

Greenprints Funding and Policy:

A review of policies, funding opportunities,
and success stories to inspire greenprints

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Executive Summary

This white paper describes both opportunities for funding greenprints and the policy context for greenprints, including enabling policies and policies that can result from greenprints. We share funding, policy, and engagement examples from across the country. Also included are experiences of greenprint practitioners and lessons they have learned from greenprints in their communities.

A greenprint is a strategic conservation plan

A greenprint is a strategic conservation plan that recognizes the economic and social benefits that parks, open space, and working lands provide communities. Benefits include recreation opportunities through the use of parks and trails, habitat protection and connectivity, clean water, agricultural land preservation and increased resilience to climate change.

Through the development of a greenprint, stakeholders identify, map, and prioritize areas important to the conservation of plants and wildlife, water resources, recreational opportunities, and working landscapes.

Greenprints include maps and associated data to help landowners, local governments, and agencies focus development away from important natural areas and working lands, prioritize conservation areas, and help the public understand the tradeoffs of various land use decisions.

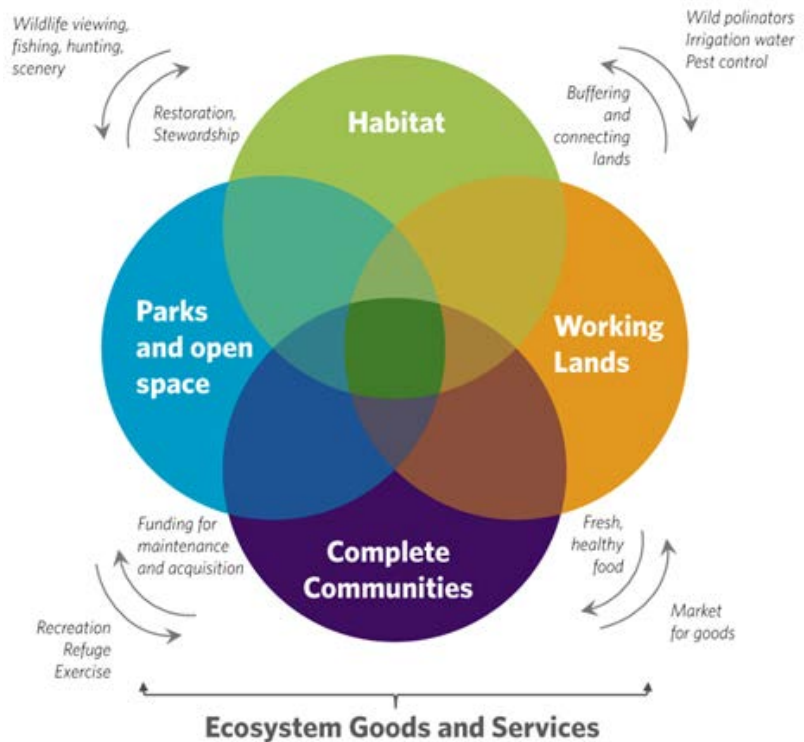


Figure 1: Land uses, ecosystem services, and conservation values are interconnected. Graphic courtesy of Dick Cameron, The Nature Conservancy.

Getting started with a regional conservation strategy

Greenprints are intended to protect natural resources and working lands, and set a vision for development and conservation. From drinking water sources to recreational lands, from floodplains to open spaces, greenprints may be used by communities, infrastructure agencies, and local and regional governments to guide development toward locations that help preserve and maintain natural resources.

Where to go for more information

This white paper is a part of the [Greenprint Resource Hub](#), a joint effort among The Nature Conservancy, The Conservation Fund, and The Trust for Public Land to create a place for practitioners, policymakers, and the interested public to access a clearinghouse of information on greenprints that is credible, timely, and implementable. The Greenprint Resource Hub includes basic information about greenprints, access to over 50 greenprint case studies, a greenprint location map, best practices, details on enabling funding and policies, and links to recent greenprints.

Funding a greenprint

Greenprints allow communities to plan for multiple benefits. As a result, they can create partnerships between non-traditional allies, unlock different funding sources, inform smart growth, and lead to durable and lasting results.

There is no formula for securing funds to build a greenprint. Most greenprints are funded by grants and matching funds from a mix of federal, state, and private sources. Half of the greenprints featured on the Resource Hub were funded by both public and private sources; 30 percent were government funded; and 20 percent were funded by foundations and individual donations.

Funding quilt engages stakeholders

For greenprint development—as well as greenprint implementation—agencies and communities often assemble a “funding quilt,” with backing from many different sources ranging from federal matching grants to local grassroots fundraising. One advantage of diversified funding is that multiple groups have a stake in the success of the work. Most greenprints described on the Resource Hub have been funded through a variety of sources.

The [Penobscot Valley Community Greenprint](#), 2009, included funding from private and public entities, including 12 communities in south-central Maine. This approach to diversified funding had multiple benefits, including broad involvement, which helped each municipality engage. The Bangor City Manager anticipated that some towns might be reluctant to participate based on an expectation that more populous communities could exercise disproportionate influence on the plan outcomes. To overcome these reservations, the Manager offered a decision-making and financing structure early in the planning process to ensure equity among partners and municipalities. The steering committee was comprised of two representatives from each town, and each town had an equal vote on all decisions made by the partnership. While voting power was equal among all towns, each town financially participated on a per capita basis at 50 cents per resident.

Table 1: Example of greenprint funding quilt with multiple funding sources

Regional municipalities (\$0.50 per capita)	\$42,000
State Planning Community Challenge Grant	\$15,000
Individual Donor AA	\$10,000
Local Community Foundation	\$15,000
Donor Advised Funds	\$25,000
Individual Donor BB	\$15,000
Foundation XX	\$40,000
State Fund for Land Conservation	\$30,000
	\$192,000

Communities Planning Grant supports a vision to 2040

Funding for the [Mid-South Greenprint 2015/2040](#) was quite different—it originated with one large grant. In 2011, Shelby County (which includes Memphis, Tennessee) was awarded a \$2.6 million Housing and Urban Development (HUD) Sustainable Communities Planning Grant. The County brought together 80 organizations, agencies and community groups and the effort grew to include neighboring counties in Mississippi and Arkansas who, within three years, collaboratively developed a greenprint that sets



Figure 2: Seeded with federal funding years ago, the Mid-South Greenprint is now a community resource. Graphic from www.facebook.com/midsouthgreenprint/

a regional vision. This grant and [subsequent funding](#) from HUD enabled Shelby County to grow the reach of the greenprint and involve neighboring counties and states. We describe more about the Mid-South community involvement process, and current use of the greenprint for transportation and resilience, later in this white paper.

Federal funding

Federal funds are available to state and local governments and nonprofit organizations through appropriations, grants, and incentives.

Federal funding has played a critical role in growing greenprints and helping participants to think big. While The Trust for Public Land and stakeholders were in the midst of preparing the [Chambers County Greenprint for Growth and Conservation](#), 2009, Hurricane Ike struck the upper Texas coast and dealt a heavy blow to Chambers County. In the aftermath of the storm, and based on the extent of damages and the limit of county resources, the Federal Emergency Management Agency provided Long-Term Community Recovery (LTCR) support to develop a local disaster recovery plan. Like a greenprint, the LTCR process is community-driven and reflects ideas and priorities expressed at public open houses and committee meetings. The Chambers County LTCR Plan resulted in 34 projects, including the County-wide Parks and Recreation Master Plan, Ecotourism Marketing and Outreach, Restoration and Preservation of Coastal Marsh, County-wide Drainage Improvements, and Shore Protection and Beach Nourishment. A recent conservation easement proposal was for wetland and prairie habitat near Smith Point, an area rated as high conservation priority in the greenprint. With substantial funding available from Deepwater Horizon oil spill mitigation, many of the priorities identified in the Greenprint will be realized. In addition to helping with specific projects, the Greenprint is used as a tool to enhance the county's resilience in the face of future storms.

The LTCR Planning Process is an opportunity to "think big." Don't limit yourself to merely putting things back the way they were prior to the disaster.

FEMA, Long-term Community Recovery Planning Process Guide

Some greenprints described below, like the Mid-South Greenprint, were funded through stand-alone federal funds. The Lake Worth Greenprint was enabled by a grant from the U.S. Environmental Protection Agency through the Texas Commission on Environmental Quality to the North Central Texas Council of Governments as a part of a long-range watershed protection strategy. Others programs, like the Clean Water State Resolving Loan Fund, require matching funds, underscoring the need to secure state, local, and private funds.

These and other collaboratives have developed extensive public resources listing funding sources for greenprint implementation. The [Funding Guide for Green Space Connectivity](#) is a great resource, as are conservation funding sections in many greenprints, including [King County](#) and [Lake Worth](#).

State funding

Land use decisions are primarily the domain of local governments, but public policies established by state governments shape those decisions significantly—particularly for conservation of natural and working lands, including:

- providing a state conservation vision and sharing it with local leaders
- funding greenprints and conservation planning processes
- coordinating ecological data and mapping
- providing incentives to implement greenprints

Maryland does all four of these things. The [Maryland GreenPrint](#), 2011, maps Targeted Ecological Areas (TEAs). TEAs are not acreage goals and are not associated with any zoning classification or restrictions on land; they are simply areas identified as being a good investment from an ecological perspective when making decisions on where to spend limited acquisition dollars.

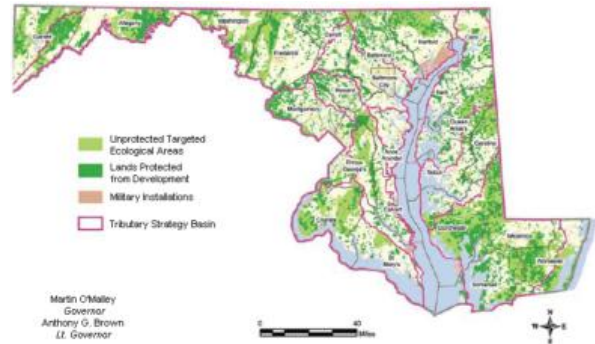


Figure 3: GreenPrint map displaying unprotected and protected ecological areas. Graphic from www.environment.fhwa.dot.gov/integ/pubcase_6001.asp#two-d

Following development of a local or regional greenprint, most states provide local governments with two important tools: direct funding (grants and incentives) and the authority to raise local funds. Maryland’s “[Program Open Space](#)” is an example state program that provides funding to implement greenprints.

Maryland’s program is administered by the Department of Natural Resources. [Florida’s greenways program](#) is administered by the Department of Environmental Protection. Many states also have innovative multi-agency programs to coordinate activities that support sustainable communities and environmental stewardship. For example, California’s [Strategic Growth Council](#) funded the [Emerald Necklace Expanded Vision Plan](#), 2014; the [San Joaquin Valley Regional Greenprint](#), 2014; and the [Santa Barbara Greenprint](#), 2013. The Santa Barbara Greenprint is a part of the Regional Transportation Plan and Sustainable Communities Strategy, and is an example of a state-funded plan that directly informs regional transportation and greenhouse gas reduction policies.

Local funding

Local governments that demonstrate investment of local funds are much better positioned to secure funding from federal governments and attract other local and state government or private philanthropic partners. In addition to cities (like those described in the Penobscot Valley example above), many local and regional agencies will benefit from greenprints: county transportation agencies, Metropolitan Planning Organizations (MPO), public health departments, water agencies, etc.

Private philanthropy, land trusts, companies, and partners

Foundations work with communities across the country to design, fund, and implement greenprint visions. The Environmental Grantmakers Association’s [Tracking the Field](#) report analyzes trends in environmental grantmaking. Their last report found that funding for the “land” sector grew dramatically, making it the most-funded issue group in place of “energy & climate.” The [Funders Network for Smart Growth and Livable Communities](#), exists to inspire, strengthen and expand funding and philanthropic leadership that yield environmentally sustainable, socially equitable and

economically prosperous regions and communities. Funders interested in strategic and regional philanthropy will oftentimes support land trust work on greenprints.

Private dollars directed toward conservation can play an important role: building organizational capacity in conservation groups, serving as a catalyst for conservation initiatives, and matching public funds available for conservation projects. Land trusts often leverage private funding from individual donors and private foundations with public funding.

In-kind and grant funding from companies are also a potential source of funding. Many greenprints rely on Esri's Conservation Program Grants, and complimentary use of GIS mapping software. The American Planning Association's [Private Stakeholders Guide](#), developed as a part of the *Greater Baltimore Wilderness Regional Resilience Green Infrastructure Network Local Implementation Toolkit*, describes ways private stakeholders can contribute to greenprint development and implementation.

Policy

Greenprints are a product of—and can influence—local policy and funding. They need to anticipate cumulative effects of different public plans and investments; consider costs and benefits to the community; and align with local land use plans and development regulations.

Many policies influence and are influenced by greenprints, including:

- comprehensive plans
- priority preservation areas
- watershed plans
- wildlife action plans
- compensatory mitigation
- greenhouse gas emission reductions



Figure 4: Working together increases the likelihood of policy progress. Graphic from American Planning Association, Green Infrastructure Network Tool 4: Public Investment Guide

In this section, we provide examples of ways greenprints interact with local and regional policies. We begin with a focus on local policies and expand out to multi-state efforts toward endangered species protection and economic development.

Weaving regulations and plans into a clear vision with measurable goals

The [Miami-Dade County GreenPrint](#), 2010, set ambitious goals: “never before has one County document detailed the impact of so many projects and processes. GreenPrint connects the dots, weaving regulations and plans into a clear vision with measurable goals.” The GreenPrint is a sustainability plan at its heart, and in addition to greenhouse gas reduction goals it sets goals and policy targets for environment, smart land use, and healthy communities.

The County’s GreenPrint lays out a vision, and is an action plan with five-year cycles, focused on specific targets for 137 initiatives within its seven interconnected areas. Initiatives are shown in an extensive [Implementation Table](#), which presents information for each initiative, such as the lead entity and partners, funding scenarios, legislative action needed, and more. This table is used to monitor progress and shows where policies are needed and interrelated. Two of the 137 initiatives and their associated responsibilities, funding, and policies are shown below in Figure 5.

Initiative	Lead & Partners	Funded and Unfunded Costs		Funding Sources	New Legislative Action
		Capital	Operating		
STRATEGY: Protect environmental and other lands that may be important for ecosystem and commun					
45. Continue to acquire important lands through the Environmentally Endangered Lands (EEL)	Lead Department of Environmental Resources Management (DERM) Partners	Funded: FY 10/11 – FY 14/15: \$28.173 million	Within existing staff resources funded by EEL Trust Fund	EEL Trust Fund	Yes. BCC approval of acquisitions

Initiative	Lead & Partners	Funded and Unfunded Costs		Funding Sources	New Legislative Action
		Capital	Operating		
STRATEGY: Better integrate planning and prioritize investments					
77. Fund and construct priority non-motorized multi-use trails	Lead Parks & Recreation Department (MDPR) Partners Metropolitan Planning Organization (MPO), Public Works Department (PWD), Transit Department (MDT), Florida Department of Transportation (FDOT)	Biscayne Trail and Black Creek Trail Bridge: 2,599,789 Averages: Capital approximately \$875,000 per mile for paved trail Maintenance: approximately \$15,493 per mile	Surface Transportation Enhancement (SE) program, Federal High Priority Projects (FHPP), Surface Transportation Program (STP), Legislative Earmarks, General Obligation Bonds (GOB), American Recovery and Reinvestment Act (ARRA) stimulus funding. Potential funding from the passing of the Active Community Transportation (ACT) act of 2010	Need BCC pass waiver on GOB 17% soft cost cap (planning services, design services and project administration) to permit expenditures of up to 25% (see form for details).	

Figure 5: The Miami-Dade GreenPrint is an umbrella for and informs existing plans. Implementation brings together diverse partners, identifies funding sources and policy, and sets milestones. Source: www.miamidade.gov/greenprint/pdf/implementation_table.pdf

Comprehensive Plans

The Miami-Dade GreenPrint took another big policy step: integrating with the County Comprehensive Development Master Plan, so actions are supported by the Comprehensive Plan. Local **comprehensive plans** or **general plans** are a primary planning tool used by municipalities to guide future growth and development. These plans typically make recommendation for land use, transportation and circulation, residential areas, community facilities, and parks and open space; using a 10-20-year planning horizon.

Incorporation into a general or municipal plan is often a critical implementation step for a municipal greenprint, not least because of the association between comprehensive plans and capital improvement plans. Aligning these demonstrates alignment with the overall local vision and goals and defines specific investment. For example, capital investments related to road construction or repairs may provide the opportunity to incorporate trail infrastructure in the right-of-way. However, investments in roadways can also be at odds with greenprint goals; smart planning can lead to better decisions, and provide risk reduction for developers. When greenprints identify important habitat, water resources, and agricultural land; transportation agencies and other developers have the opportunity to avoid impacting lands and waters and thereby minimizing risk to projects. As described below, successful greenprints often involve partnerships with MPOs.

Greenprints can leverage existing regional plans and inspire future ones. For example, the [Woodstock Georgia Greenprints Trail System](#), 2008, was adopted into the [Comprehensive Town Plan](#) in 2008 and informs trail development in Woodstock, Georgia. It supports the Georgia Land Conservation Act (which protects 20 percent of Georgia’s greenspace), and the Atlanta Regional Commission Regional Development Plan which sets open space policies for the 20-county Atlanta metropolitan areas threatened by development. One of the implementation steps is then to feedback to the Cherokee

County, Cobb County, and the Atlanta Regional Commission to be incorporated into local and regional plans.

Priority preservation areas

Many state, regional, and local agencies have “priority preservation areas” as a framework to focus public investment, technical assistance, and action to encourage development and preservation consistent with regional goals. These programs provide a framework for habitat protection and usually stress the importance of more localized planning. Greenprints typically use preservation area programs as guiding documents for conservation action. And, in turn, they address local needs and interests while contributing significantly to state conservation goals.

Priority preservation areas often include agricultural lands. Maryland defines agricultural and forest lands intended for resource protection or conservation as part of the sensitive area element of comprehensive plans. Counties with effective local agricultural land preservation programs can be certified. Four criteria for certification include:

- contain productive agricultural or forest soils, and can support profitable agricultural and forestry enterprises
- be governed by local policies that stabilize the agricultural and forest land base and provide time for easement acquisition before areas are subject to development pressures
- be large enough to support normal agricultural and/or forestry activities
- be accompanied by the county’s acreage goal for land to be preserved through easements and zoning equal to at least 80 percent of the remaining undeveloped acres of land in the area

This certification allows counties to retain 75 percent of the locally generated agricultural land transfer tax revenue.

Massachusetts uses a “land use priority plan” process and lists regionally significant priority development areas and priority preservation areas. The Massachusetts strategy includes: 1) identifying promising places for growth and preservation, 2) creating prompt and predictable zoning and permitting, 3) investing in public infrastructure to support growth in promising places, and 4) marketing priority locations to businesses and developers.

Compensatory mitigation

Transportation and other infrastructure agencies attempt to minimize any impacts to the environment, but some impacts are unavoidable. Compensatory mitigation is used to offset these impacts by restoring or preserving land, including habitats for threatened or endangered species. State and federal permitting processes are a major component of the project development and delivery process for transportation projects. Nationally, over \$3.3 billion is spent annually on compensatory mitigation under the Clean Water Act and Endangered Species Act programs, significant incentives exist to maximize conservation outcomes.

While infrastructure agencies are not required to meet all the conservation goals for a region through mitigation obligations, regional greenprints can be used to better integrate regional mitigation. The longevity of infrastructure agencies makes their partnerships with conservation planners an asset.

Many successful greenprints have built in partnerships with transportation agencies toward regional sustainability. The [Chicago Wilderness Green Infrastructure Vision](#), 2004, was updated in 2013 with a dataset that includes a GIS model indicating regional priority areas for wetland conservation and restoration. A next step is work with the U.S. Army Corps of Engineers to encourage mitigation bank developers and applicants proposing permittee responsible mitigation to locate their compensatory mitigation projects within the green infrastructure network (in addition to complying with any other requirements).

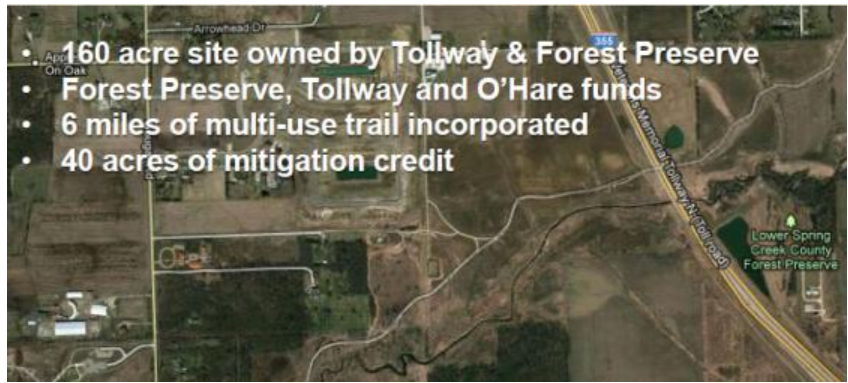


Figure 6: This satellite photo shows the winding stream that connects two area forest preserves and nearby roads in Joliet Illinois. Source: www.environment.fhwa.dot.gov/ecological/webinars/webinar_07242012.asp

Five main federal regulatory programs are associated with compensatory mitigation:

- Clean Water Act – Section 404 (three-quarters of funds spent on compensatory mitigation are generated through mitigation requirements of Section 404 of the Clean Water Act. The Environmental Law Institute has created [this handbook](#) for practitioners)
- Endangered Species Act – Section 10
- Federal Natural Resource Damage Programs – e.g., oil and chemical spills
- Federal Power Act – hydropower licenses
- Northwest Power Act – in the Columbia River Basin

For the most part, funds collected under these federal laws are reactively allocated on a permit-by-permit or case-by-case basis, with minimal regard for how they might be used to piece back together the fabric of the biological landscape. Greenprints, however, can help focus compensatory mitigation investments to support local and regional conservation priorities, especially when linked with state and federal planning efforts described below.

Habitat Conservation Plans

In recent years, to avoid ‘postage stamp’ mitigation, many regional planning efforts have been undertaken that allow for development while providing for conservation of habitat and species. Known as Habitat Conservation Plans (HCP) under federal endangered species regulations, these plans [range in size](#), and can cover dozens of species, and involve multiple state and federal agencies as well as the local agencies who are usually the proponents of the plans.

Regional HCPs are a strategic tool to protect endangered and threatened species and represent an important integration of land use planning, regional and interagency coordination, and habitat conservation. Regional HCPs offer a more efficient process for protecting the environment and approving permits for local projects and activities that may affect endangered species and their habitats. While these plans can be costly and time consuming to produce, they are typically coupled with state plans to meet Endangered Species Act requirements and enable local agencies to allow

projects and activities to occur in endangered species' habitats. In exchange, those projects and activities must incorporate HCP-prescribed measures to avoid, minimize, or compensate for adverse effects on natural communities and endangered species.

Another extension of work by greenprints and habitat plans is the development of California's Regional Advance Mitigation Planning program. This nascent program provides the potential for landscape-level planning for mitigation independent of individual projects. A pilot project based in the [Central Sacramento Valley](#) overlaid Caltrans and Department of Water Resources future infrastructure projects with a conservation greenprint to analyze potential, unavoidable impacts in the region in the next 20 years.

Wildlife Action Plans

Each of the fifty states is required to develop a State Wildlife Action Plan (SWAP) under federal legislation that established the Wildlife Conservation and Restoration Program and State Wildlife Grants Program. Given their habitat focus, SWAPs don't include the multiple benefit aspect of greenprints; but they do provide scientific data and identify priorities for conserving habitat. They also can be used to direct the allocation of compensatory mitigation funds to support state, regional, or local conservation objectives. In this way, greenprints can inform SWAPs and SWAPs can inform greenprints, all toward the goal of conserving native species and habitat.

The [Regional Conservation Strategy for the Greater Portland-Vancouver Region](#), 2012, is a conservation greenprint that fits into—and is crucial to—larger planning efforts in two states. The Regional Conservation Strategy addresses the urban and rural connections in almost 3,000 square miles on both sides of the Columbia River. It nests within Oregon and Washington state conservation strategies (including the SWAPs) and existing federal and local planning efforts and strategies. It provides accessible and usable information; including [this viewer](#) that provides data for policymakers, funders, practitioners, and the public without GIS capacity in-house.

The [Louisiana Master Plan for Wildlife Management Areas and Refuges](#), 2014, establishes a comprehensive strategic direction for management, future conservation, connectivity, and restoration of the Wildlife Management Area (WMA) and Refuge program. The Conservation Fund worked with the Louisiana Department of Wildlife and Fisheries (LDWF) to map and evaluate the state's ecological and recreational resources, including 1.6 million acres managed by LDWF. This vision rests on strategic acquisitions to expand current WMA/Refuge holdings while pursuing new lands and the management of these lands moving forward. This greenprint provides guidance on site-level management plans to help LDWF staff craft management plans for each WMA and refuge in a consistent and timely manner.

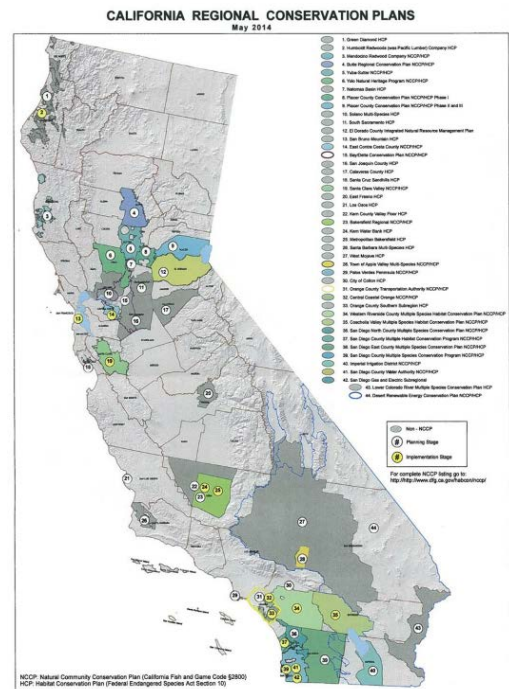


Figure 7: This map shows the magnitude and location of California regional conservation plans. Source: www.wildlife.ca.gov/Conservation/Planning/NCCP/Plans

The LDWF green infrastructure network proposed within the Master Plan covers more than 16 million acres of Louisiana. “The majority of the land within the network is privately owned and should remain so in the future. The Master Plan provides strategies for LDWF to help landowners continue the sound stewardship of their lands. The Master Plan can help key partners focus conservation efforts, raise public awareness, and increase the resources available for land conservation, restoration and stewardship.”

Partnerships

As the Louisiana Master Plan and many other greenprints demonstrate, private working lands are an important part of the community and conservation efforts. Greenprints can facilitate coordination across jurisdictional boundaries on private and public lands.

The [Garfield County Greenprint for Conservation and Economic Opportunity](#), 2012, explicitly focused on working with willing landowners to conserve open space, and is less concerned with the federal- or state-owned land in the county. It also includes an economic evaluation of the value of open space to the residents in the county. The greenprint touches on implementation by government regulation or by purchasing land or development rights from willing landowners.

Working lands present an additional opportunity. The Natural Resources Conservation Service and local Resource Conservation Districts promote land and water stewardship through their outreach mechanisms and technical support. They offer programs to help landowners make voluntary improvements to their lands that benefit their agricultural operations and wildlife.

Following is an examination of interactions between agencies, policies, funding sources and greenprints. We will consider specific greenprints and explore how they have evolved over time, both informing policy, and being informed by policy.

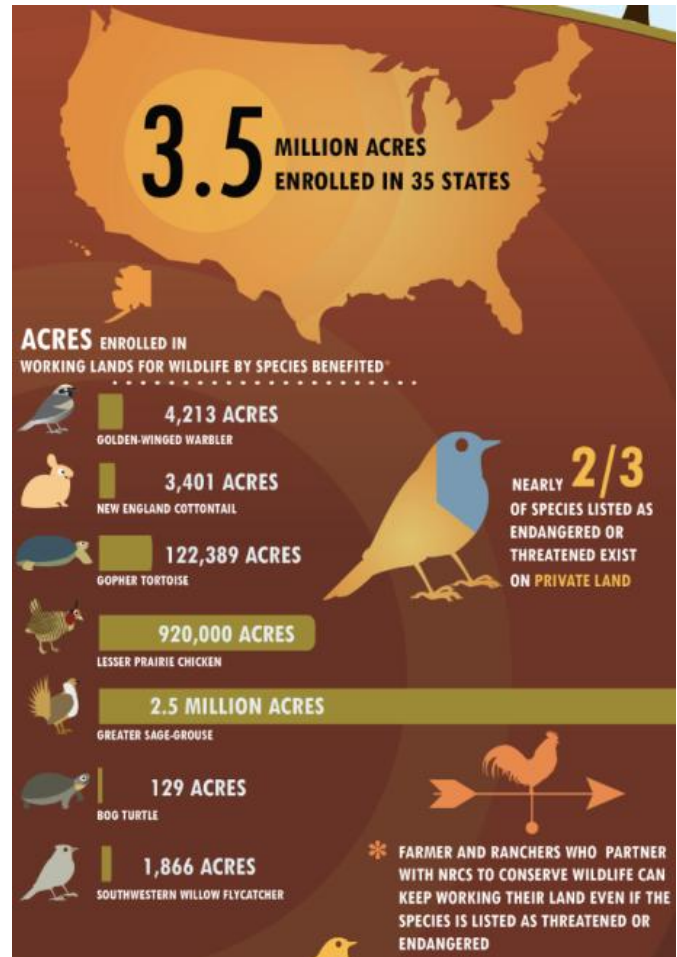


Figure 8: Integrating working lands benefits wildlife and community greenprints. Source: www.nrcs.usda.gov/Internet/FSE_MEDIA/stelprdb1119354.jpg

Greenprints in action

Greenprints allow communities to plan for multiple benefits, and as a result, they can create partnerships between non-traditional allies, unlock different funding sources, inform smart growth, and lead to durable and lasting results at many levels and in many sectors.

Let us look at the original funding and policy context of a few greenprints, consider how the process to develop them has informed implementation, and see how they have evolved to meet community needs. We look to Tennessee's Mid-South region where social equity and unmet recovery housing needs motivated Greenprint 2015/2040. Turning to Silicon Valley, California, we see a greenprint that has resulted in multiple funding sources for community identified conservation priorities. Three different greenprints in North Texas provide another example of involving a broad group of stakeholders, this time planning together to improve water quality.

Multi-benefit planning

The Mid-South **Greenprint 2015/2040** establishes more than 150 actions for long-term health and land use, resource conservation, community health, transportation alternatives, neighborhood engagement, and social equity. Truly regional in scope, the plan is being implemented by 18 municipalities and four counties in Tennessee, Arkansas and Mississippi; the two MPOs; state and local transportation, natural resource, and health departments; business leaders; and local citizens.

In 2010, the Mid-South region had a combined population of 1,180,000; with about 650,000 in the City of Memphis. In 2010, African Americans made up the largest share of the region with 47 percent of the population, followed by Whites with 44 percent. Population trends indicate a move toward greater diversity; however, much of the fast-growing region still exhibits patterns of segregation.



An equitable process, involving the community

The planning structure emphasized achieving strong representation from residents especially from minority and low-income communities. In addition to public forums and neighborhood meetings, the Memphis Area Association of Governments solicited input during 20 meetings of churches and civic organizations in the region.

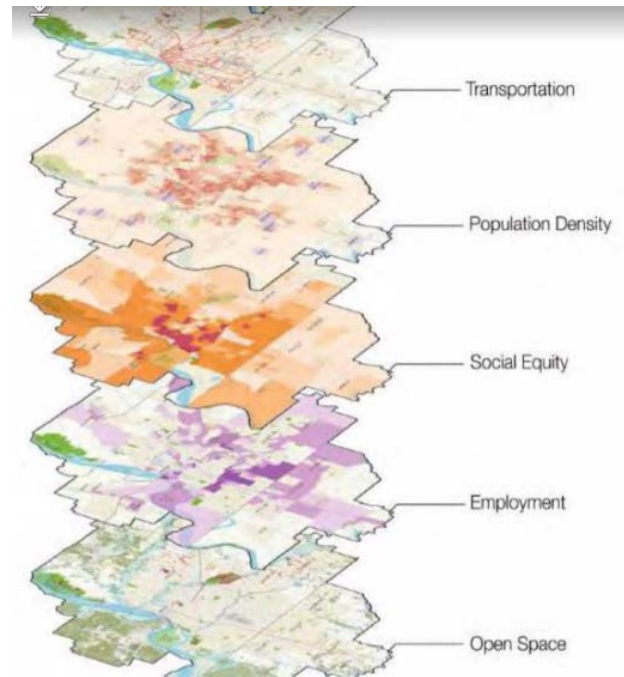


Figure 9: The Mid-South geoportal includes multiple layers and links to external tools like the Food Access Research Atlas and Fair housing Equity Analysis. Source: midsouthgreenprint.org/resources/mapping-and-data-resources/

Participants, through a dot voting exercise, selected safe streets for biking and walking as a top priority, followed by neighborhood beautification, waste reduction, creation and maintenance of parks, and a connected system of greenway trails and bicycle lanes.

As compared with the rest of the United States, individuals living in the Memphis urbanized area have lower incomes and more critical health issues. Heart disease, a leading cause of death in the US, is particularly high in the Mid-South. One third of adults are obese and more than one in 10 people in the region have diabetes. Many chronic diseases can be partially attributed to environmental and social factors such as physical activity and access to fresh foods. Over 29 percent of the region’s population reports no leisure time physical activity (above the national average of 24 percent). Access to trails for all residents in the region was a key goal of the Greenprint—which sets a path to 500 miles of greenway trails and 200 miles of bike paths by the year 2040.

Work with Metropolitan Planning Organizations

It would be hard to achieve the ambitious trail and transportation goals in Mid-South, without the involvement of the region’s two MPOs. But in 2011, development of the Greenprint was not a priority for the MPOs. Three severe storms resulted in flooding along the Mississippi River and local tributaries, resulting in three presidentially declared disasters, and \$2 billion in damages in Shelby County. The greatest impacts were to infrastructure.

The floods—combined with the long-term drain on infrastructure due to the region’s growth and the movement of housing and jobs away from a central core to outlying and suburban communities—increased demand on sewer, water, and transportation. Investments focused on automobile capacities and even the region’s primary commercial corridors at the expense of pedestrian infrastructure.

The Greenprint clarified the importance of public transit and alternative modes of transportation in access to employment, services, healthy food, activities, and green space, particularly for the estimated 30 percent or more of the population that does not drive due to age, physical ability, or household income. Greenprint 2015/2040 provides a framework for the MPOs to work with local leadership to:

- enact and support policies that facilitate and support the region
- make multimodal transportation a priority for future projects and funding
- consider the locations of proposed trail routes and on-street connectors using [this Concept Map](#)

“Because greenspace has such a broad appeal across communities and political jurisdictions, it was believed this type of plan could most effectively build the framework for regional collaboration.”

Collierville Town Planner, 2012

Adaptation and resilience

While the floods of 2011 were a catastrophe, they also helped Mid-South leadership use the concept of “making room for the river,” to address four core resilience values that build off the Mid-South Greenprint:

- protect lives and improve quality of life through creation of wetlands and other flood storage

- reduce community burden of vacancy and vulnerable housing by removing residents from homes at risk of continued flooding and developing a vacant lot program
- establish connectivity to opportunities and community assets including trails identified by the Greenprint, connecting to green space, housing and jobs
- implement the regional sustainability plan integrating scalable, resilient solutions by creating innovative solutions to flood prone communities along Greenprint corridors

The Mid-South Greenprint has far exceeded the original aims of the 2011 HUD Sustainable Communities Planning Grant. In their work to learn and build community support, Shelby County succeeded in engaging neighboring counties in Mississippi and Arkansas. Within three years; these agencies, churchgoers, road builders, and trail builders; collaboratively developed a greenprint that sets and is implementing a truly regional and still community-based vision.

A roadmap for challenging decisions

Like Shelby County, California’s Santa Clara Valley Open Space Authority (OSA) began work on a greenprint with community engagement and with an open discussion of major challenges, including:

- **water demand**, expected to exceed supply in 30 years (unless significant investment is made); more than 228 miles of polluted streams; 60 percent of recharge areas that absorb rainfall have been developed
- **agricultural land loss**, with almost half of ag land lost to development in the last 30 years, and over half of the 27,000 remaining acres at risk of development in the next 30 years
- **growth**, with an expected 36 percent growth in 30 years, Santa Clara is the fastest growing county in the Bay Area

The greenprint itself, as well as its process and implementation, provide insight for practitioners. The Greenprint was developed through a stakeholder input process in which data layers were weighted: 30 percent water resources, 30 percent biodiversity, 15 percent agriculture, 15 percent recreation, and 10 percent viewshed. A heatmap of conservation priorities emerged, and the [Santa Clara Valley Greenprint](#), 2014, identified 10 sites as high priorities for conservation. To give a sense of how the Greenprint strategy and increased funding would translate into on-the-ground improvements, the OSA developed [this interactive map](#) showing projects identified through the greenprint process that would be prioritized for conservation funding in a pending ballot measure.

Supporting investments in nature

Following extensive engagement of experts to affirm target priorities, Santa Clara County residents voted to support these conservation projects with Measure Q (a \$24 per parcel annual tax for 15 years), which passed with 68 percent of the vote, resulting in \$120 million for local conservation projects.

The OSA’s expenditure plan prioritized 10 landscapes for open space and agricultural conservation as well as additional areas for urban open space preservation. In addition to preserving open space in unincorporated



areas, the OSA also supports open space projects within cities, and will spend up to a quarter of the Measure Q parcel tax revenues on urban open space, parks, and urban farms and gardens through grants to city park departments and nonprofit organizations. The OSA’s agricultural program uses parcel tax funds to preserve agricultural land use through both acquisition and conservation easements. The OSA’s mission includes protection of a greenbelt of agricultural land at the urban edge to support the economic viability of farming in the county and to support the regional food system.

In addition to funding, the OSA is collaborating with Santa Clara County to inform future county planning policies and programs focused on agricultural lands and ecosystem services. Including the potential addition of an agricultural element to the County General Plan (coordination between greenprints and general plans is described above in the section on Comprehensive Plans).

The Greenprint also supports the formation of new programs that will incentivize good stewardship on private lands through creation of ecosystem service payments. This is supported by the OSA’s [Healthy Lands & Healthy Economies](#) initiative, which provides a regional economic valuation that underscores how investment in open space lands in Santa Clara County contributes to quality of life and provides valuable economic benefits in terms of groundwater recharge, maintaining water quality, reducing flooding, and more.

Linking land and water

The importance of land for water supply, floodplain attenuation, providing habitat, creating fertile soil, and improving water quality is widely accepted. Greenprints help agencies to quantify, prioritize, and protect land that will improve water quality and supply reliability.

We saw how greenprint work in Santa Clara County included building strong partnerships with infrastructure agencies, including the Santa Clara Valley Water District. As a result, the Water District now has additional information to consider how it can partner with other agencies to preserve land through habitat mitigation projects and improve district cost-benefit ratio in development of large-scale capital projects.

Securing water resources is critical to people and nature, and water was the core layer in three North Texas greenprints. Lake Worth was the second municipal water supply built in Texas, first filled in 1914. A century later, nearby Fort Worth is one of the fastest growing metropolitan areas in the country, and the scenic qualities that have defined the region and provided a natural filtration system for the lake are at risk from impending development.

In a June 2013 poll, four out of five Fort Worth



Figure 10: The model for identifying Lake Worth priority water quality zones included features that help protect water sources and reduce pollution in stormwater runoff. Source: www.nctcog.org/envir/SEEscg/REF/Lake_Worth_Greenprint_Report_9-8-15.pdf

residents said they would support funding to acquire land to protect water. The overall goal of the [Lake Worth Greenprint](#), 2015, was to identify the most important lands for protecting and enhancing Lake Worth's water quality. A public poll conducted early in the process showed that enhancing recreational opportunities is also important. Responding to this public input, the technical team from The Trust for Public Land and the Lake Worth Regional Coordinating Committee used the greenprint process to identify undeveloped lands that serve both goals: great places for recreation that provide natural storm water filtration to benefit drinking water supply quality.

The Lake Worth Greenprint was one of three greenprints in the North Central Texas region, supporting the efforts of local governments to protect the region's water supply lakes. All of these processes involved diverse stakeholder groups including local governments, special districts, large businesses, property owners, homeowner associations, and others.

Using community engagement and state-of-the-art computer modeling, the North Texas greenprints blended community priorities and preferences with science and research to identify lands and inform action plan strategies that enable successful implementation.

Applications and resources

In Mid-South, Santa Clara, and North Texas, the greenprint process led to multiple benefits, and even new funding sources for implementation. The fifteen examples highlighted in this white paper are but a few examples of the ways that greenprints can help:

- inspire and support leaders in thinking big and working together
- provide community members a way to engage in planning
- improve coordination between counties, states, and infrastructure agencies

Each greenprint has a different story, based on local needs and challenges. We have seen different ways to fund greenprints, and ways they inspire voluntary efforts or align with policies, mitigation banks, and plans. The [Resource Hub](#) provides case studies of over 50 greenprints, each with their own unique challenges, opportunities, and outcomes. We hope these examples inspire your work to protect and steward parks, open space, and working lands, and realize the many benefits they provide to people and nature.

For more information

This document includes embedded links. If you are looking at a print version and would like to access embedded links, please visit www.greenprintheub.org and go to the Funding and Policies page. For more information, contact:

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