

Taking the High Road

PROTECTING OPEN SPACE ALONG AMERICA'S HIGHWAYS

by Preston L. Schiller, Ph.D.

*This report was produced with funding from
the David and Lucile Packard Foundation*



Conserving Land for People

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Dear Friend:

The Trust for Public Land is pleased to present *Taking the High Road: Protecting Open Space Along America's Highways*, published through the generosity of the David and Lucile Packard Foundation.

The disappearance of open space, particularly in our metropolitan areas, is cause for concern across America. We hope this publication will help educate readers about the link between highway construction and loss of open space and motivate them to participate in transportation policy discussions.

Federal transportation programs will continue to have a tremendous impact on the character of communities in the 21st century. Critical choices about those programs will be made in the coming year. The reauthorization of the Transportation Equity Act for the 21st Century (TEA-21) provides an opportunity to build on the experiences of communities that have sought to integrate open space protection and transportation policy.

For more than 30 years, the Trust for Public Land has worked to connect people and land to improve the quality of life in our communities. We bring our experience, along with that of local leaders, elected officials, public agencies, and land trusts and other community groups, to make open space preservation a vital component of highway project planning and implementation.

Sincerely,

A handwritten signature in black ink that reads "Will Rogers". The signature is fluid and cursive, with a long horizontal line extending to the right from the end of the name.

Will Rogers
President
The Trust for Public Land

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Executive Summary

As the web of highways and byways crisscrossing our nation has grown, small towns and urban centers alike have reaped the benefits, and experienced the pains, of growth. From the interstates to the back roads that flow into them, America's highway system facilitates commerce and economic expansion, connects people more and more easily to once-distant locations, and makes remote landscapes and communities more and more accessible. It also opens those previously less-traveled landscapes to increased development, accelerating the rise of land prices while laying claim to the ever-shrinking open spaces on which communi-

ties rely for recreation, for wildlife habitat, and for the scenic character and quality of life that define these areas.

Traditionally, transportation policy—based largely on state and local decision making, but fueled largely by federal funding through periodically reauthorized transportation bills—has taken into account the immediate impacts of highway construction, mitigating for wetland and habitat losses and other environmental impacts of the actual road-building process. But the broader issues of conflicting landuses, sprawl, and vanishing open space generally have not been accounted for; instead, these



SCOTT AREMAN

Increased traffic and demand for more roads put pressure on already limited open space. People in metropolitan areas face important choices about what their communities will look like in the future.

concerns have been left to local communities to address, often at their peril.

To be sure, some localities have had a well-articulated capacity to forecast the growth pressures associated with improved highway access. They have relied on their own financial, planning, and other resources to respond (with varying degrees of success) to related stresses on open space. But many more communities have struggled as highway-spawned subdivision and commercial development has outpaced the ability to prepare for and direct growth. Such development quickly outstrips available funding to conserve parks and open spaces.

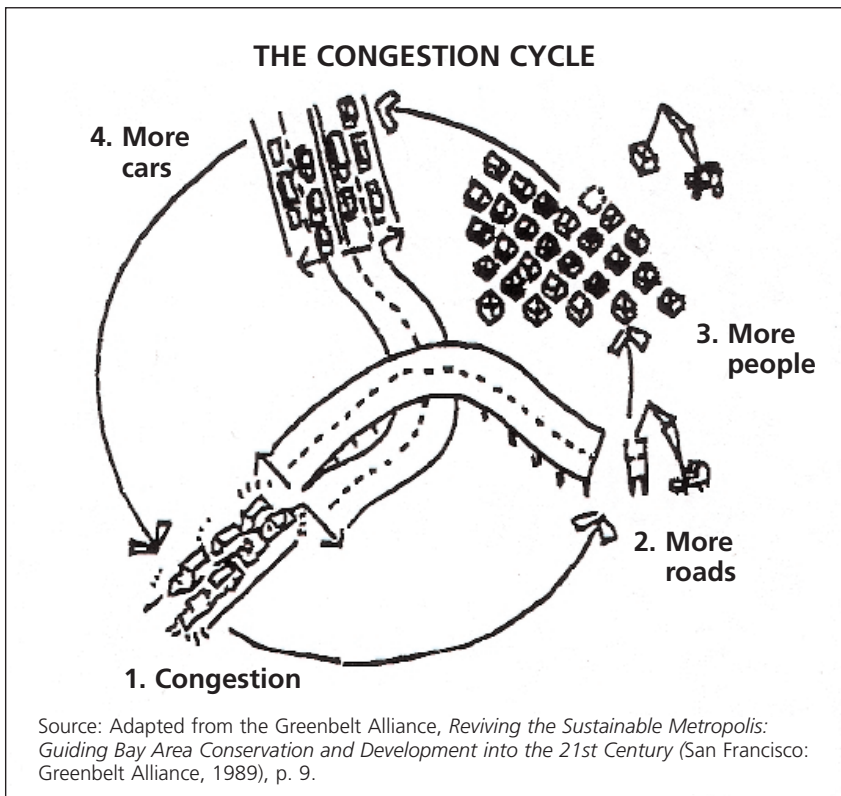
Fortunately, innovative policies linking today's highway construction and tomorrow's development issues have recently taken shape, beginning with the 1991 enactment of the federal Intermodal Surface Transportation Efficiency Act (ISTEA), and continuing with the most recent transportation reauthorization (known as TEA-21) in 1998. With much-needed conservation matching funds through provisions including the Transportation Enhancement Program; vital up-front planning assistance through the Transportation and Community

and System Preservation Pilot (TCSP) initiative; and other new approaches, these legislative packages have put important and heavily used new tools in the hands of communities grappling with the aftereffects of road building on local landscapes.

At the same time, there has been a surge in public awareness of, and involvement in, land conservation issues; and federal, state and local, and private responses to open space challenges—apart from transportation policy—have grown in magnitude and sophistication. More than 1,300 local nonprofit land trusts are now at work across the countryside, infusing their informed perspective into landuse decision making and their conservation real estate expertise into on-the-ground protection efforts. Federal partnerships through such resources as the Land & Water Conservation Fund and diverse Farm Bill programs are bringing new opportunities for leveraged community action to save the best of remaining open spaces. Ballot initiatives from Leon County, Florida, to Portland, Oregon, have demonstrated an overwhelming public desire to conserve open spaces and have made available billions of conservation dollars to help counter the effects of sprawl. But far too often, these funds and partnerships come regrettably late in the process—after improved road access has already escalated land prices and sprawl development has already claimed some of a community's most essential open spaces—limiting the impact of conservation.

With generous support from the David and Lucile Packard Foundation, this report by the Trust for Public Land explores these landuse forces and examines illustrative cases where communities have come to recognize and respond to the connection between their investments in transportation infrastructure and the need to protect their "green infrastructure." Among these examples are:

- ◆ Fairfax County, Virginia, where "parkway" development addressed some important greenway needs, but left other open space needs unmet;
- ◆ The state of Delaware, where highway planners are integrating open space strategies



into their efforts to “preserve capacity” of existing transportation corridors and to extend the value of transportation investments already made;

- ◆ The Twin Cities of Minneapolis/St. Paul, Minnesota, where a large-scale planning effort weaves transportation and open space issues and funding sources together in an attempt to retain the area’s renowned special qualities;
- ◆ Riverside County, California, where open space and wildlife habitat concerns are central considerations in a comprehensive, countywide approach to transportation, development, and related public funding needs; and
- ◆ The Mountains to Sound Greenway in the state of Washington, where a diverse coalition used a variety of public and private funding sources to create a scenic and recreational area along a major interstate highway.

Finally, in light of the transportation–open space nexus of these and other communities,

this report contains recommendations for policymakers to foster the nascent synergies hatched in previous transportation bills, and information for citizens and groups wishing to become more fluent with and engaged in these issues. Specifically, the Trust for Public Land urges that:

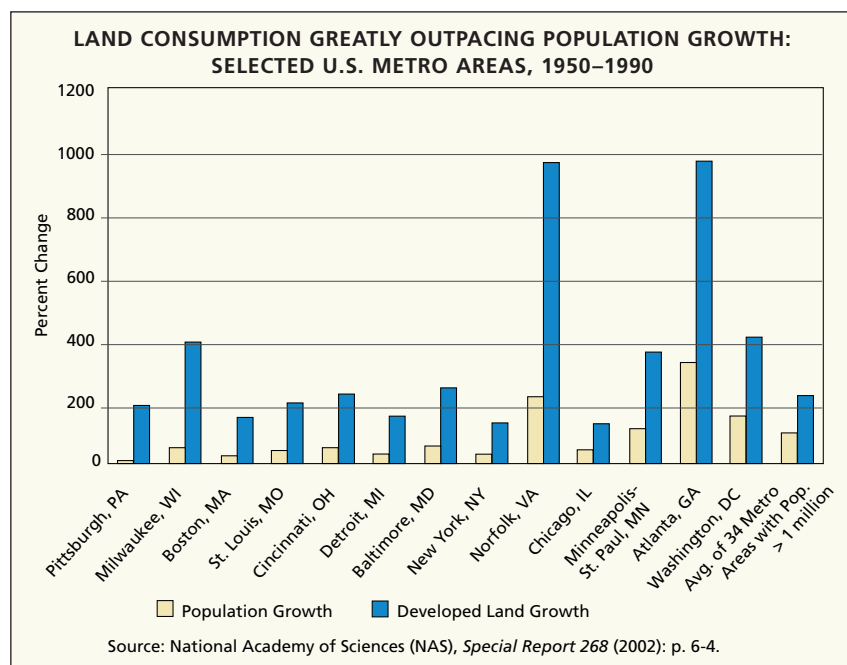
- ◆ Open space consequences of highway construction be considered and mitigated for in the early stages of road projects;
- ◆ The Transportation Enhancements Program of ISTEA be retained and improved;
- ◆ The TCSP be expanded to meet on-the-ground needs that communities and congressional appropriators have already recognized;
- ◆ Capacity preservation initiatives for existing highways appropriately include open space conservation; and
- ◆ Planning factors address open space and habitat conservation.

Background: Highways and Land— Making the Connection

The modern highway is often taken for granted as a device for people to travel quickly from one place to another. Yet the highway is an integral component of today's modern infrastructure. Highways move people, freight, and goods, and provide a valuable resource for national security and emergency response systems. For residents in rural areas, highways are a means to overcome isolation, bring goods to market, and connect with more populated and developed areas. Highways have even become engrained in culture—the long stretch of highway synonymous with the familiar question, “Are we there yet?”

Few countries depend upon highways for transportation like the United States. And no other country expends as large a percentage of its resources on highways and highway-related infrastructure. Many highway projects are conceived with the goal of improving mobility and reducing travel burdens. With the onset of suburbanization, countless highway projects have been approved with admirable goals of distancing homes from industrial pollution, providing less-crowded situations for children, and yielding more housing and yard for the money. Yet highway-construction projects also bring other unintended effects. Resulting traffic brings pollution closer to homes. More time is spent driving between home and places of work. Gradually, with every highway project, urban areas become sprawling cities and open spaces begin to disappear.

Certainly, as populations grow and cities evolve, expansion is inevitable. At the same time, land conservation issues are increasingly dominating discussions as open spaces become targets for development. There is an undeniable link between the issues surrounding land conservation and highway building. The construction of new highways affects the proliferation of sprawl, traffic patterns, and quality-of-life issues. Transportation decision makers have come to recognize that projects intended to ease congestion and provide access to remote areas can, paradoxically, result in environmental degradation and the elimination of valuable open spaces.





ERIC SWANSON

Without measures to preserve open space, highway construction can engender sprawl.

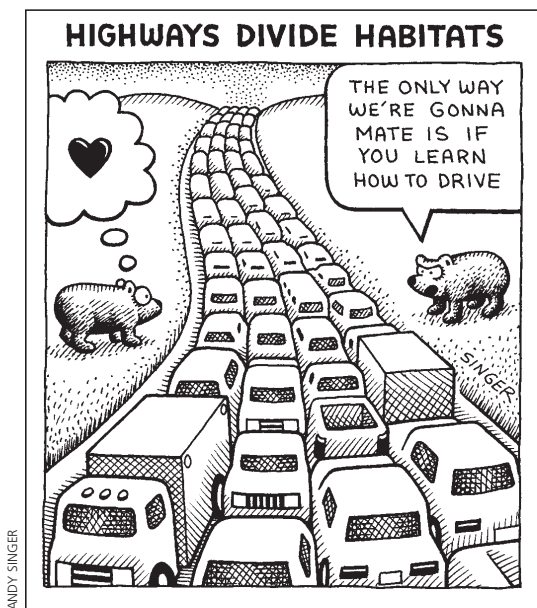
These connections highlight the inherent wisdom in coordinating the efforts of those leading federal highway initiatives and those managing local land use. Planning and funding for new highways should anticipate long-term effects. Highway systems and the communities they serve can benefit enormously when planning and funding for new highways anticipate these long-term effects, and when land conservation needs, including scenic, recreational, and habitat lands, are considered alongside transportation and infrastructure needs. This report thus takes a look at the inextricable link between land conservation and highway building issues, considers cases where communities are recognizing and responding to this connection, and offers recommendations for community groups and decision makers as Congress prepares to reauthorize the federal transportation bill, informally known at this time as “TEA-3.”

EFFECTS OF HIGHWAYS ON OPEN SPACE

The ambitious highway programs undertaken in metropolitan areas after World War II were intended to facilitate movement from cities to suburbs. The programs were successful, but the new and expanded highways did not lead to

compact communities where residents could walk to shops and services for the 80 percent or more of household trips not related to work. Instead, they spawned low-density “monocultures”; residences here, shopping strips and malls there, public schools far away, playing fields miles distant, and office parks scattered beyond the reach of public transit. This method of land development, combined with increased populations, led to a considerable increase in traffic. In short, the net effect of federal transportation and housing policies in the era following World War II was to explode the metropolis and scatter it across the countryside.

The highway construction that gives rise to these land use patterns also directly affects the financial value of land. Because it is considered desirable to live close to a major artery, which allows for easy traveling or commuting, a new highway leads to adjacent land increases in value. Obviously, it is difficult to isolate the specific amount of land-value appreciation attributable to infrastructure, since there are so many shifting variables involved in land prices; nevertheless, the upward effect is clear. Studies conducted in the 1950s and 1960s, when the interstate system was being developed, showed large increases in land values near highway



Highways can fragment wildlife habitat critical to the survival of threatened and endangered species.

between home prices and new road construction. This study found that the Foothill Transportation Corridor Backbone (FTCBB) and the San Joaquin Hills Transportation Corridor (SJHTC), constructed in the 1990s, provided homebuyers with improved access that was reflected in increased home prices, which in turn has led developers to increase the pace of subdividing those corridors.¹

Apart from these financial effects, highway-facilitated development takes a substantial toll on conservation and open space values. This subdivided countryside becomes less green, less scenic, and less valuable for wildlife and biodiversity. These losses are occurring at an ever-increasing rate. As suburban developments encroach on undeveloped lands, financial and landuse considerations pressure owners of neighboring farms and forests to consider development sales. According to the Department of Agriculture, in the 1990s Americans converted open space to developed land at a rate of 2.2 million acres per year or 251 acres per hour—a rate of conversion 50 percent greater than that of the 1980s.²

The consequences of sprawl on open spaces and adjacent waterways are manifold. Among the most noticeable impacts are the following:

- ◆ **Wetlands.** Wetlands are crucial for habitat, water quality, and aquifer recharge. Approximately 300,000 acres of U.S. wetlands are lost every year. Agricultural conversion only

projects. Later studies also showed continued increases associated with further infrastructure investments, even after access had already been established. In the 1990s, a study of commercial property in San Diego showed that properties close to freeway on-ramps could charge higher rents. An ongoing examination of the effect of new toll roads in Orange County, California, also shows a strong relationship

accounts for less than one-third of the wetland reduction.³

- ◆ **Habitat.** Plant and wildlife habitats are increasingly challenged by the pace of suburban and exurban development. According to the U.S. Fish and Wildlife Service, habitat loss is the primary hurdle to recovery of the nation's endangered and threatened species. As new residential neighborhoods and business districts spread through previously undisturbed landscapes, "habitat islands" are created, fragmenting plant and wildlife populations and cutting off migration routes.

- ◆ **Recreation/Scenic Open Space.** Open space secures places important to a community's identity and culture, and can bolster tourism economies with its scenic and historic beauty. Road building and the sprawling development it helps to generate have had a major impact on the reduction of open space for public use and enjoyment, including uninterrupted scenic vistas that once gave rise to the idea of "pleasure driving." The lack of open space hinders the development of playgrounds and fields for soccer, baseball, and other sports that help build a sense of community.

- ◆ **Water Quality.** The increasing pace of development is overwhelming the improvements made in recent decades controlling point-sources of pollution, including industrial and sewage treatment discharges. Instead, pollution from agricultural runoff, lawn treatments, septic tanks, construction, roads, driveways, parking lots, and other runoff unshielded by wetlands, riparian, or estuarine buffers has become the dominant form of contamination for coastal and inland waters—especially in the vicinity of metropolitan regions.⁴

Where highway construction affects these resources directly—that is, where the actual road bed cuts through a wetland, disturbs nesting wildlife habitat, or promotes runoff pollution of adjacent streams—highway policies have generally allowed for, and in many cases mandated, mitigation. But once the highway is built, transportation programs historically neither recognized nor addressed the negative effects of associated sprawl development. When this occurs, concerned regions and municipalities

often respond to land development pressures by purchasing land and conservation easements to protect open space resources, watersheds, and agricultural and forestlands through a variety of programs distinct from their transportation spending. Thus, mitigation of highway-related environmental impacts generally has been confined to immediate effects, such as the replacement of wetlands lost to a new or expanded right-of-way with a culvert for fish or other wildlife, while ensuing losses a region suffers as a result of highway expansion have not been addressed unless other programs to protect lands are in place. Fortunately, federal policymakers have been exploring ways, beginning with the transportation bill of 1991, to bridge this gap.

FROM HIGHWAY BUSINESS AS USUAL TO ISTEA AND TEA-21

In 1991, through the leadership of then-Senator Daniel Moynihan, chairman of the Senate Transportation Committee, Congress decided that the old way of building highways, without regard to the negative consequences on communities, had to change. The country was ready for new thinking on the interrelationships of transportation, landuse, and the environment. From this new thinking, the Intermodal Surface Transportation Act (ISTEA)⁹ was enacted, continuing several remarkable departures from previous bills, including:

◆ Improved Decision Making and Planning.

The authority for transportation planning and funding decisions, which had resided with the province of state departments of transportation, now would be shared with Metropolitan Planning Organizations (MPOs), which were more attuned to local needs than state-level bureaucracies. Both MPOs and state departments of transportation encouraged public participation in planning by incorporating a broad variety of citizen interest groups including business and transportation providers, and bicycle, trail, and open space advocacy groups. Public participation was accommodated early in the planning process in order to produce better planning and fewer citizen



JOHN DEAN

challenges to projects. ISTEA also required that federally funded transportation planning take into account environmental considerations as well as financial constraints minimizing laundry lists of nonfundable new roads.

ISTEA emphasizes local involvement in planning to develop projects that reflect the needs and desires of the affected community.

◆ Environmental Funding Opportunities.

Transportation funding under ISTEA would remain earmarked for purposes such as bridge repair and maintenance. But the program comprising nearly half of federal transportation funding each year, the Surface Transportation Program (STP)—which includes funding for highways, new interchanges, etc.—would become subject to two important innovations:

- ◆ Significant portions of STP would be flexible: a metropolitan area could decide to apply funding to options other than new road building, including above-and-beyond mitigation related to existing roads and new road projects; and
- ◆ The Transportation Enhancements Program (TEP), addressing environmental impacts, would receive 10 percent of STP's unencumbered funds. These funds were made available for a variety of community-improving activities, including acquisition of open spaces and scenic easements, and historic preservation. Amounts are significant, with actual spending growing from \$78 million in 1991 to \$586 million in 2001.

Another ISTEA program significant to open

space is the National Scenic Byways Program. This program targets the maintenance and preservation of roads having outstanding scenic, historic, cultural, natural, recreational, and archaeological qualities. It is currently funded at a level of approximately \$25 million per year.

Additionally, the Congestion Mitigation and Air Quality (CMAQ) program made a small but significant amount of funding available to regions that were noncompliant with federal Clean Air Act amendments. As approximately half of the nation's air pollution stems from transportation sources, ISTEA included a program that helped affected regions fund pollution reduction initiatives.⁹ Transit improvements, sidewalks, improved traffic management techniques, and the encouragement of less- or non-polluting vehicles were all projects funded by CMAQ.

ISTEA was revamped in 1997–98 as the Transportation Equity Act for the 21st Century (TEA-21). While ISTEA's environmental and planning provisions were preserved, more funding was allocated for building roads. The Transportation Enhancements Program (TEP) was preserved, with expanded funding. New enhancement categories were added, including environment mitigation to reduce water pollu-

tion and projects to maintain habitat connectivity. Planning remained a potent tool for TEA-21.

While the new policy maintained strong provisions for accountability, local control, and fiscal constraint, there was somewhat less focus on landuse planning and landuse impacts of highways. At the same time, however, the federal commitment to many of the programs in ISTEA was maintained, and even enhanced, and a new program with potential for the achievement of open space conservation was added.

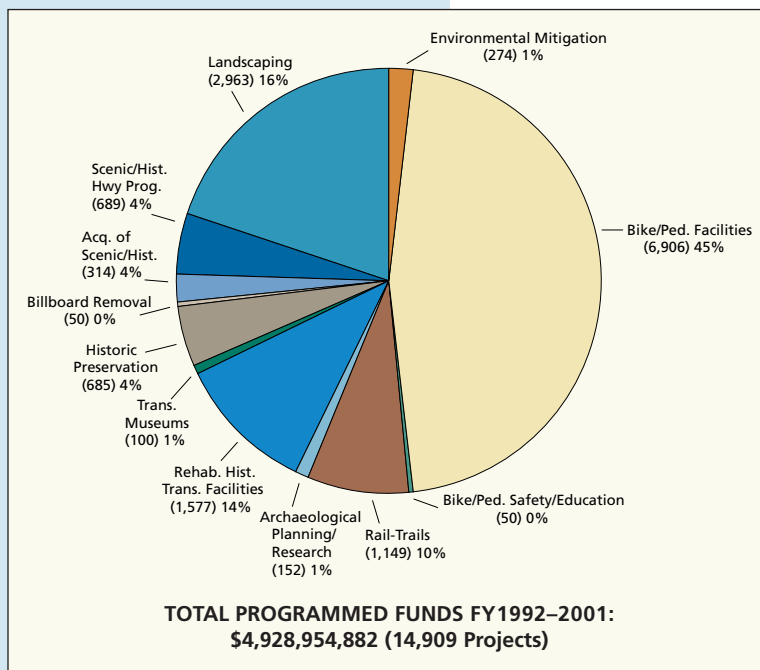
The Transportation and Community and System Preservation Pilot Program (TCSP) is an innovative program designed to help communities address the linkage between transportation, landuse, and quality of life. It encourages the involvement of nontraditional partners as part of the project team. The goals of the projects and planning efforts are to improve the efficiency of transportation systems, reduce transportation's environmental impacts, reduce the need for costly future public infrastructure investments, and plan for development. The innovative TEA-21 TCSP was originally authorized for \$25 million of annual funding. Special appropriations in Congress have raised its funding by another \$276 million for 2002.

Transportation Enhancements Program

- ◆ 10 percent set-aside of Surface Transportation Program (more than \$2.4 billion since 1991)
- ◆ Funds twelve categories of projects
 - Pedestrian and bicycle facilities
 - Pedestrian and bicycle safety and education activities
 - Acquisition of scenic or historic easements and sites
 - Scenic or historic highway programs, including tourist and welcome centers
 - Landscaping and scenic beautification
 - Historic preservation
 - Rehabilitation and operation of historic transportation buildings, structures, or facilities
 - Preservation of abandoned railway corridors
 - Control and removal of outdoor advertising
 - Archaeological planning and research
 - Mitigation of highway runoff and provision of wildlife undercrossings
 - Establishment of transportation museums⁶

Transportation and Community and System Preservation Pilot Program (TCSP)

- ◆ Authorizes \$120 million over six years, but actual funding since 1999, the first year of the program, has totaled almost \$345 million
- ◆ Encourages participation by nontraditional partners in project teams
- ◆ Funds programs that:
 - Improve the efficiency of the transportation system;
 - Reduce the impacts of transportation on the environment;
 - Reduce the need for costly future investments in public infrastructure;
 - Provide efficient access to jobs, services, and centers of trade; and
 - Examine development patterns and identify strategies to encourage private sector development patterns that achieve these purposes.⁷



National Scenic Byways Program

- ◆ Funded at about \$25 million per year
- ◆ Directs the U.S. Department of Transportation to recognize “roads having outstanding scenic, historic, cultural, natural, recreational, and archaeological qualities by designating the roads as National Scenic Byways and All American Roads”
- ◆ States nominate roads that are already designated as State Scenic Byways
- ◆ Grants are provided to projects that protect the qualities of the scenic highway and adjacent areas⁸

Meeting the Challenge of Land Conservation

THE LAND TRUST ALLIANCE

Founded in 1982, the Land Trust Alliance (LTA) promotes voluntary land conservation across the country. LTA provides the nation's land trusts with direct grants, training programs, technical assistance, and mentoring to help them protect open spaces. www.lta.org

OPEN SPACE AS AN ANTIDOTE TO SPRAWL

While highway planners have slowly been broadening their interests to address landuse, landuse planners are dealing with unprecedented interest in land conservation as an antidote to sprawl. Leading thinkers and organizations have turned their attention to using managed open space to drive metropolitan growth away from the current destructive sprawl trajectory, and toward more compact and environmentally sound development. This more strategic look at land conservation defines areas where development can occur while preserving valuable open space between developed and undeveloped areas.

The new thinking has spawned both private and public coalitions aggressively pursuing the protection of open spaces, including farms, forests, nature preserves, and other greenways, helping to define and shape metropolitan areas. Land conservancies, land trusts, and private and

nonprofit citizens organizations have been rapidly expanding to work in partnership with local governments to address landuse. These groups generally work to protect privately owned land either by purchasing property or obtaining conservation easements—agreements that remove development rights but provide for continued private ownership for such uses as farming and forestry. Today, some 1,300 national, regional, and local land trusts protect approximately 23 million acres of land in the United States.¹⁰

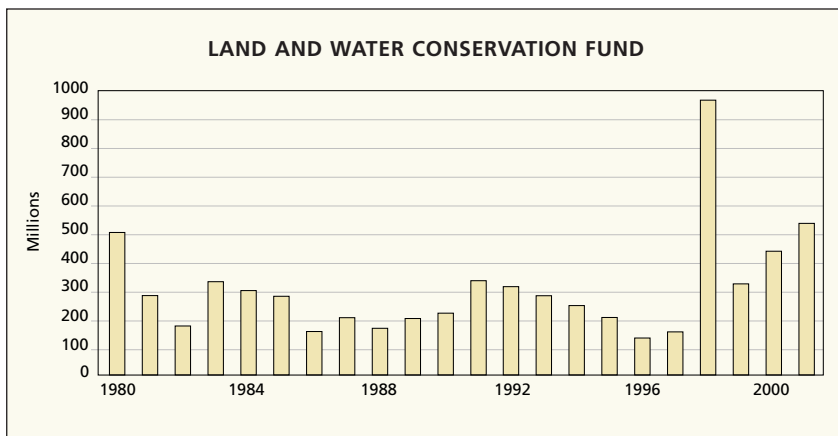
THE GROWING POPULARITY OF LAND CONSERVATION

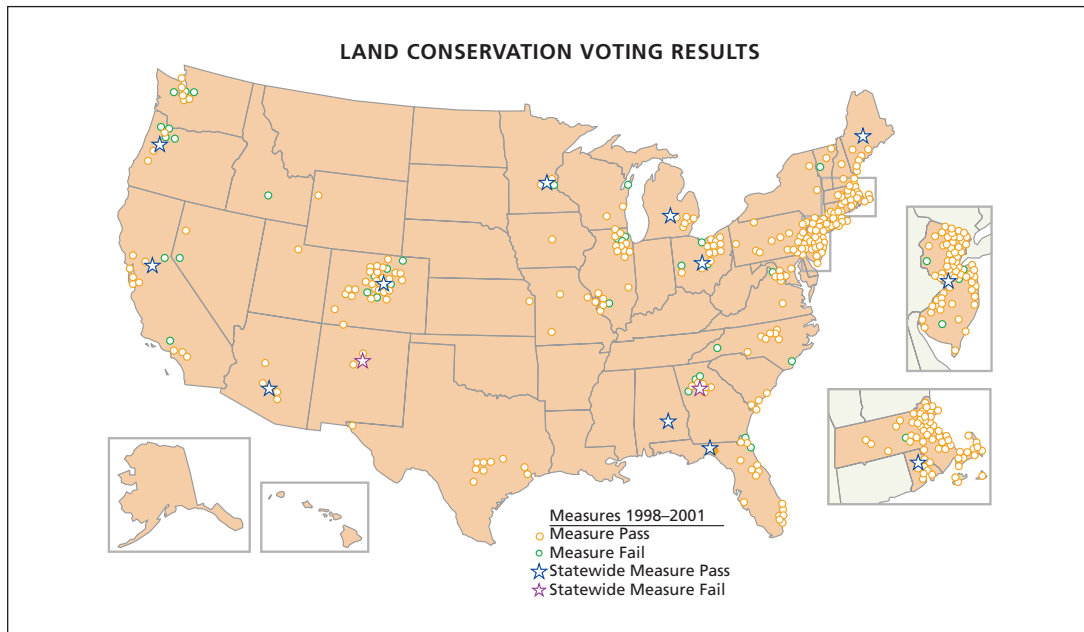
A recent poll commissioned by Smart Growth America included two questions testing Americans' support for open space. Respondents were asked if they strongly favored, somewhat favored, somewhat opposed, or strongly opposed the following proposals:

- ◆ Establish zones for green space, farming, and forests outside existing cities and suburbs that would be off limits to developers; and
- ◆ Have government use tax dollars to buy land for more parks and open space and to protect wildlife.

People overwhelmingly favored these propositions with 83 percent in favor of green space zones and 77 percent in favor of government funding for parks and open space.¹¹

Federal, state, and local governments are responding to the growing popular support for land conservation. At the federal level, Congress





has appropriated money from the Land and Water Conservation Fund (LWCF), at steadily rising levels in recent years. The LWCF provides money for land acquisitions by the U.S. Forest Service, the National Park Service, the U.S. Fish and Wildlife Service, and the Bureau of Land Management, as well as grants for state and local conservation initiatives. The Forest Legacy program has also grown. Thirty-seven states now participate in the program, which provides for federal-state partnerships in protecting forestlands from development. The Farmland Protection Program, designed to protect farms from development pressures, received a large funding increase in the 2001 Farm Bill.

One direct way the public around the country is expressing support for land conservation is at the ballot box. In the last 10 years, the success of state and local ballot measures supporting open space preservation and land conservation has been impressive.

- ◆ Since 1995, voters nationwide have approved more than \$25 billion in new funding for state and local land conservation projects.
- ◆ Between 1998 and 2000 there were more than 350 ballot open space votes in state and local elections—with voters saying yes 84 percent of the time.
- ◆ On the November 2001 ballot, 86 of 115 open space measures passed.

- ◆ In California, Proposition 40, a \$2.6 billion parks and open space bond won with 57 percent of the vote.¹²

EXAMPLE: LEON COUNTY, FLORIDA'S BLUEPRINT 2000

In the case of Leon County, Florida, in November 2000, voters supported funding for open space protection in connection with a broad effort to address the problems caused by rapid growth in the Tallahassee area. A one cent sales tax extension was tied to a community-based guide for economic development and natural resource management. Business, neighborhood, and environmental leaders came together to seek a consensus on how to solve the sprawl-related problems of increased water pollution, traffic congestion, loss of open space, and uneven economic benefits. The result was Blueprint 2000, which recommended:

- ◆ A watershed approach pairing right-of-way acquisition for major road projects with adjacent land acquisitions for greenways, storm water retrofit projects, and future alternative transportation projects.
- ◆ Linking landuse and transportation planning in order to control access to major highways.
- ◆ The design and construction of parklike storm water projects.
- ◆ Improving local government coordination in addressing water quality, storm water treatment, flooding, and aquifer protection.

The sales tax extension was proposed to fund the implementation of this plan, linking transportation development, land conservation, and water quality. Voters approved the measure by more than 60 percent.¹³

WHAT IS SMART GROWTH?

Smart growth is well-planned development that protects open space and farmland, revitalizes communities, keeps housing affordable, and provides more transportation choices.

TEN PRINCIPLES OF SMART GROWTH

1. Mix landuses
2. Take advantage of compact building design
3. Create a range of housing opportunities and choices
4. Create walkable neighborhoods
5. Foster distinctive, attractive communities with a strong sense of place
6. Preserve open space, farmland, natural beauty, and critical environmental areas
7. Strengthen and direct development toward existing communities
8. Provide a variety of transportation choices
9. Make development decisions predictable, fair, and cost effective
10. Encourage community and stakeholder collaboration in development decisions

www.smartgrowthamerica.org

THE EMERGENCE OF STRATEGIC CONSERVATION

The civic leaders and voters of Leon County are not alone in developing plans to utilize open space as a way to combat sprawl. A number of state initiatives in the past decade reflect the trend toward open space as a means to combat sprawl. Nonprofit and environmental groups at local and regional levels have joined to promote local and regional green space planning to create a framework for conservation.

Partners as diverse as the American Farmland Trust and the U.S. Conference of Mayors announced in June 2001 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 agreed that the protection of farmland is one tool for creating a comprehensive smart growth plan for metropolitan areas.

With the help of conservation organizations, green space plans are currently being developed in 30 of the 50 largest U.S. metropolitan areas; NACO reports 80 percent of its members are interested in land conservation programs.¹⁴ Green space planning, also known as greenprinting, emphasizes land conservation to ensure quality of life, clean air and water, recreation, and economic health.¹⁵ It approaches land conservation as a tool that can address a number of community issues, including the protection of view corridors, the creation of scenic buffers between specific areas and roadways, and the availability of recreational areas. Such proactive planning means conservation efforts no longer need to operate in a reactive mode. Instead, efforts can focus on comprehensive identification and protection of key open space as early as possible rather than chase after the bulldozer.



Portland, Oregon, is a pioneer in combining growth management and open space protection.

PHIL SCHERMEISTER

One of the most interesting, and enduring, examples of growth management and open space protection has taken place in Oregon, particularly in the Portland metropolitan area. Leveraging civic concern, a favorable state policy climate, and federal transportation funding for transit, Portland has managed the development of highway infrastructure by designing its community around a powerful public transit system, shaping the metropolitan area around its city center, and avoiding the suburban sprawl endemic to so many other metropolitan areas. The transit program has been paired with an aggressive effort to plan, fund, and implement one of the nation's most ambitious regional land conservation programs.

Portland's Urban Growth Boundaries (UGBs), which promote urban-style higher densities, in tandem with greater protection of outlying landscapes, have proven popular with the electorate and have withstood more than one ballot challenge, and several court challenges. Growth management planning has also been linked to the "Oregon Transportation Rule," which applies a growth limit to vehicle miles traveled (VMT), a commonly used indicator of traffic.

Portland's move away from the binge of freeway planning and construction prevalent in almost all U.S. metropolitan areas during the 1950s and 1960s eventually led to a focus on light rail. In the late 1980s, the "Western Bypass," a Beltway-like loop of I-5 through rural lands just outside the Urban Growth Boundary was proposed. A citizens' movement, "STOP," joined forces with the growth management advocacy organization, 1000 Friends of Oregon, to challenge the project.

Research, undertaken jointly by 1000 Friends and the U.S. Environmental Protection Agency, led to the creation of a planning model, LUTRAQ (Land Use Transportation

and Air Quality), which compared two development scenarios for the same region. It found that combining clustered housing, a mixing of landuses, and ample public transit and walking and bicycling infrastructure created the least amount of traffic.¹⁶ The Western Bypass was not built and transit-oriented development, which might have been undercut by a new freeway, is taking hold along a new light rail line. LUTRAQ's success led to a new generation of planning and modeling tools now being used by local governments around the country to model landuse and environmental impacts of different transportation and development scenarios.

Green space plays an important role in the growth management efforts of Portland Metro, the regional government. Portland has been able to preserve large tracts of land within its city limits as parks and open space, maintaining one of the highest ratios of parkland to residents of any similar-sized city in the United States. In the three-county metro area, voters have supported Metro's \$135 million land acquisition program. The acreage acquired from that bond measure already exceeds 6,000 acres.

The Portland model provides valuable lessons to communities across America, but in most places there remains a lack of coordination between transportation planning and policies accommodating land affected by new development projects. While it may not be the intended effect, existing transportation policy has directly influenced the onset of sprawl. In an ever-continuing cycle, transportation projects encourage more sprawl, which in turn encourages more transportation projects. The end result is a rapid disappearing of open space and ultimate harm to the environment and the quality of life in a community.

"...there has been a dramatic surge in both the creation and the enhancement of open space programs in the last 10 years...32 of 50 states have either created new programs or significantly enhanced funding for existing programs since 2001. 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."

—Linda E. Hollis and William Fulton in *Open Space Protection: Conservation Meets Growth Management*¹⁷

Case Studies: Transportation and Land Protection

Decision makers face significant challenges when planning expansions or new roads. Transportation projects are often quite extensive and costly, and it is difficult to apply a set of standards given the federal, state, and local jurisdictions that are involved in the planning process. Without a policy in place directly integrating landuse concerns with transportation planning, it is almost inevitable that transportation and highway expansion projects will continue to affect sprawl development and its ensuing effects on the environment. A community that waits to address the problem of open space loss until after a road is built will find preserving open space much more difficult and expensive than if land conservation is taken into account early in the planning process.

The following case studies illustrate the evolution and application of recent transportation policy where open space preservation has been a consideration in planning and implementing transportation projects. Northern Virginia's Fairfax County Parkway, planned in the 1970s and 1980s, provides a good starting point for examining the old way of doing things, where transportation projects sought to accommodate rather than limit sprawl.

Case Study FAIRFAX COUNTY, VIRGINIA: LEARNING A LESSON

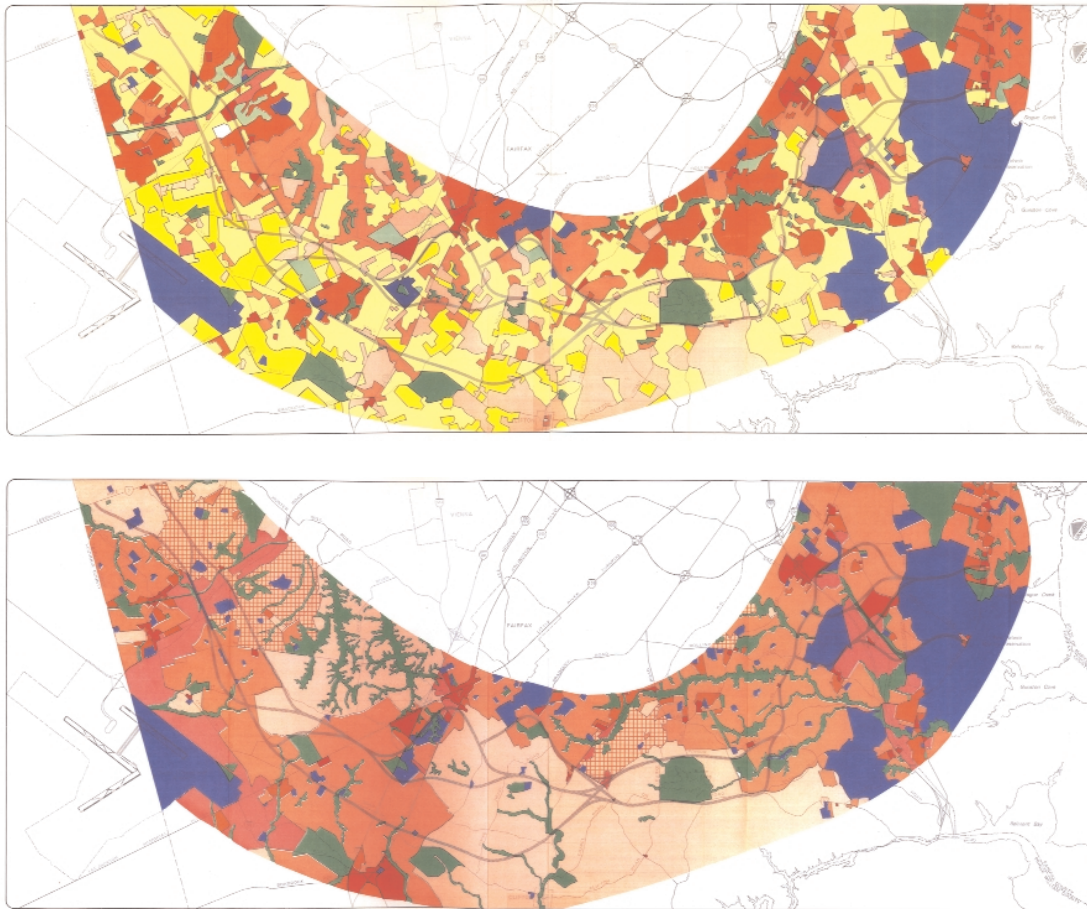
Planning the Fairfax County Parkway outside Washington, D.C., began in the mid-1970s. Public hearings began in 1981, and the bulldozers began

rolling in the mid-1980s. The project would create an outer loop road paralleling the I-495 Beltway. The road would facilitate the flow of traffic between the major radial roads of I-95, I-66, U.S. 50, and the rapidly developing Dulles Airport-Herndon-Reston area in Northwest Fairfax County. The parkway was strongly supported by development interests, which helped finance segments of it to make holdings more accessible.

The final Environmental Impact Statement for the Fairfax County Parkway took careful note of the following:

- ◆ The existence of large amounts of rural land that were slated for development.
- ◆ The existence of large amounts of traffic generated by the existing suburban developments, hinting that the new road might help relieve some of that congestion.
- ◆ Population growth, which was thought to be manageable within the corridor at a rate of 4 percent to almost 6 percent. Most experts now agree that growth rates much over 2 percent become unmanageable.¹⁸

Parkway planners promised to account for a great deal of traffic growth. Unfortunately, traffic projections were inaccurate, and the region was quickly plagued by all the crowding problems the project set out to avoid. The parkway promised to alleviate traffic congestion throughout the corridor and have capacity to spare for growth through the year 2005. By 1997, many segments of the Parkway were



These maps, from a 1994 environmental impact statement, show existing (top map) and projected (bottom map) land use along Virginia's Fairfax County Parkway. In the top map, the green areas are parks, the dark yellow areas are agricultural lands, and the light yellow areas are other open space. In the bottom map, the green areas represent parks and open space. All the other previously open space was slated for residential and commercial development, represented by the varying shades of pink and beige. The blue areas in both maps are public facilities, including an airport and a military installation.

quickly approaching, or even exceeding, the projected 2005 capacity levels.

While efforts were made to construct an attractive road with bike and walking paths alongside, the Fairfax County Parkway was expected to facilitate a great deal of low-density development that would devour open space in the vicinity of the road. The location of existing parks in the parkway corridor was dutifully recorded in the plan. It was noted that the parkway would come close to many parks, but its judgment was that the parkway would not adversely impact them. The plan did not propose additional parkland. The amount of acreage in parkland and its adequacy for serving the huge amount of growth the parkway would facilitate were not analyzed, but were left to the county to address. Ignoring the issue of open space and land conservation, parkway plan maps compared agricultural and undeveloped lands identifiable in the early 1980s with the post-parkway world of the 1990s. Virtually all agricultural and undeveloped land would be developed, most of it going to low-density residential uses.¹⁹

One important factor the plan did not account for was the effects of suburban development on agricultural land prices. By 1997, the American Farmland Trust had ranked the northern Piedmont region of Virginia, including Fairfax County, as the second most threatened farming region in the United States. Hence, “once the price of land hit \$3000 an acre, it simply made more sense to many farmers to subdivide rather than sow.”

The Fairfax County Parkway was seen primarily as a means to satisfy the needs of growth and development interests. It was not designed to prevent traffic growth, or to manage it better; it was actually intended to facilitate development with its attendant increase in traffic, though not at the rate that actually occurred.²⁰

The amount of development projected along the parkway corridor quickly became a reality. Now open space is dear and agriculture all but extinct. Today, less than 14 percent of the county remains undeveloped, as the population has increased to almost one million people. The pedestrian and bike path that runs the length

Delaware's Prime Hook National Wildlife Refuge is located close to State Route 1, one of the highway routes designated for the Delaware Corridor Capacity Preservation Program.



ALEX TEHRANI

PURCHASE OF DEVELOPMENT RIGHTS (PDR)

Purchase of development rights programs pay landowners to protect their land from development by purchasing the rights to develop the property. When the landowner sells these rights a conservation easement is placed on the property and the organization or agency purchasing the development rights pays the landowner the difference between the value of restricted property and the value of the land at its "highest and best use," which is typically residential or commercial development. Purchase of agricultural easements programs are a specific type of PDR. In this case, the easement restricts the use of the land to agriculture and the cost of the easement is equal to the difference between the land's value for agriculture and the highest and best value for development.

of the parkway has become a major recreational resource for county residents, but open space demand far outpaces this and other available park and trail opportunities. Voters and political leaders in the county have recognized that action needs to be taken to preserve remaining open space in the county, and the most recent \$20 million park bond referendum passed with 71 percent approval. Another is planned for November 2002. In 2001, the county's Board of Supervisors created the Land Preservation Fund, to which citizens can voluntarily contribute money for land acquisition. Thus far, the willingness of taxpayers to contribute to this fund has far exceeded initial expectations. A request sent out with personal property tax bills in the spring of 2002 generated contributions from more than 3,200 individuals, when only a few hundred were expected to respond.

In many areas of the country, planners are beginning to move away from the old way of transportation planning. Some newer transportation and development projects are now being conceived with the intention of integrating transportation policy with responsible open space conservation as a way to address traffic, environmental, and quality-of-life issues.



Capacity Preservation—Traffic Solutions via Land Conservation

The fact that vehicle traffic on the Fairfax County Parkway exceeded expectations is not an unusual occurrence in the world of highway planning. Addressing capacity issues through adding lanes, or opening new roads, has long been a method for handling the issue of mounting traffic. Although traffic engineers have long realized that most traffic congestion is associated with the amount of access points and the number of intersections along a road—and how they are managed—cost issues and development pressure have made it easier to add more lanes than to design smarter intersections and interchanges and access management programs.

One interesting approach to handling traffic and preserving capacity has been improving the design of roads. A road with many access points and intersections is generally going to have worse traffic than a road with fewer access points and fewer intersections. The more intersections and access points along a road, the more points of conflict between road users and the more accidents. As accidents mount, so do pressures for road expansion—often seen as the cure for accident-prone roads, although rarely proven in practice. Driveways and minor roads connecting to a major road cause slowdowns. The

slower the traffic, the more pressure to expand the road; and the more the roads expand, the greater the chance for sprawl.

Case Study **DELAWARE: MANAGING CORRIDOR** **CAPACITY TO GUIDE GROWTH**

In Delaware, State Transportation Planners are using land conservation as a tactic to help with corridor capacity. The State of Delaware's Department of Transportation (DelDOT) has developed a Corridor Capacity Preservation Program (CCPP) to meet the mandates of two broad initiatives: Livable Delaware and the Strategies for State Policies and Spending (SSPS). CCPP's broad goals are to "focus development toward existing locations, reduce the need for expansion of the transportation system, and otherwise advance the quality of life of Delawareans." Four routes have been nominated for capacity preservation, and planning processes have been under way in one corridor since 1992, and since 1997 in the remaining corridors. The nominated corridors include significant segments of SR-1, U.S. 13, U.S. 113, and SR-48.

The program is responding to immediate pressures to increase the number of traffic signals and expand access to key roads, especially in areas where development is not desired. Traffic signals and expanded access connections,

which may provide short-term solutions, will eventually slow traffic and diminish the capacity of the corridor.

In an effort to demonstrate the role of strategic land conservation, DelDOT is using Purchase of Development Rights (PDRs) to direct development, limit access, and preserve capacity.²¹

After dividing the state into five categories of landuse, DelDOT systematically analyzes how road projects contribute to local and state infrastructure investment goals. Reinvestment in existing developed areas is encouraged, as is investment in designated growth areas. Investment, including expanded transportation infrastructure, is discouraged outside designated growth areas. Developed communities and primary and secondary developing areas are clearly defined, and the types of corridor access desired for each type is carefully delineated. Guidelines are carefully developed for the types of access restrictions that would be desired or allowed by permit in each type of land use category. Alternative driveway and access road designs guide property owners and developers. Land conservation strategies are integrated into transportation infrastructure investments to preserve capacity.

Regulations govern both residential and commercial-industrial landuses. DelDOT

"In Vermont, even our Interstate routes are considered by many to be scenic corridors, and our Vermont Housing and Conservation Board has initiated a number of scenic easement acquisitions within the corridors and at undeveloped interchanges. Our Transportation Enhancement Advisory Committee has strongly supported these efforts and funded a number of these acquisitions."

—Curtis B. Johnson
VTrans Enhancement Coordinator



AARON BRONDYKE

Vermont's famed vistas are benefiting from federally funded scenic easements, which prevent development.

"We are fortunate in the Twin Cities area to have a vast network of parks, lakes, and natural areas, and a legacy of valuing and protecting open spaces.

Rather than leave environmental preservation to chance, we've made deliberate choices about open space investments, which contribute enormously to the region's livability, quality of life, and ability to remain competitive.

The region's natural amenities are at the heart of growth planning in the Twin Cities for the next quarter century and help provide a framework on which we will base decisions about investment in other regional infrastructure."

—Ted Mondale, Metropolitan Council Chair

works with Town Working Groups and county officials on specific plans that aim to benefit both land conservation and mobility interests. They actively discourage the subdivision of properties in areas where growth is deemed undesirable, and offer funding for PDRs as a cost-effective way of managing traffic and avoiding costly road expansions.

Case Study **VERMONT: USING TRANSPORTATION ENHANCEMENTS FUNDING TO CONSERVE LAND**

The Vermont Agency of Transportation and the Vermont Housing Conservation Board (VHCB) have been working together to obtain scenic easements and a conservation corridor along I-89 and I-91. VHCB is an independent, state-supported funding agency that provides grants, loans, and technical assistance to nonprofit organizations, municipalities, and state agencies. Its mission is to develop affordable housing and conserve important agricultural land, recreational land, natural areas, and historic properties. VHCB initiated the easement initiative with the state transportation agency effort to create scenic corridors and prevent undesirable development along well-traveled roads in the state. The Vermont Transportation Agency wanted a road that would be both scenic and

efficient in terms of mobility. To date, three scenic easement projects have been completed, each funded by the Transportation Enhancements Program of ISTEA and TEA-21.

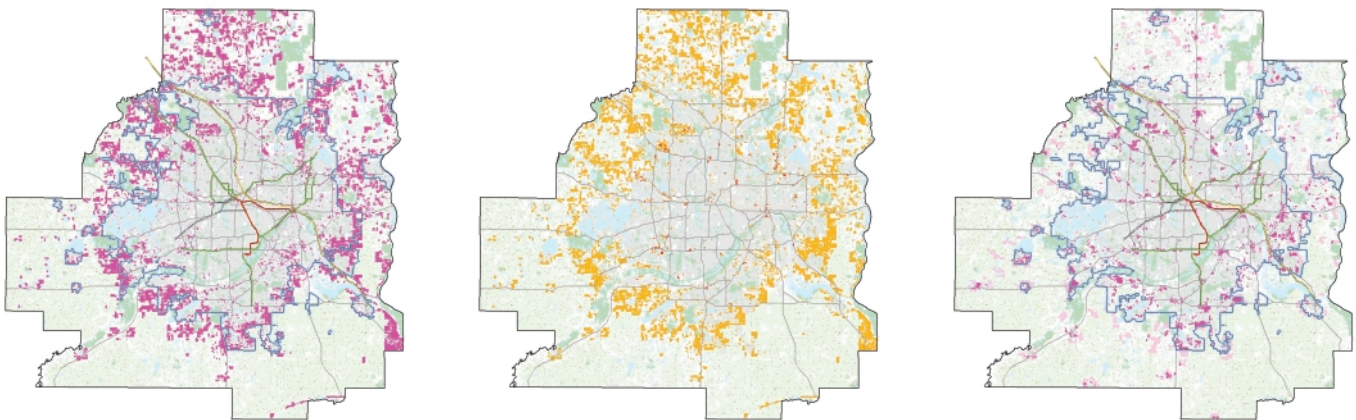
This program exemplifies the blending of goals and concerns between two rather disparate agencies: a transportation agency concerned with preserving corridor capacity as well as enhancing the appearance of highways, and a housing and preservation agency concerned with preserving the state's natural beauty and affordability of housing.²²

• • •

Linking Transportation and Landuse Planning

In addition to state-initiated efforts, many local communities are using the flexibility of transportation planning funds to study and plan for road and growth impacts. Local efforts include a range of activities from coordinating landuse and transportation planning to actively preserving green space and scenic vistas. These different approaches to linking transportation and landuse planning demonstrate the need and ability of local governments to meet their increasingly complex and connected growth management challenges. The Twin Cities in Minnesota offer one such example of comprehensive planning for the future.

TWIN CITIES BLUEPRINT 2030 GROWTH SCENARIOS



Current Plans Scenario

Regional Workshop Scenario A

Regional Workshop Scenario B

Pink and yellow areas on each of the above maps represent the extent of new development expected to encircle already developed land in the Minneapolis-St. Paul metropolitan region under different planning scenarios.

Case Study

MINNEAPOLIS-ST. PAUL, MINNESOTA: GENERATING A PLAN FOR THE FUTURE

The Minneapolis-St. Paul region, contrary to the experience of other big cities in the Midwest, has experienced growth in recent years—along with the pattern of highway expansion and sprawl typical of fast-growing regions. Owing to strong regional growth, the Metropolitan Council—a seven-county regional planning agency working on transportation, utilities, and regional parks—has initiated a regionwide growth management effort.

In response to widely felt concerns about the extent of loss of agricultural land and open spaces, as well as the growth of traffic, the Metropolitan Council has undertaken a study of three different growth scenarios depicting how the region might accommodate an anticipated growth of 280,000 households, 580,000 additional residents, and 360,000 more jobs. The process was undertaken with extensive input from public workshops, local governments, business associations, and regional transportation policymakers. The scenarios provide important information for the development of the Metropolitan Council's regional plan, "Blueprint 2030." Seven objectives form the core of Blueprint 2030:

- ◆ Increase life cycle and affordable housing
- ◆ Preserve and protect natural resources
- ◆ Support rural communities and preserve agricultural lands
- ◆ Provide greater transportation choices linked to development patterns and jobs
- ◆ Reinvest in fully developed, older communities
- ◆ Invest in new, developing communities
- ◆ Focus growth and redevelopment in urban and rural centers along corridors

The three scenarios developed as part of the Smart Growth exercise included a scenario projecting regional growth based on current development restrictions in local comprehensive plans; the other two scenarios drew from public input, integrating to different degrees compact auto-oriented development, walkable development, and a proposed transit network.

A comparison of the transportation, environmental, and landuse impacts of the three scenarios revealed major differences among them:

- ◆ Current plans would consume approximately 183,000 acres, mostly agricultural, while the two public input scenarios consumed 97,000 and 87,000 acres, respectively.
- ◆ Focusing more new development near transit and in walkable communities made a vast difference in the amount of driving that would occur in the region saving between 204,000 and 265,000 car trips each year and yielding between 2.2 million and 3 million fewer miles driven per day.

The Mississippi National River and Recreation Area provides open space along the river for the Minneapolis-St. Paul metropolitan region's 2.5 million people.



THE GREATER MINNEAPOLIS CONVENTION & VISITORS ASSOCIATION

- ◆ Current plans led to, at most, 25 percent of new development as walkable, compared with 57 and 70 percent, respectively, for the other two plans.
- ◆ Public input showed desired growth close to regional parks and trails.
- ◆ The bottom line for public expenditure also benefited from Smart Growth planning, saving over \$2.5 billion in infrastructure costs.

Blueprint 2030 is a valuable visioning exercise that demonstrates the importance of examining landuse in conjunction with transportation plans. The three different scenarios all started with the same assumption regarding networks of future highways and transit corridors, but the coordination of landuse with those networks differed considerably.²³

It is still too early to assess the extent to which metropolitan planning in the Twin Cities area will be able to fully implement the lessons of the three scenarios. In the meantime, the Metropolitan Council has updated and adopted transportation policies that emphasize Smart Growth objectives, and a coordinated plan, known as the Mississippi Riverfront Initiative, is being prepared for development and open space protection along the Mississippi River between St. Paul and Hastings. The council has also conducted a natural resources inventory and assessment of the region in cooperation with the state's Department of Natural Resources. The data from the inventory and assessment have allowed the council to prioritize natural resources for conservation and protection. This information will prove crucial in determining how to protect the environment as the region grows.

Alongside these planning efforts, green space planning and acquisition has proceeded apace, reclaiming landscapes along the Mississippi River. A program of annual greenway acquisitions, funded by a partnership between the National Park Service and local agencies, has enhanced the Mississippi National River and Recreation Area (MNRRA), a recreational and natural corridor encompassing a wealth of significant historic, scenic, cultural, natural, and scientific resources in the Twin Cities metropolitan area. The boundaries of MNRRA

include land along a 72-mile stretch of the river, offering beauty and recreational enjoyment for the area's 2.5 million people and complementing the Twin Cities' existing tapestry of local parklands. This network of open space resources has been further enriched by conservation land acquisitions in the area by the U.S. Fish and Wildlife Service and by state and local governments.



Helping Communities Plan

Regional planning efforts in Charlottesville, Virginia, and Treasure Valley/Boise, Idaho, have been bolstered by TEA-21 grants from an innovative program: the Transportation and Community and System Preservation Pilot Program (TCSP). While funding was authorized at a relatively low rate in TEA-21, \$120 million over six years, actual spending has been higher as Congress has funded various planning, public outreach, and special programs—many relating to green space preservation, transit-oriented development, and regional and corridor growth management planning.

Case Study

CHARLOTTESVILLE, VIRGINIA: BUILDING A LANDUSE PLAN VIA A TCSP GRANT

In the Charlottesville, Virginia, area, the combination of rapid growth, sprawling development, and growing traffic congestion led the Thomas Jefferson Planning District Commission to seek a federal TCSP grant of \$518,000 in 1999 to undertake the Jefferson Area Eastern Planning Initiative (EPI). This initiative aimed to:

- ◆ Develop a set of modeling tools capable of concurrently evaluating transportation and landuse options; and
- ◆ Develop a 50-year transportation and landuse vision for the five-county region.

To meet the first objective, the commission oversaw the development of an innovative geographic information systems (GIS) model that estimates regional land development potential. This model, "CorPlan," was used to produce different scenarios based on varying landuse alternatives and community development patterns. Input from this exercise was



Providing recreational opportunities and open space is among the goals of Idaho's Treasure Valley Partnership. A bike path provides transportation alternatives to residents of Boise.

then fed to the region's transportation model, "TRANPLAN," to develop travel demand forecasts associated with each landuse alternative.

The second objective was addressed through an eighteen-month effort focusing public input on three questions:

- ◆ *How will we live?* What types of communities will we have by 2050?
- ◆ *Where will we live?* What areas are suitable for development. Which areas are not?
- ◆ *How will we get there?* What steps are needed to move the region from where it is now to the desired communities and urban growth areas?

The process was guided by an advisory committee of elected officials, business leaders, residents, and representatives from environmental and community groups. After many meetings and public workshops comparing growth scenarios, "key success factors" were developed to reflect the preference for a clustered development pattern. Among these factors were growth in designed development areas, maintaining small towns and villages, and the preservation of rural areas.

Compact and clustered development scenarios were tested by the planning group's transportation model and found to generate significantly less traffic than the sprawl and highway bypass alternative; visual representa-

tions of alternative development patterns and transportation infrastructure were especially helpful in helping decision makers understand the various scenarios.²⁴

Case Study **ADA AND CANYON COUNTIES, IDAHO:** **CREATING A REGIONAL PARTNERSHIP**

The Treasure Valley region in Idaho has experienced rapid growth in recent years, with no slowing; 200,000 new residents are expected in the next 10–15 years. In 1997, alarmed that the region would lose its western character, Boise Mayor Brent Coles presented his region with new ideas about integrating transportation with landuse planning and design. Out of this meeting grew the Treasure Valley Partnership (TVP) consisting of mayors and commissioners from Ada and Canyon Counties, who agreed to cooperatively work on four areas:

1. Creating coherent regional growth and development patterns
2. Linking landuse and transportation
3. Protecting and enhancing recreational opportunities and open space
4. Reinforcing community identities and sense of place

In 1999, TVP was awarded a TCSP grant of \$510,000 that was matched by \$100,000 of local funding. The project, entitled "Treasure Valley

Futures: Alternative Choices for the American West,” focused on how transportation and land-use interact. The partnership has influenced planning processes and unified both counties under one Metropolitan Planning Organization (MPO). It has proposed a priority action list for the region, which includes targeting development along a railroad line between Boise and Nampa and establishing a regional open space trail program.²⁵



Transportation Planning and Habitat Preservation

Growing communities put added stress on plant and wildlife habitats, which depend on open space in order to be viable. Integrated planning is essential to making sure that human habitat and travel patterns do not destroy lands that support threatened and endangered species. The need to protect plant and wildlife species was a key component of an innovative planning effort in Riverside County, California.

Case Study

RIVERSIDE COUNTY, CALIFORNIA: ANTICIPATING GROWTH AND PRESERVING BIODIVERSITY

Riverside County, east of Los Angeles, is a large area forming part of the cities and suburbs of

Southern California. Its urbanized sectors are experiencing extremely rapid population and traffic growth of the strip and sprawl variety. Much of its traffic growth is due to the increases in motoring along the corridors that connect the region with Los Angeles, San Diego, Las Vegas, and Arizona.

Riverside County’s population in 2000 was 1.5 million, of which approximately 1.2 million resided in the urbanized/suburbanized western portions. The Southern California Association of Governments (SCAG) predicts Riverside County’s population will double by 2020. SCAG forecasts also show Riverside County’s population growing to 3.5 million by 2030 and to 4.5 million by 2040.

Traffic forecasts are similarly ominous. Traffic volumes on Riverside County’s major highways will increase in the range of 60 percent to 240 percent for key segments. Congestion will cause automobile travel times to increase by 40 percent in the same time span.

Such a huge volume of growth, if left undirected, would spell devastation for endangered species habitat and result in a dearth of open space. These pressures have led Riverside County to undertake the Riverside County Integrated Project (RCIP), which addresses the issues of population growth, traffic increases, and housing and jobs growth. Still in its early stages,



Open space preservation is a key element of planning efforts in Riverside County, California, which acquired this land to protect it from development.

TOM LAMB

RCIP intends to address general planning for housing and land use, habitat and open space protection, and transportation.

The Multiple Species Habitat Conservation Plan (MSHCP), an element of RCIP, is designed to protect more than 150 species and conserve over 500,000 acres in Western Riverside County, where the most severe impacts of growth are expected. The MSHCP Planning Area encompasses approximately 1.26 million acres (approximately 1,966 square miles). MSHCP addresses the mandates of the 1992 California Natural Communities Conservation Planning Act, which was passed to facilitate a collaborative conservation planning effort among the public, businesses, and government, addressing future statewide conservation needs.

The plan—one of the largest of its kind—covers multiple species and habitats within multiple jurisdictions. It encompasses a diverse landscape from urban areas to undeveloped foothills to desert and forests. The plan provides for a coordinated reserve system and implementation program that will facilitate the preservation of biological diversity as well as maintain the region's quality of life. The MSHCP will also address several federal and state mandates governing endangered species and habitat and wildlife conservation. Responsibility for implementing the MSHCP is shared among state, federal, and local governments, as well as private and public entities engaged in construction activities that potentially impact the species covered under the MSHCP. It is hoped that such an approach will be more effective, and ultimately less costly, than the previously engaged piecemeal approach of habitat conservation.

The part of the Riverside County Integrated Project that addresses transportation is the Community and Environmental Transportation Acceptability Process (CETAP). It identifies needs and funding priorities for highways and transit systems. CETAP plans to identify and preserve transportation right-of-ways that will not only serve future transportation and development needs, but also minimize impacts on sensitive habitats and preserve valuable open space.

The state of New Hampshire is preparing to widen I-93 from Manchester to the Massachusetts border. The U.S. Environmental Protection Agency (EPA) in the New England region has proposed mitigation measures to address environmental damages resulting not only from the road construction, but also from the development that will occur due to the road improvements. Citing the likelihood that future development of 50,000 to 100,000 acres in the I-93 corridor would harm aquatic resources and fragment valuable habitat, the EPA has recommended that the protection of some 3,000 acres be included in the Draft Environmental Impact Statement. The emphasis is on acquiring ecologically significant lands. Although it is still early in the process, this bold proposal is a model for the future spaces.

An important component of RCIP is extensive public outreach. Initial community input was gathered through public meetings and a survey asking Riverside County residents what they think their county should look like in 20 years. Items of concern for the public included retention of the rural environment, ability to attract high-paying jobs, and focusing growth around current city centers. Initial information gleaned from community involvement was gathered and compiled in a “Vision Statement” to guide development of each element of the RCIP. An RCIP web site (www.rcip.org) has been established to serve as an information portal for the public to learn about the status of each plan, upcoming meetings, and read/download documents produced during the planning process.²⁶

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From Planning to Action— Building Partnerships

To implement the kind of ambitious integrated plan undertaken by Riverside County requires public support, good coordination among public and private entities, and access to funding. The Pacific Northwest provides a success story of a public-private partnership formed to realize a vision of land conservation along a major transportation corridor.

Case Study
MOUNTAINS TO SOUND GREENWAY,
WASHINGTON: USING OPEN SPACE
ACQUISITION TO PREVENT SPRAWL
ALONG A HIGHWAY CORRIDOR

The Mountains to Sound Greenway, stretching some 100 miles eastward from Seattle’s downtown waterfront, through the city’s easterly suburbs, and across the slopes of the Cascade Mountains, has relied upon federal transportation money to leverage other public funding and private philanthropy.

Growth in the Seattle metropolitan region accelerated in the 1980s and 1990s as population grew from just under 2 million in 1970 to 2,240,000 in 1980 and then to 2,750,000 in 1990 and 3,275,000 in the year 2000. Not unlike most other parts of the United States, the rate of conversion of undeveloped land to developed far outpaced concurrent population growth by a factor of roughly 3 to 1.²⁷

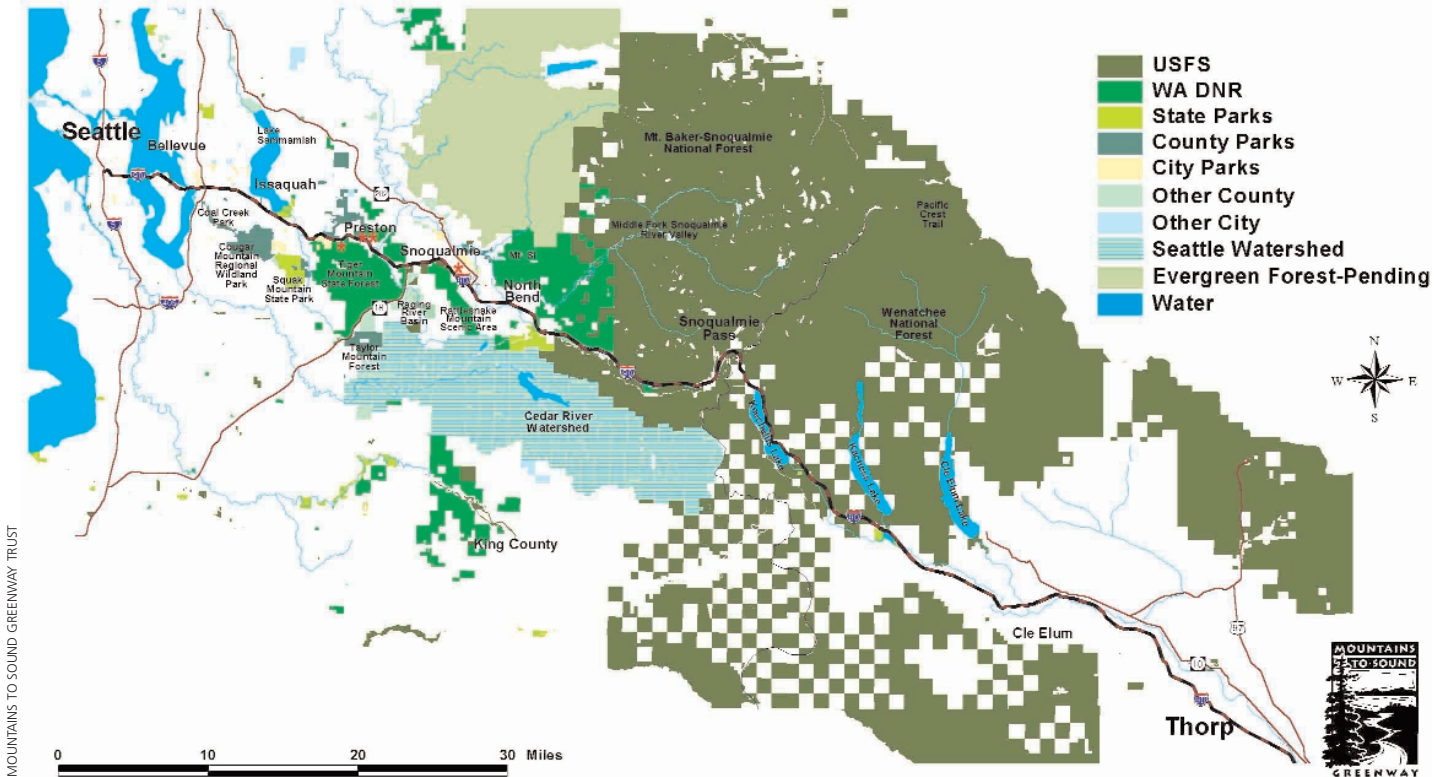
Seattle residents have always been accustomed to quick, accessible open space and wilderness experiences along the historic Snoqualmie Pass Highway, which became I-90. Accessible

wilderness was seen as a major element in local quality of life and an amenity that enabled local businesses to recruit good people. Alarmed by the unsightly sprawl that was devouring agricultural and forest land close to Seattle—and fearing it could spread deeper into the I-90 corridor’s landscape—civic forces in the early 1990s developed a vision for protecting land and vistas along the threatened corridor.

The Mountains to Sound Greenway Trust (MTSG) was formed to be the catalyst and umbrella for the protection and weaving together of some 82,000 acres of otherwise threatened or unconnected land into a greenway and trail network. The composition of the 70-plus member board of the MTSG reflects the broad-based coalition that has guided this project through a successful decade. Members include civic leaders, officials of the Washington State Department of Transportation, representatives of environmental organizations, federal, state, and local government officials, tribal representatives, academic and planning experts, representatives of recreational interests, and numerous corporate, forestry, and development representatives. This diverse

The United States Forest Service, Washington state, county and city governments, and private contributors pooled their resources to establish the Mountains to Sound Greenway.

Mountains to Sound Greenway



and highly engaged board has been one of the main keys to the success of MTSG.

Staff members from forestry companies and land management agencies are active on a Technical Advisory Committee that assures that the Greenway initiatives are integrated into town and agency plans along the corridor. Fundraising is helped by the presence of philanthropic individuals on the board. Government officials on the board can help advise the Greenway about the possibilities and obstacles it might face in regards to certain acquisition or public funding efforts. Environmental, development, and forestry interests can work out differences in an atmosphere more congenial than a courtroom. Such is the route to a successful regional coalition—and major project completion.

Today's greenway is a scenic and recreational asset and a working forest and wildlife ecosystem area. Public agencies along the corridor have cooperated with MTSG in the last ten years to seek funds and purchase lands for open space uses, parks, working forests, and historic landscapes. It has created new trails and connected existing parcels and trails. When the project is complete, citizens will be able to travel by foot or bicycle from Seattle's downtown waterfront, through revitalized neighborhoods in Central Seattle, across Lake Washington on the bicycle-pedestrian lanes of the I-90 bridge, through the eastern suburbs, across large state parks and forestlands, across dozens of streams protected from the pollution and degradation associated with inappropriate development, to the nationally designated Pacific Crest Trail, and finally, to rest at the Greenway's eastern terminus, the town of Thorp.

The MTSG was made possible, especially in its early days, by federal transportation funding through ISTEA and TEA-21. In 1992 the Northwest Region office of the Washington State Department of Transportation received an ISTEA planning grant for \$250,000. Over the next four years, four planning volumes were published that were instrumental in the successful nomination of MTSG as a National Scenic Byway—the first segment of an interstate highway in the United States to attain such status. Other ISTEA and TEA-21 National Scenic Byways grants followed in subsequent years.

The Transportation Enhancements Program of ISTEA and TEA-21 have helped leverage funding for several historic and environmentally sensitive parcels, and several more in areas pressured by suburban development, as well as the design and construction of trail segments in Seattle and suburbs along the greenway. In the early days of greenway building, some parcels along the highway were seen as crucial to the success of the entire endeavor, acting as potential development dominoes. ISTEA and TEA-21 funds kept these parcels undeveloped, leveraging local, state, and other federal funding sources ranging from King County environmental programs to the federal Forest Legacy program.

Federal transportation planning and land acquisition funds enabled a vision that has created an awareness throughout the region of the value of enhancing I-90 with scenic and environmental protection. When talking about the greenway to public audiences, leaders point to the contrast between the forested beauty and sequence of undeveloped highway interchanges of I-90, and the preservation of small towns along the corridor with the development, billboards, and suburban sprawl that has taken over almost all of Interstate 5, Washington's main north-south corridor.

The Mountains to Sound Greenway is a prime example of civic involvement, public and private cooperation, and environmental and scenic protection efforts working in conjunction with federal programs to create transportation corridors surrounded by open space rather than sprawl.²⁸

MOUNTAINS TO SOUND GREENWAY: THE GREENWAY MISSION

Protect, enhance, and make accessible scenic beauty, recreational opportunities, wildlife habitat, historic communities, and healthy economies in a multipurpose greenway along Interstate 90 from the shores of Puget Sound, over the Cascade Mountains, to the Kittitas Valley foothills.

"Federal funding played a critical role in making the Mountains to Sound Greenway a reality. This beautiful scenic corridor is the result of the strategic use of federal money in combination with private contributions and state and local government efforts. It's a model for communities seeking to utilize a variety of funding sources to preserve the scenic, recreational, and natural resources values of land threatened by development."

—Ron Sims,
King County Executive

Recommendations: Transportation Policy for a New Century

THE NEED TO ADDRESS LAND CONSERVATION IN NEW TRANSPORTATION LEGISLATION

As reauthorization of TEA-21 approaches, increased understanding of the relationship between transportation, landuse, and land conservation creates new opportunities to shape and improve aspects of the legislation. It is clear that when federal transportation funding is expanded to offset immediate and long-term open space losses stemming from transportation projects, states and communities are ready to take advantage of available conservation and growth management tools, and to leverage this federal support with non-federal dollars.

Across America people have supported open space protection. They recognize its disappearance from their communities as a consequence of the sprawl that follows the building of a new road or the expansion of an existing one. They see how loss of open space diminishes their quality of life. They have sought solutions in a variety of ways, using federal, state, local, and private sources of funding. In many cases, they seek ways to plan ahead so that land can be protected before the bulldozers begin to roll. Funds to implement these plans, however, are not always readily available, in spite of numerous successful open space ballot measures. Decision makers should maintain or expand currently existing transportation programs that support the efforts of communities to deal with new roads and sprawl. Beyond that, however, the concept of environmental mitigation

should be expanded to include the impacts brought about by development facilitated by new road construction or expansion.

In general, new legislation should:

- ◆ Address the unintended secondary consequences of highway expansion, particularly the impacts of sprawl development on the diminishment of open space in metropolitan regions.
- ◆ Strengthen the links between transportation and landuse planning and improve the available planning tools and resources.
- ◆ Address the loss of open space and habitat in growing metropolitan areas and in outlying landscapes affected by new transportation infrastructure, and treat these issues as seriously as the loss of wetlands.
- ◆ Ensure that transportation planning factors, mandated under federal legislation for state and MPO level planning, consider and reward projects that protect open space and habitat.

Federal transportation funding and programs simply have not kept pace with the need to preserve open space and engage in the community planning needed to accommodate expansion. While the current level of federal funding for open space acquisitions is modest, it is accomplishing exceptional results on the ground; accordingly, relatively small increases could be exponentially beneficial. Federal transportation funding has a significant effect on state and local spending and decision making. Federal expenditures on surface transportation,

as large as they are—approaching \$40 billion per year—compose only a small portion of total transportation funding. Each federal dollar spent on transportation can leverage several dollars in state and local spending.

BOLSTERING LAND CONSERVATION IN TRANSPORTATION REAUTHORIZATION

Mitigation:

- ◆ Environmental mitigation should include mitigating for impacts of highway-induced development. Open space conservation is a key component of such mitigation.
- ◆ Open Space and Habitat Banking, similar to Wetlands Banking, should be considered a part of federal transportation policy.

Fear of sprawl and attendant environmental consequences of sprawl has led communities to seek out ways to prevent or mitigate damaging effects. This has been attempted through improved planning, as in the cases of the Twin Cities in Minnesota; Charlottesville, Virginia; and Treasure Valley, Idaho; and through mobilizing a variety of federal, state, and local resources to save land from development as in the case of Washington state's Mountains to Sound Greenway. Not all communities, however, have the capacity to act before the damage is done, or to adequately forecast these impacts. Environmental Impact Statements should recognize the green space consequences not only of the new or expanded highway, but also of the development and population growth that comes in its wake. Measures to counteract the loss of open space should be factored into each highway project—not merely left up to some uncertain (and more expensive) remedy in the indefinite future through state or local funding, Transportation Enhancements, or other potential sources.

Transportation Enhancements:

- ◆ The Transportation Enhancements Program should be retained at the current level of 10 percent of program funds for Surface Transportation Programs.
- ◆ Access to the program should be improved, so that obtaining enhancements funding no longer is so slow and onerous (as it currently

is in some states) as to discourage applicants.

- ◆ Regulations for enhancement projects such as greenways, open space conservation, and other environmental improvements that clearly have no adverse impacts should be streamlined.

The Transportation Enhancements Program has been very successful in addressing a broad spectrum of priorities for citizens and policy-makers. The program provides funds for acquiring easements or land—although the mechanisms under which this can be done need to be made more clear to transportation agencies. This funding can also leverage other funds for open space preservation. This important tool should be maintained, made more easily available to qualified applicants, and expanded as a means for conserving land before development pressures put land acquisition out of reach financially. Finally, actual enhancements spending has lagged behind the amount of funding that has actually been authorized—especially in comparison to many other TEA-21 programs—placing undue pressures on this already-oversubscribed funding source. By remedying this problem, enhancement projects could proceed more efficiently and effectively.²⁹

TRANSPORTATION AND COMMUNITY AND SYSTEM PRESERVATION PILOT PROGRAM (TCSP)

- ◆ Funding authorizations for this program should be expanded to at least \$300 million per year.
- ◆ Land acquisition and purchase of development rights should be eligible for funding and promoted as capacity preservation and system preservation strategies consonant with TCSP goals.

As a new program under TEA-21, TCSP has been remarkably successful and popular. Although the level of authorized funding was relatively low (\$20 million for fiscal year 1999 and \$25 million for each of fiscal years 2000 through 2003), this program already has grown exponentially through the annual congressional appropriations process in response to overwhelming demand. The program is a proven smart growth tool, which can promote compact development,

HOW LAND TRUSTS CAN GET INVOLVED

Here are a few suggestions for land conservationists looking to help make transportation planning serve habitat and open space protection:

- ◆ Educate yourselves about ISTEA and TEA-21 and TEA-3. Good places to start are the Surface Transportation Policy Project's (STPP) *TEA-21 User's Handbook* and related TEA-3 information at www.transact.org. Also, the 1997 STPP publication *Green Streets* gives an overview of many of the environmental issues related to transportation. An excellent article about ISTEA and TEA-21 is *Unpaving the Way*, by Steve Lerner in *Land&People*, Fall, 1997 and is available on TPL's website at www.tpl.org.
- ◆ Attempt to gain representation for your organization at the state- and MPO-level policy boards. Representation by a broad range of citizen interests, including environmental organizations, has been mandated under ISTEA and TEA-21. If your organization or coalition cannot gain direct representation, then work with represented organizations that share your goals. Study the TEA-21 and TEA-3 guidelines for public participation and make sure your MPO or state transportation departments follow them. It is especially important to understand how projects are selected and prioritized for inclusion in the Transportation Improvement Program (TIP) at your MPO. Even if you are unable to gain a seat at the table you can advance your projects with written requests, testimony at public input portions of MPO meetings, and help from sympathetic elected officials on the MPO board.
- ◆ Form or join smart growth coalitions in your area. Such coalitions might include alternative transportation advocates (bicycle, pedestrian, and transit advocacy organizations), affordable housing groups, developers, transit interests, good government groups, clean water interests, and a range of land conservation, habitat protection, and recreational and environmental interests. Make sure strategic land conservation is a top priority.

reduce transportation demands, and support transit services. TCSP has also been an effective program for promoting greater public involvement in planning. The authorized level should rise to meet real need, and to meet the levels Congress in practice is already providing.³⁰

METROPOLITAN AND STATEWIDE PLANNING REQUIREMENTS

- ◆ Planning requirements for Metropolitan Planning Organizations (MPOs) and states should consider land conservation, open space preservation, and habitat conservation planning.

ISTEA required MPOs to consider 15 criteria for transportation planning and funding. These included, "The likely effects of transportation decisions on short-range and long-range land use and development," and "Overall social, economic, energy, and environmental effects of transportation decisions." TEA-21 reduced the planning factors to 7 and eliminated specific wording about land use and development. State Departments of Transportation and Metropolitan Planning Organizations should consider the effects of planning on land conservation and begin to include strategic land conservation in planning and funding processes. State and MPO-level planning should be encouraged to reward projects that address open space and habitat issues. In addition, these projects should create synergies between such efforts and related state, local, and federal conservation programs such as wetlands banking, farm and forest preservation programs, and state, regional, and local land conservation programs.³¹

CAPACITY PRESERVATION

- ◆ Policies should be established for promoting capacity preservation through a variety of means, including purchase of development rights and land acquisition for conservation purposes.

Increased traffic and congestion due to development often overwhelm roads that were projected to handle fewer vehicles. The Delaware and Vermont examples demonstrate that open space preservation can have very practical and beneficial effects on maintaining corridor capacity.

The Road Ahead

For generations, the evolution of our nation's road and highway systems has been inextricably interwoven with the growth and land development trends that have reshaped communities and landscapes, from small town to urban megalopolis, across America. An increasing number of those localities are taking advantage of a diverse spectrum of local, state, and federal programs—including important, albeit limited, new sources of funding and other assistance through recent federal transportation bills—to preserve some of their most essential open spaces against the tide of sprawl. Even with these vital tools, however, many more communities are losing the best of their remaining parklands, scenic vistas, and wildlife and plant habitat to the residential, commercial, and other landuses that invariably accompany each new road, off-ramp, and freeway lane.

Fortunately, as Congress prepares to revisit highway-related issues through the periodic transportation bill reauthorization process, there is a rising awareness among policymakers regarding the open space consequences of road

construction. That upcoming legislation affords a critical opportunity, at this pivotal moment for so many conservation landscapes, to address these issues head-on. Currently, communities are typically left with the unfortunate options of either allowing sprawl to redefine the landscape or struggling to patch together after-the-fact mitigation strategies. But by considering land conservation needs and building open space mitigation into the highway planning process, recognizing the role conservation plays in preserving the capacity of highways, and tailoring existing highway programs to address these challenges more fully, our nation's transportation policies could strike a much-needed new balance.

Ultimately, this more comprehensive approach to highway and open space policy depends on just the sort of vision and funding partnerships that already are beginning to take shape on a case-by-case basis. If these models can pave the way to more consistent attention to land conservation, then we may indeed be able to take the high road to a greener future.

Appendix

Endnotes

1. Regarding highways and land prices, see Marlon G. Boarnet and Andrew F. Haughwout, *Do Highways Matter? Evidence and Policy Implications of Highways' Influence on Metropolitan Development* (Washington, D.C.: Brookings Institution, Center on Urban and Metropolitan Policy, 2000); and Marlon G. Boarnet and Saksith Chalermpong, "New Highways, House Prices, and Urban Development: A Case Study of Toll Roads in Orange County, CA," *Housing Policy Debate* 12, no. 3 (Fannie Mae Foundation, 2001): pp. 575–576. Several issue areas animating policy and research discussions about transportation, landuse, and environmental impacts are, unfortunately, beyond the scope of this report. For examples of the "chicken-and-egg" debate about the relationships between highways, traffic generation, and landuse/sprawl, see Robert Cervero, "Road Expansion, Urban Growth, and Induced Travel: A Path Analysis" (Berkeley: Department of City and Regional Planning, Institute of Urban and Regional Development, University of California, www.uctc.met/papers/520pdf, July 2001); Lawrence D. Frank, "The Impacts of Mixed Use and Density on the Utilization of Three Modes of Travel," Paper No. 940425 (Washington, D.C.: Transportation Research Board, 1994); Todd Littman, "Generated Traffic and Induced Travel: Implications for Transport Planning" (Victoria, B.C.: Victoria Transport Policy Institute, www.vtpi, November 2001); Surface Transportation Policy Project, "The Nation's Road Capacity: How Fast Is It Growing?" *Decoding Transportation Policy & Practice* #2 (30 April 2002), www.transact.org; Brad Heavner, *Paving the Way: How Highway Construction Has Contributed to Sprawl in Maryland* (Baltimore: MaryPIRG, www.marypirg.org/sprawl/Paving.pdf, November 2000); P. W. G. Newman, J. R. Kenworthy, and T. J. Lyons, "Does Free-flowing Traffic Save Energy and Lower Emissions in Cities?" *Search* 19, no. 5/6 (September–November 1988): pp. 267–272; and Peter Newman and Jeffrey Kenworthy, *Cities and Automobile Dependency: An International Sourcebook* (Brookfield, Vt.: Gower, 1991). For discussions of sustainability and transportation, see Peter Newman and Jeffrey Kenworthy, *Sustainability and Cities* (Washington, D.C.: Island Press, 1999); F. Kaid Benfield and Michael Replogle, "The Roads More Traveled: Sustainable Transportation in America," *Environmental Law Review* 32 (2002): p. 10633, www.eli.org; F. Kaid Benfield, Matthew D. Raimi, and Donald D. T. Chen, *Once There Were Greenfields: How Urban Sprawl Is Undermining America's Environment, Economy and Social Fabric* (Washington, D.C.: Natural Resources Defense Council, 1999); Vukan R. Vuchic, *Transportation for Livable Cities* (Rutgers, N.J.: Center for Urban Policy Research, 1999); Organisation for Economic and Cooperative Development, *Proceedings: Vancouver Conference on Sustainable Transportation* (Washington, D.C.: Organisation for Economic and Cooperative Development, Publications and Information Center, www.oecd.org., 1996) and *The Economic and Social Implications of Sustainable Transportation: Proceedings from the Ottawa Workshop*, October 1998 (Paris: Organisation for Economic and Cooperative Development, www.oecd.org., 1999); and Preston L. Schiller, ed., "Sustainable Transportation Issue," *Sustainable Cities* (Vancouver, B.C.: International Centre for Sustainable Cities, www.icsc.ca, fall 2000). For the issue of transportation investment, pricing, and fiscal implications, see Todd Littman, "Online TDM (Transportation Demand Management) Encyclopedia" (Victoria, B.C.: Victoria Transport Institute, www.vtpi.org, 2002); Per Kågeson, *Getting the Prices Right: A European Scheme for Making Transport Pay Its True Costs* (Stockholm: European Federation for Transport and Environment, 1993); Brookings Institution, *A Region Divided: The State of Growth in Greater Washington* (Washington, D.C.: Brookings Institution, Center on Urban and Metropolitan Policy, 1999); James J. MacKenzie, Roger C. Dower, and Donald D. T. Chen, *The Going Rate: What It Really Costs to Drive* (Washington, D.C.: World Resources Institute, 1992); and Charles Komanoff, "Pollution Taxes for Roadway Transportation," *Pace Environmental Law Review* 12, no. 1 (fall 1994): 121–184.
2. National Academy of Sciences, *Surface Transportation Environmental Research: A Long-Term Strategy*, Paper 278 (Washington, D.C.: National Academy of Sciences, bob.nap.edu/books0309077028/html, 2002). For other transportation and agriculture issues, see Stefanie Böge, "The Well-Travelled Yogurt Pot: Lessons for New Freight Transport Policies and Regional Production," *World Transport Policy and Practice* 1, no. 1 (1995): pp. 7–11, www.ecoplan.org/wtpp/wt_index.htm.
3. Organisation for Economic and Cooperative Development, *Environmental Performance Reviews: United States* (Washington, D.C.: Organisation for Economic and Cooperative Development, Publications and Information Center, www.oecd.org, 1996), pp. 66–67; U.S. Department of Transportation, *Transportation Statistics Annual Report 1996* (Washington, D.C.: U.S. Department of Transportation, Bureau of Transportation Statistics, 1996), pp. 162–163; Preston L. Schiller, with Bianca DeLille, *Green Streets: The 1991 Intermodal Surface Transportation Efficiency Act and the Greening of Transportation Policy in the United States* (Washington, D.C. Surface Transportation Policy Project, www.transact.org, 1997), pp. 2, 5–6, 9; and Dana Beach, *Coastal Sprawl: The Effects of Urban Design on Aquatic Ecosystems in the United States* (Arlington, Va.: Pew Oceans Commission, 2002), passim.
4. Henry L. Diamond and Patrick F. Noonan, *Land Use in America* (Washington, D.C.: Island Press, 1996), p. 75; Beach, *Coastal Sprawl*, pp. 7–10; Chesapeake Bay Commission, *Keeping Our Commitment: Preserving Land in the Chesapeake Watershed* (Annapolis, Md.: Chesapeake Bay Foundation; Washington, D.C.: Trust for Public Land, 2001), passim; and Schiller, with DeLille, *Green Streets*, pp. 2–5.
5. *Intermodal Surface Transportation Efficiency Act*, Public Law 102-240, 102nd Congress, 18 December 1991. See also Rob Kennedy, with Sarah Clark Stuart, *Transportation Action Guide: Fair and Sustainable Mobility in the 1990s* (New York: Environmental Defense Fund; Madison, Wis.: Wisconsin's Environmental Decade, 1993); Schiller, with DeLille, *Green Streets*; and Surface Transportation Policy Project, *A Blueprint for ISTEA Reauthorization: Potholes and Politics*; and *Changing Directions: Federal Transportation Spending in the 1990s* (Washington, D.C.: Surface Transportation Policy Project, www.transact.org, 1997, 1998, and 2002, respectively).

6. *Transportation Equity Act for the 21st Century*, Sections 1108 and 1201. Public Law 105-178/205. *U.S. Statutes at Large* 112 (1998): 107.
7. *Ibid.*, Section 1221.
8. *Ibid.*, Section 1219.
9. Interestingly, a National Research Council report suggested using CMAQ funds for landuse actions designed to reduce future mobile sources emissions. See National Research Council, Committee for the Evaluation of the Congestion Mitigation and Air Quality Improvement Program, *The Congestion Mitigation and Air Quality Improvement Program: Assessing 10 Years of Experience* (Washington, D.C.: National Academy Press, www.nap.edu/html/SR264.pdf, 2002).
10. Linda E. Hollis and William Fulton, *Open Space Protection: Conversation Meets Growth Management* (Ventura, Calif.: Brookings Institution Center on Urban and Metropolitan Policy and Solimar Research Group, www.solimar.or/pdfs/hollisfultonopenspace.pdf, 2002), p. 41.
11. Don Chen and Nancy Jakowitsch, "Issue on Smart Growth," *Progress* 10, no. 4 (Surface Transportation Policy Project, www.transact.org, November 2000): pp. 4–5.
12. Susan Ives, "A New Language for Land: A Conversation with TPL President Will Rogers," *Land&People* 14, no. 1 (The Trust for Public Land, spring 2002), p. 42; and Hollis and Fulton, *Open Space Protection*, p. 22.
13. See City of Tallahassee and Greater Tallahassee Chamber of Commerce in "Resources" section
14. *Hollis and Fulton, Open Space Protection*, p. 6.
15. For more information about greenprinting, see Ives, "A New Language for Land"; and the Trust for Public Land, *Local Greenprinting for Growth* (San Francisco: The Trust for Public Land, www.tpl.org (Washington, D.C.: National Association of Counties, 2002).
16. 1000 Friends of Oregon, *Making the Land Use, Transportation, Air Quality Connection* (LUTRAQ) (Portland, Ore.: 1000 Friends of Oregon, 1997); U.S. Department of Transportation, *Transportation Statistics Annual Report 1996*, pp. 199–202; Preston L. Schiller and Jeffrey Kenworthy, "Prospects for Sustainable Transportation in the Pacific Northwest: A Comparison of Vancouver, Seattle, and Portland," *World Transport Policy and Practice* 5, no. 1 (1999): passim; Peter Harnik, *Inside City Parks* (Washington, D.C.: Urban Land Institute and Trust for Public Land, 2000), pp. 113–118; and Benfield and Replogle, "The Roads More Traveled."
17. Hollis and Fulton, *Open Space Protection*, p. 22.
18. U.S. Department of Transportation, *FEIS: Springfield Bypass and Extension, Fairfax County*, Final Environmental Impact Statement (Washington, D.C.: U.S. Department of Transportation, Federal Highway Administration, 1984).
19. *Ibid.*, Figures 3-7, 3-8.
20. Glenn Frankel and Stephen C. Fehr, "As the Economy Grows, the Trees Fall," *Washington Post*, 23 March 1997. Also see Fairfax County (Virginia), "Open Space Funding in Fairfax County" www.co.fairfax.va.us/parks/openspace.htm
21. Delaware Department of Transportation, "Livable Delaware Implementation Plan," www.deldot.net/static/reports/livable_delaware/corridor_preservation.htm.
22. See Vermont Agency of Transportation in Resources section.
23. Calthorpe Associates, "The Smart Growth Twin Cities Development Scenarios" (Berkeley, Calif.: Calthorpe Associates, 16 May 2002). Also see Metropolitan Council, Minneapolis-St. Paul/Twin Cities Region in Resources section.
24. U.S. Department of Transportation, Federal Highway Administration, "(TCSP) Case Studies: Charlottesville, Virginia: Jefferson Area Eastern Planning Initiative (September 2001)," www/fhwa.dot.gov/tcsp/cvadelft.html. Also see Thomas Jefferson Planning District Commission in Resources section.
25. See Treasure Valley Futures and Treasure Valley Partnership in Resources section.
26. See Riverside County Transportation Commission in Resources section.
27. Schiller and Kenworthy, "Prospects for Sustainable Transportation in the Pacific Northwest," p. 31; and Diamond and Noonan, *Land Use in America*, p. 4.
28. Mountains to Sound Greenway Trust, *The First Ten Years* (Seattle: Mountains to Sound Greenway Trust, www/mtsgreenway.org, 2001); *Mountain to Sound* 9, no. 1 (January 2002). Also see Resource section.
29. TEA-21 *Transportation Equity Act for the 21st Century*, Sections 1108, 1201.
30. *Ibid.*, Section 1221.
31. *Ibid.*, Sections 1203, 1204; see "Scope of Planning Process" under each section.

Bibliography

- 1000 Friends of Oregon. *Making the Land Use, Transportation, Air Quality Connection (LUTRAQ)*. Portland, Ore.: 1000 Friends of Oregon, 1997.
- Bank of America, Greenbelt Alliance, the California Resources Agency, and the Low Income Housing Fund. "Beyond Sprawl: New Patterns of Growth to Fit the New California." San Francisco: Bank of America, 1995.
- Beach, Dana. *Coastal Sprawl: The Effects of Urban Design on Aquatic Ecosystems in the United States*. Arlington, Va.: Pew Oceans Commission, 2002.
- Benfield, F. Kaid, and Michael Replogle. "The Roads More Traveled: Sustainable Transportation in America." *Environmental Law Review* 32, pp. 10633–10647 (June 2002), www.eli.org.
- Benfield, F. Kaid, Matthew D. Raimi, and Donald D. T. Chen. *Once There Were Greenfields: How Urban Sprawl Is Undermining America's Environment, Economy and Social Fabric*. Washington, D.C.: Natural Resources Defense Council, 1999.
- Boarnet, Marlon G., and Saksith Chalermpong. "New Highways, House Prices, and Urban Development: A Case Study of Toll Roads in Orange County, CA." *Housing Policy Debate* 12, no. 3 (Fannie Mae Foundation, 2001).
- Boarnet, Marlon G., and Andrew F. Haughwout. *Do Highways Matter? Evidence and Policy Implications of Highways' Influence on Metropolitan Development*. Washington, D.C.: Brookings Institution, Center on Urban and Metropolitan Policy, 2000.
- Böge, Stefanie. "The Well-Traveled Yogurt Pot: Lessons for New Freight Transport Policies and Regional Production." *World Transport Policy and Practice*, 1, no. 1 (1995): pp. 7–11, www.ecoplan.org/wtpp/wt_index.htm.
- Brookings Institution. *A Region Divided: The State of Growth in Greater Washington, D.C.* Washington, D.C.: Brookings Institution, Center on Urban and Metropolitan Policy, 1999.
- Burwell, David. "What Is Sustainable Transportation?" *Bulletin* 3, no. 7 (Surface Transportation Policy Project, September 1993), www.transact.org.
- Calthorpe Associates. "The Smart Growth Twin Cities Development Scenarios." Berkeley, Calif.: Calthorpe Associates, 16 May 2002.
- Carlson, Daniel, with Lisa Wormser and Cy Ulberg. *At Road's End: Transportation and Land Use Choices for Communities*. Washington, D.C.: Island Press, 1995.
- Center for Neighborhood Technology. *Transportation for Sustainable Communities*. Chicago: Center for Neighborhood Technology, 1992.
- Cervero, Robert. "Road Expansion, Urban Growth, and Induced Travel: A Path Analysis." Berkeley: Department of City and Regional Planning, Institute of Urban and Regional Development, University of California, July 2001, www.uctc.net/papers/520.pdf.
- Chen, Don, and Nancy Jakowitsch. "Issue on Smart Growth," *Progress* 10, no. 4 (Surface Transportation Policy Project, November 2000), www.transact.org.
- . "Transportation Reform and Smart Growth: A Nation at the Tipping Point," Translation Paper Number Six. Funders' Network for Smart Growth and Livable Communities, Smart Growth America, and Surface Transportation Policy Project, August 2001, www.fundersnetwork.org/usr_doc/transportation_paper.pdf.
- Chesapeake Bay Commission. *Keeping Our Commitment: Preserving Land in the Chesapeake Watershed*. Annapolis, Md.: Chesapeake Bay Foundation; Washington, D.C.: The Trust for Public Land, 2001.
- Chesapeake Bay Foundation and Environmental Defense Fund. *A Network of Livable Communities: Evaluating Travel Behavior Effects of Alternative Transportation and Community Designs for the National Capital Region*. Annapolis, Md.: Chesapeake Bay Foundation, 1996.
- Copps, David H. *Views from the Road: A Community Guide for Assessing Rural Historic Landscapes*. Washington, D.C.: Island Press, 1995.
- Delaware Department of Transportation. "Livable Delaware Implementation Plan." deldot.net/static/reports/livable_delaware/corridor_preservation.htm.
- Diamond, Henry L., and Patrick F. Noonan. *Land Use in America*. Washington, D.C.: Island Press, 1996.
- Dittmar, Hank et al. "Issue on Land Use and Transportation," *Progress* 7, no. 2 (Surface Transportation Policy Project March, 1997), www.transact.org.
- Downs, Anthony. *Stuck in Traffic: Coping with Peak-Hour Traffic Congestion*. Washington, D.C.: Brookings Institution; Cambridge, Mass.: Lincoln Institute of Land Policy, 1992.
- Durning, Alan Thein. *The Car and the City*. Seattle: Northwest Environment Watch, 1996.
- Fairfax County (Virginia). "Open Space Funding in Fairfax County," www.co.fairfax.va.us/parks/openspace.htm.
- Fodor, Eben. *Better Not Bigger: How to Take Control of Urban Growth and Improve Your Community*. Gabriola Island, B.C.: New Society Publishers, 1999.
- Frank, Lawrence D. "The Impacts of Mixed Use and Density on the Utilization of Three Modes of Travel," Paper No. 940425: Transportation Research Board, 1994.
- Frankel, Glenn, and Stephen C. Fehr. "As the Economy Grows, the Trees Fall." *Washington Post* (23 March 1997).
- Freund, Peter, and George Martin. *The Ecology of the Automobile*. Montreal: Black Rose Books, 1993.
- Fulton, William, and Linda Hollis. *Open Space Protection: Conservation Meets Growth Management*. Washington, D.C.: Brookings Institution, 2002, www.brookings.org/dybdocroot/es/urban/publications/hollisfultonopenspace.htm.
- Gas Guzzler Campaign. *Getting There: Strategic Facts for the Transportation Advocate*. Washington, D.C.: Advocacy Institute, 1996.
- Harnik, Peter. *Inside City Parks*. Washington, D.C.: Urban Land Institute and the Trust for Public Land, 2000.
- Heavner, Brad. *Paving the Way: How Highway Construction Has Contributed to Sprawl in Maryland*. Baltimore: MaryPIRG Foundation, November 2000, www.marypirg.org/sprawl/Paving.pdf.
- Hollis, Linda E., and William Fulton. *Open Space Protection: Conservation Meets Growth Management*. Ventura, Calif.: Brookings Institution, Center on Urban and Metropolitan Policy and Solimar Research Group, 2002, www.solimar.org/pdfs/hollisfultonopenspace.pdf.
- Intermodal Surface Transportation Efficiency Act*, Public Law 102-240, 1991. 102nd Congress, 18 December 1991.
- Ives, Susan. "A New Language for Land: A Conversation with TPL President Will Rogers." *Land & People* 14, no.1 (The Trust for Public Land, spring 2002).
- Johnson, Elmer. *Avoiding the Collision of Cities and Cars: Urban Transportation Policy for the Twenty-first Century*. Cambridge, Mass.: American Academy of Arts and Sciences, 1993.
- Kågeson, Per. *Getting the Prices Right: A European Scheme for Making Transport Pay Its True Costs*. Stockholm: European Federation for Transport and Environment, 1993.
- Kay, Jane Holtz. *Asphalt Nation: How the Automobile Took over America, and How We Can Take It Back*. New York: Crown, 1997.
- Kennedy, Rob, with Sarah Clark Stuart. *Transportation Action Guide: Fair and Sustainable Mobility in the 1990s*. New York: Environmental Defense Fund; Madison, Wis.: Wisconsin's Environmental Decade, 1993.

- Komanoff, Charles. "Pollution Taxes for Roadway Transportation." *Pace Environmental Law Review* 12, no. 1 (fall 1994): pp. 121–184.
- Lerner, Steve. "Unpaving the Way." *Land&People* 9, no. 2 (The Trust for Public Land, fall 1997).
- Lerner, Steve, and William Poole. *The Economic Benefits of Parks and Open Space: How Land Conservation Helps Communities Grow Smart and Protect the Bottom Line*. San Francisco: The Trust for Public Land, 1999, www.tpl.org.
- Littman, Todd. "Generated Traffic and Induced Travel: Implications for Transport Planning." Victoria, B.C.: Victoria Transport Policy Institute, November 2001, www.vtpi.org.
- . "Online TDM (Transportation Demand Management) Encyclopedia." Victoria, B.C.: Victoria Transport Policy Institute, 2002, www.vtpi.org.
- MacKenzie, James J., Roger C. Dower, and Donald D. T. Chen. *The Going Rate: What It Really Costs to Drive*. Washington, D.C.: World Resources Institute, 1992.
- Maurer, George. *A Better Way to Grow*. Annapolis, Md.: Chesapeake Bay Foundation, 1996.
- McElfish, James M. Jr., and Ryan Hamilton. *Smart Links: Turning Conservation Dollars into Smart Growth Opportunities*. Washington, D.C.: Environmental Law Institute, 2002, www.eli.org.
- Mountains to Sound Greenway Trust. *The First Ten Years*. Seattle: Mountains to Sound Greenway Trust, 2001, www.mtsgreenway.org.
- . *Mountain to Sound*, no.1 (January 2002), www.mtsgreenway.org.
- National Academy of Sciences. *Surface Transportation Environmental Research: A Long-Term Strategy*, Paper 278. Washington, D.C.: National Academy of Sciences, (pre-publ.uncorr.), 2002, bob.nap.edu/books/0309077028/html.
- National Association of Counties. *Local Tools for Smart Growth: Practical Strategies and Techniques to Improve Our Communities*, Washington, D.C.: National Association of Counties, 2002.
- National Research Council Committee for the Evaluation of the Congestion Mitigation and Air Quality Improvement Program. "The Congestion Mitigation and Air Quality Improvement Program: Assessing 10 Years of Experience." Washington, D.C.: National Academy Press, 2002, www.nap.edu/html/SR264/SR264.pdf.
- Newman, P. W. G., J. R. Kenworthy, and T. J. Lyons. "Does Free-flowing Traffic Save Energy and Lower Emissions in Cities?" *Search* 19, no. 5/6 (September–November, 1988): pp. 267–272.
- Newman, Peter, and Jeffrey Kenworthy. *Cities and Automobile Dependency: An International Sourcebook*. Brookfield, Vt.: Gower, 1991.
- . *Sustainability and Cities*. Washington, D.C.: Island Press, 1999.
- Organisation for Economic and Cooperative Development. *Environmental Performance Reviews: United States*. Washington, D.C.: Organisation for Economic and Cooperative Development, Publications and Information Center, 1996, www.oecd.org.
- . *Proceedings: Vancouver Conference on Sustainable Transportation*. Washington, D.C.: Organisation for Economic and Cooperative Development, Publications and Information Center, 1996, www.oecd.org.
- . *The Economic and Social Implications of Sustainable Transportation: Proceedings from the Ottawa Workshop*, October 1998. Paris: Organisation for Economic and Cooperative Development, 1999, www.oecd.org.
- Ohm, Brian W. "The Purchase of Scenic Easements and Wisconsin's Great River Road: A Progress Report on Perpetuity." *APA Journal* 66, no. 2 (spring 2000): pp. 177–188.
- Otto, Betsy et al. *Paving Our Way to Water Shortages: How Sprawl Aggravates Drought*. Washington, D.C.: Smart Growth America, 2002, www.smartgrowthamerica.org.
- Pendall, Rolf, Jonathan Martin, and William Fulton. *Holding the Line: Urban Containment in the United States*. Washington, D.C.: Brookings Institution, Center on Urban and Metropolitan Policy, August 2002.
- Schiller, Preston L., ed. "Sustainable Transportation Issue." *Sustainable Cities* (International Centre for Sustainable Cities, Vancouver, B.C., fall 2000), www.icsc.ca.
- Schiller, Preston L., and Jeffrey Kenworthy. "Prospects for Sustainable Transportation in the Pacific Northwest: A Comparison of Vancouver, Seattle, and Portland." *World Transport Policy and Practice* 5, no. 1 (1999): pp. 30–38.
- Schiller, Preston L., with Bianca DeLille. *Green Streets: The 1991 Intermodal Surface Transportation Efficiency Act and the Greening of Transportation Policy in the United States*. Washington, D.C.: Surface Transportation Policy Project, 1997, www.transact.org.
- Sierra Club. *The Dark Side of the American Dream: The Costs and Consequences of Suburban Sprawl*. San Francisco: Sierra Club, Challenge to Sprawl Campaign, 1998, www.sierraclub.org/transportation.
- Surface Transportation Policy Project. *A Blueprint for ISTEA Reauthorization*. Washington, D.C.: Surface Transportation Policy Project, 1997.
- . *Potholes and Politics*. Washington, D.C.: Surface Transportation Policy Project, 1998.
- . "The Nation's Road Capacity: How Fast Is It Growing?" *Decoding Transportation Policy & Practice #2*, posted 30 April 2002, www.transact.org.
- . *Changing Direction: Federal Transportation Spending in the 1990s*. Washington, D.C.: Surface Transportation Policy Project, July 2002, www.transact.org.
- . "TEA-21 Users Online Guide." Washington, D.C.: Surface Transportation Policy Project, 2002, www.transact.org/guide/sm.htm.
- Transportation Equity Act for the 21st Century*, Public Law 105-178/205. *U.S. Statutes at Large* 112 (1998): 107. http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=105_cong_public_laws&docid=f:publ178.105.
- The Trust for Public Land. *Local Greenprinting for Growth*. San Francisco: The Trust for Public Land; Washington, D.C.: National Association of Counties, 2002, www.tpl.org.
- U.S. Department of Transportation. "FEIS: Springfield Bypass and Extension, Fairfax County" (Final Environmental Impact Statement). FHWA-VA-EIS-81-01-F, 1984. Washington, D.C.: U.S. Department of Transportation, Federal Highway Administration, 1984.
- . *Environmental Externalities and Social Costs of Transportation Systems—Measurement, Mitigation and Costing: An Annotated Bibliography*. Washington, D.C.: U.S. Department of Transportation, Federal Rail Administration, Office of Policy, 1993.
- . *Transportation Statistics Annual Report 1996*. Washington, D.C.: U.S. Department of Transportation, Bureau of Transportation Statistics, 1996.
- . "(TCSP) Case Studies: Charlottesville, Virginia: Jefferson Area Eastern Planning Initiative (September 2001)." Washington, D.C.: U.S. Department of Transportation, Federal Highway Administration, www.fhwa.dot.gov/tcsp/cvadeft.html.
- Vuchic, Vukan R., *Transportation for Livable Cities*. Rutgers, N.J.: Center for Urban Policy Research, 1999.
- Washington Regional Network for Livable Communities. *A New Approach: Integrating Transportation and Development in the National Capital Region*. Annapolis, Md.: Chesapeake Bay Foundation, 1993.

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Washington, D.C. 20005
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(617) 661-3016
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Nancy Keith, Executive Director
1011 Western Avenue, Suite 606
Seattle, WA 98104
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www.mtsgreenway.org

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440 1st Street, NW
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www.naco.org

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3560 University Avenue
Suite 100
Riverside, CA 92501
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www.talchamber.com

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District Commission
Hannah Twaddell
300 East Main Street
P.O. Box 1505
Charlottesville, VA 22902
(434) 979-7310
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Elaine Clegg and John Barrett,
Co-Executive Directors
800 S. Industry Way, Suite 100
Meridian, ID 83642
(208) 333-8066
www.tvfutures.org

Treasure Valley Partnership
Elizabeth Connes
Executive Director
P. O. Box 140176
Garden City, ID 83714
(208) 869-7298
www.treasurevalleypartners.org

United States Environmental
Protection Agency
Office of Policy, Economics,
and Innovation
Mary Kay Santore
1200 Pennsylvania Avenue, NW
MC 1808
Washington, D.C. 20460
(202) 260-8745
www.epa.gov/opei

Vermont Agency of Transportation
Curtis Johnson
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(802) 828-0583
www.aot.state.vt.us

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About the Author

Preston L. Schiller, Ph.D., principal author of this report, is a research and policy consultant on transportation and the environment. He is adjunct faculty at Western Washington University, Bellingham, Washington. He can be contacted at preston@cc.wvu.edu.

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On the cover: The Mountains to Sound Greenway protects open space along the I-90 corridor in Washington.

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The Trust for Public Land

National Office

*116 New Montgomery Street, 4th Floor
San Francisco, CA 94105
(415) 495-4014
(415) 495-4103 (fax)*

Federal Affairs Office

*660 Pennsylvania Avenue, SE, Suite 401
Washington, D.C. 20003
(202) 543-7552
(202) 544-4723 (fax)*

Mid-Atlantic Regional Office

*666 Broadway, 9th Floor
New York, NY 10012
(212) 677-7171
(212) 353-2052 (fax)*

Midwest Regional Office

*2610 University Avenue, Suite 300
St. Paul, MN 55114
(651) 917-2240
(651) 917-2248 (fax)*

New England Regional Office

*33 Union Street, 4th Floor
Boston, MA 02108
(617) 367-6200
(617) 367-1616 (fax)*

Northwest Regional Office

*Waterfront Place Building, Suite 605
1011 Western Avenue
Seattle, WA 98104
(206) 587-2447
(206) 382-3414 (fax)*

Southeast Regional Office

*306 North Monroe Street
Tallahassee, FL 32301
(850) 222-7911
(850) 224-3755 (fax)*

Southwest Regional Office

*418 Montezuma Avenue
Santa Fe, NM 87501
(505) 988-5922
(505) 988-5967 (fax)*

Western Regional Office

*116 New Montgomery Street, 3rd Floor
San Francisco, CA 94105
(415) 495-5660
(415) 495-0541 (fax)*

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