

**Smart Growth:
Mainstream Environmental Organizations'
Efforts to Thwart Sprawl**

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This paper will review how mainstream environmental organizations (MEO's) are thwarting sprawl with smart growth policy campaigns that include: land acquisition, easements, conservation buyer programs and other landowner incentives, lobbying and advocacy, litigation, research and planning tools, publications, environmental transportation and innovations, and promoting traditional neighborhood developments. This paper will also briefly discuss an exemplary collaborative project as an example of a recommended approach to further the potential of new initiatives linking conservation efforts with smart growth development.

Sprawl results from poorly planned, low-density, automobile dependent development that threatens environmental health and quality of life through habitat loss and increased pollution. Sprawl causes irreversible harm to sensitive areas, degradation of towns and cities, loss of rural farms and rural jobs, longer, more frequent commutes, and higher taxes.¹

Sprawling development is consuming natural areas at a rate of 365 acres per hour.² Seven thousand acres of forest, farms and open space are lost to sprawl each day in the US and two million acres are lost each year. As a result of these sprawling developments, we are paving an area the size of Delaware each year.³ There is also great cause for alarm because the rate of sprawl is increasing. The amount of urban land has quadrupled in the last 50 years, consuming half of all wetlands and a third of the most productive farmland in the US; and the rate has doubled from 1992 to 1997 compared to the previous ten years. At the current rate, the next 25 years will see the development of as much land as has been developed since the US was founded. And finally, in recent years, counties with wilderness areas have grown six times faster than counties without wilderness, and 95% of Endangered Species are endangered by habitat loss.⁴

Causes of Sprawl

Sprawl in the United States has many historical causes. The book *Suburban Nation* suggests that a series of well-intentioned steps on the part of government and industry are to blame. A turn-of-the-century municipal planning effort called the City Beautiful movement began to contribute to sprawl by separating residential areas from factories and other businesses through establishment of single-use zoning ordinances. Following WWII, policies such as the Federal Housing Administration Program and the Veterans Administration Program, directed at new, single-family suburban homes, resulted in a migration of housing from traditional neighborhoods to the suburban periphery. This took place at a time when the 41,000 mile Interstate Highway Program was building new roads and mass transit was being neglected. Industry has become accustomed to building separately zoned housing subdivisions, and it is hard for them to change the way they now design and market suburban housing.⁵ People seeking improved quality of life also contribute to sprawl by moving out near national parks and wilderness areas.⁶

Linking Environmental Concerns with Smart Growth

Interest in Smart Growth as a mechanism for improving environmental quality is growing.

“Environmentally sensitive development patterns minimize habitat and water quality impacts, decrease motor vehicles dependence, and reduce air pollution and greenhouse gas emissions”.⁷

Environmental concerns about the rate of species and habitat loss as a result of sprawl are forcing land trusts, wildlife, and wilderness organizations to become involved in land use planning and transportation issues. Habitat conservation plans as required by the Endangered Species act have so far “been one of the primary means of integrating biodiversity concerns into land use planning. Smart growth is a way for environmental organizations to take a strategic and

proactive approach to conserve land, as every urban infill or brownfield redevelopment project saves another greenfield”.⁸ Specific environmental concerns about sprawl include pollution from highways, roads, parking lots, and lawns, and the lack of rainwater absorption from paving and impermeable surfaces. Water pollution from rainwater and snowmelt runoff from paved surfaces and lawns is caused by cadmium and zinc from tire wear, oil, solvents, and other contaminants. Transportation related paving accounts for more than 60% of impervious surfaces in suburban areas, and when such surfaces cover more than 10% of a watershed, nearby bodies of water become degraded.⁹ Runoff from impervious surfaces such as roads and rooftops alters regular streamflow and watershed hydrology, and increases stream sedimentation and water acidity. Roads take up approximately 11.1 million acres in the US, not including shoulders and medians, and land for parking takes up an estimated additional 1.5 million acres.¹⁰

The words of Steven McCormick of The Nature Conservancy (TNC), speak of the need to address human settlement patterns as a means of effectively protecting threatened natural areas. While attending the 2003 World Parks Congress, he had a sobering realization that the concept of “parks” was an outmoded reality. “We believed that we could protect breathtaking landscapes and the wildlife they harbor by fencing them off from people and our economic activities....but the boundaries that we established were false ones. In our new concept, there are gradations from pristine lands to those that support varying and appropriate densities of human populations engaged in a variety and varying intensities of land uses—activities that are complementary and in harmony with natural processes and undertaken compatibly with parks and protected areas.”¹¹

Linking of Environmental Justice and Smart Growth

Environmental justice issues have been linked to urban and suburban growth management, because growth management can aggravate social inequities. Environmental resources must be managed so that minority and low-income populations do not bear a disproportionate burden of community waste, nor should they be distanced from valued natural resources such as clean air and water, open space, and habitat. Infrastructure must be managed so that it is not disproportionately provided to developing suburban areas at the expense of deteriorating existing infrastructure serving these populations; and so that minority and low-income populations are not disproportionately burdened by impacts of highway expansion to satisfy regional demands. Development must be guided by rules and regulations that distribute environmental standards and land uses that protect all groups and income levels equally; and economic development policy must consider the environmental consequences for low-income and minority populations. Sales taxes to buy open space can impose a higher burden on low-income people, who spend a higher proportion of their incomes. A disproportionate number of minorities are low-income.¹²

In the absence of smart growth management, sprawl development can create high concentrations of low-income minorities in cash-strapped, deteriorating inner cities that are isolated from opportunities in wealthier, faster growing suburban communities. This raises concerns under the Civil Rights Act because government planning efforts have not required transportation options to be part of new developments, and job options for those without cars are low and decreasing.¹³ Scholars can address environmental justice in smart growth management through improved research and data collection afforded by demographic analysis, social equity indexes, and GIS overlays to map expenditures on environmental enhancement such as urban wildlife corridors.

Additional tools like the Comparative Environmental Risk Index that is part of the Toxic Risk Inventory for Superfund sites can be used to calculate proportions of low-income and minority populations exposed to environmental risks and impacted by smart growth management policy. Government policies that call for greater public participation in environmental planning efforts, as called for in Executive Order 12898, can also address environmental justice concerns.¹⁴ “New Urban” developments can also address some of these environmental justice concerns, because New Urbanism advocates creating economic diversity by providing a broad range of affordable and expensive housing opportunities for renters and owners within each neighborhood.¹⁵

Smart Growth Policy

Solutions to sprawl advocated by some MEO’s include smart growth policy and development approaches such as land acquisition, easements, landowner incentives, conservation buyer programs, litigation, research and planning tools, publication, environmental transportation innovations and promotion of traditional neighborhood developments.

Smart growth is the primary planning approach to thwart sprawl. Smart growth is a participatory planning process that organizes stakeholders to work to alleviate pressure for open space and farmland development and reinvest in existing communities. National, state, and local governments can help to identify and protect undeveloped areas through conservation zoning, establishing protected areas, creating more efficient development guidelines, as well as providing tax incentives and direct funding sources. Smart growth has been promoted as an organizing principle to support market-based conservation zoning.

Several MEO's have campaigns to thwart sprawl and promote smart growth. Prominent among them are partners of Smart Growth America (SGA), a diverse coalition of national, state and local advocacy organizations working to support citizen-driven planning initiatives for preservation of critical environmental areas to protect ecosystems, wildlife, waterways, farms, and historic sites. Environmental justice issues addressed by SGA include public participation in neighborhood redevelopment for social equity and to provide affordable housing, economic sustainability, clean air and clean water, and efficient and affordable public transportation.

MEO's that are partner organizations of SGA include; Defenders of Wildlife (DOW), Environmental Defense (ED), National Wildlife Federation (NWF), Natural Resources Defense Council (NRDC), Sierra Club (SC), Trust for Public Land (TPL), and American Rivers (AR).¹⁶

Other MEO's thwarting sprawl include the National Audubon Society (NAS), the Nature Conservancy (TNC), Friends of the Earth (FOE), and the Wilderness Society (TWS).

Smart growth policy development has been initiated by many individuals and communities, and MEO's have been supportive of such efforts to introduce smart growth policy and legislation.

Citizens across the US are integrating efforts toward biodiversity conservation and land use planning,¹⁷ and have passed hundreds of ballot initiatives during the last several years supporting measures to curb sprawl such as land preservation, community reinvestment, and public transit.¹⁸

Last November alone US citizens voted on more than 200 state and local initiatives to regulate sprawl and protect conservation areas. More than 70% of these policy initiatives were approved and they will provide \$7.5 billion in new state and local conservation spending.¹⁹

Lobbying and Advocacy for Smart Growth

TNC has lobbied the Massachusetts Legislature and the Governor to increase funding to protect ecologically significant areas before they are permanently lost to development.²⁰ DOW is working with state and local authorities on community growth planning to mitigate future harm to wildlife and habitat. DOW calls for modification of roads to avoid impacts to environmentally sensitive habitat and facilitate wildlife crossings.²¹ SC advocates greater investments in clean public transportation, pedestrian-friendly developments, and regional and statewide planning with public involvement in order to combine transportation, affordable housing, and environmental planning efforts.²² FOE works closely with local activists in several states that are fighting destructive road building projects that threatened to increase sprawl development.²³ The “Green Scissors Campaign by SC, FOE, NAS, and TWS was instrumental in forcing the state of Virginia to withdraw critical funding for the Western Transportation Corridor, a 60 mile highway project that would have contributed to sprawl.²⁴ TWS is calling on its members to persuade their Senators and Representatives to support federal funding for land acquisition in their states, such as the US Land and Water Conservation Fund,²⁵ and the Conservation Trust Fund.²⁶ NAS is also asking its members to support federal funding for the US Land and Water Conservation Fund.²⁷ NWF has a smart growth and wildlife campaign to protect wildlife and restore habitats threatened by urban sprawl by promoting smart-growth alternatives.²⁸

MEO’s are engaged in transportation policy initiatives such as calling for amendments and greater public input into bills like the Transportation Equity Act for the 21st Century (TEA-21). The environmental community is particularly worried about streamlining provisions proposed for this ACT in order to speed the review process for highway and road constructions projects.²⁹ DOW was instrumental in adding wildlife protection to TEA-21, which now includes funding for

wildlife habitat connectivity, such as wildlife crossings, underpasses and overpasses.³⁰ ED asks its members and supporters to phone or write to congress and local newspapers to call for better transportation choices, for better air quality and public health, to be included in the Transportation Equity Act for the 21st Century (TEA-21).³¹ ED calls for more public input in the decision making process for highways,³² and warns that Congress is considering proposals that could undermine the National Environmental Policy Act (NEPA) and limit public involvement.³³ The SC cautions members that environmental review and community involvement in the decision making process, which are essential components of NEPA, are threatened by the pending reauthorization of the national transportation bill.³⁴ The SC report looks at the role NEPA has played in road projects around the country, and includes testimonials from transportation officials, citizens, and others. The road projects profiled the critical role public involvement has played in the NEPA process, which has helped these projects to cause less environmental damage through wildlife underpasses and fencing, and saved parts of local communities including farmland.³⁵ SC argues that the road construction lobby and the Bush administration seek to limit public input in future road planning. In September of 2002 President Bush signed an executive order to limit the process of environmental review for transportation projects in order to prevent perceived delays in road construction. This reasoning is contrary to findings of a 2002 Federal Highway Administration study of 89 projects which found that environmental impact statements were not in fact major causes of delay. The SC also advocates incentive based programs to encourage alternative transportation, such as tax credits, and requiring developers to pay impact fees for new roads and services.³⁶ In March of 2004 NRDC sent out a press release calling for more money to be spent on public transportation and transportation alternatives as part of the reauthorization of the new \$300 billion dollar

Transportation Equity Act (TEA-21), that was currently under consideration by the Bush administration and Congress.³⁷ FOE asked its members to oppose this transportation bill that threatened environmental and public health.³⁸

Criticisms of Smart Growth

A new focus on smart growth projects in Massachusetts, along with major cuts in state funding, may be at odds with conservation efforts dedicated to other forms of land conservation. Because state land protection funding will now be spent in cities and towns hosting smart growth projects, there is concern that habitats beyond municipal boundaries will be left unprotected. As a result of these cuts, more than 40 acres per day of land is being lost to development in Massachusetts. TNC is working to restore funding for permanent protection of ecologically significant areas in Massachusetts to a level that existed before recent cuts, which reduced land protection funds from \$53 million per year to \$15 million per year.³⁹

Land Acquisition, Conservation Easements and Landowner Incentives

State and local governments have passed legislation and referendums allocating \$20 billion for acquisition of open space in the last five years.⁴⁰ The North Carolina Chapter of the TNC received a Smart Growth Award in 2002 for conservation efforts with the Carolina Mountain Land Conservancy, a partner land trust, including land acquisitions and conservation easements in the Hickory Nut Gorge, a 1,500 acre conservation area, a site with 34 rare plant species and cave habitat for endangered bat species and rare salamanders.⁴¹ Funds from the chapter's Forever Wild campaign were used to purchase the property in the Hickory Nut Gorge.⁴² According to Emily Tibbott of the TNC, smart growth management such as land use planning and advance mitigation for transportation projects is much cheaper than outright acquisition.⁴³

The US Land and Water Conservation Fund (LWCF) is an important tool for land acquisition, and the US Congress is considering zero funding for LWCF land acquisitions in the year 2004.⁴⁴ NAS has secured more than \$65 million from the LWCF for bird habitats in the past four years.⁴⁵ Another tool for land acquisition that needs support is the Federal Conservation Trust Fund.⁴⁶

Conservation easements, also called purchase of development rights, allow landowners such as farmers to sell development rights to a private land trust or the government. Landowners receive part of the money they could get for selling the land, as well as the benefit of lower property taxes; and this may allow the landowner to keep farming and to preserve a rural way of life.⁴⁷ The landowner retains title to the property, while the conservation easement is often held by a private or government agency for conservation management.⁴⁸

TNC's Freshwater Initiative has a campaign to promote smart growth as a means of protecting the Big Darby Creek Watershed in central Ohio (BDCW). TNC is working with 60 public and private organizations using techniques such as land acquisition, conservation development, conservation easements, and the restoration of forests, streams and wetlands.⁴⁹ TWS helped local groups acquire Douglas Point, an ecologically pristine and culturally significant site in Charles County Maryland that was threatened by rapid growth and sprawl.⁵⁰

The Ohio Chapter of TNC has recently been working on efforts to promote smart growth planning and land protection, as well as landowner incentives for best management practices. TNC is working with the Ohio Department of Natural Resources and the U.S.D.A. to develop

Ohio's second Conservation Reserve Enhancement Program that will provide financial incentives to landowners for conservation efforts such as stream buffer zones and biological monitoring.⁵¹

ED works with landowners restore endangered species with its Back from the Brink Program.⁵²

Transfer of Development Rights and Conservation Buyer Programs

Transfer of Development Rights (TDR's) and Conservation Buyers Programs (CBP's) are both mechanisms to protect habitat and strategic natural resources that offer cost effective alternatives to outright land acquisition. TDR's and CBP's have been implemented by TNC, which identifies and purchases critical habitat areas, places conservation easements on the property to protect that habitat, sells the land at fair market value, and recycles the money from the sale back into the Conservation Buyer Program.⁵³ TNC has plans to utilize transfer of development rights to protect the Great Salt Lake and its wetlands as part of a citizen-based growth planning process.⁵⁴

Litigation

NWF has filed a lawsuit for violation of the Endangered Species Act against the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers and the Federal Highway Administration. The NWF lawsuit charges that these agencies are fostering sprawl that endangers panthers.⁵⁵

The SC, along with Friends of the Earth, VPIRG, and the Conservation Law Foundation have teamed up with local citizens and filed a lawsuit in federal court to stop construction of the Chittenden County Circumferential Highway (CCCH). They contend that the Federal Highway Administration and VTrans violated NEPA and the Department of Transportation Act when they failed to fully investigate environmental impacts or consider cost-effective alternatives; and deprived the public of information and involvement in a smarter regional transportation system.⁵⁶

Research and Planning Tools

NWF scientists have studied the effects of sprawl on Florida panther habitat by doing telemetry overflights and plotting the locations of three radio-collared panthers in both 1995 and 1999.⁵⁷ DOW and TNC worked with the Oregon Natural Heritage Program to create a \$1 million database for conservation planning. While this was used widely by developers and land trusts for conservation, it has not been used in the land use planning process. A 2004 TNC service called NatureServe is a smart growth planning tool for use in routine land and water planning.⁵⁸ TNC has lobbied the Massachusetts Legislature and the Governor to increase funding for two protects which they maintain are necessary for future smart growth planning. The first project is a Natural Heritage & Endangered Species Program of the State Division of Fisheries & Wildlife that collects and distributes data about rare and endangered species and their habitats to guide state, municipal, and private developers through environmental impact assessments, and helps with implementation of the Endangered Species Act and Wetlands Protection Act. TNC also is seeking more funding for the Bureau of Geographic & Environmental Information's Executive Office of Environmental Affairs which maintains a GIS database that provides an important land use and management tool for smart growth planning.⁵⁹

Publications about Smart Growth by Mainstream Environmental Organizations

ED published a 1996 report: *A Network of Livable Communities: Evaluating Travel Behavior Effects of Alternative Transportation and Community Designs for the National Capital Region*.⁶⁰ SC published a 1998 sprawl report titled *The Dark Side of the American Dream* in, a 2000 report: *Sprawl Costs us All: How Uncontrolled Sprawl Increases Property Taxes and Threatens Your Quality of Life*, and a 2003 report titled: *The Road to Better Transportation Projects: Public*

Involvement and the NEPA Process: Community Input Threatened. The SC has also published other reports and numerous fact sheets on smart growth planning to thwart sprawl.⁶¹ The NRDC published a book on sprawl in 1999 titled *Once There Were Greenfields*,⁶² and a 2001 sequel, *Solving Sprawl*, with 35 exemplary stories of smart growth alternatives to sprawl.⁶³ NWF has produced a report titled *Paving Paradise—Sprawl’s Impact on Wildlife and Wild Places in California*.⁶⁴ A 2003 NRDC publication titled *Environmental Characteristics of Smart Growth Neighborhoods Case Studies in Sacramento and Nashville* describes the environmental benefits of smart growth and discusses the concept of new urban developments.⁶⁵ FOE published a report in 1999 titled *Road to Ruin: The 50 Worst Road Projects in America That Would Waste Tax Dollars, Harm our Communities, and Damage the Environment*.⁶⁶ AR has published a 2004 report titled: *Ecological Riverfront Design: Restoring Rivers, Connecting Communities*.⁶⁷

Environmental Transportation and Innovations

ED has a program called the Alliance for Environmental Innovation that promotes environmental technologies for business, including the widespread utilization of hybrid trucks to provide clean, healthy air, and to reduce climate change impacts and oil dependency. ED has worked with FedEx Express to develop a clean and fuel efficient hybrid-electric delivery truck for 2003, the OptiFleet E700, which creates 90% less soot particle emissions, 75% less nitrogen oxide (smog) emissions, and has a 50% increase in fuel economy. The project was funded by grants from the Richard and Rhoda Goldman Fund, the Oak Foundation, The Pew Charitable Trusts, and the David H. Smith Foundation.⁶⁸

NRDC has taken a bold step towards sustainability in building its Robert Redford Center in Santa Monica, California. The building was constructed with recycled and renewable materials, it features solar panels that supply 20% of the electricity it uses, and water from rooftop cisterns and bathrooms sinks is recycled for use in toilet flushing. The building was designed by Elizabeth Moule, a board member of the Congress for the New Urbanism (CNU) and it has received a platinum rating from the United States Green Building Council. These two groups have embarked on a joint venture with NRDC to create a “green building” certification process for neighborhoods. According to an April 2004 article on the CNU, “The next frontier for finding such efficiencies may be applying green solutions to urban districts or even larger areas”. The 12th annual CNU congress in Chicago in June of 2004 featured a discussion of amendments to the group’s Charter of the New Urbanism to clarify CNU’s environmental principles.⁶⁹

Traditional Neighborhood Developments and New Urbanism

Traditional neighborhood designs place housing in mixed-use areas, and residents within a five-minute walk to work, school, shopping, etc., much like the predominant European settlement pattern prior to WWII. Traditional neighborhood often had a defined city civic and social center, and a grid-like network of narrow streets, with multiple travel options to reduce travel time.⁷⁰

Proponents of the modern version of traditional neighborhood designs refer to themselves as ‘new urbanists,’ According to architect Peter Calthorpe, “a central tenant of New Urbanism is economic diversity and regional order that confines, directs and connects new development”.⁷¹

New Urbanism is now being promoted by numerous MEO’s that advocate smart growth.

Collaboration Between a Conservation Trust and a Community Development Trust

An exemplary collaborative project between a conservation trust and a community land trust is Troy Gardens, an innovative project to conserve open space and to build affordable housing. The Madison Area Community Land Trust in Wisconsin, and the Urban Open Space Foundation, a conservation land trust, contributed financial and technical resources to establish this ‘conservation development project’. A study done on the project specified that future collaboration between community and conservation land trusts would require a greater awareness among funding organizations and the public that housing and conservation areas can effectively coexist, as well as a need for technical assistance in the area of joint conservation of open space and affordable housing stock.. The Vermont Housing and Conservation Board was identified as an organization with technical expertise in these previously separate disciplines. The study identified a need for a national agency to assist with similar projects across the US. A final observation was that land trust driven projects are often in response to a crisis such as uncertain fate of a parcel of land, and that conservation land trusts do not usually engage in comprehensive community development planning with broad public input and oversight.⁷² Areas of overlap between the two organization’s goals include edible landscaping and urban agriculture to meet the food security needs of residents. These areas of overlap could provide grounds for future collaboration between conservation land trusts and community land trusts.

According to TPL, the citizens of Austin, Texas have voted to approve more than \$87 million in local bonds for watershed protection, parks, and greenways in the past ten years. Austin has a program that uses economic incentives and natural areas as a form of green infrastructure to attract development that protects and utilizes green space as common land, and ensures attractive and sustainable development in a desired zone around these sensitive natural resources areas.⁷³

Conclusion

Mainstream environmental organizations have a wide variety of campaign approaches and strategies for thwarting sprawl. Many are relatively new, and the approaches are evolving from marketing of their existing projects as viable alternatives to sprawl, to exciting initiatives that employ new technologies and broad based collaborative projects with a range of stakeholders. Most exciting, and perhaps least employed so far, are new approaches that move beyond policy and technological innovations for industry to improve our environmental and public health. These are projects that physically put in place viable alternatives to unsustainable development in the built environment, to reduce further human impacts and encroachment into natural areas. Weaving together conservation planning and smart growth planning to establish “Green” new urban developments, along with funding and implementing innovations in transportation and the built environment, offers a comprehensive and hopeful solution to unsustainable development. Only through collaborative efforts and advance, participatory planning at the local and regional level can broad-scale initiatives be implemented on the ground. Collaboration between conservation land trusts and community land trusts provides an excellent model for small-scale developments, and new urbanism provides an important resource for denser urban planning. Taking the city of Austin, TX as an example, currently unprotected conservation areas could become magnets for, and core components of new, collaborative conservation developments. The use of tools and technologies for mapping and demographic analysis are critical for habitat protection and expansion, as well as the protection of the rights of poor minorities in gaining access to affordable housing, transportation, and healthy natural areas to live, work and play.

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⁵ Suburban Nation, *P. 3, 7-, 15.*

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