

## Changing Landscapes

Land use planning curriculum for natural resource professionals

- P** rinciples, people, and policies
- L** and planning and pressures
- A** pproaches
- N** atural resource planning tools

## N4: Nonregulatory Approaches to Natural Resource Conservation

### Overview

This factsheet discusses nonregulatory tools that are used to conserve open space and other natural resources. It describes how regulatory and nonregulatory strategies are used together and discusses how nonregulatory tools can be just as effective as regulatory tools in planning for and conserving natural resources.

### Regulatory and Nonregulatory Tools Work Together

There are places that have successfully preserved open space and other natural resources during development using a combination of regulatory and nonregulatory tools—the city of Thousand Oaks, CA; the city of Boulder, CO; and Montgomery County, Pennsylvania. These two types of tools are not mutually exclusive and can be orchestrated for powerful conservation strategies. The many tools that have been used include resource assessment and planning, developer subsidies and incentives, tax policy, zoning, ordinances, public outreach, and partnerships. Zoning and other regulatory policy are strengthened by using nonregulatory tools. Successfully negotiating with developers and the business community, using the power of the public purse to purchase desired lands, and building support of the general public can all ensure that protecting natural resources is a key consideration during the planning process.



*Nonregulatory approaches can be used to conserve open space and other natural resources.*

*(Photo: Neal Bungard, U.S. Forest Service)*

### Resources for Partnerships and Other Nonregulatory Tools

- The Environmental Grantmakers Association provides information and links for grants. (<http://ega.org/collaborate/grant-seekers>)
- The Lincoln Institute of Land Policy provides information on organizations that support conservation. (<http://www.lincolnst.edu/subcenters/regional-collaboration/resources.asp>)
- The American Planning Association provides educational materials and training on a variety of planning issues. (<http://www.planning.org/education/training/>)
- The Conservation Fund provides information on planning for and conserving nature. (<http://www.conservationfund.org>)
- The Smart Growth Network supports community and stakeholder collaboration. (<http://www.smartgrowth.org>)
- The American Marketing Association provides strategies for effective marketing. (<http://www.marketingpower.com>)



**Forest Service**  
**Northeastern Area State and Private Forestry**

11 Campus Blvd., Suite 200  
Newtown Square, PA 19073  
October 2014

<http://www.na.fs.fed.us>

NA-TP-01-14 N4

*USDA is an equal opportunity provider and employer.*

### Natural Resource Assessment and Planning

Communities with successful resource conservation records have a clear understanding of where important resources are and how they are connected. They have used their natural resource assessments to develop priorities and strategies to acquire and protect these important resources. They used this information to incorporate conservation, open space, and other elements into comprehensive plans. Such plans provide a logical rationale for using zoning and other ordinances, and provide regulatory and nonregulatory strategies for resource conservation.



*Communities that successfully conserve natural resources have a clear understanding of where they are and incorporate open space into their comprehensive plans, among other strategies.*

Mapping the location of natural resources following their assessment provides important information on the quality and location of resources such as woodlots, riparian areas, steep slopes, and greenways. When natural resource assessments are tied to Geographic Information Systems (GIS) and merged with other GIS-based datasets, these assessments can become powerful tools that link natural resources with community infrastructure, demographics, and even economic information that can be used to support and scientifically substantiate planning decisions.

### Developer and Landowner Subsidies and Incentives

Developers and others who own forest land and properties with natural landscapes are more inclined to conserve them (and the ecosystem services they provide) if they are compensated in some way for their efforts. Incentives can help developers work toward conservation goals and policies that municipalities and other agencies establish. Many subsidies and incentives, such as density bonuses and landscape credits, are tied to zoning and other ordinances, but they cannot be used unless there are regulations in place to provide a basis for negotiation. Incentives can also be designed to help manage practical resource issues such as invasive species management and wildfire fuel reduction. When considering the management of natural resources

and the high-quality recreational benefits that large natural systems provide to communities, it's important that incentives for conserving these systems are available to all groups and not only developers. These incentives may be the impetus that determines whether or not natural lands are protected from development.

Incentives for conserving natural resources may be the impetus that determines whether or not natural lands are protected from development.

### Density Bonus

Many municipalities allow density bonuses (increased development density) as an incentive for builders to preserve open space, steep slopes, and riparian areas. Municipalities offer density bonuses through “conditional use” provisions in zoning ordinances or face-to-face negotiation. For example, to make preservation of open space more acceptable to a developer, a municipality may choose to allow additional residential units as part of a residential cluster subdivision design. Using a Conditional Use Variance may allow a developer to encroach on a certain percentage of steep slope area if the developer agrees to provide more open space than is required. This is done because the value of the preserved open space is greater than a minor encroachment into a steep slope.

### **Landscape and Other Credits and Bonuses**

Developers can receive credits for installing landscaping and for preserving existing trees and vegetation . Preserving trees and existing vegetation can reduce impervious surfaces, support natural resource planning, and spur innovative design and grading that may contribute to other credits and bonuses. Some municipalities allow for “in-lieu” payments for purchasing recreational property or planting and landscaping in places not directly in the development; however, these payments should be made from stand-alone accounts with clear rules about how and when such funding is used.



*Developers can receive credits for preserving existing trees and vegetation.*

### **Design Flexibility using Performance-based Ordinances and Design Waivers**

Some municipalities support flexibility in design by using performance-based ordinances that allow developers to meet design requirements without detailed designs. A simple example is a landscape ordinance that requires 50 percent of the area of all parking lots to be shaded within 15 years. The developer is responsible for designing the solution to this design standard, which the municipality must review and approve. Municipal zoning ordinances can provide developers with design flexibility by allowing for Setback and Lot Averaging that allows typical setbacks and lot sizes to be varied. Additionally, if a developer can offer a better design for sidewalks, retention basins, parking, and other facilities to provide space for landscaping or preserve other natural resources, a municipality can modify or waive existing design provisions found in subdivision and land development ordinances.

### **Reduction of Impact Fees and Others**

Municipalities can charge the developer with impact fees for the additional cost of services new development will place on a municipality; these fees cover costs associated with the need for a new school, additional fire and ambulance services, or increased traffic. Impact fees are illegal in some States, such as Pennsylvania, but are common in many other States. These fees are usually established by formula, but can be negotiated to provide incentives for certain development designs such as those that preserve trees and open space. Standing fees, such as those for sewer hook-up, can also be negotiated as an incentive for natural resource conservation. Many municipalities alternatively use impact fees and developer exactions and dedications to purchase and maintain parks and open space.

### **Transfer of Development Rights**

The practice known as transfer of development rights (TDR) is directly related to zoning ordinances and the use of Growth Boundaries. TDR enables development density to be shifted from areas where resource conservation is desirable (the sending area) to areas that have been zoned for higher development densities (the receiving area). Underlying zoning in the sending area drives the amount of residential or other density that can be moved to the receiving area. Growth Boundaries and TDR can control the velocity of development and provide for more orderly development by restricting the provision of water, sewer, and roads in certain areas for specified periods of time. TDR has also been used as a tool to move development density away from fire-prone and other environmentally sensitive areas. One requirement for using TDR is the requirement for high-density market in the receiving area.

### **Clear Communications between Municipal Departments**

In some places, municipal departments do not communicate well. There must be a realistic understanding and open communication related to the requirements of ordinances administered separately by planning, public works, and other departments within a municipality. As an example, the planning department may require the preservation of existing trees, while the public works department may require certain widths for streets and sidewalks. If the developer preserves the trees that the planning department demands, they cannot construct the size streets and sidewalks desired by public works. Developers can be caught between the interests of municipal departments, which can cost considerable time and money.

There must be a realistic understanding and open communication about the requirements of ordinances that are administered separately by different departments in a municipality.

### **Tax Policy**

Tax credits and tax breaks have long been used to provide both incentives for development and support for conserving natural resources in open space or working forests. A number of tax policies can be used to conserve and manage natural resources.

#### **Pay As You Go Tax Policies**

Under this scenario, a municipality spends revenues from a dedicated tax or other funding source. Property taxes, earned income taxes, real estate transfer taxes, budget surpluses, or revenues from municipal businesses, such as the water or sewer authority, may be considered for purchasing and maintaining parks.

#### **Property Tax**

In Pennsylvania and other States, property taxes are measured in “mills,” where one mill equals one dollar of tax for every \$1,000 of assessed property value. In many places, property tax revenues are collected and used by three entities: the school district, the municipality, and the county. Property taxes can provide a relatively stable stream of income, but there may be a great deal of competition for their use. Voters in many States have approved property tax increases that are directly dedicated to open space acquisition, especially in areas undergoing rapid growth. State statutes oversee the generation and use of property taxes; major increases usually require a referendum.

#### **Earned Income Tax**

In Pennsylvania, State legislation (PA Act 153 of 1996) authorizes voters to approve an increase in the earned income tax above the State limit exclusively for the purpose of financing the purchase of open space. As with property taxes, this revenue can also be used as a basis for servicing an open space bond issue. Bear in mind that the revenue from tax on earned income can decline with economic turndowns or in places with a growing population of retirees.

#### **Real Estate Transfer Tax**

This tax is levied on the sale of property and increases with the value of property being sold. Costs are usually divided between buyer and seller. Revenues from this tax can be dedicated to purchasing and maintaining open space. However, applying or increasing this tax can be difficult in the face of opposition from real estate interests.

### **Benefit Tax Districts**

Benefit Tax Districts that have been used to finance the Bay Area Rapid Transit System in San Francisco and New York City's subway system may be a model for financing the purchase and maintenance of park and open space. A benefit assessment found that Benefit Tax Districts increased land values in the vicinity of new transit lines or other public infrastructure because of the positive impact of publically financed infrastructure on property values.



*The Bay Area Rapid Transit System in San Francisco was financed by benefit tax districts. (Photo: Justin Sullivan, <http://www.ideastream.org/news/npr/209068284>)*

### **Special Assessments**

Special assessments charge all property owners for specific municipal services such as stormwater management and public landscaping. Assessments are often levied as a per foot cost of right-of-way frontage or as a percent of property value. The city of Cincinnati uses a frontage assessment to help fund its street trees and other public landscapes. The city of Philadelphia assesses and taxes the square footage of parking lots and other nonpermeable surfaces to help subsidize stormwater utility fees and provides tax credits for the planting of trees and other landscaping.

### **Improvement Districts and Community Development Block Grants**

Downtown and business Improvement Districts have long been used to help fund public landscapes and parks. Some cities have successfully used Community Development Block Grants to fund tree planting and public landscapes.

### **Property and Tax Programs**

State tax programs that use tax funds to conserve forest, agricultural, and other working landscapes are an important mechanism for conservation. Many States allow tax reductions for the sale of land development rights. Both Wisconsin and Vermont have well known tax programs that have had substantial positive impacts on resource conservation.

- **Wisconsin Managed Forest Law Program**

This program, enacted in 1985, supports Wisconsin's forests and forest products industry by ensuring that forest land ownership remains affordable. Landowners enrolled in the program pay reduced taxes on forested property (75 to 95 percent less than typical property taxes).

(<http://dnr.wi.gov/topic/ForestLandowners/mfl.asp?s1=ForestTax&s2=MFL-Enrollment&inc=ftax>)

- **Vermont Use Value Appraisal Program**

Also called "Current Use" or "Land Use," this program enables landowners who practice agriculture or long-term forest management to have their enrolled property appraised for property taxes based on its value for forestry rather than its development or fair market value.

([http://www.vtfor.org/resource/for\\_forres\\_useapp.cfm](http://www.vtfor.org/resource/for_forres_useapp.cfm))



*Many States allow tax reductions for the sale of land development rights.*

Other States have programs similar to Vermont's. In Pennsylvania, for example, the Clean and Green Act of 1974 offers preferential tax assessment to owners of farm land and forest land by taxing land according to its current use rather than prevailing market value for development.

### **Estate Planning**

The inheritance of property and other land transfers often break up large landholdings and fracture rural and suburban landscapes. Given rising land values, aging property owners, and Federal inheritance taxes, estate planning is a tool that landowners can use to help avoid the division and loss of property that has natural resource value.

Landowners can use estate planning to help avoid the division and loss of their property that has natural resource value.

The principal goal of estate planning is to reduce death taxes and other transfer costs. Estate planning involves identifying assets such as real estate and stock that can be counted as part of a taxable estate, and identifying future property use goals. Financially, this planning can become complicated when considering death taxes and other transfer costs, probate, and land ownership options.

### **Open Space Purchase and Taxes: The Central Bucks County School District Study**

One question often asked when purchasing property is whether conserving open space will remove much needed income from public tax rolls. Many studies across the United States show that farmland, forest, and open space generate taxes but require few services. For example, a 1992 American Farmland Trust study of Massachusetts towns found that residential development cost more in services than it earned in tax revenue, while open space generated more in sales and other taxes than it cost to service. In 2000, Pennsylvania's Central Bucks County School District reported an annual gap, or shortfall, of \$3,149 per household between the tax revenue provided by new residential development and the costs of new students to the school district. Considering this educational cost, various economic studies then showed that it would be cheaper for the school district to purchase the property or development rights for a 100-acre farm than to pay for the increased costs of education over 10 years.

There are a number of different estate planning approaches that can be used to keep properties from being broken up. Land and its control can be gifted to heirs a little at a time each year. As of 2012, cash or property equivalent to a maximum of \$12,000 can be given to an individual without a Federal gift tax. Property can also be gifted to a conservancy or other nonprofit or placed in trust in a will. All or part of a property can be protected through a conservation easement, as discussed in the next section.

### **Public Investment**

The power of the public purse to purchase property rights is another powerful tool for natural resource conservation. Private property carries a bundle of rights that include development, water, timber, mineral, agriculture, and others that can be secured under contract or purchased outright. To conserve natural resources, some or all of these rights can be purchased "fee simple" or "full fee" by government and nonprofit organizations. Fee-simple acquisition protects the natural environment by easement—the easement buyers purchase only the land rights that they desire (for example, a conservation easement would purchase only development rights). Full-fee acquisition involves purchasing and controlling the entire bundle of property rights.

To conserve natural resources, government and nonprofit organizations may purchase some rights or the entire bundle of rights held by the property owner.

In addition to purchasing property for resource conservation, growth can be controlled or guided by planning and providing for roads, water, sewer, and other infrastructure. For this reason, people concerned about resource conservation should be aware of their municipality's capital improvement programs and spending decisions as they relate to capital improvement provisions related to the construction of bridges, roads, and other infrastructure that can spur development.

### **Conservation Easements**

A conservation easement is a flexible, negotiated contract between a landowner and a conservation organization or government agency that permanently limits the uses of the land in order to protect its conservation values. Easements are a particularly effective tool for permanently protecting land from subdivision development. Typically, easements are used to purchase the development, mineral, timber harvest, or other productive rights of a parcel, thereby eliminating its development potential. The permissible types of management and land use that can continue on the property are determined by a contract negotiated between the two parties. Depending on the terms of the contract, landowners may be able to continue farming, hunting, and living on the parcel. Since the sale of development and other property rights reduces the value of the land, easements can result in significant tax reductions. Tax benefits also occur when an easement is donated, thus qualifying as a tax-deductible charitable donation.

### **Conservation in the State of Maryland: Smart Growth and Neighborhood Conservation Initiative**

Maryland has a number of innovative conservation easement programs, such as the Rural Legacy Program. These programs establish greenbelts of forest and farms around rural communities to preserve their cultural heritage and maintain a sense of place. An example of local efforts is the Carroll County, Maryland Agricultural Land Preservation Program, which preserves agricultural land and open space by supporting programs that compensate landowners for voluntarily restricting property from development. (<http://ccgovernment.carr.org/ccg/agpres/default.asp>)

### **Bargain Sale of Land**

A bargain sale is when land is sold at a value less than its fair market value to a conservancy or government agency. This can afford the seller some savings on capital gains tax and entitle them to charitable income tax deduction.

### **Land Trades and Exchanges and Limited Development**

Properties vary in how desirable they are for development. Conservancies and other organizations often trade smaller parcels that are desirable for development in order to consolidate larger parcels with healthier natural systems. As an example, a parcel with potential for a large residential development may be traded for a larger parcel more distant from current development that provides better ecological and recreational opportunities. Conservancies and agencies also use limited development—constructing homes on a small portion of a parcel—to fund the acquisition of that or other parcels.

### **Bonds, Other Borrowing, and Referendums**

Municipalities can borrow from public funds using bond issues or from banks and other commercial lenders, but they must abide by a strict set of regulations. In many States, municipal borrowing is not only overseen by the State, it is also affected by the ability of a municipality to provide a stable stream of revenue to service debt, the amount of debt already accrued, and the debt limit set by the State for a municipality.

One of the major opportunities presented by a bond issue is that it provides a large amount of money quickly to purchase open space in a competitive and rising real estate market. In addition, costs are spread out over a long time frame and are borne by both current and future beneficiaries. Drawbacks of a bond issue include the accrual of financing charges and, in the case of a public referendum, the need to convince voters of the merits of incurring debt to protect land.

Given the complexities of borrowing, municipalities interested in bonds and other debt should seek advice from an experienced lending professional. Remember that any debt raised by the municipality must eventually be paid for using municipal tax, municipal authority, or other revenue source.

In many States, a referendum is not required if the proposed financing does not put a municipality over its state-mandated statutory debtor tax limits. However, referendums are often used even if the financing is below debt or tax limits as a test of the public's will. State statutes, such as the Pennsylvania Election Code (P.L. 1333, No. 320), establish the method for placing a referendum question on a ballot. There are various procedural rules regarding referendums that involve such things as passing an ordinance allowing the placement of a referendum question on the ballot, timing for filing the referendum, and wording for the referendum questions.

Successful referendums that approve the acquisition of open space and conservation easements are handled like any popular election campaign. They need to have a well-developed message and campaign strategy, especially when competing with organized opposition or other referendums on a ballot. To build support, the campaign should utilize publicity, education, and citizen committees. In some cases, this may require staff support. It will certainly require budgeting and fundraising.

### Advice for a Successful Referendum Campaign

This process takes place in the political arena. Anticipate the same amount of work, fundraising, organizing, debate, and conflict as you would for any other political campaign.

- Organize early. Allow at least 6 months. One year is better.
- Prepare your message. Keep it simple and stick with it.
- Focus on the benefits of the referendum that will be most meaningful to voters.
- Build broad support early on. Keep local officials informed and supportive.
- Build personal relationships with editors, reporters, and elected officials.
- Anticipate organized opposition.
- Fundraise early.



*Successful referendums that approve the acquisition of open space are handled like any popular election campaign.*



*The Mount Loretto Unique Area in New York City is an example of open space that preserves this region's natural and historic character. (Photo: <http://en.wikipedia.org>)*

### Case Study – Montgomery County (PA) Green Fields, Green Towns Program

By 1993 Montgomery County and other areas of southeastern Pennsylvania were coping with high rates of development and land conversion. In some municipalities, nearly 100 percent of agricultural and forested properties had been developed. This loss of natural features caused a huge groundswell of support for natural resource conservation, and open space preservation became an important campaign issue at all levels of government.

In response, county commissioners appointed an Open Space Program Task Force to develop a 10-year program to preserve open space and conserve natural resources. Initial objectives of the program were to provide grants to municipalities and conservation organizations for land acquisition, provide funding for county land acquisition, and develop a county trail system. The program was funded by the county for 10 years with \$79 million in general capital funding. To apply for county funds, municipalities were required to write Open Space and Resource Conservation Plans. Financial incentives were provided to encourage municipalities to work together to develop joint plans and acquisition programs. The initial plans spawned many ideas for open space preservation, including municipal bond issues, partnerships, and some joint municipal efforts. All 62 municipalities in the county completed open space plans.

In 2003, the county commissioners appointed a new task force to review the Open Space Program and make recommendations for change. The task force recommended that the Green Fields, Green Towns program be started. Although municipal, conservation organization, and county land acquisition remained the core of the program, grant funding for public landscaping and parkscape improvements was also increased. This program required municipalities to update their Open Space and Resource Conservation Plans. The county financed the program in 2004 by borrowing \$60 million, as approved in a \$150 million nonbinding referendum in the 2003 general election. The open space referendum was approved by 79 percent of the county voters. In 2010 the county borrowed another \$35 million to support the program.

Today, with slowing development and increased expenses, the county tax base has leveled off, and the county has slowed open space borrowing and grants. Since 1993, the county has preserved 7,000 acres of municipal parklands, 4,000 acres of conservation open space, 7,000 acres of working farms, and 43 miles of trails.

Montgomery County Open Space Program: <http://www.montcopa.org/?nid=638>

Green Fields/Green Towns Update: Fall 2009  
*Perkiomen Township Huber Property Acquisition*  
2008 • 2.34 acres



*The Montgomery County (PA) Open Space Program helps preserve open space and conserve natural resources. (Photo: <http://www.montcopa.org>)*

### Relevant Factsheets

**L4** – *The Power of Collaboration in Community Planning* – Discusses the scales of planning and the extent to which collaboration, dialogue, and the planning process itself can influence outcomes.

**A1** – *Using Smart Growth Principles to Plan Sustainable Communities* – Discusses the tools of smart growth, including both regulatory and nonregulatory concepts.

**N1** – *Developing a Natural Resource Assessment* – Provides an overview of the components of a natural resource assessment to ensure all applicable tools can be used to protect natural resources.

**N2** – *Comprehensive Planning for Natural Resource Conservation* – Describes the nonregulatory and regulatory strategies that can be used in comprehensive plans to better protect and conserve natural resources.

**N3** – *Regulatory Approaches to Protecting Natural Resources* – Explains in detail the regulatory strategies that can be used in natural resource conservation.

### Resources

- Andreasen, A. 1995. *Marketing social change: changing behavior to promote health, social development, and the environment*. San Francisco: Jossey-Bass. 368 p.
- Bennett K., ed. 2010. *Good forestry in the Granite State: recommended voluntary forest management practices for New Hampshire*. 2d ed. Durham, NH: University of New Hampshire Cooperative Extension. 224 p.
- Elmendorf, W. 2008. *Managing natural resources: a guide for municipal commissions*. University Park, PA: Penn State University Cooperative Extension. 86 p.
- Elmendorf, W.; Kincaid, D.; Clay, J.; Martz, E. 2005. *Working with the media: a guide for volunteer organizations and tree, environmental advisory, planning, and other municipal commissions*. University Park, PA: Penn State Cooperative Extension. 24 p.
- Elmendorf, W.; Luloff, A. 2001. Using qualitative data collection methods when planning for community forests. *Journal of Arboriculture*. 27(3): 139–151.
- Gray, B. 1989. *Collaboration: finding common ground for multiparty problems*. San Francisco: Jossey-Bass. 329 p.
- Healy, P. 2006. *Collaborative planning: shaping places in fragmented societies*. 2d ed. New York: Palgrave Macmillan. 368 p.
- Heritage Conservancy. 2008. *Leaders in the fields: seven successful municipal open space referendums in the Lehigh Valley*. Doylestown, PA. 21 p.
- Linden, R. 2002. *Working across boundaries: making collaboration work in government and nonprofit organizations*. San Francisco: Jossey-Bass. 336 p.
- Maslin, M. 2004. *TreeTenders handbook*. Pennsylvania Horticultural Society. Philadelphia. 77 p.
- Randolph, J. 2004. *Environmental land use planning and management*. Washington, DC: Island Press. 664 p.
- Sirianni, C. 2007. Neighborhood planning as collaborative democratic design. *Journal of the American Planning Association*. 73(4): 373–387.
- Smith, H. 1993. *The citizen's guide to planning*. 3d ed. Chicago: American Planning Association. 267 p.
- Walter, B.; Arkin, L.; Crenshaw, R., eds. 1992. *Sustainable cities: concepts and strategies for eco-city development*. Los Angeles: Eco-Home Media. 354 p.

### **Acknowledgements**

#### **Author**

William Elmendorf, Ph.D., Associate Professor of Urban and Community Forestry, Penn State

#### **Editors**

Donna Marie Foster, U.S. Forest Service, Northeastern Area State and Private Forestry

Sandra Clark, U.S. Forest Service, Northeastern Area State and Private Forestry

#### **Designer**

Deborah Muccio, U.S. Forest Service, Northeastern Area State and Private Forestry