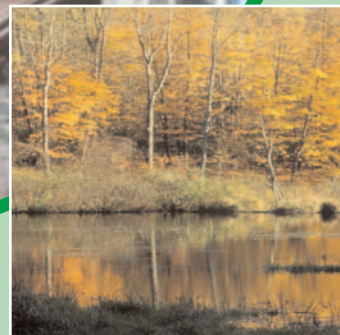


# Conserving the Washington-Baltimore Region's Green Network: The Time to Act is Now



  
**American Farmland Trust**  
SAVING THE LAND THAT SUSTAINS US

**MAY 2004**

## **ACKNOWLEDGEMENTS**

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- Planning directors and staff from each of the counties in the region, as they reviewed a draft version of the map for accuracy and provided detailed information on their county’s planning and zoning efforts.
- Harford County (MD); Howard County (MD); Maryland Department of Natural Resources; Maryland Department of Planning; Montgomery County (MD); Piedmont Environmental Council; RESAC Program, Department of Geography, University of Maryland; Virginia Outdoors Foundation
- Map design and final Geographical Information Systems (GIS) work for this project was undertaken by GreenInfo Network of San Francisco, CA, directed by Larry Orman and primarily undertaken by Tommy Albo.

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# Conserving the Washington-Baltimore Region's Green Network: The Time to Act Is Now

The Baltimore-Washington region relies on an existing “green network” of farms and forest land to enrich our lives in many ways, from scenic open space and cleaner water to wildlife habitat and fresh, local foods. However, that network, our incredible asset, is shrinking. Every day we lose a little bit more open space to satisfy the strong demand for land. We can't continue to lose thousands of acres and expect to enjoy the land's benefits. Based on GIS mapping just completed, we know that we still have enough farm and forest land to create an interconnected, green network throughout the region. But it won't last. We need to act now to permanently protect this resource for the future. We know how to do it, but we must coordinate the work across jurisdictions. We need a regional effort to protect a regional asset.

## ***Green Network = Quality of Life***

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Permanently conserving an interconnected “green infrastructure” of open space is critically important to the future of the greater Washington-Baltimore region. Despite two centuries of steady population growth, the region's remaining network of farm and forest land still enriches our quality of life in many ways. Open space also provides crucial ecological services to us, such as flood protection and reduction of air and water pollution.

This “great green filter” protects public drinking water supplies, reduces the impacts of stormwater runoff and reduces the degradation of streams, rivers and the Chesapeake Bay. Meanwhile, a green network throughout the region provides vital habitat for a broad variety of mammals, birds and fish species (some of which are rare, threatened or endangered).

At the same time, the region's working farmland provides a direct supply of fresh farm products and yields direct economic benefits in rural communities, as well as helps to define the overall sense of place.

The region's population, however, is growing quickly, sprawling out into predominantly rural areas. Ultimately, we cannot save the streams, the rivers, the Chesapeake or the wildlife habitats around them if we continue to lose tens of thousands of acres of these natural filters annually to poorly planned development.

The science is clear: In stream watersheds where the acreage of impervious surfaces—rooftops, roadways and parking lots—exceeds 10 percent of the total area, we are beginning to lose the water quality that is essential to the waterways' health. Add enough damaged streams, and an entire river system suffers, all the way to the Chesapeake Bay. The easiest land to develop is often farmland closest to the areas of fastest growth. Unfortunately, this land quite likely is the most productive and most valuable from environmental, cultural and economic perspectives when managed well.

## A Fast-Closing Window of Opportunity to Conserve

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Land use in the greater Washington-Baltimore region is rapidly changing. Farmland and forests, which account for most of the region's open space, are being converted to developed land by the tens of thousands of acres each year.<sup>1</sup> Some of this new development is designed and located within existing communities, strengthening our villages, towns and urban places. Much of the development, however, is ill-planned "sprawl," the kind of growth that spreads out across the landscape, paving our open space resources and costing our communities in many more ways than it benefits them.

At the same time, this region of more than 5 million acres still has valuable green space assets worthy of permanent protection. There remains a significant amount of farm cropland with productive soils in the urban-edge and still-rural parts of the region. Other farmland has high livestock value for beef and dairy production. Some undeveloped land holds important cultural and historic resources, while additional land offers high natural resource value for water quality, water supply, wildlife habitat and protection of tidal waters of the Chesapeake Bay ecosystem.

A moderate amount of forested land in the region is currently growing harvestable timber, Christmas trees and nursery stock. There are also

large blocks of contiguous forest, some public and some private, which provide high quality habitat for "forest-interior-dwelling" migratory bird species, while helping to clean the air and filter rain water.<sup>2</sup> Finally, the "green infrastructure" of farms, forests, river and stream corridors and wetlands also helps to shape and define the region's developed and growth areas. Open space and natural settings provide unique character of place.

The bottom line is that there exists still a great, green and interconnected network of open space throughout the region that provides substantial economic, cultural and environmental benefits to its citizens. *But strong competition for land threatens the long-term sustainability of this network. Our region's green necklace needs a broadly coordinated planning effort if we wish to enjoy it in the future.*

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<sup>1</sup>From 1990–1997, the Maryland counties in this region alone converted about 10,600 acres each year to urban uses. Maryland Department of Planning, *Maryland's Changing Land: Past, Present and Future* (2001). In a Landsat-based 2002 study by the University of Maryland RESAC Program, urbanization in the region as a whole was seen as consuming an average of 28,000 acres of open land annually from 1986–2000. C. Jantz et al., *Modeling Future Growth in the Washington, DC Area*, University of Maryland Department of Geography, Mid-Atlantic Regional Earth Science Application Center (April 2002). In 1997, American Farmland Trust (AFT) identified the Northern Piedmont, which included parts of Maryland and Virginia, as a highly threatened agricultural region. American Farmland Trust, *Farming on the Edge* (1997).

<sup>2</sup>American Forests, Mid-Atlantic Eco-Regional Analysis for US Forest Service (1999).



## Existing Open Space Protection: Well-Intentioned but Often Fragmented

Over the years, the region's state and local governments and private citizens have taken steps to protect many valuable open space resources. Some efforts involved classic land conservation techniques, such as the purchase of deed-restricted open land or the sale or donation of conservation easements on private land. Indeed, almost 350,000 acres of the region's land base have been permanently conserved in this way.<sup>3</sup> Several hundred thousand more acres are owned as wildlife refuges, public parkland and public recreation open space. **Table 1** shows how much land already has been protected solely by conservation and farmland easements.

Many of the region's local jurisdictions have community master or comprehensive plans with good intentions to protect rural lands and landscapes. Without strong zoning, however, these plans may actually lead to more sprawl in the form of wide spread two- and three-acre developed lots. (Please see the "Planning and Zoning Status" map). A smaller number, including, for example, Montgomery and Baltimore Counties in Maryland, and Fauquier County in Virginia, have protected land through zoning that restricts development with densities generally considered low enough to keep agriculture, forest and other open space land uses viable.

These successful programs allow density of one housing unit per 20, 25 or even 50 acres, providing a land base where viable farming and woodlot operations are at least possible. Zoning programs operating at such densities have protected approximately 1.5 million acres. This approach, when combined with zoning for more

**TABLE 1**

### Washington-Baltimore Preserved Land, 2003

COUNTIES	ACREAGE
Anne Arundel	11,278
Baltimore	32,133
Calvert	19,917
Carroll	37,844
Charles	12,027
Fairfax	179
Fauquier	51,863
Frederick	24,951
Harford	31,725
Howard	18,431
King George	3,106
Loudoun	34,900
Montgomery	53,832
Prince George's	3,186
Prince William	405
St. Mary's	7,759
Stafford	446
<b>TOTAL</b>	<b>343,981</b>

Sources: Maryland Department of Natural Resources; Maryland Department of Planning; Piedmont Environmental Council, Virginia local jurisdictions; Virginia Outdoors Foundation.

compact growth in settled areas with existing infrastructure, can be very effective. It is unknown how much land is effectively zoned for compact, non-sprawling growth.

Some localities have coupled zoning with strategic conservation purchases or have promoted conservation restrictions. With a few single-county exceptions (e.g., Montgomery County's Transfer of Development Rights and Legacy Open Space Programs, Fairfax County's Environmental Quality Corridors), however, many of these local efforts, public and private alike, have been reactive and piecemeal. They are often fragmented and scattershot, hardly ever coordinated across county lines.

<sup>3</sup>Maryland Department of Planning and Maryland Department of Natural Resources (2003); local governments in Virginia (2003–2004); Personal communication, Mike deHart, Piedmont Environmental Council (Jan. 2004); Virginia Outdoors Foundation Web site (2003).

## ***Mapping a Coordinated Green Network for the Region***

Chesapeake Bay Foundation and American Farmland Trust undertook an effort to assess the condition of the region's open space assets, past and present attempts to conserve them and the effects that a coordinated green network might have on future growth. The project mapped the region's protected lands and collected conservation status information from state and local sources—creating a “greenprint” for conservation. (Please see the “Green Network” map). The maps include the area's refuges, parks and recreation lands, wetlands, farmland and open space conservation easements and land protected by zoning, as well as unprotected farmland, forests and stream valleys. The green network map shows a conceptual protected area at the broad regional scale, with sufficient room for growth (light gray area on the green network map). More fine-grained, local detail will certainly be necessary, as our maps do not

capture it. In dozens of interviews with local planning officials, three conclusions have become clear:

- First, the region has made much progress with respect to landscape-scale protection of open space and working lands, but it is not consistent or systematic throughout the region.
- Second, there is a natural green network that suggests itself through already-accomplished private land conservation and enlightened planning, regulatory and public/private land purchase actions.
- Third, we still have a major challenge—and a major opportunity—to protect the kind of regional, interlinked green network that is so valuable to us all.

## ***What Are the Next Steps?***

The region has made some progress. Current growth pressures, however, ensure that our window of opportunity for coordinated conservation will close if we do not act quickly. Any regional greenprint must encompass region-wide, interconnected environmental systems and natural resources, as well as the working farm and forest landscape that provides food, fiber and direct economic and cultural benefit to all of our citizens.

What can make this greenprint happen? What can launch and sustain such an endeavor? This kind of ambitious initiative requires development of an overarching vision, as well as active support

and long-term commitment, by a wide variety of public and private constituencies. It also demands an open decision-making process that defines the details over time. It requires strong political will and a specific action plan that blends both regional and local efforts.

At CBF and AFT, we see the vision beginning to emerge from the mapping we have begun here. Now we challenge others to join in to review, discuss and modify it—to take it to the next level of detail and effort. Based on that vision, an action plan must come from three sources:

- Public—organized participation by the public-at-large in town and country, and

by specific, affected stakeholders, such as builders and developers, environmental advocates, civic groups and communities of faith;

- Government—regional, cooperative intergovernmental policy development and regulatory action by state and local governments, planning districts and regional councils of government, preferably in partnerships; and
- Funders—support by public and private funding communities, for use of various financial tools and funding sources for key conservation purchases.

There may be an opportunity now for federal agencies (e.g., the National Park Service); local,

regional and national conservation organizations; the Metropolitan Washington Council of Governments; and the local jurisdictions to move this visioning process forward. CBF and AFT pledge our support toward the convening of stakeholders in a “summit” of public and private leaders, or another equally effective mechanism for progress. Together we can develop goals, objectives and a clear process for attaining them. We need local governments to promote permanent land protection in the form of easements/purchases/donations and effective zoning that restricts development to keep agriculture, forest and open space land uses viable. Further, we need to coordinate this action across jurisdictions to ensure a regional green network.

## ***The Value of a Green Network and the Need to Move Forward Now***

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The region’s green space includes productive, working farmland that helps provide its citizens with fresh fruit and produce, promoting a solid rural economy through a working landscape of farms and forests, while it protects the character of rural communities. Permanently conserved open space protects and provides historic and cultural ties for the citizens of the region, yielding honest, place-based character and identity that would otherwise be lost.

The region’s open space endows us with invaluable parks and recreation lands, corridors and “greenways”—places for a Sunday drive, a hike or a bike ride. Meanwhile, conserving this green network of natural filters will complement

massive regional efforts to reduce pollution of streams, rivers and the Chesapeake Bay. We can ensure that fishing, boating and a summer weekend’s crab feast remain a part of the region’s culture and a legacy we pass on to our children.

Adequately conserved, networked open space also can help the region guide growth while providing quality *human* habitat and appreciated property values, along with fiscal efficiency for state and local governments. In this era of corporate mobility, a region’s broad and protected green network can be a critical quality of life component that seals the deal for business location or retention.<sup>4</sup>

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<sup>4</sup>Charles J. Fausold and Robert J. Lillieholm, “The Economic Value of Open Space: A Review and Synthesis,” *Land Lines*, v.8.no.5, Lincoln Institute of Land Policy (1996).

A future that permanently preserves an interconnected green network of our invaluable open space resources is a worthy goal for the Washington-Baltimore region. Attaining this will

take hard work. Not attempting this is a conscious decision to allow such important land to be “lost.” There’s no time to lose.

## ***About our Methodology***

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Mapping resources and statistics for this project were collected from a variety of sources. The base map of the region, including its urbanized area, farm and forest land and already protected open space, was initially developed in 2002 from Landsat imagery and state and local data, by the University of Maryland Department of Geography, Mid-Atlantic Regional Earth Science Application Center (RESAC). Some new data were added as they became available: Year 2003 protected lands shapefiles and related information on protected lands in Montgomery, Harford, Howard, Loudoun and Fauquier counties from those local jurisdictions; and the addition of a northern sliver of land in Harford, Baltimore and Carroll counties that was excluded from the original Landsat image.

Forest and farmland were combined into one “color” representation, and other adjustments were made, by GreenInfo Network of San Francisco, California, our GIS consultant for this project. The “plans and policies” map was hand-drawn by AFT and CBF from information

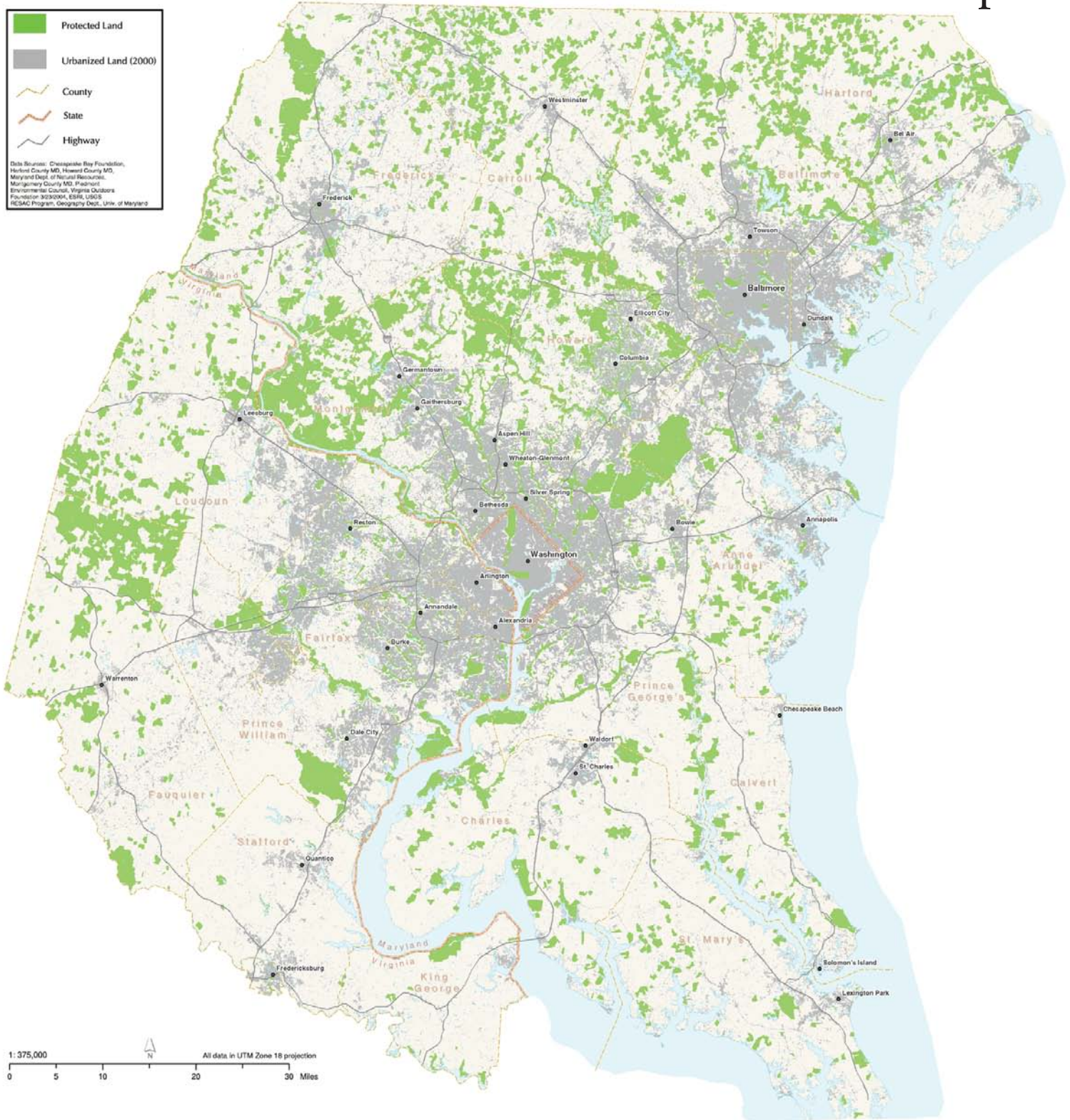
directly received from local jurisdictions on hard-copy maps and in interviews, May–October, 2003, and digitized by GreenInfo Network in March 2004. (Interviews were conducted with senior planning staff in every county covered by the maps to discuss information displayed on draft versions.) The Green Network map/overlay was developed by AFT and CBF utilizing the overlaid information from the other maps, good conservation and environmental planning practice and best professional judgment.

Statistics on land conserved by easement were separately collected from information developed by the Maryland Departments of Planning and Natural Resources, the Virginia Outdoors Foundation, local jurisdictions and the Piedmont Environmental Council. Statistics on land that is effectively protected by zoning were derived by digitizing and measuring that layer through the GIS system. ESRI’s ArcGIS 8 was utilized as the basic GIS software by GreenInfo Network, Inc.



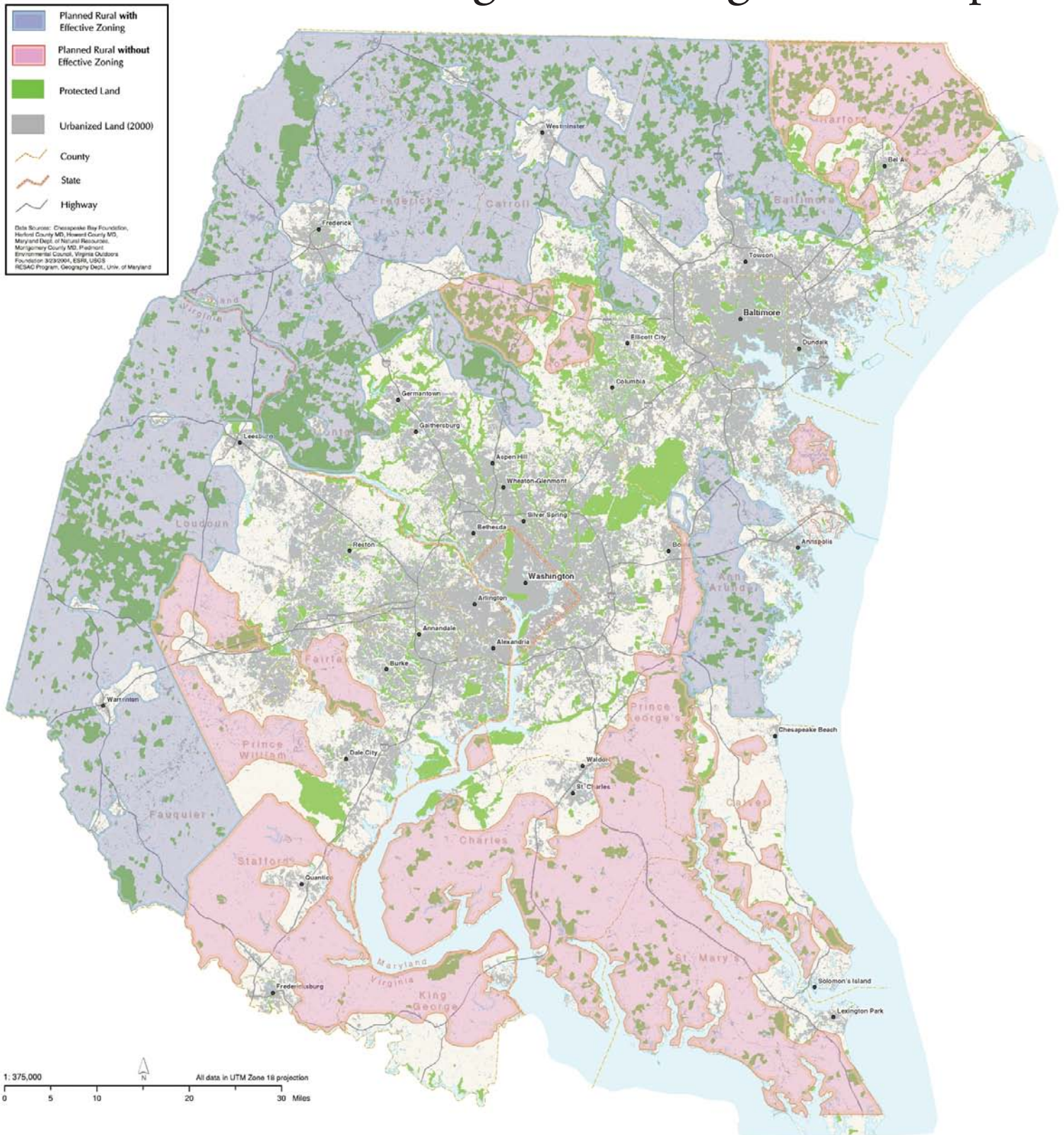
## Conserving a Green Network

# Base Map



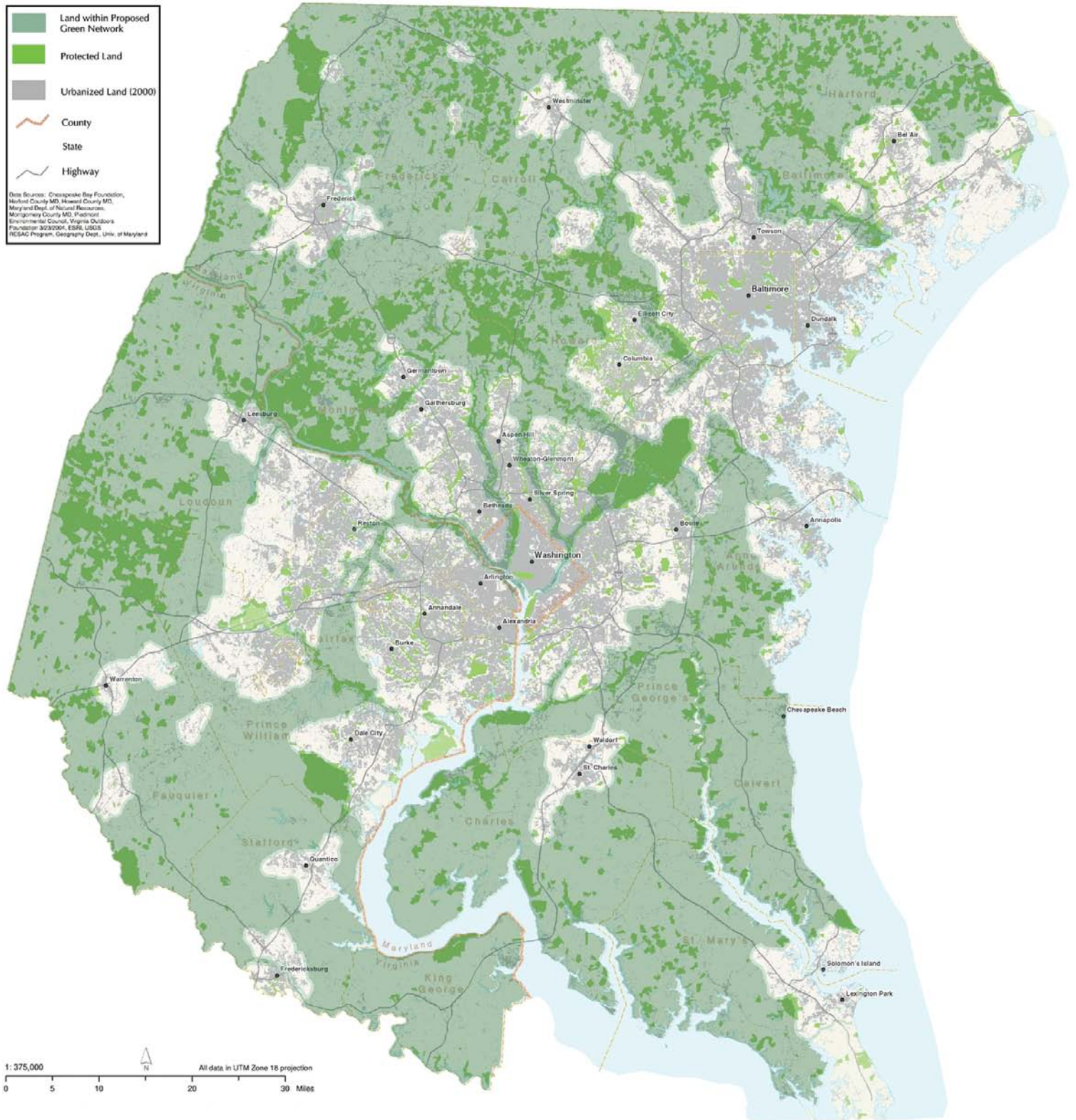


# Planning and Zoning Status Map





# Green Network Map





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