

Green Infrastructure: A Strategic Approach for Land Conservation¹ · Excerpted from a paper by Dr. Mark A. Benedict, The Conservation Fund.

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Green Infrastructure is our Nation's natural life support system - an interconnected network of natural areas, conservation lands, and working landscapes that support native species, maintain natural ecological processes, sustain air and water resources, and contribute to the health and quality of life for America's communities and people.

America's Land Conservation Challenge

The accelerated consumption of open lands is America's number one land conservation challenge. This challenge is dramatically reflected by data from the Natural Resources Inventory (Natural Resources Conservation Service, 1997), which revealed that 15,966,000 acres of land were developed in the 5-year period between 1992-1997 in contrast to 13,884,100 acres developed during the previous 10-year period, 1982-1992. This translates to an annual development rate of 3,193,200 acres per year during 1992-1997, more than twice the annual rate of 1,388,410 acres per year during the previous 10 years (1982-1992). Recent maps from the United States Geological Survey depicting developed lands in the U.S. in 1965 and 1995 provide a dramatic visual representation of the accelerated consumption of land over the past 30 years. This change and challenge is being "brought close to home" in our country's major metropolitan areas where the consumption of land is particularly dramatic. For example, the Atlanta metropolitan area has lost 25 percent of its tree cover, or roughly 350,000 acres since 1973 - equivalent to the loss of 50 acres of trees every day.

The ecological and social impacts of this accelerated consumption of open lands are well known and continue to increase as more and more land is consumed. Documented ecological consequences include habitat fragmentation, the alteration/disruption of natural landscape processes, the degradation of air and water resources, and the loss of biodiversity. Social consequences include the loss of vital services provided by natural systems (e.g. flood protection), increased costs to the community, decreased quality of life and the loss of connection between people and nature. A regulation-based approach focused on site-specific and species-specific resource conservation and land management and a parcel-based land use review system have contributed to these consequences.

Green Infrastructure: The "Smart Conservation Solution"

... the problem is not growth itself but the pattern of growth - where do you put it, how do you arrange it and how does it fit into the area's ecological and social landscape? Simply put, some places are better to develop than other places. Over the last few years Smart Growth has emerged as a key tool to strategically direct and influence the pattern of growth/land development. With increasing numbers, America's Governors and Legislators are calling for Smart Growth programs to address the concerns of sprawl and haphazard development. Maryland's Smart Growth initiative stands out with programs to conserve open space, protect rural communities and landscapes and direct growth to areas where infrastructure already exists. Pennsylvania's Governor recently proposed a "Growing Smarter" plan that would help bolster local land use planning and support farmland preservation.

As much as we must watch out for and be concerned about haphazard development, so must we also watch out for and be concerned with haphazard conservation. ... Smart Conservation is conservation that

promotes resource planning, protection and management that is proactive not reactive, systematic not haphazard, holistic not piecemeal, multifunctional not single purpose, and multi-scale not single scale. ...

Green Infrastructure - America's Natural Life Support System

[...]

Green Infrastructure is an interconnected network composed of:

1. Conserved natural areas and features - such as wetlands, woodlands, waterways and wildlife habitat;
2. Public and private conservation lands - such as nature preserves, landscape linkages, wildlife corridors and wilderness areas;
1. Private working lands of conservation value - such as forests, farms and ranches; and
2. Other protected open spaces - such as greenways and parks.

Green Infrastructure is green space with multiple purposes. It supports native species and habitats; maintains natural ecological processes and functions; sustains air and water resources; and contributes to the health and quality of life for America's communities and people.

Green Infrastructure Principles

A work group of state and federal government and private sector representatives ... is currently developing principles to provide design, planning, acquisition, and other decision-making guidance for community-based, regional, and state green infrastructure initiatives. These principles are designed to be used by planners, developers, landowners, State and local officials, and others as benchmarks to suggest how a green infrastructure approach could be incorporated into existing plans, ordinances, and development and conservation projects. The draft principles are not intended to be national design standards.

A city, county, or state would never build a road, water or electrical system piece by piece, with no advanced planning or coordination between different system components and jurisdictions. These built infrastructure systems are planned, designed, and invested in far in advance of their actual use. We should design, plan and invest in our Green Infrastructure following the same principles and approaches that are used for built infrastructure.

Green Infrastructure projects should therefore be:

1. *Designed holistically - ...;*
2. *Planned comprehensively - ...;*
3. *Laid out strategically - ...;*
4. *Planned and implemented publicly - ...;*
5. *Grounded in principles and practices - ...;*
6. *Funded up-front -*

Summary

[...] Green Infrastructure provides a strategic "smart" approach for land conservation that benefits people, wildlife, and the environment. It helps us look at all the pieces of the land development/land

conservation puzzle together, addressing the interrelationships and interactions between humans and the natural world.

Green Infrastructure provides a logical, scientific-based framework that:

1. Helps guide and integrate the conservation actions of diverse people, organizations, and agencies while promoting Smart Growth and Smart Conservation at all scales;
2. Recognizes and addresses both natural and human needs, enabling us to think strategically with respect to multiple purposes and values;
3. Helps provide conservation certainty for communities and regions facing dramatic, growth-related changes as well as development certainty for private property owners and commercial interests;
4. Provides a broad, unifying vision for the future that people and organizations with diverse background and interests can buy into.

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For More Information

For more information about the Green Infrastructure Work Group contact:

- Mark Benedict, The Conservation Fund, NCTC, Route 1, Box 166, Shepherdstown, WV, 25443. Phone (304) 876-7461. E-mail: mark_benedict@fws.gov;

- J. Glenn Eugster, National Park Service, National Capital Region, 1100 Ohio Drive, SW, Washington, DC, 20242. Phone (202) 619-7492. E-mail: glenn_eugster@nps.gov; or

- Peggy Harwood, U.S.D.A. Forest Service, Cooperative Forestry Staff, 201 14th Street, SW-4th floor SE, Washington, DC 20250. Phone (202) 205-0877. E-mail: pharwood@fs.fed