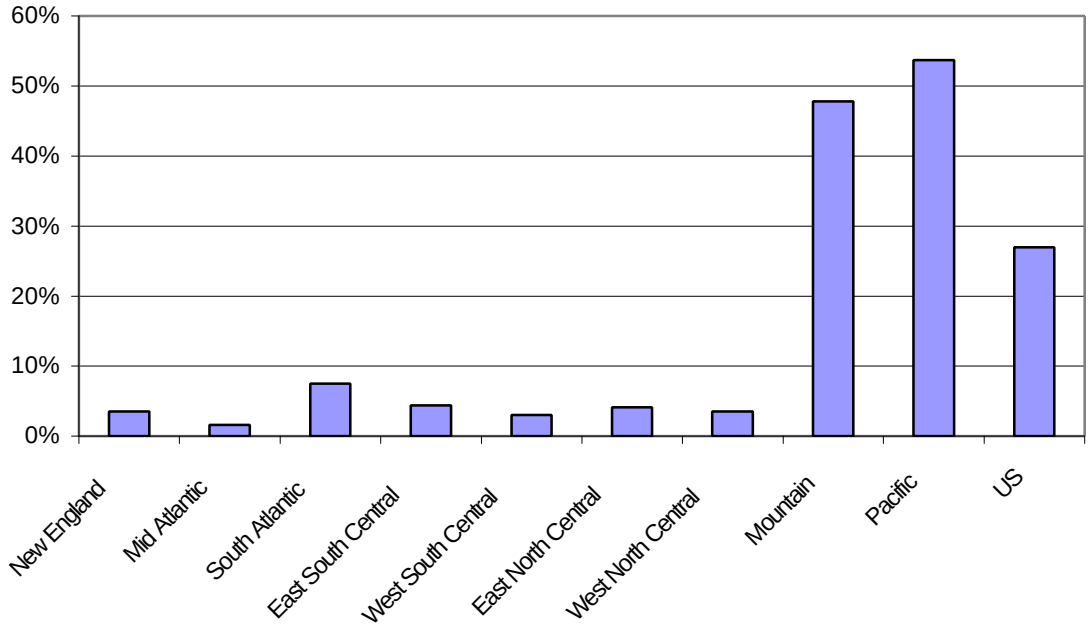
[4] Of this amount, more than 200 million acres is in Alaska, where the federal government owns 65 percent of the land. Excluding Alaska, the national figure is 402 million acres, or 20.6 percent of the nation's surface land area (http://www.nhq.nrcs.usda.gov/NRI/1997/summary_report/original/table1.html).

[5] The National Environmental Policy Act, 42 U.S.C. 4321 et seq., requires all federal agencies to undertake environmental analyses of their actions if the environmental could be significantly affected. The result is often "mitigation measures" that include the dedication of land for wildlife protection purposes. NEPA essentially requires conservation agencies to consider conservation of natural systems in their actions whether or not they are legally mandated to do so (California Resources Agency 2001).

[6] It is important to note that there is considerable vacan land inside some of the municipal boundaries, especially Henderson, as well as in unincorporated areas of Clark County.

Chart 1: Federal Land Ownership (by Census Subregion), 1997



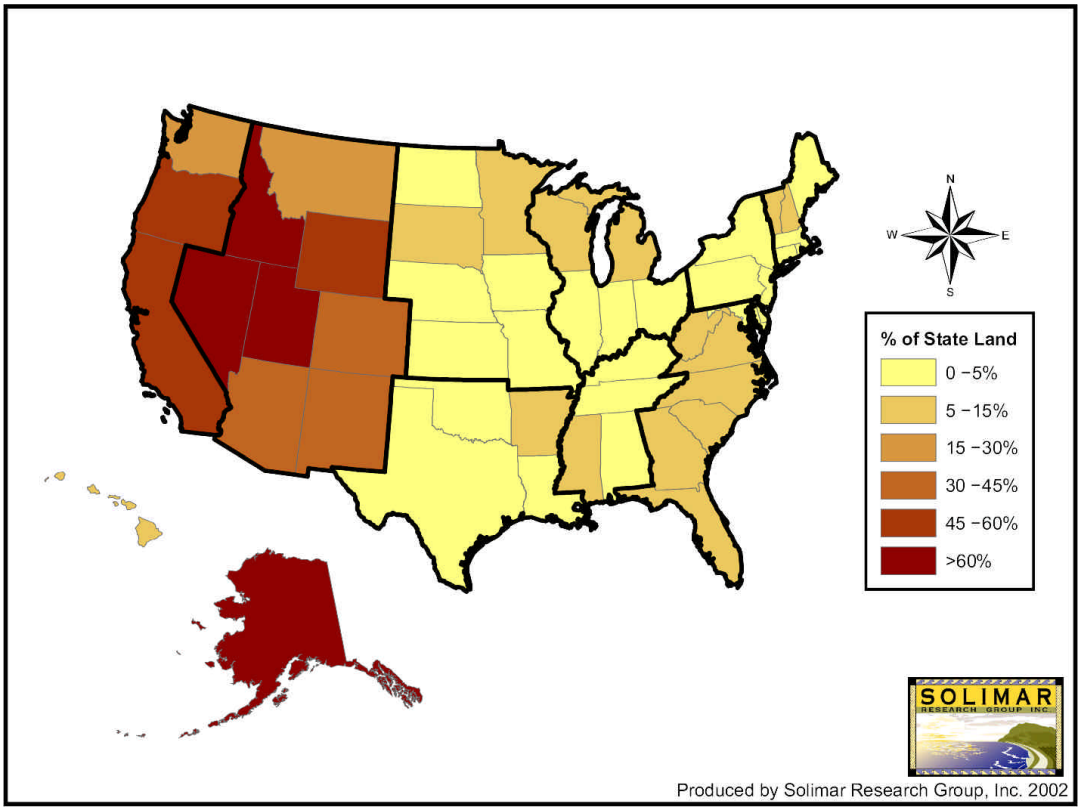
Source: 1997 Natural Resources Inventory, USDA

However, in these western areas, federal practices in buying, selling, and trading land on the metropolitan fringe have begun to shape urban growth patterns. For example, in Las Vegas and a few other western metropolitan areas, BLM has chosen to trade land on the edge of the metropolitan area to private landowners in exchange for larger tracts of land with greater resource value located in more rural areas. During each year between 1990 and 1997, for example, BLM engaged in trades for approximately 85,000 acres of land with private landowners and approximately 20,000 acres of land with western states (Draffan and Blaeloch 2000).

This practice has become the target of considerable controversy throughout the West - not only because of its impact on metropolitan form - but because of alleged below-market transactions. Most of the controversial transactions have involved the conveyance of federally owned land to timber companies (Draffan and Blaeloch 2000).

However, one of the most controversial was a 1997 exchange of almost 5,000 acres of land near Las Vegas, which was conveyed to the Del Webb development company in exchange for a variety of properties in Nevada and at Lake Tahoe, California. Del Webb subsequently began building a major development project, but procedural issues associated with the exchange are still in litigation (California Planning and Development Report 2001). Partly because of these controversies, in 1998 Congress

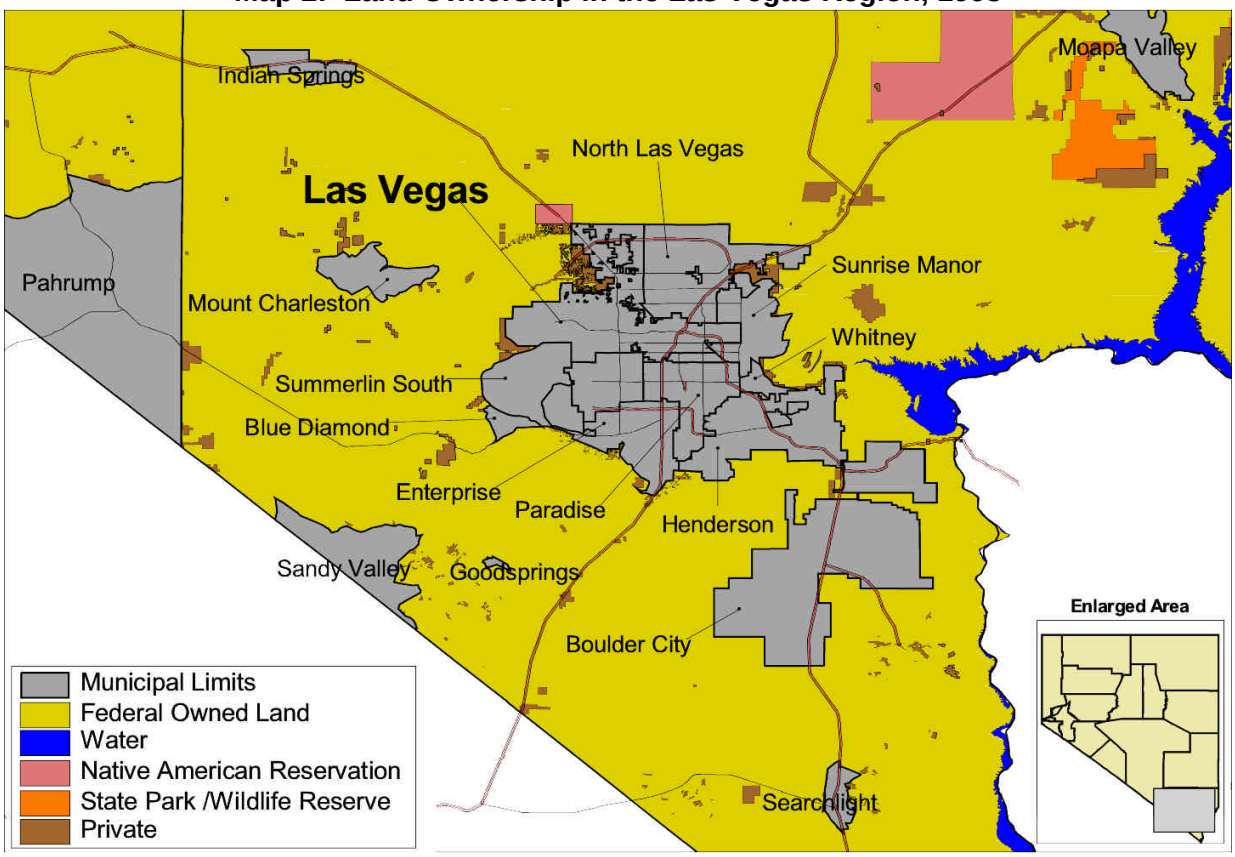
Map 1: U.S. Federal Land Ownership, 1997



Source: National Resources Inventory, USDA

passed the Southern Nevada Public Lands Management Act. This requires the BLM to sell, rather than exchange, 27,000 acres of land declared “surplus” in the Las Vegas Valley, and to use the proceeds for public purposes including the acquisition of environmentally sensitive lands (U.S. Bureau of Land Management 2000).

Map 2: Land Ownership in the Las Vegas Region, 1998



Source: Nevada State Office of the Bureau of Land Management

B. Federal Policies that Promote Open Space Acquisition

The federal government also has a variety of policies and grantmaking programs that promote ownership of open space by both federal agencies and by state and local government agencies. These include the following:

1. Land and Water Conservation Fund

Since the 1960s, the U.S. Department of the Interior has funded and operated the Land and Water Conservation Fund (LWCF), a program designed to provide both federal agencies and state and local governments with funds for open space protection. Funded principally by federal revenue from offshore oil and gas drilling, LWCF produced over $6 billion between 1965 and 1999. Much of LWCF's activities are oriented toward recreation rather than preservation of pristine landscapes. About two-thirds of the funds have gone to federal agencies to buy land, with the other third going to state and local governments to provide matching funds for their own projects (to be eligible for funding, states must develop a statewide comprehensive outdoor recreation plan (SCORP) (National Park Service 2001).

Because of its size and scope, LWCF may be the most important federal open space acquisition program. Because money must be appropriated by Congress, LWCF spending is subject to intense political lobbying and LWCF purchases have been concentrated in a few large states. More than half of the money funneled to federal agencies has been spent in eight states in the West and South (*i.e.,* California, Florida, Washington, Texas, Oregon, Nevada, Georgia and Louisiana. See Table 1 and Map 3). California alone has received almost $600 million in federal funds, or about 20 percent of the total.[7] The federal portion of the Land and Water Conservation Fund has led to the purchase of 4.7 million acres of land, including "all or most of dozens of well-known national parks, from Cape Cod and Padre Island national seashores to Voyageurs and Redwoods national parks." (The Conservation Fund undated).[8] Federal funding is limited to land conservation only.

[7] Of this amount, approximately $175 million has gone to the Santa Monica Mountains National Recreation Area near Los Angeles, a National Park Service unit established in 1978 and charged with acquiring some of the most expensive undeveloped land in the nation. These figures were provided to Solimar Research Group by Americans for Our Heritage and Recreation, based on that organization's database of LWCF funding. http://www.ahrinfo.org/lwcf_projects.html

[8] Specific statewide acreage figures, and historical acreage figures, are difficult to come by because organizations that keep track of LCWF activity, such as Americans for Our Heritage and Recreation, tend to focus on funding amounts rather than acreage and on current-year activity in order to provide their constituents with tools to advocate more funding.

Table 1. Land and Water Conservation Fund: Summary of Spending by State, 1965-1998

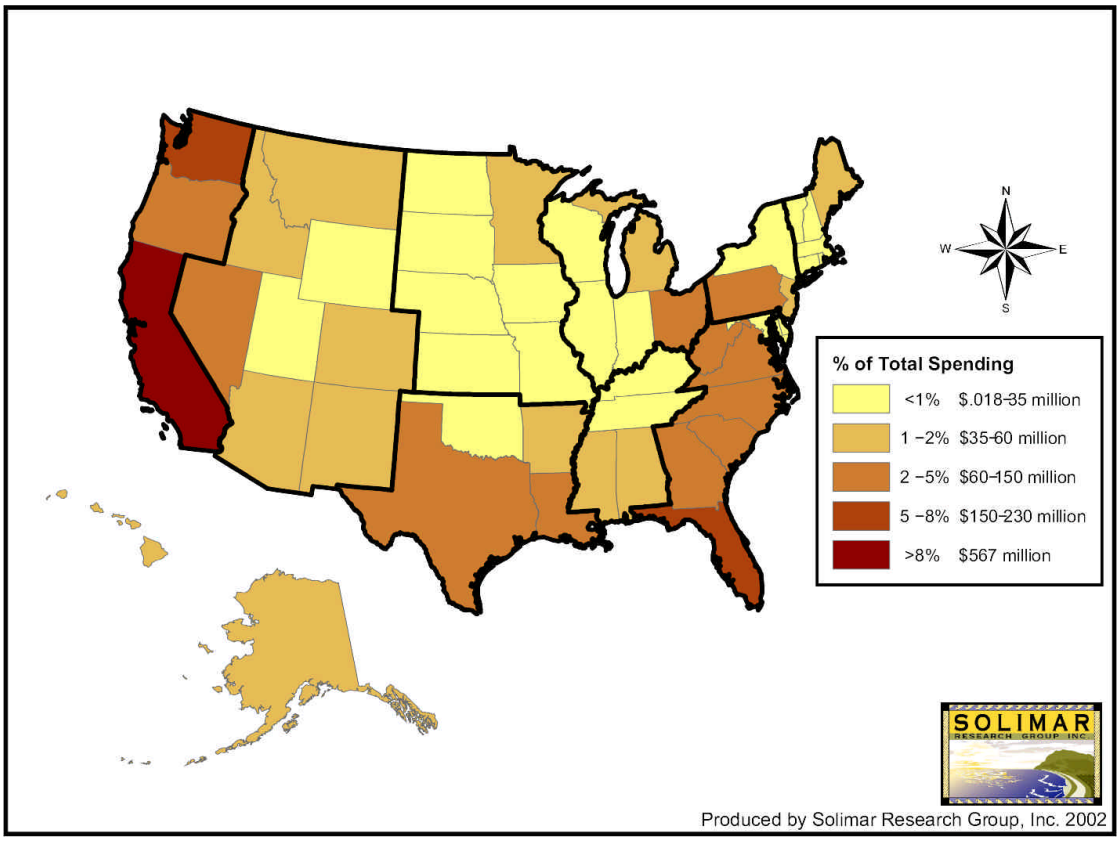
State	Federal Agency Spending	% of Total	State and Local Grantmaking	% of Total	Total Federal and State Spending	% of Total
California	$567,350,491	19.4%	$230,588,783	7.3%	$797,939,274	13.1%
Florida	$228,722,461	7.8%	$98,644,275	3.1%	$327,366,736	5.4%
Texas	$136,263,662	4.7%	$137,805,591	4.4%	$274,069,253	4.5%
New York	$29,051,720	1.0%	$197,324,006	6.3%	$226,375,726	3.7%
Washington	$166,173,468	5.7%	$56,725,255	1.8%	$222,898,723	3.7%
Pennsylvania	$72,432,839	2.5%	$139,359,491	4.4%	$211,792,330	3.5%
Ohio	$84,206,900	2.9%	$123,841,030	3.9%	$208,047,930	3.4%
Oregon	$132,451,488	4.5%	$48,297,960	1.5%	$180,749,448	3.0%
Georgia	$106,059,709	3.6%	$65,779,782	2.1%	$171,839,491	2.8%
New Jersey	$58,788,001	2.0%	$100,230,604	3.2%	$159,018,605	2.6%
Illinois	$24,297,740	0.8%	$131,874,532	4.2%	$156,172,272	2.6%
Louisiana	$95,053,804	3.2%	$59,130,292	1.9%	$154,184,096	2.5%
Virginia	$86,709,364	3.0%	$67,004,660	2.1%	$153,714,024	2.5%
Michigan	$44,661,951	1.5%	$108,464,943	3.5%	$153,126,894	2.5%
Nevada	$117,194,920	4.0%	$31,851,010	1.0%	$149,045,930	2.5%
West Virginia	$92,381,267	3.2%	$36,831,800	1.2%	$129,213,067	2.1%
North Carolina	$61,036,997	2.1%	$62,021,690	2.0%	$123,058,687	2.0%
South Carolina	$69,563,532	2.4%	$47,788,942	1.5%	$117,352,474	1.9%
Massachusetts	$25,304,044	0.9%	$81,343,345	2.6%	$106,647,389	1.8%
Arizona	$53,003,761	1.8%	$45,707,591	1.5%	$98,711,352	1.6%
Minnesota	$38,033,133	1.3%	$58,414,855	1.9%	$96,447,988	1.6%
Alabama	$39,892,502	1.4%	$52,381,884	1.7%	$92,274,386	1.5%
Indiana	$22,611,500	0.8%	$69,642,053	2.2%	$92,253,553	1.5%
Maryland	$25,813,485	0.9%	$65,657,913	2.1%	$91,471,398	1.5%
Colorado	$37,035,557	1.3%	$48,228,788	1.5%	$85,264,345	1.4%
Arkansas	$44,108,393	1.5%	$39,967,276	1.3%	$84,075,669	1.4%
Wisconsin	$18,153,389	0.6%	$62,872,677	2.0%	$81,026,066	1.3%
Hawaii	$48,140,359	1.6%	$31,348,945	1.0%	$79,489,304	1.3%
Connecticut	$26,038,310	0.9%	$53,164,294	1.7%	$79,202,604	1.3%
Missouri	$8,512,334	0.3%	$70,417,466	2.2%	$78,929,800	1.3%
New Mexico	$44,534,647	1.5%	$33,488,605	1.1%	$78,023,252	1.3%
Tennessee	$17,015,542	0.6%	$59,503,928	1.9%	$76,519,470	1.3%
Mississippi	$37,512,204	1.3%	$38,168,644	1.2%	$75,680,848	1.2%
Montana	$44,017,336	1.5%	$31,194,442	1.0%	$75,211,778	1.2%
Maine	$41,455,384	1.4%	$31,789,677	1.0%	$73,245,061	1.2%
Alaska	$41,926,194	1.4%	$27,875,926	0.9%	$69,802,120	1.2%
Idaho	$37,777,569	1.3%	$31,685,327	1.0%	$69,462,896	1.1%
Kentucky	$15,488,440	0.5%	$48,648,773	1.5%	$64,137,213	1.1%
Oklahoma	$9,145,324	0.3%	$45,328,104	1.4%	$54,473,428	0.9%
Vermont	$26,773,530	0.9%	$27,105,270	0.9%	$54,171,537	0.9%
New Hampshire	$21,437,299	0.7%	$30,164,296	1.0%	$51,601,595	0.9%
Iowa	$6,477,188	0.2%	$44,872,438	1.4%	$51,349,626	0.8%
Utah	$7,140,320	0.2%	$39,539,468	1.3%	$46,679,788	0.8%
Kansas	$4,321,787	0.1%	$41,479,680	1.3%	$45,801,467	0.8%

Table 1 (cont.)

State	Federal Agency Spending	% of Total	State and Local Grantmaking	% of Total	Total Federal and State Spending	% of Total
Nebraska	$2,967,126	0.1%	$36,935,667	1.2%	$39,902,793	0.7%
Rhode Island	$6,323,120	0.2%	$32,828,589	1.0%	$39,151,709	0.6%
Wyoming	$4,916,328	0.2%	$27,537,889	0.9%	$32,454,217	0.5%
South Dakota	$1,074,142	0.0%	$30,294,787	1.0%	$31,368,929	0.5%
Delaware	$18,000	0.0%	$29,705,590	0.9%	$29,723,590	0.5%
North Dakota	$883,242	0.0%	$28,512,064	0.9%	$29,395,306	0.5%
Total	**$2,930,251,803**		**$3,139,370,897**		**$6,069,622,700**	

Source: Americans for Our Heritage and Recreation, "The Land and Water Conservation Fund: An Overview."

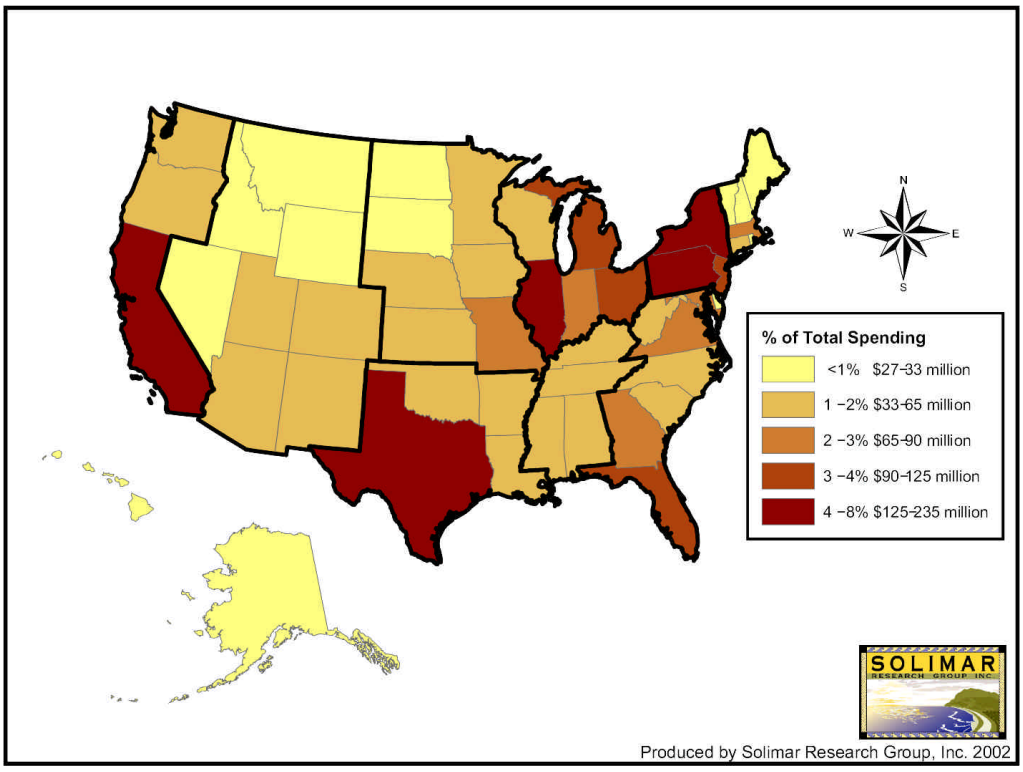
Map 3: Land and Water Conservation Fund - Federal Spending



Source: Americans for Our Heritage and Recreation

However, state and local grantmaking has been more evenly distributed (see Table 1 and Map 4). Again, California ranks first with 7 percent of state and local grants. Northern and Midwestern states, such as New York, Pennsylvania, Illinois, Ohio, Michigan, and New Jersey, also rank high on the state and local grantmaking list. State programs have led to the preservation of 2.7 million acres of land and the construction of 27,000 different recreation projects (The Conservation Fund undated).

Map 4: Land and Water Conservation Fund - State and Local Spending



Source: Americans for Our Heritage and Recreation

2. Endangered Species Act

In the last decade, the federal government's role in determining open space to be protected has grown because of the increasing influence of the Endangered Species Act. In short, the Act is designed to "recover" endangered or threatened plant and animal species and protect their habitats. Under this law, state and local governments and landowners often draw up habitat conservation plans (HCPs) that call for the acquisition of land.

Approximately 380 HCPs have been approved by the U.S. Fish & Wildlife Service. HCPs are, essentially, a land planning tool derived from a regulatory mechanism, specifically the ban on "taking" endangered species on critical habitat. The land required for HCPs is usually acquired through a combination of landowner donations in exchange for development permits; donation of lands or easements from state and local government agencies that originally acquired the land for other purposes; and acquisition funding from the U.S. Fish & Wildlife Service and from state open space acquisition programs (Fulton 1999).

Because they are stimulated by the Endangered Species Act, these programs have been focused mostly on those parts of the country which have experienced a large number of endangered species listings. According to the Fish & Wildlife Service, 41 percent of approved HCPs involve geographical areas located in the Southwestern region of the country, 32 percent are in the Pacific

Coast region, and 20 percent are in the Southeast. Only 6 percent are located in Northeast, Midwest and upper Rocky Mountain states.[9] Even so, most states have programs to preserve their natural heritage and to preserve non-game wildlife.

These programs have begun to have a major impact in shaping metropolitan growth patterns in certain parts of the country, especially in Southern California. In Los Angeles and Orange counties, endangered species efforts are likely to set aside well over a half-million acres of land (Southern California Studies Center 2001). However, because the sole purpose of these programs is to protect species that are either listed as threatened or endangered or proposed for listing, their impact on urban form is rarely discussed or analyzed.

C. Federal Policies that Promote Conservation of Privately Owned Resource Land

A number of federal programs encourage the preservation of resource land in general and privately owned farmland in particular. In recent years, some lobbying groups and anti-sprawl advocates have sought to strengthen the connection between federal farm policy and issues associated with urban and metropolitan growth.

1. Conservation and Wetland Reserves

Since the Great Depression, federal farm policy has sought to address erosion issues. Beginning in 1985, however, farm policy was expanded to address broader conservation issues with a series of expanded programs. The largest and most important are the Conservation Reserve Program (CRP) and its spin-off, the Conservation Reserve Enhancement Program. CRP provides payments to farmers who agree to retire highly erodable or environmentally sensitive land from farm production, usually for 10 years. Enrollment is limited to 25 percent of cropland in a county, and it is capped at 36 million acres nationwide (Zinn 2001).

The Wetlands Reserve Program (WRP) encourages private landowners to restore and protect wetlands, while taking them out of agricultural production. Landowners are compensated by the purchase of a permanent easement, a 30-year easement, or a restoration cost-share agreement.

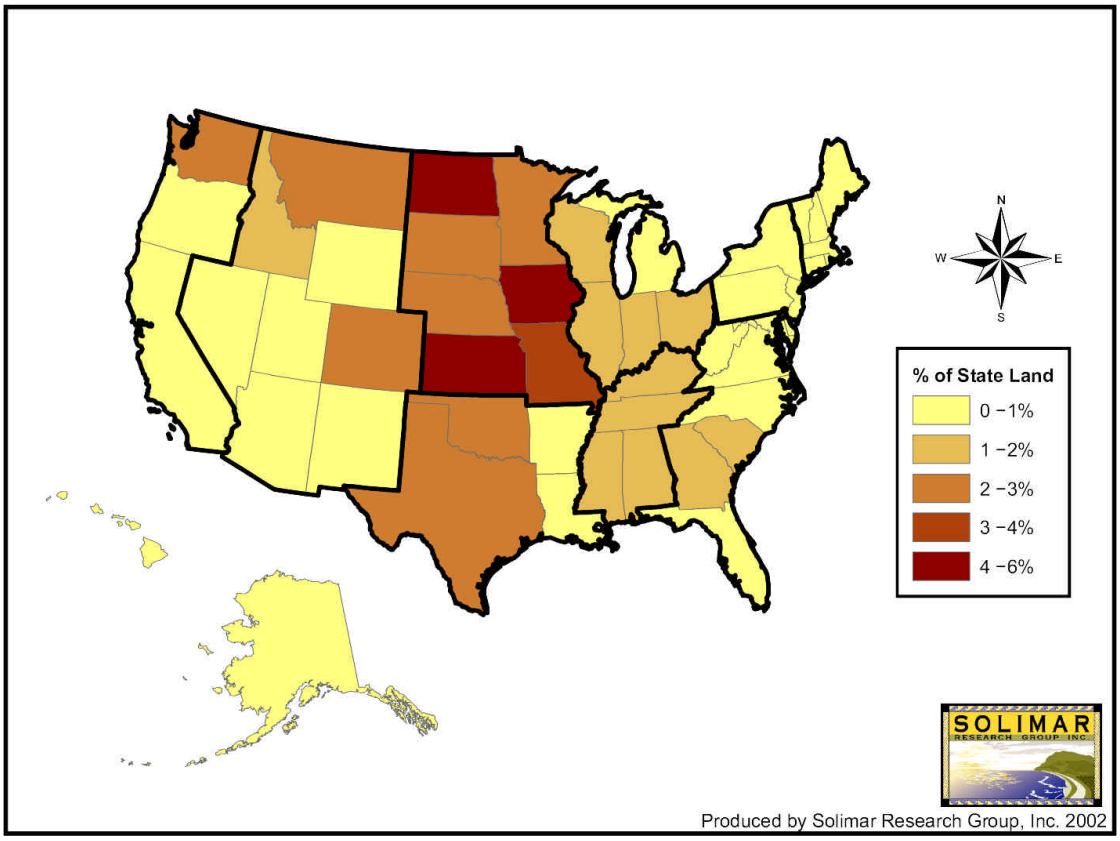
Both CRP and WRP are administered by the U.S. Department of Agriculture, with state and local support provided by the agricultural extension service and by soil and water conservation districts. Funding for these programs is large and has grown from $1 billion per year in FY 1985 to more than $3 billion in FY 2001 (Becker and Womach 2002). In recent years, anti-sprawl advocates have increasingly sought to use these and other federal farm programs as vehicles to provide federal funding for conservation efforts on private land (Smart Growth America 2001).

Most states make information about CRP and WRP available through their Departments of Agriculture or Natural Resources. According to the American Farmland Trust, 29.5 million acres are

[9] See the Environmental Conservation Online System (http://ecos.fws.gov) maintained by the U.S. Department of Interior, U.S. Fish & Wildlife Service.

currently enrolled in either the CRP or the WRP. Not surprisingly, most of the states with a large percentage of land enrolled in the CRP/WRP programs (2 to 4 percent of total land area) are in the farm belt of the Great Plains and upper Midwest states (see Map 5). However, a few states in other parts of the nation also have at least 2 percent of their land enrolled, including Montana, Washington, Delaware, and Maryland. States in the Northeast, the Pacific Coast, and the Rocky Mountains are least likely to have large amounts of land enrolled in the CRP/WRP programs.[10]

Map 5: Conservation and Wetlands Reserve Programs Land Protected by State



Source: 1997 Agricultural Census Data from the American Farmland Trust
http://www.farmlandinfo.org/fic/census/1997over.html

[10] Data from the 1997 National Resources Inventory (http://www.nhq.nrcs.usda.gov/land/meta/m6142.html and http://www.nhq.nrcs.usda.gov/land/meta/m5114.html).

V. TRENDS IN STATE OPEN SPACE PROTECTION

Although the federal government is the largest owner of open space in the United States, most strategic open space acquisitions are made by a patchwork quilt of state governments, local and regional agencies, and non-profit land trusts. These agencies and organizations sometimes use federal money, including the Land and Water Conservation Fund as outlined above. But more often they use state, regional, and local public funds, which are often approved through special elections for bonds and taxes. Increasingly, the non-profit land trusts also use funds provided by foundations and other philanthropic organizations. These funds are usually used for two purposes: the outright acquisition of open space land and the acquisition of development rights or conservation easements on agricultural land.

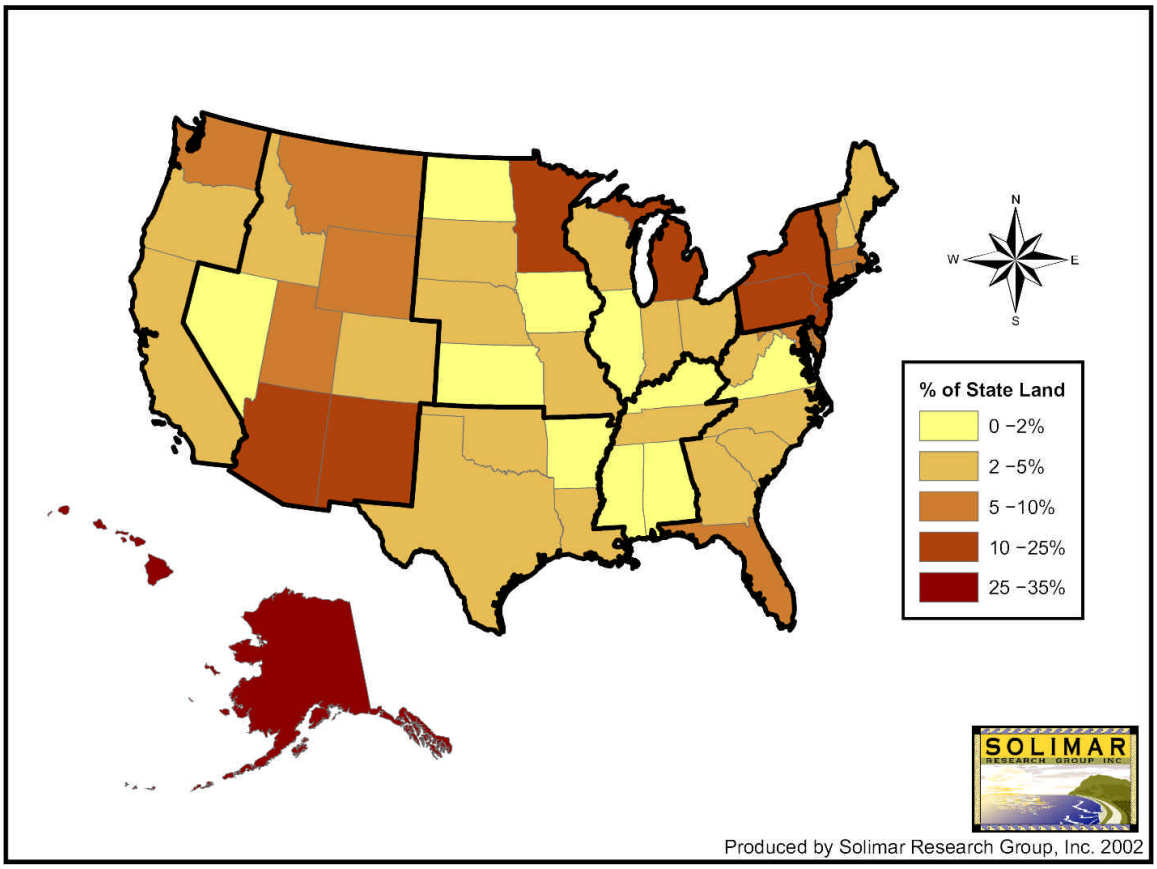
The activities of non-profit land trusts are documented later in this paper. But it is important to note that these different funding sources and the public and private entities involved in open space preservation are sometimes difficult to separate. Several layers of funding are often used, including federal, state, local, and philanthropic dollars. In addition, state and local agencies and non-profit land trusts may all play a role in a transaction – either by having the land trusts buy property and later sell or transfer it to government agencies, or by different entities purchasing different, but related, pieces of open space land.

Partly because of this complicated and decentralized system, it is impossible to provide authoritative state-level estimates regarding the amount of acreage protected through state and local programs. In 1992, the National Resources Inventory estimated the total amount of state-owned land in the United States, excluding Alaska, at approximately 85 million acres, or about 4 percent of the nation's total land area.[11] The largest amount of acreage was owned by Arizona (9.9 million acres), New Mexico (8.3 million acres), and Minnesota (5.9 million acres) (see Table 2, Map 6). Much of the land owned by states is still in the form of "state trust lands," or lands deeded to the states at statehood with the express purpose of selling them to raise funds for public education.[12]

[11] Alaska's state land ownership is estimated at approximately 100 million acres, or about 5 percent of the nation's total land area.

[12] The NRI has not released state land ownership data from its 1997 survey and no other reliable, comprehensive survey has been conducted since then. In 1995, the National Wilderness Institute issued statistics from a national survey indicating that the 49 states other than Alaska owned approximately 91 million acres, but this survey heavily overestimated New York State's landholdings and had other major differences with the 1992 NRI data regarding individual states (National Wilderness Institute 1995, http://www.nwi.org/Maps/LandChart.html).

Map 6: State Land Ownership, 1992



Source: National Resources Inventory

Table 2: State-Owned Land, 1992

Census Subregion	Total Acres	State Land (in acres)	% State Land
New England	40,199,100	2,132,600	5.3%
MidAtlantic	63,656,400	8,074,100	12.7%
South Atlantic	170,342,400	6,094,800	3.6%
East South Central	114,314,300	1,878,000	1.6%
West South Central	272,789,800	6,700,300	2.5%
East North Central	155,865,000	7,417,000	4.8%
West North Central	325,109,100	10,847,000	3.3%
Rocky Mountains	547,918,600	35,432,700	6.5%
Pacific	573,027,200	113,292,100	19.8%
United States	**2,263,221,900**	**191,868,600**	**8.5%**

Source: National Resources Inventory

It is reasonable to assume that state land ownership is now higher than the 85 million acres in the 1992 NRI survey, as the state open space programs listed in Appendix A have preserved additional land. Although acreage figures are hard to come by, the trend of increased funding for open space at the state and local level has been well documented, both by previous reports from the Brookings Institution Center for Urban and Metropolitan Policy (Myers and Puentes 2001) and from the Land Trust Alliance. The Land Trust Alliance recently reported that more than 350 successful open space votes had occurred in state and local elections between 1998 and 2000, with a success rate of at least 84 percent in each election. Despite the terrorist attack and economic downturn in the fall of 2001, this trend appeared to continue in the elections of November 2001. The Trust for Public Land and Land Trust Alliance reported that 86 of 115 open space measures passed on the November ballot, a pass rate of 75 percent (Trust for Public Land and Land Trust Alliance 2002). In addition, a $2.6 billion parks and open space bond on the California state ballot won with 57 percent of the vote (California Secretary of State 2002).

In addition to the ballot elections, however, our recent survey reveals that there has been a dramatic surge in both the creation and the enhancement of open space programs in the last 10 years. As Table 3 shows, 32 of the 50 states have either created new programs or significantly enhanced funding for existing programs since 1991. In 21 of these 32 states this has occurred since the beginning of 1999. Also, of these 32 states, 21 of them – 66 percent – are ranked by the National Resources Inventory in 1997 as among the most rapidly urbanizing states in the nation in terms of land consumption. Of the 18 states which have neither adopted new programs nor increased funding for existing open space programs in the last ten years, 13, or 72 percent, were among the least rapidly urbanizing states between 1992 and 1997 according to the NRI.

Table 3: State Open Space and Agricultural Conservation Programs

Region/State	OPEN SPACE: Year Program Established	AGRICULTURAL EASEMENTS: Year Program Established	MAJOR FUNDING INCREASES: Year Funding Added to Existing Programs
New England			
Connecticut	1998	1978	
Maine	1996	1987	1999
Massachusetts	2001	1977	
New Hampshire	2001	1979	
Rhode Island	1986	1981	2001
Vermont	1987	1987	
MidAtlantic			
New Jersey	1961	1981	1999
New York	1993	1996	1998
Pennsylvania	2000	1989	
South Atlantic			
Delaware	1986	1991	1999
Florida	1979, 1991	2001	2001
Georgia	2000		
Maryland	1969, 1998	1977	
North Carolina	1995	1998	
South Carolina	1989		
Virginia	1999	1999	
West Virginia			
East South Central			
Alabama			
Kentucky	1994	1994	
Mississippi			
Tennessee	1991		
West South Central			
Arkansas			
Louisiana			
Oklahoma			
Texas	1993		

Region/State	OPEN SPACE: Year Program Established	AGRICULTURAL EASEMENTS: Year Program Established	MAJOR FUNDING INCREASES: Year Funding Added to Existing Programs
East North Central			
Illinois	1994		2000
Indiana	1993		
Michigan	1976	1975	1999
Ohio	1994	2000	2001
Wisconsin	1991		2001
West North Central			
Iowa	1989		
Kansas	1998		
Minnesota	1988		1999
Missouri	1996		
Nebraska	1993		
North Dakota			
South Dakota			
Rocky Mountains			
Arizona	1990, 2001		
Colorado	1983, 2001	1994	2000
Idaho			
Montana		1999	
Nevada			
New Mexico			
Utah	1999	1999	
Wyoming			
Pacific			
Alaska			
California	1965	1996	2001
Hawaii			
Oregon	2000		
Washington	1989		2000

Furthermore, all of the states with growth management laws have been active on the open-space issue in the last 10 years, with the exception of Vermont, which created an important open space program in 1987 (as will be discussed below, Vermont also has by far the highest percentage of land

protected by private land trusts of any state). In short, based on both urbanization patterns and patterns of growth management, it appears that open space conservation programs and growth management are clearly linked as public policy.

As Table 4 shows, seven states stand out as national leaders in open space acquisition programs: California, Colorado, Florida, Maryland, New Jersey, New York, and Wisconsin. These states are generally populous and have a large urban population as well as considerable open space resources near big metropolitan areas. In some cases, these are also states that have been national leaders in state-level growth management. State bonds are the most popular revenue source for these open-space programs. Real estate transfer taxes are also important.

Table 4: Top States in Self-Funded Land Acquisition

State	Year Acquisition Began	Funding Sources					Outlays
		Bonds	***General Fund***	***Lottery***	***Sales Tax***	***Transfer Tax***	
California	1965	X	X				*$4 billion in funding approved by voters in 2000*
Colorado	1983			X			*$240 million since 1994*
Florida	1964	X	X			X	*$2 billion in 1990-2000; another $2 billion for 2000-2010*
Maryland	1969	X				X	*$150 million in fiscal year 2001*
New Jersey	1961	X			X		*$3 billion for 2000-2010*
New York	1960					X	*$55 million in fiscal year 2002*
Wisconsin	1991	X					*$230 million in 1990-2000; $460 million in 2001-2010*

Table 3 also documents the recent increase in the use of farmland protection programs as well. The most common way to preserve farmland – and other working landscapes, such as ranchland[13] – is not through outright purchase of the property but through purchase of conservation easements. Easements are recorded as covenants between the landowner and a government agency or nonprofit group and they represent the landowner's agreement not to develop the conservation areas of the property. Easements may be for a limited number of years, or in perpetuity. Permanent conservation easements are often required on grant-purchased property. Laws permitting conservation easements have been passed in all states except Missouri and West Virginia (Price 1995).

[13] The issue of "working landscapes" – that is, using public funds to preserve farmland and ranchland while keeping it in private hands – has also gained considerable state policy attention in recent years. In March 2001, the National Governors Association held a conference in Washington on "Working Lands Conservation" – an event that generated several background papers on the topic (Batie 2001; Daniels 2001; Levitt 2001; Salkin, Cintron, and Fleming 2001).

Of the 21 states that purchase agricultural conservation easements, twelve of the programs have been adopted in the last 10 years, while nine date back to the 1970s and 1980s. The American Farmland Trust Farmland Information Center has compiled data on these state programs as well as on 34 local programs operating in 11 states. As of February 2001, AFT found that these state and local programs had protected 997,139 acres of farmland. Table 5 shows that eight states lead the nation in farmland protection (American Farmland Trust Farmland Information Center 2001).

Table 5: Top 8 States in Self-Funded Farmland Protection, 2001

Rank	State	Acres Preserved
1	Pennsylvania	186,321
2	Maryland	185,872
3	Vermont	88,281
4	New Jersey	70,950
5	Colorado	65,265
6	Delaware	60,619
7	Massachusetts	47,737
8	Connecticut	27,368

Source: American Farmland Trust, 2002. Does not include land preserved through other means, such as 15.9 million acres under Williamson Act contracts, a favorable tax treatment program, in California.

In addition to the purchase of easements, states use other tools such as conservation tax credits to encourage the protection of farmland. As with land owned by state and local governments, data on the impact of conservation tax credits is not readily available.

Statewide Connections Between Open Space Protection, Growth Management, and Metropolitan Growth Patterns

Although landscape architects back to Frederick Law Olmsted have viewed open space protection as a critical force in shaping urban form, historically most state open space programs – like their federal counterparts – have not consciously focused on that aspect as a goal. Rather, the state programs have either (1) taken an opportunistic approach to conserving land or (2) followed a systematic pattern of open space protection that has revolved around the state's interest in the natural resources involved, rather than the impact on the metropolitan environment. While state open space funds have been used to "save" land threatened by development, this has usually occurred on a case-by-case basis rather than as part of an urban growth or urban containment strategy.

In recent years, however, a growing connection has emerged between statewide open space protection, statewide growth management, and metropolitan growth patterns. This connection has not always been explicit in either open space or growth management policy-making, but it has been an important component in the political debate surrounding the new or expanded open space programs.

In reviewing the state programs, it becomes clear that state open space efforts are highly diverse and range from those closely linked with a metropolitan growth strategy to those with virtually no linkage to metropolitan growth. In many cases, the actual implementation of the state open space program has focused on rural land, much of it far from metropolitan areas. In other cases – including some states with state growth management laws – there is little overt policy connection between growth management and open space programs. But in most situations, much of the political impetus for new or expanded programs has emerged from concern over urban and metropolitan growth. Increasingly, state open space programs are accompanied by a numerical target for the percentage of the state's land to be preserved.

All state programs are detailed in Appendix A, but this section will briefly discuss some of the current political dynamics and policy connections between open space and growth management at the statewide level. In general, it is fair to say that many states have strong open space programs and weak state-level growth management systems. Especially in small states – and in states where both systems are operating in metropolitan areas – the open space programs are likely to give states significant power over the ultimate pattern of metropolitan growth in a way that regulatory systems usually do not. In this way, many of these programs support the contention that state open space programs provide centralized land use planning systems that are more politically palatable than regulatory-driven growth management systems (Steelman 2000).

1. Strong Growth Management States: Oregon, Maryland, New Jersey, and Florida

The states that have the most significant connection between strong growth management systems and strong open space acquisition programs are Oregon, Maryland, New Jersey, and Florida. Oregon has the nation's strongest state-controlled land-use system, while Florida has a somewhat weaker system.[14]

But Florida also has an ambitious program to allocate $300 million per year to land conservation with a goal of conserving approximately 100,000 acres per year. Of this amount, approximately $66 million is allocated to the Florida Communities Trust program (FCT), providing grants to local governments for acquisition of open space lands identified in local comprehensive plans as strategically important – thus creating a direct policy link to metropolitan growth.[15] In order to provide matching funds, at least 19 counties and one Florida city have adopted local taxes for open space. As of 2000, the FCT program had preserved 27,000 acres (Florida Department of Community Affairs undated).

Maryland and New Jersey provide an interesting contrast. Both have strong state open space programs and, relatively speaking, strong growth management systems. But Maryland has tied its open space acquisitions directly to the state growth management policy, while New Jersey has not.

[14] As noted in the review of the literature, only Oregon appears to have a formal policy connection between growth management and greenways (linear open public spaces).
[15] Local comprehensive plans in Florida must be approved by the state.

Through Program Open Space, a state program funded by a real estate transfer tax, Maryland has preserved 230,000 acres since 1969. But in adopting Governor Parris Glendening's "Smart Growth" legislative package in 1997, the state created an overt connection between open space and growth management for the first time by designating geographic areas where growth should occur and where land should be conserved. The legislation allows for the designation of Priority Funding Areas (PFAs) where the state and local governments want to target growth and economic development. The PFAs are generally in established areas with existing infrastructure. To preserve undeveloped land, "Rural Legacy" funds – that is, conservation funds -- are used to buy land or development rights in the conservation areas. Funded with $30 million a year beginning in 1998, as of December 2000, the Rural Legacy program had conserved 47,000 acres of land (Baltimore Sun 2000). In 2001, the state announced the creation of the "Green Print" program, designed to protect connecting land of high ecological value and funded at $30 million per year. These interconnected programs could have a strong impact on growth patterns throughout the state and especially in the Baltimore and Washington metropolitan areas.

New Jersey has had aggressive open space programs for 40 years. The Green Acres Open Space Land Conservation Program has conserved over 470,000 acres since 1961, and since 1989 has included a local government grant program that has stimulated more than 198 local open space trust funds. Overall, more than 1.1 million acres of land has been permanently preserved by all levels of government, or about 20 percent of the state (New Jersey Department of Environmental Protection 2002). In 1998, voters approved an ambitious open space program that called for $2 billion in spending to ensure the permanent conservation of another 1 million acres, meaning that 40 percent of the state's land would be permanently set aside as open space. Most of the funding goes to continue the Green Acres program and the state's Farmland Preservation program. As of July 2000, the new program had preserved 130,000 additional acres of land (Garden State Preservation Trust 2000).

Although New Jersey also has a state growth management system and a state plan, in the long run, the open space programs may be a more important factor in determining where urban growth does and does not occur. This is because the state plan is in large part an advisory document, prepared in concert with local governments - a weaker system than in either Florida or Oregon - and was the result of political compromise when the state planning law was passed in 1987 (De Grove 1993).

2. Other Key Efforts to Connect Growth and Open Space Efforts: Colorado and Arizona

Colorado is similar to New Jersey in that it has very strong state-level public open space funding, but a relatively weak state growth management system. The connections between the two strategies are only beginning to be made.

The state has a 20-year history of dedicating state lottery revenue to open space. Since the program began full operation in 1994, the state's organization, Great Outdoors Colorado (GOCO), has expended $240.9 million to preserve 82,177 acres of open space and 73,823 acres of farmland. GOCO funds have also been used to acquire 15,259 acres of state park land and to preserve an estimated 100,000 acres of wildlife habitat. Even as this high level of open-space activity continued, however, the

state took small and somewhat uncoordinated steps on the growth management front. In 2000, the legislature created the Office of Smart Growth in the Colorado Department of Local Affairs, and appropriated over $700,000 for regional growth management. The first round of grant awards includes projects that preserve 600 acres. However, the growth management debate in the state legislature remains quite elementary compared to the states described above. After a special legislative session in fall 2001, Governor Bill Owens signed four growth management bills but no policy connections to open space acquisition were made (Sanko 2001).

Arizona falls into a somewhat separate category. It does not have a strong statewide growth management program. But the state's open space protection program has emerged from a sophisticated political debate over growth management and may give the state more power over land use than any state growth management system.

Arizona's population grew by 40 percent between 1990 and 2000, from 3.6 million to 5.1 million people, making it the second-fastest-growing state in the nation. Although Arizona generally has plentiful land (Hollis 2000), much of the statewide debate has focused on the fate of Arizona's 9.4 million acres of state trust land, whose revenues must be used to enhance public education. The city of Phoenix estimates that 70 percent of the land within its northern boundary is state trust land (Morrison Institute for Public Policy 2001).

In 1996, the legislature passed the Arizona Preserve Initiative (API), an effort to buy some of the state trust land with public funds, so that the land may be protected as open space while still meeting the educational revenue objective. API explicitly seeks to shape metropolitan form by focusing on land near urban areas (Arizona State Land Department 1998). Two years later, public interest groups and environmentalists proposed the "Citizens Growth Management Act," which would have mandated urban growth boundaries and required voter approval for community plans. In response, more moderate forces proposed the "Growing Smarter Initiative," which called for strengthening state planning law (for example, requiring growth management elements in community plans) and setting aside $20 million per year to purchase state trust lands. The "Citizens Growth Management Act" was withdrawn and the "Growing Smarter Initiative" passed (Heffernon and Melnick 1998).

In 2000, a new urban growth boundary ballot initiative was soundly defeated at the ballot, while the Growth Smarter Initiative was revised in the Legislature (Heffernon and Melnick 2001). Thus, it is clear that the entire debate over land use and sprawl in Arizona has revolved around the intersection of growth management – that is, local planning requirements – and open space acquisition, which in Arizona has focused on the state trust lands.

3. Resource Protection Meets Metropolitan Growth: California and Washington

Although they have different growth management regimes, California and Washington are worth mentioning together as states in which resource protection efforts have begun to shape urban growth – but these efforts are being driven largely by the federal Endangered Species Act, which will increasingly force these two topics together.

California has a long history of aggressive open-space programs at both the state and the local level. Most recently, Californians passed two bond issues in 2000 for natural resources protection, Propositions 12 and 13, and another in 2002, Proposition 40, for a total of $6.7 billion. Some of these funds are used to influence growth patterns and block development; indeed, past bond issues have sometimes been called “park barrel” bonds because local land trusts gather signatures in exchange for financial commitments to specific land conservation projects. In general, however, the state has focused its funding on significant resources at risk in rural areas, an approach reinforced by the state’s new “California Legacy” program (California Resources Agency 2001).

Recent statewide conservation efforts have focused on both land and water issues around the Sacramento Delta, which provides water for agriculture and urban users around the state. Although these efforts could influence urban growth patterns, especially by retiring agricultural land in the Central Valley, they are not tied to any statewide growth management system.

Growth patterns in emerging suburban areas of Southern California are increasingly shaped by Habitat Conservation Plans approved the U.S. Fish & Wildlife Service under the federal Endangered Species Act and its state counterpart. For example, Riverside County, California, is currently working on a multi-topic comprehensive plan that will delineate how to set aside 500,000 acres of land for species habitat while accommodating a doubling of the county’s population from 1.5 million to 3 million people (Fulton 2000). However, even though the conservation plans will serve as de facto regional land use plans, and open space will be protected in part with state funds, these efforts are not connected to any state growth management or land-use regime.

Although it has a much stronger statewide growth management regime, Washington is now facing a somewhat similar situation because of endangered species issues surrounding the salmon. Washington passed the state Growth Management Act in 1990, which required local governments to work together to create county-level plans and also to create urban growth boundaries (called Urban Growth Areas) under the law.

The Growth Management Act includes language encouraging habitat protection for plant and animal species but contains little specific direction on how local governments should do so. The GMA was amended in 1995 to state specifically that in “designating and protecting critical areas … counties and cities shall give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries".[16] In response, most cities and counties have created critical area ordinances under the Growth Management Act.

As in many other states, the growth management effort has focused largely on containing urban growth and has not been closely linked to the state’s open space programs, such as the Washington Wildlife Habitat and Recreation Program (WWRP is funded at $45 million per year in fiscal years 2001 and 2002). However, the National Marine Fisheries Service’s decision to list two sub-species of salmon as endangered in 1999 altered the calculus of habitat conservation and growth management. The listing

[16] Washington State Code Revised. RCW 36.70a.172 (2002) (Critical areas -- Designation and protection -- Best available science to be used).

encouraged the creation of dozens of watershed groups around the state which are focused on watershed restoration and, hence, land use issues.

The state's new Salmon Recovery Funding Board distributed $38 million in salmon recovery funds in 1999-2000 (Washington State Salmon Recovery Homepage undated). These funds were not strategically directed in combination with containing urban growth. However, as in California, it seems likely that future open space acquisition and restoration efforts will be focused on recovery of endangered species and, at least in practical terms, a stronger connection between species and urban land use will be created.

4. Emerging States' Approaches to Open Space Protection: Georgia, Pennsylvania and Ohio

A few other states have placed emphasis on farmland and open space protection. These protection efforts have often occurred without a systematic connection to growth management, but the connection appears to be growing.

In Georgia, Governor Roy Barnes has regularly focused on growth issues, especially in metropolitan Atlanta, and to a certain extent he has tied open space protection to that goal. Barnes received national publicity for his creation of the Georgia Regional Transportation Authority, which has veto power over some development projects in metropolitan Atlanta (Ehrenhalt 1999). Barnes also spearheaded the creation of the Georgia Greenspace Program, which provides $30 million per year to local governments that set a goal of setting aside at least 20 percent of their land for open space. Although the committee that recommended the creation of the Greenspace program eschewed broad land-use and growth management policy, it did highlight the link between those goals (Georgia Department of Natural Resources 1999). The program does call for connected, regional approaches to open space protection focusing on land in close proximity to populated areas (Saporta 2002).

Pennsylvania and Ohio are both Rust Belt states that have recently acted to protect farmland and open space. Daniels (1999b) documented the aggressive state/local farmland protection policies in both Lancaster and Chester Counties in Pennsylvania, noting that these counties have combined regulatory measures (including urban growth boundaries in Lancaster) with agricultural easements (using both local and state bond money) to protect the agricultural greenbelt against urban growth.

More recently, both states have enacted new open space protection programs that may have an impact on urban growth. In 2000, Pennsylvania announced the five-year Growing Greener spending plan. This created the Watershed Protection and Environmental Stewardship Fund. Plans include around $5 million per year in state/local grants for parks and open space, and $20 million per year for farmland preservation. First-year grants went to local projects in almost every county in the state, restoring 3,600 acres of wetlands and 117 miles of riparian buffers (Pennsylvania Department of Environmental Protection 2000).[17]

[17] Two months after he took office, Governor Mark Schweiker froze $50 million for the Growing Greener program trying to close a $650 million gap in the state budget. The initiative suffered the largest reduction among all state programs (Mastrull and Petersen 2002).

Ohio voters have been very active in protecting open space in the last 10 years. In 1993 voters approved $330 million in state bonds for the Parks and Natural Resources Fund. Since that time $275 million has been used to acquire 60,000 acres of state land, and $55 million has been used for Nature Works grants for local parks and recreation (Ohio Department of Natural Resources 2001). In 2000 voters approved $400 million in Clean Ohio bonds. The measure enjoyed broad political support because it linked several disparate issues designed to curb sprawl (Myers and Puentes 2001). Of the total, $200 million will be used for open space and $200 million for redeveloping brownfields. Of the open space funds, $50 million will be used for watershed restoration, $25 million for recreational trails, and $25 million for Ohio's purchase of agricultural easement program, authorized in 2000. The remaining $100 million will fund Green Space Grants, primarily to acquire open space at the local level (Ohio Departments of Natural Resources, Development, Agriculture and the Ohio Environmental Protection Agency 2001). The Clean Ohio bonds represent the first time that open space and brownfields funding have been linked on a ballot issue (Trust for Public Land 2000b).

5. Linking Open Space Protection to Housing and Historic Preservation: New England

Finally, the mostly non-metropolitan New England states have pursued farmland preservation and open space aggressively through both public and private means. Private land trusts are especially significant in New England, where they are more numerous and have protected a greater percentage of the states' land than in any other part of the nation (see below).

One innovative effort in New England has been the linkage of open space funding to two different urban development issues, affordable housing and historic preservation. Vermont has had a Housing and Conservation Trust Fund since 1987. New Hampshire created the Land and Community Heritage Investment Program in 2000. In Massachusetts, the state created the Community Preservation Fund, providing matching funds for local governments that raise money for open space, historic preservation, and affordable housing. It is unclear whether these funds are being used together to shape urban growth patterns, but at least certain aspects of urban growth are linked politically to open space acquisition through the same revenue stream.

VI. Local and Regional Trends in Open Space Protection

Local and regional agencies play an increasingly important role in protecting open space in the United States. But even more than at the state level, the true impact of local and regional programs is hard to quantify and therefore must be mostly descriptive.

Much more than state or federal agencies, local and regional agencies use a wide variety of tools to protect open space, including regulatory tools. As mentioned, regulatory tools are largely beyond the scope of this paper, however, our scan of state web sites revealed that about a dozen states require or encourage their local governments to designate rural reserves and growth areas in their comprehensive or general plans. Those states include Florida, Georgia, Maine, Maryland, Massachusetts, New Jersey, Oregon, Pennsylvania, Rhode Island, Tennessee, Vermont, Washington and Wisconsin.

Our scan found 24 states that permit local governments to use transfer of development rights (TDR) programs.[18] Such a system involves transferring the development rights from land to be preserved to land in another part of the county or city where higher density can be permitted. As of 1997, there were 85 local TDR programs intended to preserve land for open space, agriculture, or resource protection (other TDR programs are for historic preservation and downtown redevelopment) (Pruetz 1997). Similar techniques designed to rearrange development on a single large property include overlay zones and cluster development. The latter involves the grouping of dwellings on a development site, leaving much of the site as open space. This technique is also referred to as cluster zoning or conservation subdivisions. According to one 1995 survey, flexible zoning is permitted in 26 states[19] (Price 1995). Obviously, both these techniques seek to shape metropolitan form and protect open space by shifting development from one location to another, using a system where the landowners that benefit (rather than the government) pay the cost of open space protection.

Some local governments have also focused on preserving working landscapes, especially farmland. At least 34 local governments in 11 states have programs that permit the purchase of development rights. Most of these programs are used for farmland, so they are also known as Purchase of Agricultural Conservation Easement (PACE) programs. Two local government programs began in the 1970s, 12 in the 1980s, and 20 local PACE programs were established in the 1990s. Table 6 shows the counties most active in protecting farmland (Daniels 2001).

[18] These states are (ranked by the number of TDR programs in existence) California, Florida, Pennsylvania, Maryland, New Jersey, New York, Colorado, Massachusetts, Vermont, Washington, Maine, Texas, Arizona, Connecticut, Georgia, Illinois, Louisiana, Montana, Minnesota, Oregon, South Carolina, Virginia, Wyoming, and the District of Columbia (Pruetz 1997).

[19] These states are Colorado, Connecticut, Delaware, Florida, Idaho, Indiana, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Nebraska, Nevada, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Vermont, and Washington (Price 1995). We believe the number has probably increased since then.

Table 6: Leading Counties in Farmland Preservation

Rank	County	State	Acres Preserved
1	Montgomery	MD	50,969
2	Lancaster	PA	40,096
3	Chester	PA	34,388
4	Carrol	MD	33,242
5	Sonoma	CA	32,619
6	Marin	CA	31,907
7	Baltimore	MD	29,352
8	Hartford	MD	29,223
9	Addison	VT	22,345
10	Franklin	VT	21,733

Source: Daniels, 2001

The success of these programs in maintaining viable agricultural economies is in question. In King County, Washington, outside Seattle, the program ran from 1979 to 1987 and permanently protected almost 13,000 acres using over $50 million in local bonds. One analyst suspects that the program succeeded more in protecting open space than in maintaining a viable farm economy (Daniels 1991). An issue with the successful local PACE programs in Suffolk County, New York, and Lancaster County, Pennsylvania, is protecting contiguous parcels to preserve a critical mass of farmland.

In addition, our search found 19 states that permit local governments to designate agricultural districts. Farmers who voluntarily enroll their land in these districts receive tax relief; local governments in turn are assured that a critical mass of farmland will be preserved. Agricultural districts were pioneered in California (1965) and New York (1971). The California program – in which both farmers and counties voluntarily choose to participate – currently has 15.9 million acres, or about one-third of the privately owned land in the state, enrolled for reduced taxation (California Department of Conservation 2002).

As with the states, most open space and farmland protection activity in the local and regional context involves political activity designed to create public revenue streams to purchase the land and/or development rights. Some states formally enable local governments to adopt local taxes for open space, flexible zoning, and conservation easements. Local taxes are common in states with long histories of funding local open space, such as Florida and New Jersey.

The number and success of local open space taxes through the November 2000 election has been well documented in a previous Brookings report (Myers and Puentes 2001). Specifically, 201 of 257 open space and parks measures passed nationwide, a passage rate of 78.2 percent. The number of measures was up 15 percent from 1998, and the vast majority of these measures were on regional and local ballots. Such taxes continued to meet with success in 2001. As of November 2001, 35 Massachusetts municipalities had approved local property tax increases, in order to receive state funds

under the new Community Preservation Act[20] (Trust for Public Land and Land Trust Alliance 2002). In May 2001, voters in Boise, Idaho, approved $10 million in local property taxes to acquire land in the foothills north of the city. Municipalities in New Jersey continue to approve and increase their local property taxes to match state funds for open space and farmland preservation. Voters in three counties in Missouri and two counties in Illinois recently created the first local, bistate park and recreation district in the U.S. (Myers and Puentes 2001).

Some regions and localities have received considerable attention for the way they have combined regulatory and preservation techniques to create "greenbelts". Most prominent of these is Boulder, Colorado, where both the city and the county have sales tax revenue streams devoted to open space acquisition and purchase of development rights, as well as TDR programs. In addition to purchasing almost 30,000 acres of open space and agricultural easements, Boulder has sometimes combined these tools – for example, compensating landowners partly with TDRs and partly with actual monetary compensation (Boulder County 2001).

Case Studies of Local and Regional Open Space Protection

Given the decentralized nature of state and local open space protection, it would be impossible to quantify the impact these programs have on urban growth and metropolitan form. However, the following three case studies provide some illustrative examples of how open space programs and urban growth patterns are interacting in New York, Maryland, and California.

1. Metropolitan New York: Sterling Forest

In 1998, a rugged 15,200-acre tract of land 40 miles northwest of New York City called Sterling Forest was purchased by New York State with funding from an unusual consortium of government agencies (including the State of New Jersey and the U.S. Department of the Interior), land conservancies, and private philanthropies. The purchase is an important example of the way open space acquisition shapes metropolitan development today, because it included multi-layered financing and presented the tri-state metropolitan New York with an important set of strategic choices regarding how best to grow.

Sterling Forest is located in Orange County, on the southeastern edge of the Catskills Mountains. With 340,000 people – an increase of more than 30 percent in the last 20 years – Orange County is one of the fastest-growing counties in the metropolitan area and represents part of the metropolis's exurban edge. Not only does it represent the edge of urbanization in the northwestern part of the region, but it also serves as part of the New York-New Jersey Highlands area, which provides drinking water for northern New Jersey. It is also adjacent to the Appalachian Trail.

Originally owned by railroad magnate Averill Harriman, Sterling Forest had been a target for acquisition by New York State for almost a century. In the 1920s, Harriman donated more than 50,000

[20] The act enables local governments in Massachusetts to vote on dedicating their own property taxes to these purchases.

acres of his holdings to the state for Bear Mountain and Harriman State Parks. The Harriman family eventually sold Sterling Forest to a private real estate company in the 1950s. Over the next 40 years, a series of companies attempted to develop the property. These efforts culminated in a 1991 plan by Sedway Cooke Associates, a respected California planning firm, which called for 14,000 housing units, 5 million square feet of commercial space, and 2.5 million square feet of retail space – as well as the preservation of more than 13,000 acres of land for open space.

As development appeared more imminent, government agencies, citizen groups, and land conservancies mobilized to oppose any development and purchase the property. Passaic County, New Jersey, moved aggressively in 1989 to take 2,000 acres of Sterling Forest located inside its borders by eminent domain – an action that eventually cost the county $9 million. Eventually, 40 groups in metropolitan New York formed the Public-Private Partnership to Save Sterling Forest.

During the 1990s, momentum grew to buy the property. In 1993, newly elected Governor Christie Whitman of New Jersey committed $10 million to the purchase, even though all the remaining land was in New York. In 1996, the non-governmental Regional Plan Association (RPA) released a regional plan, A Region at Risk, which called for a renewed effort at preserving open spaces, including Sterling Forest, as a means of giving the metropolitan region shape and form (Yaro and Hiss 1996). The 1998 agreement called for the purchase of 15,280 acres for $55 million, with approximately 2,000 acres remaining in the hands of the Swiss insurance company that owned the land. In addition to the $10 million from New Jersey, New York contributed $10 million, the Interior Department contributed $10 million, and the Open Space Institute and the Trust for Public Land raised $17.5 million in philanthropic funds from the Doris Duke Charitable Foundation and others. According to RPA, it was the largest single land purchase in metropolitan New York in 80 years.

Even after it was executed, the Sterling Forest deal received criticism from all sides. Some land conservationists stated off the record that the price was very high and the money might have been better spent to purchase more land in the Adirondacks. Environmentalists, meanwhile, continued to argue for purchase of the final 2,000 acres. In 2001 a group led by the Trust for Public Land and the Open Space Institute acquired 1,065 acres, resulting in protection of 95 percent of Sterling Forest (Leshinsky 2001). The landowners retain 571 acres, which they still plan to develop.

Thomas Cooke, the architect of the 1991 plan, said the purchase might facilitate leapfrog growth because urban development might simply skip over Sterling Forest into the Catskills. Given the difference between his 1991 plan and the eventual purchase, he noted that “the public paid $55 million for an additional 1,900 acres of open space” (Fulton and Myers 1998).

Given the views on all sides, Sterling Forest provides a series of useful lessons for open space acquisition. It is very hard to raise enough money to buy out large tracts of land completely, especially on the metropolitan fringe. While the money might have stretched farther in the Adirondacks, it is unlikely that New Jersey or the philanthropic groups would have committed the funds for a different purpose, because of the significance of Sterling Forest in metropolitan New York. Regardless of Cooke’s comments, the public paid $55 million not just for an additional 1,900 acres of open space, but also to prevent the construction of millions of square feet of built space. Whether, in the end, Sterling

Forest creates leapfrog development or provides a barrier that will drive urbanization back toward New York remains to be seen; little empirical research has been done investigating such questions.

2. San Francisco Bay Area: Sonoma County, California

In the last decade, Sonoma County, California, has undertaken one of the most aggressive open space acquisition programs in the nation. The results so far reveal the tension that can exist between the sometimes complementary and sometimes conflicting goals of shaping urban growth and protecting open space no matter where it is located.

Sonoma County is located on the northern edge of the San Francisco Bay Area, just north of Marin County and west of the Napa Valley. It is a well-known agricultural and wine-growing region, but Census 2000 recorded a population of 461,000 people – a 16.2 percent increase since 1990, making it also one of the fastest-growing counties in the Bay Area.

Following up on a recommendation in the county's 1989 General Plan, in 1990 the county's voters approved a quarter-cent increase in the county's sales tax. This revenue stream totals more than $12 million per year and is intended to fund the county's protection of farmland and open space, as urban encroachment was identified as a major issue in the General Plan. The county formed a new agency, the Sonoma County Agricultural Preservation and Open Space District, to implement the program.

A critical component of the open space program's initial political success was the prospect of purchasing large portions of the "community separators" designated in the General Plan. These greenbelt-type designations include about 15,000 acres in eight different areas that serve to separate the county's cities from one another.[21] During the 1990s, most cities in the county also adopted regulation-driven urban growth boundaries that removed these separators from their city planning areas (Fulton 1997). These UGBs were promoted mostly by a private advocacy group, Greenbelt Alliance, and therefore did not reflect a coordinated effort by the local government policymakers to manage at a countywide level.

However, the county also includes large agricultural and open space belts away from the existing cities. Recent statistics from the State of California indicate that only 6 percent of the county's land (66,000 acres) is urbanized, whereas 17 percent (170,000 acres) is cultivated farmland, 43 percent (439,000 acres) is grazing land, and 33 percent (334,000) acres is devoted to other non-urban uses (California Department of Conservation 2001).

Between 1990 and 2000, the Open Space District engaged in 80 transactions to protect 27,000 acres at a cost of approximately $50 million. Only 11 percent of these transactions involved fee purchase of the property. Agricultural easements accounted for 49 percent of the transactions and 31 percent involved easements on natural resources. Although the Open Space District had engaged in a

[21] Sonoma County General Plan, 1989, Part 4, Section 2.1: *Open Space Element, Scenic Resources, Policy For Community Separators*. http://www.sonoma-county.org/prmd/gp2020/1998/index.htm.

large number of transactions for community separator land (34 percent of total transactions), the amount of property conserved was only 1,685 acres, or only about 10 percent of all community separator land. By contrast, the Open Space District conserved more than 20,000 acres of agricultural land elsewhere.

In the aggregate, Sonoma County's rate of urbanization did not change much during this period. According to the state Department of Conservation, urbanized land increased by only 12 percent between 1988 and 1998, a smaller increase than population growth. The amount of cultivated farmland declined slightly and actually went up in some categories, largely because previously non-cultivated land was brought into production for wine grapes (see Table 7).

Table 7: Sonoma County Land Use Change, 1988-1998

Category	1988		1998		Change: 1988-1998	
	Acres	% of Total	Acres	% of Total	Acres	% Change
Urban and Built-Up Land	**58,927**	**5.7%**	**66,178**	**6.4%**	**7,251**	**12.3%**
Prime Farmland	33,545	3.3%	35,687	3.5%	2,142	6.4%
Farmland of Statewide Importance	13,103	1.3%	16,778	1.6%	3,675	28.0%
Unique Farmland	19,706	1.9%	25,037	2.4%	5,331	27.1%
Farmland of Local Importance	105,633	10.3%	92,867	9.1%	-12,766	-12.1%
Grazing Land	443,963	43.3%	438,636	42.7%	-5,327	-1.2%
Total Agricultural Land	**615,950**	**60.1%**	**609,005**	**59.4%**	**-6,945**	**-1.1%**
Other Land	333,208	32.5%	333,663	32.5%	455	0.1%
Water Area	17,330	1.7%	17,214	1.7%	-116	-0.7%
Total Other Land / Water Area	**350,538**	**34.2%**	**350,877**	**34.2%**	**339**	**0.1%**
Total Area	**1,025,415**		**1,026,060**		**645**	**0.1%**

Source: California Department of Conservation, 2001

Beginning in 1998, the Open Space District began to suffer from criticism that it was focusing too much attention and funds on properties in remote parts of the county, and also failing to acquire land in a systematic way. In an extensive series, the Santa Rosa Press-Democrat – the major newspaper in the county – criticized the Open Space District's spending pattern as "scattered throughout the county in an almost haphazard fashion that has produced little measurable impact on growth, particularly in the critical areas around cities." The newspaper series also noted that the Open Space District had not expended funds quickly and had $40 million in the bank (Chorneau 1999a and 1999b).

In response, county officials emphasized that they are only able to purchase the community separator property from willing sellers and suggested many of the landowners in the community separators were holding out – partly because they still believed their property could be developed some day.

After the 1998 round of criticism, the Open Space District embarked on the creation of an acquisition plan, which was released in July of 2000. The acquisition plan laid out four different categories of property to be acquired: agricultural, greenbelts (including community separators), recreation, natural resources, and recreation. In the plan, the Open Space District committed itself to doubling the amount of acreage protected in five years; to protecting property in all four categories; and to expending $10 million per year (Sonoma County 2000).

In July 2001, the Open Space District again made headlines by choosing to spend $6 million to buy a conservation easement on a remote 19,000-acre cattle ranch known as Cooley Ranch, far distant from virtually all urban growth in the county (Chorneau 2001c). The easement almost doubled the amount of land protected in the county, but the district was again criticized for expending funds away from the cities and also for spending public money on a working ranch that would not be accessible to the public. In response, defenders of the purchase called for a balanced approach to open space acquisition. “It is my contention that the chief expectation of the voters from the 1990 campaign was that we were going to use this money to secure greenbelts near cities,” said one county supervisor (Chorneau 2001a).

“The district can try to buy greenbelt lands, but it’s an uphill battle, and those lands ultimately are small, hemmed in by cities, generally agricultural and essentially worthless for sensitive species,” wrote prominent local forester and hydrologist Fred Euphrat. “The district will continue buying greenbelt as it is available but even if we spent all of our remaining dollars on it, we would hold less than 10,000 acres. The Cooley Ranch will be an easement double that size, for a fraction of the price.” (Euphrat 2001).

3. Metropolitan Baltimore: Piney Run Rural Legacy Area

The Piney Run area of Maryland provides an example of both intended and unintended consequences of the state’s Smart Growth initiative. The intended consequence is the use of state programs and policies to preserve farmland in Baltimore County. The unintended consequence is that one of the neighboring county’s designated growth areas is contiguous to the preserved farmland.

Piney Run is located in northwest Baltimore County, in a section called “The Valleys.” This is a 75 square mile agricultural area bounded by Greenspring Valley on the south and the Prettyboy Reservoir on the north. Preservation efforts began there in 1962 with the formation of The Valleys Planning Council. Also in that year the Council retained Ian McHarg to develop “The Plan for the Valleys,” later featured in his book *Design With Nature*. Much of the land in the Valleys is still used for agriculture. It has not been a high-growth area to date, but it is well located for large-lot residential development.

In 1981 a 130-acre farm in the Valleys represented the first purchase of development rights in Baltimore County. Subsequently, other land has been preserved by the Maryland Agricultural Land Preservation Foundation (MALPF) and the Maryland Environmental Trust (MET). Approximately 16,000 acres are under easement in the Valleys, with the goal to protect another 11,000 acres by 2010 (Valleys Planning Council 1999).

That goal has received a boost from Maryland's new Rural Legacy program. Rural Legacy uses transfer taxes to purchase land and easements to protect large, contiguous tracts from development. Under the program, local governments and private land trusts are encouraged to identify Rural Legacy Areas (RLAs), and to apply for funding for land conservation. There are currently 25 RLAs in Maryland, five of which are in Baltimore County.[22]

The Piney Run RLA is sponsored by the Valleys Planning Council, the Land Preservation Trust and Baltimore County. Since the Rural Legacy program was established in 1998, Piney Run has received the most funding of any RLA in the state. It also leads the state in the number of parcels preserved under the program (Maryland Department of Natural Resources 2000a). The administrator of the Piney Run RLA estimates that, by the end of 2002, over $11 million in RLA funds will have been used to purchase easements on over 3,500 acres in the area.[23]

The Piney Run RLA is named for the stream that runs through it and feeds Loch Raven Reservoir. The reservoir in turn is the source of drinking water for an estimated 1.6 million people in the Baltimore metropolitan area. In 2001 Rural Legacy funds of $700,000 were used to purchase easements on land buffering this stream. Another $1.2 million went for buffers along streams feeding into the Prettyboy Reservoir, also in the Piney Run RLA. An estimated 7,000 contiguous acres of land in Piney Run has been preserved and is considered to be the largest block of permanently held easements in the Boston to Washington metropolitan corridor (Maryland Department of Natural Resources 2000b).

The Rural Legacy program is part of the Governor's Smart Growth Initiative. Another key feature of the initiative is the designation of Priority Funding Areas (PFAs), eligible to receive state funds for roads, schools and other infrastructure. Counties may designate PFAs; in addition, existing cities and towns are automatically considered PFAs. Two Priority Funding Areas, the Towns of Hampstead and Manchester, are located along the Maryland Route 30 corridor in Carroll County, directly to the west of Baltimore County. Hampstead's PFA is immediately adjacent to Piney Run (Baltimore County Office of Planning 2001).

According to Maryland's Department of State Planning, zoning along MD Route 30 in Carroll County is "nonrestrictive." This may be contrasted with the zoning in northwest Baltimore County, which is one unit per 50 acres. Existing uses along Route 30 in Carroll County include commercial development and low density residential. Future development in Hampstead, Manchester, and Carroll County may generate traffic and other impacts on this area of Baltimore County. In fact, Hampstead's sewage treatment plant discharges into the Piney Run stream. This interjurisdictional problem can potentially undermine the Maryland Smart Growth Initiative since local governments still have great latitude to approve low-density zoning outside PFAs if they so choose. A report from 1000 Friends of Maryland concluded that only Baltimore County had meaningful agricultural zoning; the other four

[22] See http://www.dnr.state.md.us/rurallegacy/rlprogram/mapoptions.html for the state of Maryland's maps of Rural Legacy Areas.
[23] Telephone discussion with Ann Jones, Administrator, Piney Run Rural Legacy Area, November 19, 2001.

counties in the region permitted housing on four- to eight-acre lots in rural areas (1000 Friends of Maryland 2001).

Many of these low-density developments provide sufficient tax revenue and do not require water or sewer hookups, so outlying counties have little motivation not to allow them. According to a second report by the Baltimore Regional Partnership, 15 percent of new homes in Baltimore County between 1990 and 1999 were built outside PFAs, compared with 38 percent in Carroll County. The Partnership projected that between 2000 and 2020, only 9 percent of Baltimore County's residential growth will occur outside PFAs, as compared with 58 percent in Carroll County (Baltimore Regional Partnership 2001).

Maryland is far from alone in trying to influence growth patterns from the state level. And there is little question that Maryland's efforts to acquire land and development rights in the Rural Legacy Areas - including Piney Run, which helps to protect Baltimore's drinking water supply - will shape metropolitan growth. But without coordinated local zoning, the Maryland program may face an issue that many other communities face: Open space protection efforts essentially "chase" threatened development across the countryside and often pay high prices because local zoning still permits viable urban development even in areas designated as "rural."

VII. The Role of Non-Profit Land Trusts and Philanthropic Institutions in Protecting Open Space

As stated above, nonprofit land trusts and the philanthropic institutions that support them have become major players in open space preservation throughout the United States. A number of the states that are active in open space preservation provide matching funds not only to state and local government agencies, but also to conservation groups such as land trusts.

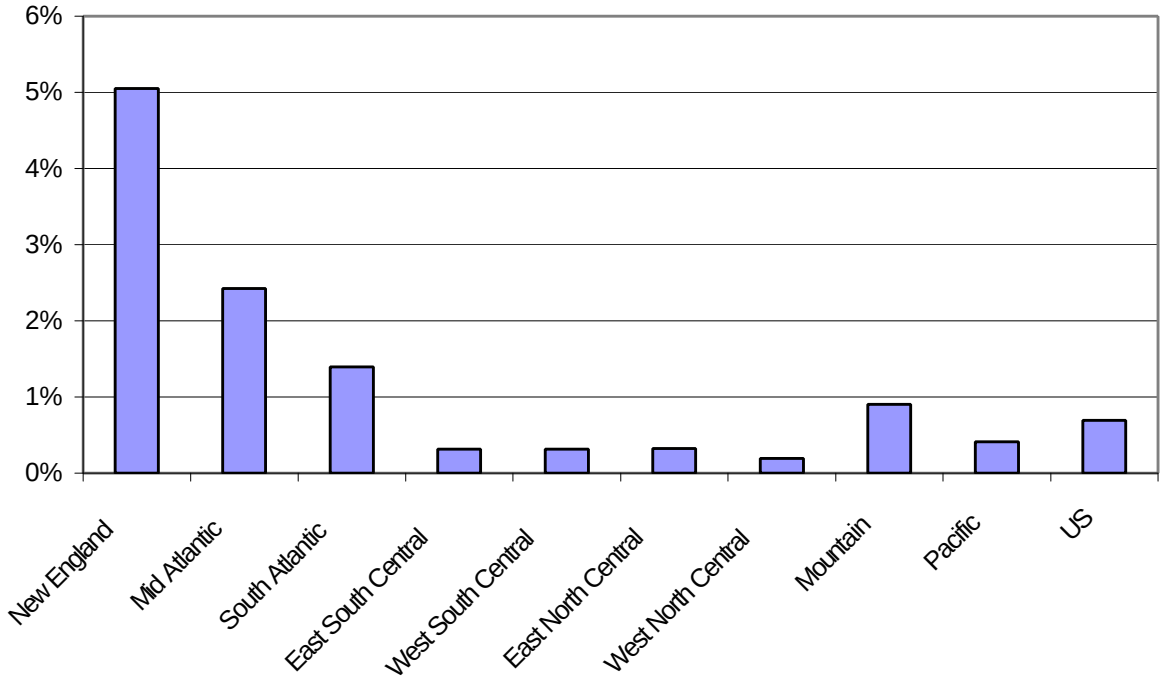
Land trusts are nonprofit groups that work with property owners to protect land through outright purchase or through conservation easements. Their number has grown dramatically in recent years. The first land trust in the world was incorporated in Massachusetts in 1891. By the mid 1960s, there were only about 130 land trusts in the United States. That number grew to 431 by 1981, 889 by 1990, and 1,262 by 2000 (Land Trust Alliance 2001).[24] In a chapter in Land Use in America, Jean Hocker, President of the Land Trust Alliance, suggests that the growth in regional and local trusts has been fueled by environmental awareness in the 1960s and 1970s; real estate speculation in the 1980s; and government downsizing in the 1990s.

Most land trusts are local, though some are statewide and a small but prominent group – principally The Nature Conservancy, The Conservation Fund, and the Trust for Public Land – operate nationally. Some work in rural areas where rural uses are under economic threat, while others work in suburban areas to protect land otherwise slated for development. In the aggregate, the land trusts do affect metropolitan growth patterns in the United States. But because so many of them are local, they rarely do so strategically. Often they are reactive in nature, moving to protect land not in the service of a larger regional plan but in response to the threat of development. And because the land trust movement is so decentralized, it is hard to get a handle on the impact nationally.

Of the major national groups, The Nature Conservancy has protected over 12 million acres, The Conservation Fund almost 3 million acres and the Trust for Public Land over 1 million acres (see Appendix Table 1). By 2000 the Land Trust Alliance reported that regional and local land trusts had protected 6.2 million acres in the 50 states. As was noted above, much of the land protected by the national, regional and local land trusts is eventually turned over to state and local governments for permanent ownership. Additional land, also owned and maintained by state and local governments, has been protected with the help of other groups such as the American Farmland Trust. Increasingly as well, land trusts do not own land outright but, rather, hold conservation easements on privately owned land in order to maintain working landscapes. As Chart 2 and Map 7 reveal, land trusts are most active in New England, where they own 5 percent of the land.

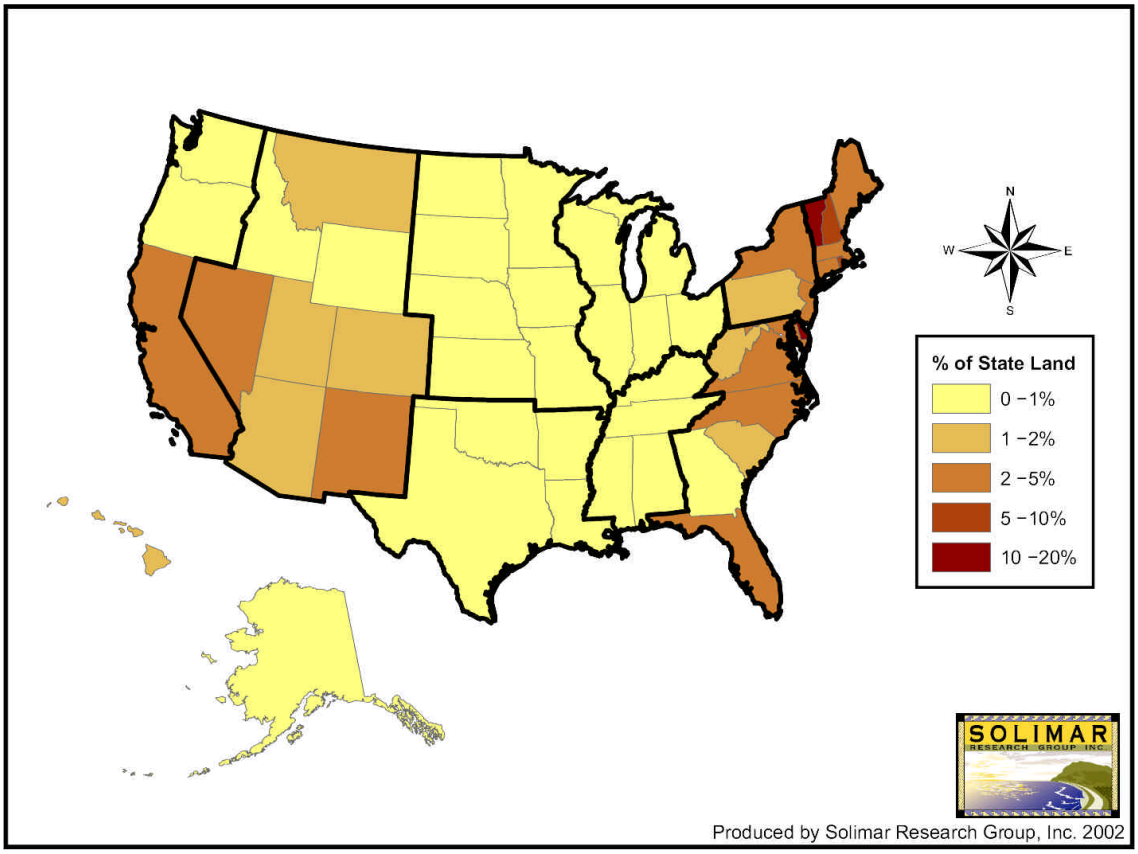
[24] Data on land trust ownership is from a variety of sources: Conservation Fund, Nature Conservancy, and Trust for Public Land.

Chart 2: Percentage of Total Land Protected by Land Trusts (by Census Subregion)



Source: The Nature Conservancy, Land Trust Alliance, The Conservation Fund, The Trust for Public Land

Map 7: Land Protected by Land Trusts, 2001



Source: The Nature Conservancy, Land Trust Alliance, The Conservation Fund, The Trust for Public Land

In Vermont, land trusts own or have protected 14.7 percent of the land, by far the highest percentage in the nation. Other states where at least 3 percent of land is protected by land trusts are New York, Connecticut, New Jersey, Delaware, Maryland, Massachusetts (which has more land trusts than any other state), New Hampshire, and Rhode Island. Land trusts also are active in some of the nation's largest states, so that even though the percentage of land they protect is small, the acreage is large. These include California, Nevada, Pennsylvania, Virginia, Utah, Florida, New York, and New Jersey.

New England is the center of the land trust movement partly because there is relatively little public ownership of land in the region and partly because of a long tradition of decentralized community action surrounding land use and other issues. Low-density suburban development is more common in the Northeast than in other parts of the nation (Fulton, Pendall, et al. 2001). Traditional New England dairy farming is becoming more marginal. As with the land trust movement generally, however, most land trust activity in New England is local and reactive, rather than regional and strategic (Russell 2001). Thus, it is hard to say authoritatively what kind of impact land trust activity is having on urban

development patterns even in New England, where they have protected more land than anywhere else in the nation.

One of the reasons that land trusts and similar groups have become more active in recent years is the growing interest in land conservation by private philanthropic foundations. The stock market run-up of the 1990s greatly increased the asset base of private foundations, and some of them have been willing to use these additional funds for acquisition of open space, usually serving as financier to national, regional, or local land trusts.

For example, the Doris Duke Charitable Foundation has committed considerable resources to land conservation in New Jersey, Rhode Island, and elsewhere. In addition to the Sterling Forest deal, the Duke Foundation recently announced $8.4 million to help preserve forests and highlands in the central and northern parts of New Jersey. Similarly, in 1998 the David and Lucile Packard Foundation began a five-year, $175 million program to protect open space, farmland and wildlife habitat in California's Sierra Nevada, Central Valley and Central Coast regions. As of November 2000 over 327,000 acres had been protected. The Packard program may be the largest private open space conservation program in the United States (David and Lucile Packard Foundation 2000a).

Beyond that, major land conservation groups have also worked with resource industries to set aside considerable portions of land to protect it from development. One recent example includes the New England Forestry Foundation's purchase of development rights to 750,000 acres in Maine's North Woods in 2001 - the largest acreage conservation easement to date (Goldberg 2001). Also, in 1999, The Conservation Fund and Champion International Corporation's agreed to protect 300,000 acres of forest land in New York, Vermont and New Hampshire - the largest multi-state conservation project in U.S. history (Dooley 1999).

VIII. Conclusions and Remaining Policy Questions

Open space protection has been viewed as a tool in shaping metropolitan growth at least as far back as Frederick Law Olmsted's time. Over the last decade, open space protection efforts have increased dramatically throughout the nation. Yet they are generally not well coordinated with complementary policies designed to shape urban and metropolitan growth patterns. Partly for this reason, the impact of open space protection efforts on these growth patterns – while undoubtedly considerable – is not well documented and hard to describe authoritatively.

Even with that limitation, however, it is possible to reach some conclusions regarding the role of open space protection in U.S. metropolitan areas today, along with some suggestions for future empirical research in this area.

First, ***we have seen a strong surge of interest in open space programs, especially in rapidly urbanizing areas***. Between 1991 and 2001, 32 states established new open space programs or greatly expanded funding for existing open space programs. This surge has continued even in the midst of the 2001-2002 recession and in the wake of the September 2001 terrorist attacks. Open space protection efforts received widespread public support at the polls in November of 2001, and that support continued in March of 2002 with the passage of a $2.6 billion parks and open space bond in California. This ongoing success represents a shift from the traditional pattern, in which support for public funds for open space declines during recessions.

Second, ***the term "open space" does not have only one meaning, even though it is often used to refer to all lands that contain non-urban activities***. While "open space" typically refers to land on which there is little or no urban development, such lands do often involve land that is being used by humans for some economic or recreational purpose. The term "open space" frequently refers to wilderness lands and lands devoted to ecosystem protection – a level of protection that might mean that people have extremely limited access to the lands. Yet the term is also used to mean land that contains a wide variety of recreational uses, including hiking, skiing, and similar activities that have both economic and environmental effects.

Most significantly, the term "open space" is often used as well to include privately owned working landscapes such as farms, ranches, and some extractive industries. The issue of working landscapes has recently received a great deal of attention in open space policy circles – a fact that could have significant implications on the relationship between open space and metropolitan growth patterns. In recent years, however, there has been a renewed focus on purchasing easements or development rights on farmland, ranchland, and other privately owned "working landscapes". Nonprofit land trusts and public agencies alike have increasingly focused on such working landscapes.

Working landscapes are often viewed by growth management advocates as a tool to shape metropolitan form and create relief from urban development. But they are under considerable economic pressure, as some farming and other rural activities become more marginal in economic terms. To deal with this issue, more public funds are being devoted to protecting working landscapes by purchasing

agricultural easements or development rights – in essence, paying private landowners to maintain rural land uses rather than convert to more lucrative urban uses. This practice is cheaper than purchasing the land and helps retain the rural character of property that may have little natural or recreational value.

But as the case study from Sonoma County, California, suggests, this practice creates a separate set of issues about open space protection and its relationship to metropolitan growth. In many cases, political support for working landscapes is high. But the public may be skeptical about devoting tax resources to retaining such landscapes if alternatives exist – such as purchase of greenbelts or recreational areas near urban places – that the public perceives as more beneficial. Furthermore, a review of the literature suggests that, as efforts to preserve working landscapes increase, there may be an emerging conflict between the political motivation for such preservation, which is often focused on open space preservation, and the economic demands of agriculture and ranching.

The protection of working landscapes will probably be an important part of the overall open space protection effort in the United States. But the goals of such efforts must be clear, especially as those goals relate to public benefits and to overall efforts to shape future metropolitan growth.

Third, ***open space is protected through a complex and decentralized system that tends to be reactive and hard to assess***. There is no centralized movement or program to protect open space in the United States. It is a complex and decentralized system. The federal government is the largest open-space landowner in the United States, but much open space acquisition occurs as a result of partnerships among all levels of governments and private players. In addition, nonprofit land trusts and philanthropic institutions have become important members of these partnerships. The number of land trusts in the United States increased from about 400 in 1981 to more than 1,200 in 2000. In addition, philanthropic foundations have increased their activity in providing funding to private land trusts to purchase open space.

Furthermore, this decentralized system tends to encourage reactive or ad-hoc open space protection at the local level and, in many cases, large-scale acquisitions based on different strategic objectives. Indeed, in this sense open space protection efforts are similar to affordable housing efforts, where nonprofit entities work with a variety of funding sources to piece together financing for specific projects important to them.

Local land trusts tend to focus on lands that are locally significant but may not fit any larger strategic objective, either for metropolitan growth or for natural resource protection. Larger-scale efforts – by government agencies and by large land conservancies – may be more forward-looking and strategic, but they tend to focus on resource value (significant ecosystems or significant farmland, for example), with little concern for the impact on metropolitan growth.

Fourth, ***open space is protected by different types of "regimes" in different parts of the nation***. Western open space is protected mostly by federal landholdings. However, New England open space, which is probably more likely to include working landscapes, tends to be protected by local land trusts. Although we did not find a reliable source of data for state and local landholdings at the state

level, the geographic incidence of state-local open space preservation is similar to that of land trusts. All East Coast states except West Virginia have initiated either new programs or new funding in the last decade. Ten of the twelve North Central states have either new programs or funding, whereas new programs are less common in the South Central and Western states. Meanwhile, farmland protected by federal conservation subsidies is centered on the Great Plains and adjacent states, Delaware and Maryland on the East Coast, and Washington on the West Coast.

None of these results is surprising. But they do suggest that, just as we should focus on how metropolitan growth patterns differ in different parts of the country, we should also focus on how open space protection patterns differ – especially in considering how these two types of policy tools might work together better.

Fifth, ***the connection between open space program and urban and metropolitan growth policy is rarely made well***. The renewed interest in open space protection over the last decade clearly reflects the public's interest in protecting some land from urban development, thus positioning open space protection as "a back-door approach to urban containment." However, this covert agenda does not always translate into an overt policy connection.

At the state level, many states that have strong growth management regimes also have strong open space protection programs. But these different efforts are usually not connected by policy. As a result, state or regional growth and open space policies may often be working at cross-purposes. One encouraging exception is Florida, where communities seeking state open space protection funds must show that their proposals fit in with their comprehensive planning policies, which are also subject to state review.

Similarly, federal land management and environmental policy is also disconnected from urban and metropolitan growth policy. Increasingly, land management and environmental policy is affecting the shape and form of metropolitan growth, especially in the West. In California and the Southwest, for example, the Endangered Species Act is forcing state and local governments to set aside large wildlife preserves in the midst of emerging urban areas. However, these efforts are rarely coordinated with urban growth policies, primarily because the Endangered Species Act is the most powerful federal law affecting land and because federal landowning agencies have no mandate to examine the implications of their actions on patterns of metropolitan growth.

One exception is Riverside County, California, where local officials are coordinating their federal species protection efforts with local and regional efforts to plan for housing and transportation. Even in this case, however, it has been difficult to obtain "buy in" from all local government entities on all portions of the integrated planning effort.

Finally, ***our understanding of the impact of open space protection programs on metropolitan growth patterns is sketchy at best***. One inescapable conclusion of our review is that open space acquisition programs clearly affect metropolitan growth patterns. However, the fragmented nature of open space protection – both policy efforts and record-keeping – make it very difficult to assess the impact in a meaningful way.

Given the fact that growth patterns, growth goals, and forms of open space protection are different throughout the nation, the impact of open space protection on metropolitan form is almost certainly different in every metro area. But more empirical research is required for us to fully understand this relationship. Have open space acquisitions been large enough or properly sited to serve as de facto urban growth boundaries? In cases where preservation has geographically limited urban expansion, has this affected the location of new development in the larger metropolitan region? What has the impact of greenways or corridor systems been on metropolitan growth patterns? These questions are partly quantitative and partly qualitative, and can only be answered with an intense metro-by-metro analysis of growth patterns and open space protection efforts.

APPENDIX A: STATE PROGRAMS BY REGION

New England

This region includes six states: Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island and Vermont. The region contains 42.4 million acres or 2 percent of the land area of the 50 states. It also contains 425 of the regional and local land trusts, or over a third of the total. By 1998 these trusts had protected 1,183,748 acres of land, or 18 percent of the total protected in the 50 states. Only one of the states, Massachusetts, is in the top 25 in terms of acreage and rate of nonfederal land developed between 1992 and 1997. All of the New England states fund the purchase of development rights for farmland, with programs established between 1978 and 1987. They also all fund the acquisition of open space on the local level, with programs established between 1987 and 2000.

Connecticut

The Open Space and Watershed Land Acquisition (OSWLA) program was established in 1998 and received $12 million in FY01. With matching funds from local governments and nonprofits, OSWLA has preserved more than 7,000 acres in its first two years. Under the slogan "21 percent for the 21st Century," Connecticut's goals are, by the year 2023, to have preserved 10 percent of its land as open space owned by the state and 11 percent of its land as open space owned by municipalities and nonprofits. Since 1978 Connecticut's farmland preservation program has protected 26,000 acres. *Connecticut Department of Environmental Protection -- http://dep.state.ct.us/rec*

Maine

In 1987 voters approved $35 million in state bonds to establish the Land for Maine's Future (LMF) program. With matching funds from nonprofits, LMF has preserved 65,000 acres. In addition, LMF's farmland protection program has preserved 2,260 acres of agricultural land. In 1999 voters approved another $50 million in state bonds, for both open space and farmland. In 1996 the legislature approved the use of state lottery proceeds for the Maine Outdoor Heritage Fund. Funding of about $1.5 million a year is used for state grants in four categories. In the Land Acquisition category, state funds are matched by local governments or nonprofits. *Maine State Planning Office -- http://www.state.me.us/spo/lmf; Maine Department of Inland Fisheries and Wildlife -- http://www.state.me.us/ifw/outdoorheritage*

Massachusetts

Since 1996 Massachusetts has used $317 million in open space bonds and stamp tax fees to acquire open space, restore watersheds, and protect the environment. Between 1997 and 2000 those funds were used to acquire 37,000 acres. The state's goal is to acquire 100,000 acres by 2010. In the fall of 2000 Massachusetts' new Community Preservation Fund received its first $26 million. These monies will match local funds for open space, historic preservation and affordable housing. Under the

Community Preservation Act, municipalities may provide their share of funds through up to a 3 percent surcharge on property taxes, if approved by local voters. By November 2001, a total of 35 Massachusetts municipalities have approved these dedicated taxes. Since 1977 Massachusetts' state program has protected 44,336 acres of farmland. *Massachusetts Executive Office of Environmental Affairs -- http://www.state.ma.us/envir*

New Hampshire

In 2000 New Hampshire established the Land and Community Heritage Investment Program. The state will match funds with municipalities and nonprofits for land acquisition and historic preservation. First year funding of $12 million is expected. An earlier program, Land Conservation Investment, funded easements on almost 50,000 acres between 1987 and 1993. Since 1979 New Hampshire's state program has protected 2,864 acres of farmland. *New Hampshire Land and Community Heritage Investment Program -- http://www.lchip.org*

Rhode Island

Between 1985 and 1989, voters they approved four measures totaling $133 million; in 1996, $4 million; in 1998, $15 million; and in 2000, $34 million. The most recently approved funds will be used to acquire state land ($12.1 million), to develop recreational facilities ($10.5 million), and to acquire local land ($11.4 million). For local land, state funds will be matched by those from municipalities and nonprofits. Rhode Island's goal is to protect another 35,000 acres of open space by 2010. Since 1985 state funds have helped protect 18,555 acres of open space and over 25,000 acres of farmland. *Rhode Island Planning Program Greenways Council -- http://www.planning.state.ri.us/greencouncil*

Vermont

The Vermont Housing and Conservation Trust Fund was established in 1987. Since that time an estimated $42 million in state funds, along with funds from local governments and nonprofits, has protected over 230,000 acres of recreation land and natural areas. Another 83,000 acres of farmland have been preserved through this state program. *Vermont Agency of Natural Resources -- http://www.state.vt.us/anr/fpr/lands*

Mid Atlantic

This region contains three states: New Jersey, New York and Pennsylvania. Its land area of almost 66 million acres is almost 3 percent of that of the 50 states. The MidAtlantic contains 176 of the regional and local land trusts, or almost 14 percent of the total. By 1998 these trusts had protected 1,030,257 acres of land, or 16 percent of the total protected in the 50 states. These three states are all in the top 25 in terms of acreage and rate of nonfederal land developed between 1992 and 1997.

All of the MidAtlantic states fund the purchase of development rights for farmland, with programs established between 1989 and 1996. They also all fund the acquisition of local open space.

New Jersey

State bonds established the Green Acres Open Space Land Conservation program in 1961. From its inception Green Acres has included matching grants for local government land purchases. In 1989 the legislature authorized the establishment of local Open Space Trust Funds. Since that time 19 counties and 179 municipalities have established these funds, along with property taxes dedicated for open space. In 1998 the state set a goal of preserving another million acres of land, with voters approving the use of state sales tax revenues of at least $98 million a year for 30 years. This money is allocated by the Garden State Preservation Trust (GSPT). In FY2000 GSPT funded Green Acres at $130 million and Farmland Preservation at $80 million. Between 1961 and 1999 Green Acres preserved 440,000 acres of open space. From its inception in 1981, the state's Farmland Preservation program has preserved 64,738 acres. *New Jersey Green Acres Program -- http://www.state.nj.us/dep/greenacres; Garden State Preservation Trust -- http://www.state.nj.us/gspt*

New York

New York has encouraged local acquisition of open space since 1960, although funding has been sporadic. In 1996 voters approved $150 million in bond funds to acquire open space that protects water resources, to acquire public parkland, and to protect farmland. Some of the bond funds are supporting the acquisition of state and local land under the Environmental Protection Fund, established in 1993. The FY02 Budget for the EPF includes $55 million for open space and $12 million for farmland protection. Since 1993 state funds have preserved 250,000 acres of open space. In 1996 New York established its Farmland Protection program. Since that time the state has purchased easements on 1,695 acres of agricultural land. *New York State Department of Environmental Conservation -- http://www.dec.state.ny.us*

Pennsylvania

In 2000 the Governor announced the five-year Growing Greener spending plan. This created the Watershed Protection and Environmental Stewardship Fund. Plans include around $5 million per year in state/local grants for parks and open space, and $20 million per year for farmland preservation. Pennsylvania established its farmland program in 1989. Since that time state funds have helped to protect 194,619 acres. *Pennsylvania Growing Greener -- http://www.dep.state.pa.us/growgreen*

South Atlantic

This region includes eight states: Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia and West Virginia. Its land area of 180.9 million acres is 8 percent of the total for the 50 states. The South Atlantic includes 153 of the regional and local land trusts, or 12 percent of the total. By 1998 these trusts had protected 854,332 acres, or 13 percent of the total protected in the 50 states. Except for Delaware and West Virginia, all of the states in the South Atlantic are in the top 25 in terms of acreage and rate of nonfederal land developed between 1992 and 1997. West Virginia ranks 26th on this measure.

In spite of the fairly rapid pace of development in the South Atlantic, much of the region has only recently become active in land conservation. Florida and Maryland have long histories of state and local funding for open space. Delaware, Georgia, North Carolina, South Carolina and Virginia have all established programs for state-local acquisition of open space in the last 15 years. Only three of the eight South Atlantic states (Delaware, Maryland and North Carolina) have separate funding for farmland preservation, although in Florida and Virginia farmland is being protected through open space funds. Also, in the 2001 legislature Florida approved funding for the purchase of conservation easements in rural (mostly agricultural) land.

Delaware

Since 1993 the State of Delaware has preserved 29,000 acres of land. In 1995 the 21st Century Fund was established, and in 1999 $26 million was set aside for open space and $20 million for farmland protection. The 21st Century Fund is also enabling the state to match local money for open space, under the Delaware Land and Water Conservation Trust Fund. Delaware established its Agricultural Lands Preservation program in 1991 and has used it to protect 53,783 acres.
Delaware's 21st Century Fund -- http://www.state.de.us/finance/officeofthesec/21st/21home.htm
Delaware Land & Water Conservation Trust Fund -- http://www.destateparks.com/greenway/grants.htm

Florida

Florida voters approved a $20 million bond in 1964 and a $40 million bond in 1972, both to acquire outdoor recreation lands. In 1979 the Conservation and Recreation Lands program (CARL) was established; since that time it has preserved 700,000 acres. In 1990 Florida began Preservation 2000 (P2000), a ten-year plan to fund land acquisition through revenue bonds repaid by the state documentary stamp tax. P2000 has provided CARL with around $150 million per year. In 1991 the Florida Communities Trust program (FCT) was begun, to include state-local funds for land acquisition. P2000 has provided FCT with around $30 million per year. In order to provide matching funds, at least 19 counties and one Florida city have adopted local taxes for open space. FCT has preserved 28,000 acres. In November 1998 voters approved continued use of state revenue bonds for land conservation. Called Florida Forever, the new ten-year plan is for CARL to receive $105 million per year and FCT to

receive $72 million per year. The state's goal is to preserve another million acres by 2010, matching its achievement in the 1990s. In the 2001 legislature Florida approved funding for the purchase of conservation easements in rural (mostly agricultural) land. *Florida Communities Trust -- http://www.dca.state.fl.us/ffct; Florida Department of Environmental Protection -- http://www.dep.state.fl.us/lands/carl_ff*

Georgia

During the 1990s Georgia appropriated over $100 million in state bonds to acquire resource lands. A proposal to increase the real estate transfer tax and dedicate it to land protection was on the ballot in November 1998 but was defeated. In 2000 the Greenspace Program was established with $30 million in funding for FY01. This money will be distributed to local governments to help them preserve at least 20 percent of their land as connected and open greenspace for recreation and resource protection. As of April 2001, 39 of Georgia's 40 counties and 70 cities had submitted applications for Greenspace funding. Of these, 30 counties and 27 cities have been awarded a total of $26.9 million, or 89 percent of the available funds. Final funding decisions will be made by June 1. *Georgia Greenspace Program -- http://www.state.ga.us/dnr/greenspace*

Maryland

Maryland established Program Open Space (POS) in 1969. Funded by real estate transfer taxes and matched by local and nonprofit dollars, POS has acquired 230,000 acres. In FY01 POS was funded at $92 million. In 1998 the Rural Legacy program was begun, with funding of around $30 million a year for its first four years. With matching funds from local governments and nonprofits, Rural Legacy's goal is to protect up to 200,000 acres by 2011, of large contiguous tracts of farm and forest land. In its first two years, the program has protected 47,000 acres. In 2001 the Green Print program was announced, with first year funding of $30 million. This will establish a statewide green infrastructure network, linking land with high ecological value. Maryland established its Agricultural Land Preservation program in 1977, purchasing development rights for 186,078 acres since that time. *Maryland Department of Natural Resources -- http://www.dnr.state.md.us/pos.html; http://www.dnr.state.md.us/rurallegacy; http://www.dnr.state.md.us/greenways/greenprint http://www.dnr.state.md.us/smartgrowth*

North Carolina

The Natural Heritage Trust Fund (NHTF) was established in 1987. It is used by state agencies to acquire recreation and resource lands. Funding is around $12 million a year. In 1994 the Parks and Recreation Trust Fund (PARTF) was established with 75 percent of the real estate transfer tax (the other 25 percent goes to NHTF). Of PARTF funding of $18 million a year, 30 percent or $5.4 million is for matching grants to local governments. In 1998 North Carolina established its Farmland Preservation Trust Fund. With spending of around $750,000 a year, it has protected 2,700 acres to date. In 2000 North Carolina legislature set as a state goal the permanent protection of one million

acres of farmland, open space and resource lands by 2009. In the 2001 legislative session a bill was introduced to ask the voters to approve an increase in the real estate transfer tax to be dedicated for these purposes. The bill was referred to committee but may appear on the ballot in November 2002. *North Carolina Natural Heritage Trust Fund -- http://www.ils.unc.edu/parkproject/heritage/nhtf.html*
North Carolina Farmland Preservation Program -- http://www.enr.state.nc.us/DSWC/files/ncfpp.htm

South Carolina

Currently South Carolina is spending about $5 million per year on state-local matching grants through its Parks and Recreation Development Fund, established in 1989, and its Recreation Land Trust Fund, established in 1974. In 2001 both the Governor and the legislature proposed significant increases in funding for open space; the legislature also considered establishing a state program to purchase agricultural conservation easements. Funding for both open space and farmland is expected to be discussed again in the 2002 legislative session. *South Carolina Division of Parks and Recreation -- http://www.scprt.com*

Virginia

In 1997 the Open Space Lands Preservation Trust Fund was established, and in 2000 it was authorized to make grants to local governments to purchase conservation easements. In 1999 the Virginia Land Conservation Fund (VLCF) was created to make grants for open spaces and parks, natural areas, historic preservation, and farmlands and forests. In 2000 the first round of VLCF grants totaling $3.9 million were awarded. This helped preserve 1,062 acres of farmland and almost 2,000 acres of other lands. The 2001 legislature failed to reach agreement on funding totals or distribution between the Open Space and Land Conservation Funds, so no new grants are in the offing.
Virginia Land Conservation Foundation -- http://www.dcr.state.va.us/vlcf

West Virginia

The new Governor of West Virginia has appointed a task force on long-range funding for natural resources. He has also asked citizens to nominate special places for land preservation. Historically West Virginia has used hunting and fishing license fees of around $1 million per year for general land purchases. *West Virginia Division of Natural Resources -- http://www.dnr.state.wv.us*

East South Central

This region contains four states: Alabama, Kentucky, Mississippi and Tennessee. Its land area of 116.8 million acres represents 5 percent of the land area of the 50 states. This region contains 31 of the regional and local land trusts, or 2 percent of the total. By 1998 these trusts had protected 85,667 acres or 1.3 percent of the total protected in the 50 states. All four of the states in the Mid-South are in the top 25 in terms of acreage and rate of nonfederal land developed between 1992 and 1997.

Kentucky and Tennessee have recently adopted state-local programs to preserve open space. Kentucky also established state funding for farmland protection in 1994.

Alabama

Alabama has a program to purchase state recreation lands, Forever Wild, established in 1992. In 1998 voters approved $110 million in bonds to acquire, renovate and maintain state parks and historic sites. This has increased spending on Forever Wild from $8.5 million in FY99 to $16.2 million in FY02. At least 10,000 acres have been purchased. *Alabama's Forever Wild Program -- http://www.dcnr.state.al.us/agfd/forever.html*

Kentucky

Kentucky established the Heritage Land Conservation Fund (KHLCF) in 1994. Half of the money is used for state land, and half is shared with local governments and other agencies. By June 2000 KHLCF had acquired 9,200 acres. Kentucky also began funding the purchase of agricultural easements in 1994, and has protected 3,388 acres to date. *Kentucky Heritage Land Conservation Fund -- http://www.nr.state.ky.us/nrepc/dnr/dnrhlcf.htm*

Mississippi

Mississippi established its Wildlife Heritage Fund in 1978. It receives revenues from the state income tax checkoff and special automobile license plates. Current spending is about $1 million per year. *Mississippi Department of Wildlife, Fisheries and Parks -- http://www.mdwfp.com*

Tennessee

Tennessee established the State Lands Acquisition Fund in 1991. Historically it received around $3 million per year in real estate transfer taxes. The fund is now called Local Parks and Recreation and is used mainly for state-local grants, with FY01 funding of $7 million. *Tennessee Department of Environment and Conservation -- http://www.state.tn.us/environment*

West South Central

This region contains four states: Arkansas, Louisiana, Oklahoma and Texas. Its land area of 281.2 million acres represents over 12 percent of the land area of the 50 states. This region also contains 25 of the regional and local land trusts, or 2 percent of the total. By 1998 these trusts had protected 105,967 acres, or 1.6 percent of the total protected in the 50 states. Although Texas led the nation in acreage and rate of nonfederal land developed between 1992 and 1997, the other three states in this region rank 27th, 28th and 29th on this measure. Texas is also unique in this region in having state-local funding for indoor and outdoor recreational facilities.

Arkansas

Arkansas has preserved 18,000 acres of natural areas through its Natural Heritage Commission. Annual spending is estimated at $4 million. *Arkansas Natural Heritage Commission -- http://www.naturalheritage.org*

Louisiana

In 1989 Louisiana began the Wetland Conservation and Restoration Trust Fund with $53 million in severance taxes from offshore oil drilling. State spending of these funds is around $5 million per year. The state also has a Wildlife Habitat and Natural Heritage Trust Fund, which receives around $1.5 million a year. *Louisiana Department of Natural Resources -- http://www.dnr.state.la.us/crm/2050.ssi*

Oklahoma

The Department of Wildlife Conservation receives funds from the state income tax checkoff and automobile licenses. The Department of Tourism and Recreation operates the state park system and is updating the SCORP. Plans are to seek state funding for outdoor recreation, as well as higher federal funding under the LWCF. Oklahoma contains 700,000 acres of state trust land. (This is land granted to the states by Congress. The states mostly manage their trust land to generate financial support for the public schools). *Department of Wildlife Conservation -- http://www.wildlifedepartment.com*

Texas

The legislature established the Texas Recreation and Parks Account program (TRPA) in 1993. It is funded by a portion of the sales tax on designated sporting goods. TRPA helps local governments acquire land and develop indoor and outdoor recreation facilities. Funding is between $15 and $20 million per year. The state holds 12 million acres of land in trust. *Texas Recreation and Parks Account -- http://www.tpwd.state.tx.us/park/grants*

Great Lakes (East North Central)

This region includes five states: Illinois, Indiana, Michigan, Ohio and Wisconsin. Its land area of 158.9 million acres is 7 percent of the total for the 50 states. The Great Lakes region includes 162 of the regional and local land trusts, or 13 percent of the total. By 1998 these trusts had protected 184,093 acres, or 3 percent of the total protected in the 50 states. All of the states in this region are in the top 25 in terms of acreage and rate of nonfederal land developed between 1992 and 1997. All of the Great Lakes states have state-local programs to acquire open space, all with recently enhanced levels of funding. Two of the states, Michigan and Ohio, also have programs to fund the purchase of agricultural easements.

Illinois

This state had been spending several million dollars a year on conservation easements and natural areas through its Build Illinois Bond Fund and the Conservation 2000 program. In 1999 the Open Land Trust program was begun, providing $160 million in real estate transfer taxes over four years. The program includes state grants to match local funds. As of the spring of 2001 around 24,000 acres of land had been purchased in 16 counties and municipalities. *Conservation 2000 -- http://dnr.state.il.us/orep/c2000; Open Land Trust Grant Program -- http://dnr.state.il.us/legal/3050.htm*

Indiana

In 1992 Indiana established its Heritage Trust. Between 1993 and 1998 state funds of $25.7 million, along with local and nonprofit funds, were used to preserve 27,573 acres. *Indiana Heritage Trust -- http://www.state.in.us/dnr/heritage*

Michigan

The state's Natural Resources Trust Fund (NRTF) was established in 1976 and ensured dedicated funding in 1984. Since that time the state has spent $325 million and acquired 140,000 acres. In recent years NRTF funding has been $20 to $25 million per year to acquire state and local resource land. In 1998 voters approved the Clean Michigan Initiative which provides $50 million in state bond funds for local recreation grants. In 1975 Michigan established its Farmland and Open Space Preservation program. Since that time $12.6 million in state funds has helped to protect 4,081 acres. *Michigan Department of Natural Resources -- http://www.dnr.state.mi.us; Clean Michigan initiative http://www.deq.state.mi.us/exec/cmi/cmiimp.html*

Ohio

In 1993 voters approved $330 million in state bonds for the Parks and Natural Resources Fund. Since that time $275 million has been used to acquire 60,000 acres of state land, and $55 million has been used for Nature Works grants for local parks and recreation. In 2000 voters approved $400 million in Clean Ohio bonds. Of this total, $200 million will be for open space and $200 million for brownfields restoration. Of the open space funds, $50 million will be used for watershed restoration, $25 million for recreational trails, $25 million for purchase of agricultural easements, and $100 million will fund Green Space Grants, primarily to acquire open space at the local level. The Clean Ohio bonds represent the first time that open space and brownfield funding were linked on the same ballot measure. *Ohio Department of Natural Resources -- http://www.ohiodnr.com/realm/grants/natrwrks.htm*
Clean Ohio Fund -- http://www.state.oh.us/cleanohiofund

Wisconsin

The Stewardship Program was established in 1991 with $231 million in state bonds for its first ten years. State and nonprofit funds have been used to acquire 154,090 acres. For its second decade, 2001 to 2010, the Stewardship Program has $460 million in state bonding authority (although lawmakers have recently targeted this program for budget cuts). Of this total, $345 million will go to state agencies and nonprofits for resource land acquisition, $35 million for development of state-owned recreational facilities, and $80 million for local assistance. This will provide around $8 million per year in grants to local governments and nonprofits. *Wisconsin Department of Natural Resources -- http://www.dnr.state.wi.us*

Plains (West North Central)

This region includes seven states: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota and South Dakota. Its land area of 331.4 million acres is 14 percent of the total for the 50 states. The Plains region includes 24 of the regional and local land trusts, or 2 percent of the total. By 1998 these trusts had protected 112,107 acres or 1.7 percent of the total protected in the 50 states. Of the Plains states, only Minnesota and Missouri are in the top 25 in terms of acreage and rate of nonfederal land developed between 1992 and 1997. None of the Plains states have separate programs for the purchase of agricultural easements, although Minnesota is beginning funding in 2001 under an existing program. Five of the seven states have state-local grants to acquire land.

Iowa

The Resource Enhancement and Protection Program (REAP) begin in 1989. Its appropriations have averaged $10 million per year, of which $3 million has been used for state open space and $1.5 million for city parks and open space. Iowa also has a Recreation Infrastructure Grants (RIG) program that received state matching funds of $3 million in FY2000. *Iowa Department Of Natural Resources -- http://www.state.ia.us/government/dnr/organiza/reap*

Kansas

Kansas established the Local Government Outdoor Recreation Grant Program in 1998. For the last three years it has received between $1.5 and $2 million in funding. *Kansas Department of Wildlife and Parks -- http://www.kdwp.state.ks.us/parks/grants.html*

Minnesota

In 1988 the Environmental and Natural Resources Trust Fund (ENRTF) was established. In 1990 voters dedicated 40 percent of state lottery proceeds to the fund through 2001, and in 1998 voters extended that dedication to 2025. ENRTF's proposed budget for the 2002 and 2003 biennial is $34.6

million. Of this total, $5.9 million will fund state acquisitions, $15.9 million will go to regional and local parks, trails and greenways, and $0.7 million will be for agricultural land preservation. *Minnesota Environment & Natural Resources Trust Fund -- http://www.lottery.state.mn.us/etf.html*

Missouri

In 1984 Missouri approved a one-tenth of 1 percent parks and soil sales tax to develop state parks and historic sites. In FY02 these funds total almost $12 million. In 1995 local governments in Missouri were authorized to adopt a sales tax for either stormwater control or parks. By 1998, 41 local governments had done so. In 1996 the Landmark Local Parks program began. This provides $4 million per year in state funds to match local funds for park acquisition and development. *Missouri Department of Natural Resources -- http://www.dnr.state.mo.us*

Nebraska

The Environmental Trust Fund (ETF) was established in 1993. It receives 49.5 percent of the net proceeds of the state lottery. Annual spending on open space is around $4 million per year. Funds are used to restore habitat areas, improve water quality and deal with solid waste. ETF funds, along with money from local governments and nonprofits, had preserved 10,000 acres by 1998. Nebraska has 1.5 million acres of state trust lands. *Nebraska Environmental Trust -- http://www.environmentaltrust.org*

North Dakota

In the current biennial budget, the State Game and Fish Department has $5.1 million to restore deer habitat and $150,000 for non-game wildlife conservation. There are 712,000 acres of state trust land in North Dakota. *North Dakota Game and Fish Department -- http://www.state.nd.us/gnf*

South Dakota

The State Department of Game, Fish and Parks has a Land Acquisition fund but has had no appropriations in the last four fiscal years. There are 807,336 acres of state trust lands. *South Dakota Department of Game, Fish & Parks -- http://www.state.sd.us/state/executive/gfp/gfp.htm*

Rocky Mountains

This region includes eight states: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming. Its land area of 552.7 million acres is 24 percent of the total for the 50 states. The Rocky Mountain region includes 79 of the regional and local land trusts, or 6 percent of the total. By 1998 these trusts had protected 1,524,768 acres, or 24 percent of the total protected in the 50 states. Almost half of the land in the Rocky Mountains (48 percent) is under federal ownership. Only New Mexico is in the top 25 states in terms of acreage and rate of nonfederal land developed between 1992

and 1997. Three of the states have state-local programs to acquire open space (Arizona, Colorado and Utah). Colorado, Montana and Utah have also recently begun funding the purchase of agricultural easements.

Arizona

In 1990 Arizona established the State Parks Heritage Fund. This receives proceeds from the state lottery, with recent funding around $3 million per year. Local governments, state agencies and Indian tribes may apply for grants from the Heritage Fund to acquire land and develop outdoor recreation facilities. Arizona currently has 9.4 million acres of state trust land. In 1996 the legislature passed the Arizona Preserve Initiative (API). API's purpose is to preserve state trust land near urban areas for "open space to benefit future generations." In November 1998 Arizona voters approved the use of $220 million in state funds for the API. Between 2001 and 2011, $20 million per year will be available for Growing Smarter Grants to preserve state trust lands as open space. Applicants may be state agencies, local governments or nonprofits. Grants will be for up to 50 percent of the land's appraised value. Over 30 million acres or 42 percent of Arizona's land area is under federal ownership.
Arizona State Parks -- http://www.pr.state.az.us/partnerships/grants/grants.html
Arizona Preserve Initiative -- http://www.land.state.az.us/asld/htmls/api_bkgrd.html

Colorado

A 1980 citizens' ballot initiative established a state lottery for conservation and the Conservation Trust Fund. Beginning in 1983 40 percent of net lottery proceeds were distributed in per capita grants to all local governments for parks, recreation and open space. Another 10 percent of lottery proceeds went for state parks. In 1992 another citizens' ballot initiative established the Great Outdoors Colorado Trust Fund (GOCO). GOCO redirected the use of the remaining 50 percent of lottery proceeds away from general state capital projects (in the 1980s these funds had been used for prison construction). GOCO funds are used for wildlife, outdoor recreation, natural areas and parks. In the latter two categories, local governments and nonprofits are eligible for competitive matching grants. Since the program began full operation in 1994, GOCO funds of $240.9 million have preserved 82,177 acres of open space and 73,823 acres of farmland. GOCO funds have also been used to acquire 15,259 acres of state park land and to preserve an estimated 100,000 acres of wildlife habitat. The 2000 legislature created the Office of Smart Growth in the Colorado Department of Local Affairs, and appropriated over $700,000 for the new Heritage Planning Grants program for regional growth management. (These grants have, however, been targeted for budget cuts). The first round of grant awards includes projects that preserve 600 acres. In November 2000 Colorado voters approved a multistate lottery to generate additional revenues for the Conservation Trust Fund. There are also 3 million acres of state trust lands in Colorado. Almost 24 million acres or 36 percent of Colorado's land area is under federal ownership.
Colorado Conservation Trust Fund -- http://www.dola.state.co.us/LGS/FA/ctf.htm
Great Outdoors Colorado Trust Fund -- http:://www.goco.org/aboutGOCO.asp
Colorado Office of Smart Growth Home Page -- http://www.dola.state.co.us/SmartGrowth

Idaho

In FY2001 the Idaho Department of Parks and Recreation granted $4.8 million for state and local recreational facilities. The money was from a variety of sources including the federal Land and Water Conservation Fund (LWCF). Idaho has 2.5 million acres of state trust lands. Almost 34 million acres or 63 percent of Idaho's land area is under federal ownership. *Idaho Department of Parks and Recreation -- http://www.idahoparks.org/about/grants_landwater.html*

Montana

The Department of Natural Resources and Conservation provides Renewable Resources Grants and Loans to local governments throughout Montana. Funding is around $400,000 per year. The Montana Fish, Wildlife and Parks Foundation, a new nonprofit, works with the state department of the same name to leverage local and private funds for conservation easements. In 1999 the Montana legislature established the Agricultural Heritage program. In its first two years around $0.9 million in state funds were used to purchase easements on 9,923 acres of farmland. There are 4.6 million acres of state trust lands. Over 27 million acres, or 29 percent of Montana's land area, is under federal ownership. *Montana Department of Natural Resources & Conservation - http://www.dnrc.state.mt.us*

Nevada

In 1990 Nevada issued Parks and Wildlife bonds which have been used to acquire 6,400 acres. The 2001 legislature is considering placing another bond issue on the ballot in November 2002. There are 126,000 acres in state trust land. Almost 60 million acres, or 85 percent of Nevada's land area, is federally owned. *Nevada Department of Conservation and Natural Resources -- http://www.state.nv.us/cnr*

New Mexico

New Mexico established the Natural Lands Protection Act in 1988. This permits the state to partner with land trusts. Funding is dependent on legislative appropriations, and is $300,000 in FY02. There are 9 million acres of state trust lands, and over 26 million acres or 34 percent of New Mexico's land area under federal ownership. *New Mexico Energy, Minerals and Natural Resources Department -- http://www.emnrd.state.nm.us*

Utah

In 1998 the legislature established the LeRay McAllister Critical Land Conservation Revolving Loan Fund. By January 2001, $4.7 million from this fund had been matched with local and nonprofit dollars to preserve 9,416 acres. This includes the purchase of agricultural easements to protect farmland (this program has recently been targeted for budget cuts). In 1999 the Quality Growth Act established planning grants to help local governments implement the Principles of Quality Growth, one

of the six principles being conservation. Funding for these grants is around $250,000 per year. Utah has 3.5 million acres in state trust lands. Over 34 million acres, or 63 percent of Utah's land area, is under federal ownership. *Utah Critical Lands Conservation Committee -- http://www.governor.state.ut.us/planning/UCLCC.htm; Utah Quality Growth Act of 1999 -- http://www.le.state.ut.us/~1999/htmdoc/hbillhtm/HB0119S3.htm*

Wyoming

Since 1996 the Habitat Grant program has provided matching grants to local governments, nonprofits and landowners. Funding is around $1 million per year. There are 3.6 million acres in state trust lands. Almost 29 million acres, or 46 percent of Wyoming's land area, is under federal ownership. *Wyoming Game and Fish Commission -- http://gf.state.wy.us/HTML/admin/habgrant.htm*

Pacific

The Pacific region includes five states: Alaska, California, Hawaii, Oregon and Washington. Its land area of 580.9 million acres is 25 percent of the total for the 50 states (Alaska alone contains almost 370 million acres). The Pacific region includes 186 of the regional and local land trusts, or 15 percent of the total. By 1998 these trusts had protected 1,347,024 acres, or 21 percent of the total protected in the 50 states (in California alone trusts protected over 530,000 acres). Federal land ownership in the Pacific states ranges from low in Hawaii (9 percent) to moderate in Washington (27 percent) to high in the other three states. For the Pacific region as a whole, 54 percent of land is under federal ownership.

The Natural Resources Inventory (NRI) has not released 1997 data for Alaska. Of the remaining five states, two (California and Washington) are in the top 25 in terms of acreage and rate of nonfederal land developed between 1992 and 1997; Oregon ranks 34th; and Hawaii ranks 49th. Three Western states (California, Oregon and Washington) have significant state-local programs to acquire open space. Only California has state funding for the purchase of agricultural easements.

Alaska

In 1994 the Exxon Valdez Oil Spill Trustee Council adopted a Restoration Plan. This sets aside $395 million for habitat protection and acquisition. To date over 650,000 acres have been preserved. There are 580,000 acres of state trust lands, and 222 million acres of federally owned land. Another 44 million acres of land are part of the Alaska Native Claims Settlement. *Exxon Valdez Oil Spill Trustee Council-Home Page -- http://www.oilspill.state.ak.us; Alaska Native Claims Settlement Act -- http://www.ankn.uaf.edu/ancsa.html*

California

In 1965 the California Land Conservation Act (called the Williamson Act) was passed to protect farmland and open space from urban development. Under contracts with participating local governments, landowners agree to restrict their land uses in exchange for lower tax assessments. As of December 1998, 15.9 million acres were under Williamson contract. In 1996 the California Farmland Conservancy Program was begun. This provides grants for the purchase of agricultural easements. FY2001 funding is $6.5 million. Since its inception the program has preserved 3,946 acres of farmland. Since 1965 the state Department of Parks and Recreation has distributed $1.6 billion in matching grants to local governments. In March 2000 California voters approved the first significant bonding for open space since 1988, with two measures totaling $4 billion. Proposition 12, the Safe Neighborhood Parks, Clean Water, Clean Air and Coastal Protection Bond Act, provides $2 billion in "Park bonds." Proposition 13, the Safe Drinking Water, Clean Water, Watershed Protection and Flood Protection Bond Act, provides $2 billion in "Water bonds." The availability of this money has increased funding for matching grants for local parks and recreation from $22.2 million in FY00 to $300 million in FY02. There are 4.5 million acres of state trust land, and almost 47 million acres, or 46 percent of California's land area, in federally ownership. *California Land Conservation Act -- http://www.consrv.ca.gov/dlrp/LCA; California Farmland Conservancy Program -- http://www.consrv.ca.gov/dlrp/CFCP*

Hawaii

In 1970 Hawaii established its Natural Area Reserve System (NARS). This now includes over 109,000 acres, but annual funding has dropped to $500,000. In 1991 Hawaii began the Natural Area Partnership and Forest Stewardship program. This has preserved 2,667 acres. FY01 funding is $2 million. The Hawaii legislature is considering dedicated funding sources for both the NARS and Forest Stewardship programs. In 2001 they established a Smart Growth Advisory Council in the Office of Planning. The Council will address the preservation of farmland and open space, among other issues. The state owns 1.2 million acres, and the federal government owns 361,200 acres. *Hawaii Division of Forestry and Wildlife - http://www.state.hi.us/dlnr/dfw*

Oregon

In 1998 voters approved a ballot initiative to dedicate 15 percent of the proceeds of the state lottery for natural resources. Of this 15 percent, half goes for state and local park land acquisition and development and half for the Oregon Plan for Salmon and Watersheds. Funding is shared among the Departments of Agriculture, Forestry, Environmental Quality, and Fish and Wildlife, and is administered by the Oregon Watershed Enhancement Board (OWEB). In 1999 the Oregon legislature approved the Department of Parks and Recreation's Local Government Grant program. In 2000 this program awarded its first round of funding, $5 million for the 2000-01 biennium. There are 1.4 million acres in state trust land. Over 31 million acres, or 50 percent of Oregon's land area, is federally owned. *Oregon Plan for Salmon and Watersheds -- http://www.oregon-plan.org*

Washington

The Washington Wildlife and Recreation Program (WWRP) began in 1989. Its funds are equally divided between Habitat Conservation and Outdoor Recreation. Within Habitat Conservation, state agencies may receive funding for critical habitat and natural areas, and state and local agencies may receive funding for urban wildlife habitat. Within Outdoor Recreation, funding is for local parks, state and local trails, state and local water access, and state parks. WWRP is funded at $45 million per year in FY01 and FY02. In 1999 the legislature created the Salmon Recovery Funding Board. In 2000 the board financed $38 million in local salmon recovery projects, including fish barrier removal, habitat restoration, and some land purchases. Another $32 million in grants was awarded in January 2001. For 2002 and 2003 funding of over $33 million per year is proposed. There are 1.7 million acres of state trust land. Almost 12 million acres, or 27 percent of Washington's land area, is federally owned.
Washington Wildlife and Recreation Program -- http://www.tnc-washington.org/govrel/wwrp
Salmon Recovery Funding Board -- http://www.wa.gov/iac/salmonmain.html

APPENDIX B: STATE AND LOCAL ACTIVITY BY GEOGRAPHIC AREA

New England

Local governments in New England have been only moderately active on land conservation, although the new state law in Massachusetts is changing that. The literature shows eight local TDR programs in the six New England states. In November 2000, voters in four of these states approved new financing for local parks and open space. In Rhode Island two municipalities approved dedicated funding sources, and 13 approved general obligation bonds. In the other three states residents of municipalities also approved bonds for parks and open space, as follows: Connecticut, 5; Maine, 1; and Massachusetts, 2.

By November 2001 voters in a total of 35 Massachusetts jurisdictions had approved up to 3 percent surcharges on their local property taxes. This qualifies them for state matching funds under the Community Preservation Act of 2000. Of the surcharge, one-third is for historic preservation, one-third is for affordable housing, and one-third is for open space.

In recent years large tracts of forest land have been preserved in this region. In 1999 the New England Forestry Foundation purchased the development rights to 750,000 acres in Maine's North Woods. This is an area larger than the state of Rhode Island. Also in 1999, The Conservation Fund and Champion International Corporation announced an agreement to protect 300,000 acres of timberland in New York, Vermont and New Hampshire.

New England also provides an example of regional planning for open space. In 1996 the Cape Cod Commission adopted a Regional Policy Plan with a goal of protecting 50 percent of the remaining developable land. In 1998 the legislature adopted the Cape Cod Open Space Land Acquisition Program, setting aside $15 million in state matching funds. In November 1998 voters in all 15 of the Cape's towns approved a 3 percent surcharge on local property taxes. This money is placed in the Land Bank fund and its spending supervised by each town's open space committee. Land acquisitions must be approved by town meetings or town councils. As of July 2000, $11.8 million had been spent to preserve 568 acres. By the year 2020, Land Bank funds are estimated to total $170 million.

Mid Atlantic

The three states in this region have considerable local government activity in land conservation. They each have local governments with TDR programs: New Jersey, 6; New York, 6; and Pennsylvania, 14. New Jersey and Pennsylvania each have 5 local governments that purchase agricultural conservation easements.

New Jersey jurisdictions use local taxes to purchase both farmland and open space. As of January 2002 19 counties and 179 municipalities in the Garden State have local open space funding programs.

In November 2000, nine New York communities voted in favor of bonds and two adopted taxes; and two Pennsylvania jurisdictions approved bonds while four adopted taxes.

In New Jersey the Doris Duke Charitable Foundation recently announced $8.4 million to help preserve forests and highlands in the central and northern parts of the state. In southern New Jersey the Pinelands National Preserve was designated by Congress in 1978. The Pinelands lies above the Cohansey Aquifer, one of the world's largest underground water supplies. The region also contains the largest forested area on the MidAtlantic coast and provides valuable wildlife habitat. The Pinelands covers property in 56 municipalities and 7 counties, including Cape May.

In 1979 the governor appointed the Pinelands Commission, which adopted a comprehensive management plan in 1980. The plan designated 295,000 acres as the Preservation Area, from which development rights can be transferred or sold to Growth Areas of the Pinelands. Over 12,000 acres have been permanently preserved through this TDR program.

In New York the 17,000 acre Sterling Forest tract was preserved in 1998 through a consortium of government agencies and private foundations. The tract is in Orange County, northwest of New York City. Its preservation protects the watershed that supplies New Jersey drinking water and expands the buffer zone for the Appalachian Trail.

Also in New York, Suffolk County established the first county purchase of development rights (PDR) program in 1972. To date over 6,000 acres have been preserved. Suffolk County covers the eastern two-thirds of Long Island. It includes the Central Pine Barrens ecosystem, a source of groundwater for Long Island. In 1993 the state created the Central Pine Barrens Joint Planning and Policy Commission. The commission adopted a comprehensive land use plan, designating a 55,000 acre Core Preservation area and a 47,500 acres Compatible Growth area. Landowners in the preservation area may transfer their development rights to the growth area through the Pine Barrens Credit program. In 1998 Suffolk County voters approved $20 million for PDRs for farmland, and in 1999 they extended the dedicated one-quarter cent sales tax to 2013.

More than two-thirds of Pennsylvania's counties have local funding sources for farmland preservation, to match funds from the state's program. The largest and best-known local program is in Lancaster County where almost 28,000 acres of farmland are protected under conservation easements. Lancaster, with its Amish or Pennsylvania Dutch traditions, leads the state in agricultural sales per acre.

South Atlantic

Except for Florida and Maryland, local governments in the South Atlantic have been relatively inactive in the preservation of open space. That is changing as evidenced by new state programs in Georgia, North Carolina and Virginia and new funding in Delaware.

Florida has provided state matching funds to acquire open space designated in local comprehensive plans since 1991. As a result, at least 19 counties and one city have dedicated funding sources. Florida also has 16 local governments with TDR programs. Maryland has seven local

governments with TDR programs and nine with PDR programs for farmland. North Carolina has two counties with PDR programs for farmland, while in Virginia, the city of Virginia Beach has a PDR program. Virginia Beach also dedicates a portion of its tax on cell phone bills to PDRs. Elsewhere in Virginia, the city of Blacksburg has a TDR program, as does Greenville County, South Carolina. As of 1997 there were no other TDR programs in the South Atlantic.

In November 2000 voters in this region approved local funding for open space as follows: Florida, 3 bonds and 1 tax; Georgia, 2 bonds; Maryland, 2 bonds; North Carolina, 4 bonds; South Carolina, 3 bonds; and Virginia, 3 bonds. There were no local open space measures on the ballot in Delaware or West Virginia.

Because of state planning requirements and grant funding, there are several examples of Florida communities that preserve open space in a systematic manner. One of the most interesting is Jacksonville-Duval County's Preservation Project. This is a plan to buy 10 to 20 square miles of land, or as much as 10 percent of the remaining developable sites in the county. Goals are to reduce sprawling residential development in the southeast county, and to preserve the St. John's River. The plan will cost $362 million, with funding from local, state and nonprofit sources, including The Trust for Public Land and The Nature Conservancy. As of May 2001, the project has preserved 2,011 acres.

A long-time leader in land use, Montgomery County, Maryland provides two examples of successful local initiatives. In 1980 the county designated 110,000 acres as its agricultural reserve, and by 1997 had permanently preserved over 30,000 acres using TDRs (Pruetz 1997). In 2000 Montgomery County began Legacy Open Space, a ten-year program with $33 million in local seed money. State and nonprofit funds will also be used for land conservation.

East South Central

The literature shows no local TDR or PDR programs in Alabama, Kentucky, Mississippi or Tennessee. Likewise, there were no local open space measures on the ballot in these four states in November 2000. New state planning requirements in Tennessee require local governments to designate land for future development and land to remain rural. The result of these planning requirements may be the preservation of more farmland and open space in that state.

West South Central

Texas has one local TDR program (San Marcos, in the Austin region), but there are no other local TDR or PDR programs in the four states in this region. The City of New Orleans in Louisiana had a successful bond measure for recreational facilities on the ballot in November 2000, while voters in Tulsa County, Oklahoma, approved a sales tax for parks and recreation.

In Texas in 1998 voters in the capital city of Austin approved $45 million in bonds to protect lands surrounding the Edwards Aquifer. In 2000 Austin voters approved another $13.4 million bond for open space, and neighboring Williamson County voted for $25 million in bonds for parks and recreation.

On the Gulf Coast, Corpus Christi approved $4.7 million for park, recreation and museum improvements.

Great Lakes (East North Central)

Local governments in the five Great Lakes states show only moderate funding activity in recent literature. There is increasing interest in the preservation of farmland and open space in this region, however, and much activity by state and regional agencies and nonprofits.

There are no local TDRs for open space in this region. Michigan and Wisconsin each have one local PDR program for farmland. In November 2000 voters approved local funding for open space as follows: Illinois, 4 bonds and 3 taxes; Michigan, 1 bond and 3 taxes; and Ohio, 1 bond and 4 taxes. There were no local open space measures on the ballot in Indiana and Wisconsin.

Illinois and Missouri are home to the first local, bistate park and recreation districts in the U.S. Called the Metropolitan Park and Recreation District in Missouri and the Metro-East Park and Recreation District in Illinois, their funding through dedicated sales taxes was approved by local voters in three Missouri jurisdictions in Missouri and two counties in Illinois in November 2000. The districts' share of these taxes, estimated at $20 million per year, will fund a regional greenway system in the St. Louis metropolitan area. This includes the Confluence Greenway, a park and trail system which follows the Mississippi River 40 miles, from the Gateway Arch to the confluence with the Illinois River.

Also in Illinois a partnership called Chicago Wilderness has developed a biodiversity recovery plan for the metropolitan area. One of its goals is to create a network of protected land and waters. Another nonprofit, the Openlands Project, continues to promote a greenways and trail system for the Chicago region, as well as to assist in the acquisition of open space.

Plains (West North Central)

Local governments in the seven states of the Great Plains are relatively inactive in land conservation. Except for the Twin Cities, Kansas City and St. Louis regions, the Plains states are experiencing few development pressures. There is growing concern about farmland preservation in Iowa but as yet no local PDR programs. One county in Minnesota has a TDR program for farmland.

In November 2000 voters in the Plains states approved local funding for open space as follows: Minnesota, 2 bonds, and Missouri, 1 bond and 7 taxes (3 for the new bistate district in the St. Louis region). There were no local open space issues on the ballot in Iowa, Kansas, Nebraska, North or South Dakota.

The Metropolitan Council of the Twin Cities has been responsible for planning for regional parks and open space since the 1970s. The Council is now expanding the system of regional trails. Also in Minnesota, a network of eight local public and private groups is working to establish Green Corridors or linked open spaces in Chisago and Washington Counties, to the east of the Twin Cities.

Rocky Mountains

Local governments in the Rockies are moderately active on land conservation, but becoming more so with the assistance of nonprofit groups. As of 1997 there was one local TDR program in each of Arizona, Montana, and Wyoming, and three such programs in Colorado. In 2001 Santa Fe County, New Mexico began a local TDR program. Colorado also has three local PDR programs for farmland protection.

In November 2000 voters in the Rocky Mountain states approved local funding for open space as follows: Colorado, 11 bonds, 3 taxes, and 2 setasides of budget surpluses; Montana, 1 bond; Nevada, 1 bond; and New Mexico, 4 bonds and 2 tax. There were no local open space issues on the 2000 ballot in Idaho, Utah and Wyoming. In May 2001 voters in Boise, Idaho approved a $10 million local property tax to acquire land in the foothills north of the city.

Although there were no local open space measures on the 2000 ballot in Arizona, in 1999 voters in the cities of Glendale and Scottsdale approved bonds for land acquisition, while voters in Phoenix increased their sales tax one-tenth of one percent for the same purpose. In 1998 voters in Scottsdale had approved continued use of a 2 percent sales tax for preservation.

The Phoenix and Tucson regions of Arizona are active in land conservation. The cities of Phoenix and Scottsdale have dedicated sales taxes each yielding around $15 million per year. These funds help acquire land in the Sonoran Desert and McDowell Mountains. Phoenix has identified 20,000 acres and Scottsdale 36,000 acres for preservation. In the Tucson region, Pima County's Sonoran Desert Conservation Plan has identified over 80,000 acres of potential additions to its reserves (this does not include additions to state and federally owned open space). These local governments and others in the state have applied for Growing Smarter grants under the Arizona Preserve Initiative, to protect portions of the identified reserve lands. The first round of grant awards is expected in September 2001.

One of the best known local open space programs is in the city of Boulder, Colorado. The city has a "blue line" limit on development above a certain elevation in the foothills. In 1967 voters adopted a four-tenths of one percent sales tax for land acquisition. South of Denver, Douglas County established a PDR program in 1994, and also permits higher density for cluster development that protects at least two-thirds of the site as open space. And in northwestern Colorado, Routt County established a PDR program for farmland in 1996, funded by an increase in the local property tax.

In Nevada, voters in Washoe County (Reno) approved $28 million in bonds for open space, trails and parks in November 2000. Other activity in Nevada includes a regional "coverage transfer" program administered by the Lake Tahoe Regional Planning Agency.

In Montana, the cities of Helena and Missoula each passed $5 million open space bonds. In November 2000 Gallatin County voters approved $10 million in bonds to preserve farm and ranch land and open space, and to protect water quality. Gallatin, adjacent to Yellowstone National Park, plans to purchase the development rights on 12,000 to 18,000 acres of land.

In New Mexico there were 5 successful local ballot measures in 2000. Albuquerque voters approved $16 million in bonds for roads, parks and libraries. Bernalillo County, outside Albuquerque, increased its tax rate and approved $1.6 million in bonds, both to acquire open space. Santa Fe County to its north approved an $8 million bond issue, and in Torrance County, southeast of Albuquerque, voters approved $38 million in bonds for parks, open space and libraries.

Pacific

Of the five states in this region, the two newest states, physically separate from the "lower 48," have little local but some regional activity on land conservation. Land trusts are becoming active in Alaska and Hawaii, however. The three mainland Pacific states have significant activity, with California leading the region and, in some ways, the nation.

As of 1997, there were 18 local environmental TDR programs in California, one in Oregon and two in Washington. Two counties in California and four counties in Washington had PDR programs for farmland.

In November 2000 voters in the Western states approved local funding for open space as follows: California, 2 bonds and 6 taxes; Oregon, two bonds and one tax; and Washington, one tax. Voters in the city of Seattle approved an 8-year property tax increase to raise almost $200 million for parks, green spaces, trails and the zoo.

Oregon's well-known regional agency, Portland Metro, adopted a Metropolitan Greenspaces Master Plan in 1992. The plan formed the basis of a land acquisition strategy approved by residents of the three-county region in 1995. At the same time voters also approved $136 million in bonds to purchase land for 14 regional natural areas and 6 regional trails and greenways. To date 6,911 acres have been acquired.

According to the American Farmland Trust, the two local PDR programs that have preserved the most farmland in the U.S. are in California north of San Francisco. Marin County established its program in 1980 and has protected almost 27,000 acres. Sonoma County created the Agricultural Preservation and Open Space District in 1990, and has protected almost 25,000 acres. Sonoma's funding comes from a one-quarter percent local sales tax. The district is currently planning to acquire its largest and most expensive property, a 19,000 acre ranch that borders Mendocino County.

Another successful program is the Santa Monica Mountains Coastal Zone (also called the Malibu Coastal Zone). The area is 27 miles long and up to 5 miles wide, extending from the city of Santa Monica to Los Angeles County's border with Ventura County. The zone is bordered on the east by the Santa Monica Mountains, named a Natural Recreation Area in 1978. Since 1981 the zone has been the site of a TDR program administered by the California Coastal Commission and assisted by the State Coastal Conservancy. The program restricts development on antiquated small lots, on hillsides, and in other environmentally sensitive areas. As of 1997 over 900 substandard lots had been retired.

Perhaps the most unique example of regional activity is the San Francisco Bay area's Greenbelt Alliance. Founded in 1958 as a citizen land conservation organization, the Alliance seeks to protect open lands surrounding cities and towns in the nine-county region. More than 600,000 acres have been preserved. Another 1.8 million acres in the Bay area is in farmland. The Alliance works with other nonprofits and local governments in the region to encourage compact development and focus investment in existing urban centers. The group also supports the passage of urban growth boundaries (UGBs) as a way to prevent sprawl and protect farmland and open space. Partly as a result of its influence, around one quarter of the municipalities in the Bay area have adopted UGBs.

In addition to indirect preservation through UGBs, direct preservation through acquisition is proceeding in California. In March 1998 the David and Lucile Packard Foundation announced the Conserving California Landscapes Initiative. The foundation earmarked $175 million to protect open space, farmland and wildlife habitat in the Sierra Nevada, Central Valley and Central Coast regions. As of November 2000 over 327,000 acres had been protected. In April 2001, Packard granted $50 million to the Peninsula Open Space Trust to help conserve 20,000 acres in San Mateo County, south of San Francisco. According to the Trust, this land is the only undeveloped coastline next to a major metropolitan area remaining in the world.

Appendix Table 1. Total Acres Preserved by State through 2000 by Major National, Regional and Local Land Trusts

Group	The Conservation Fund	Land Trust Alliance	The Nature Conservancy	Trust for Public Land	TOTAL
States by Census Regions					
New England					
Connecticut	29	70,361	28,894	2,191	101,474
Maine	14,409	141,240	349,308	24,540	529,497
Massachusetts	381	209,967	17,748	4,244	232,339
New Hampshire	19,759	288,197	86,529	9,536	404,021
Rhode Island	36	29,950	18,239	147	48,372
Vermont	271,012	444,036	191,469	14,336	920,852
Subtotal	**305,625**	**1,183,751**	**692,187**	**54,993**	**2,236,556**
MidAtlantic					
New Jersey	2,250	138,249	32,817	13,679	186,995
New York	158,976	552,220	356,045	56,016	1,123,257
Pennsylvania	9,319	340,788	45,070	2,644	397,821
Subtotal	**170,544**	**1,031,257**	**433,932**	**72,339**	**1,708,073**
South Atlantic					
Delaware	13,667	102,041	14,862	22	130,592
Florida	28,126	64,456	934,242	121,956	1,148,780
Georgia	12,785	36,864	156,255	10,250	216,154
Maryland	94,965	146,776	49,678	2,819	294,239
North Carolina	156,769	112,141	461,940	9,766	740,615
South Carolina	43,744	97,573	151,131	12,501	304,949
Virginia	35,799	236,160	225,296	9,605	506,860
West Virginia	18,484	58,321	100,340	66,121	243,266
Subtotal	**404,338**	**854,332**	**2,093,744**	**233,040**	**3,585,454**
East South Central					
Alabama	3,427	33,516	47,374	1,521	85,838
Kentucky	35,277	4,012	24,145	2,223	65,657
Mississippi	3,878	4,405	110,169	3,179	121,631
Tennessee	43,126	43,734	63,090	14,690	164,640
Subtotal	**85,708**	**85,667**	**244,778**	**21,613**	**437,767**
West South Central					
Arkansas	1,428	1,496	125,491	11,536	139,951
Louisiana	41,693	13,645	148,057	2,894	206,289
Oklahoma	6,096	5,151	84,763	5,209	101,219
Texas	71,957	85,675	464,509	20,249	642,390
Subtotal	**121,174**	**105,967**	**822,820**	**39,888**	**1,089,848**

Appendix Table 1 (cont.)

Group	The Conservation Fund	Land Trust Alliance	The Nature Conservancy	Trust for Public Land	TOTAL
States by Census Regions					
East North Central					
Illinois	20,609	45,683	47,239	1,274	114,804
Indiana	1,452	9,754	52,802	1,370	65,378
Michigan	11,667	79,456	86,063	55,718	232,904
Ohio	44,228	23,938	41,669	4,468	114,303
Wisconsin	3,426	25,262	58,654	11,244	98,586
Subtotal	**81,382**	**184,093**	**286,427**	**74,074**	**625,976**
West North Central					
Iowa	5,465	65,212	29,868	0	100,545
Kansas	200	2,451	45,093	56	47,800
Minnesota	2,790	16,788	307,627	22,920	350,124
Missouri	5,161	9,347	134,643	3,262	152,413
Nebraska	430	16,772	118,463	0	135,665
North Dakota	1,987	4,912	45,130	0	52,029
South Dakota	145	9,625	39,104	0	48,874
Subtotal	**16,177**	**125,107**	**719,928**	**26,238**	**887,450**
Rocky Mountains					
Arizona	2,838	38,175	871,900	188,539	1,101,452
Colorado	145,234	339,122	319,248	56,603	860,207
Idaho	121,189	36,532	160,549	3,665	321,935
Montana	11,731	505,659	417,972	16,193	951,556
Nevada	1,136,910	12,225	1,395,202	11,569	2,555,906
New Mexico	15,724	271,623	1,207,922	104,610	1,599,879
Utah	111,441	56,483	560,117	19,962	748,003
Wyoming	9,303	40,759	464,060	0	514,122
Subtotal	**1,554,370**	**1,300,578**	**5,396,970**	**401,141**	**8,653,058**
Pacific					
Alaska	179,215	28,939	46,877	69,375	324,406
California	12,651	1,251,782	986,089	181,006	2,431,528
Hawaii	550	8	62,499	1,879	64,936
Oregon	11,856	24,567	400,692	58,148	495,263
Washington	5,768	41,728	151,567	40,209	239,272
Subtotal	**210,040**	**1,347,024**	**1,647,724**	**350,617**	**3,555,405**
Grand Total	**2,949,358**	**6,217,776**	**12,338,510**	**1,273,942**	**22,779,586**

NOTES: In many cases ownership of this land has been transferred to state and local governments. In some cases more than one land trust has worked to preserve the same tract. Therefore the grand total of acres preserved may be somewhat high

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