



VI. Preservation and Conservation Techniques

The natural and cultural resources of Pennsylvania's communities are significant factors in our economic vitality, environmental health and quality of life. Farmland and forests provide for employment, personal income and taxes to local and regional economies. In fact, farming and forestry are two of the largest economic sectors in the Commonwealth. Farming and forestry enterprises use and conserve renewable natural resources. When farmers and forestland owners use best management practices, farming and forestry are sound land use practices in and of themselves.

Together with greenways, waterways, wetlands and other kinds of natural areas, farms and forests function as valuable resources for open space, wildlife habitat, water protection, recreation, and heritage tourism. Farms and forests are also important cultural resources, and their continued presence maintains Pennsylvania's rural culture, lifestyles and traditional economy.

Cultural resources such as archeological and historic sites and landscapes also shape community character and serve as an important educational and economic tourism asset. Through sound land use practices, Pennsylvania's vast array of natural and cultural resources can be enhanced, preserved and protected for the present generation, as well as for future generations. It is only through a commitment toward use and implementation of sound land use practices that future generations will be able to benefit from the Commonwealth's resources. ■



1. Resource Inventory / Analysis Maps

DESCRIPTION:

Every municipal comprehensive plan should contain at least a basic resource inventory of the landscape. The Natural Resource Inventory can be used to help protect the community's special resources by mapping the exact locations of environmental, cultural, historic and scenic features in the municipality, as well as resources to be used as future energy sources and mineral reserves. The ideal inventory is one that is broad enough to include the full range of natural and cultural resources existing in the community, and one that contains sufficient detail to support recommendations regarding appropriate land use activities and intensities.

BENEFITS:

When the locations of environmental, cultural, historic and scenic features are known, they can be preserved. When such features are linear or are part of larger systems, the conservation areas within developments can be established so that they can eventually be joined together to form an interconnected network of protected open space.

IMPLEMENTATION:

Municipalities could begin this process by tapping into a considerable body of information from sources that they may access at little or no cost. When outside financial resources are available, municipalities may choose to hire consultants to produce very detailed inventories.

The following list provides a basic description of the principal resources and maps, as well as sources for information recommended for inclusion in the community inventory.

Natural Resource Opportunity/ Constraints Map

- *Wetlands and their Buffers* – Lands that are seasonally or permanently wet comprise one of the most basic resources in any community. These should be one of the first resources to be identified, together with dry, upland buffer areas around them. Soil survey maps published by the USDA Natural Resource Conservation Service and the National Wetland Inventory Maps published by the U.S. Fish and Wildlife Service are good sources to use for general wetland areas. For more detailed mapping, field verified wetland delineations should be used.
- *Floodways and Floodplains* – The maps published by the Federal Emergency Management Agency (FEMA) constitute the most accurate and readily available data on the location of floodways and floodplains in most communities.
- *Moderate and Steep Slopes* – Slopes of between 15 percent and 20 percent require special site planning and slopes with gradients over 25 percent should be avoided for clearing, regrading or construction. They can easily be prepared by a surveyor,

(Resource Inventory / Analysis Maps, Cont'd)

- engineer, planner, or landscape architect, working from readily available topographic sheets printed by the U.S. Geological Survey.
- *Groundwater Resources and their Recharge Area* – Start with the U.S. Geological Survey to identify the aquifer(s) underlying the area and surrounding area contributing to the recharge of each aquifer.
 - *Woodlands* – In areas where the majority of original forest has been cleared away for commercial agriculture, woodlands may be described as remnants, often located in low lying areas with relatively damp soils or on the steeper slopes. Vertical aerial photographs are the best sources for defining the map of wood lands, hedgerows, or tree lines and are commonly available through county offices of the USDA Natural Resource Conservation Service.
 - *Productive Farmland* – Soils rated as being “prime” or “of statewide significance” should be noted and can be obtained from the county Conservation Districts.
 - *Significant Wildlife and Vegetative Habitat* – Habitats of threatened or endangered wildlife and plant species should be mapped, at least in their general location, whenever possible. Such information is available from the Pennsylvania Natural Diversity Inventory (PNDI).
 - *Energy Resources* – Setting aside areas containing extractable resources as open space ensures needed and economical resources for future generations while providing needed green space. Good stewardship includes knowledge and planning of resources.

Historic, Cultural, and Scenic Resources Map

Official lists such as the National Register of Historic Places and the historic or archaeological site inventories compiled by state and county offices of historic preservation and cultural resources can provide a basic inventory. Landowners and local historians or historical groups should also always be consulted. Scenic view sheds can be recorded from two person windshield surveys with an annotated base map of existing buildings and patterns of field and forest.

Linked Open Space Network Map

This map identifies those parts of undeveloped properties where the municipality has preliminarily determined the importance of designing new development around certain land and water features in such a way that an interconnected network of open space or conservation land can be protected.

Greenways/Trails Map

Conservation subdivisions and linked open space areas make it easier for municipalities to implement community-wide greenway network plans and maps. Local officials generally depend in part upon land designated for permanent conservation purposes in new subdivisions and designated transportation corridors.

(Resource Inventory / Analysis Maps, Cont'd)

Water Resources Map/Plan

All water resources, including wetlands, streams, swales, springs, and lowland areas are identified and mapped. Existing water resource facilities should also be identified including detention basin locations and capacity, other stormwater management facilities, water supply systems and other water related resources. Sensitive areas or exceptional value waterways and wetlands are of primary importance when mapping these features. The plan can also include water quality protection analysis and water quantity analysis, as well as wastewater treatment methods.

Protecting the lands identified in the Resource Inventory/Analysis Maps can take many forms. In addition to outright acquisition or the purchase or transfer of development rights (PDRs and TDRs), an inexpensive and practical technique is that called "Open Space Zoning/Conservation Design" combined with early sketch plan alternatives (Section V) may be employed.

Some communities have not yet completed a basic resource inventory due to time and fiscal constraints. However, there are some short-term alternatives available to municipalities whose comprehensive plan does not yet include a proper resource inventory. Such communities should, in the meantime, include specific language in their existing plan requiring that, in all future development proposals, the applicant shall prepare the detailed site inventory maps.

EXAMPLES IN PENNSYLVANIA:

Under DCNR's **Growing Greener Program**, the Natural Lands Trust has prepared "Township-wide Maps of Potential Conservation Lands" for four townships: Chadd's Ford, East Pikeland, Wallace, and West Vincent, all in Chester County.

Montgomery County Planning

Commission – The Commission developed an aerial perspective sketch illustrating how various protected resource lands – productive farmlands, woodland habitat, roadside vistas, and municipal trail networks – will eventually coalesce to form linked open space systems in communities applying a conservation design approach.

West Manchester Township, York

County – West Manchester's Community-wide Open Space Network Map of potential conservation lands gives clear guidance to landowners and developers as to where new development is encouraged on their properties. Township officials engaged a consultant to draw, on the official tax parcel maps, boundaries of the new conservation lands network as it crossed various properties, showing how areas required to be preserved in each new development could be located so they would ultimately connect with each other. In this formerly agricultural municipality the hedgerows, woodland remnants, and the riparian buffer along the creek were identified as core elements of the conservation network.

(Resource Inventory / Analysis Maps, Cont'd)

CONTACT INFORMATION:

Montgomery County Planning
Commission
(610) 278-3730

Natural Lands Trust
(610) 353-5587

West Manchester Township, York County
(717) 792-3505

Pennsylvania Department of Conserva-
tion and Natural Resources (PA DCNR)
Bureau of Recreation and Conservation
(717) 787-7672

Pennsylvania Department of Conserva-
tion and Natural Resources (PA DCNR)
Bureau of Geologic and Topographic
Survey
(717) 787-2169 ■

2. County Natural Areas Inventory

DESCRIPTION:

Since 1988, the Bureau of Recreation and Conservation in the Department of Conservation and Natural Resources (DCNR) has been partnering with The Nature Conservancy (TNC) and the Western Pennsylvania Conservancy (WPC) to study and inventory the critical natural areas of the Commonwealth that contain rare, threatened or endangered species; natural communities of special concern; and significant ecological and geological landscapes worthy of protection. The inventories are done on a county or multi-county basis with the information provided to the County Commissioners and County Planning Office. The information is also incorporated into the Pennsylvania Natural Diversity Inventory (PNDI), a database maintained by DCNR's Bureau of Forestry of the state's natural heritage.

As of October 1, 1999, 32 counties and parts of two counties have been inventoried or are in the process of completing inventories. There are 35 counties that have not been inventoried, and the earlier county inventories need to be updated. Current funding sources allow DCNR to fund approximately three to five counties per year.

BENEFITS:

The counties use the inventory as base information on which to build county comprehensive plans, or to supplement plans already in place with information that helps counties make environmentally and economically-balanced decisions regarding land use, zoning, and open

space preservation. Municipalities within the county have easy access to the information to help guide local elected officials and planners with their land use, subdivision and permitting decisions and strengthen the partnerships between county and community planners when making land use decisions.

County natural areas inventories and the PNDI are used by public agencies, private developers and consultants to identify significant ecological areas, and to guide development away from those areas into other areas more suitable for development. Early use of county natural areas inventories and PNDI in the development process often saves planning and permitting time and costs.

IMPLEMENTATION:

DCNR provides counties with 50 percent grants from the Keystone Recreation, Park and Conservation Fund (Key 93) Program and 75 percent grants from the Pennsylvania Heritage Parks Program to undertake the inventories. The counties subcontract with WPC and TNC to actually perform the inventories and summarize the findings in a written report that includes maps.

EXAMPLES IN PENNSYLVANIA:

Several counties have given natural areas inventories a higher degree of importance as a foundation for all other county and municipal planning, land use, zoning, permitting and open

(County Natural Areas Inventory, Cont'd)

space decisions. Some examples are **Allegheny County, Bucks County, Centre County, Erie County, Lancaster County and Monroe County.**

CONTACT INFORMATION:

The Nature Conservancy
(717) 948-3962

Pennsylvania Department of
Conservation and Natural Resources,
Bureau of Recreation and Conservation
(717) 787-7672

Western Pennsylvania Conservancy
(412) 281-1487

FUNDING SOURCE(S):

DCNR provides counties with 50 percent grants from the Keystone Recreation, Park and Conservation Fund (Key 93) Program and 75 percent grants from the Pennsylvania Heritage Parks Program to undertake the inventories.

Pennsylvania Department of
Conservation and Natural Resources
(PA DCNR) Bureau of Recreation and
Conservation
(717) 787-7672 ■

3. Pennsylvania Natural Diversity Inventory (PNDI)

DESCRIPTION:

The Pennsylvania Natural Diversity Inventory (PNDI) is a partnership between the Pennsylvania Department of Conservation and Natural Resources (DCNR)'s Bureau of Forestry, the Pennsylvania Science Office of The Nature Conservancy, and the Western Pennsylvania Conservancy. PNDI collects, manages, and makes available information on Pennsylvania's most significant ecological features. These features include plant and animal species of special concern, exemplary natural communities, and outstanding geologic features. Site-specific information describing these features is stored in an integrated data management system consisting of map, manual and computer files. The PNDI information system is regularly updated to include new information and to document changes at known sites. The result is Pennsylvania's most accurate, current and comprehensive source of information on special concern species and exemplary natural communities. Since 1988, a review of PNDI files has become routine in most environmental assessments.

BENEFITS:

With objective and accurate data, PNDI can help guide planning and development, avoiding damage to precious ecological areas.

IMPLEMENTATION:

PNDI data is based on the best available information, but is still far from complete. For this reason, even

if a PNDI search fails to indicate the presence of species of special concern in a given area, such species may nonetheless be present. An on-site survey may reveal the presence of species not indicated by PNDI and should be used to supplement PNDI.

EXAMPLES IN PENNSYLVANIA:

PNDI is in three offices: The Western Pennsylvania Conservancy — working in Western Pennsylvania; The Nature Conservancy — working in eastern Pennsylvania; and the Pennsylvania Bureau of Forestry — statewide.

CONTACT INFORMATION:

Pennsylvania Department of Conservation and Natural Resources (PA DCNR) Bureau of Forestry (717) 787-3444 ■

4. Geographic Information System (GIS) Mapping

DESCRIPTION:

Geographic Information System (GIS) is a system by which natural, cultural and political boundaries (features) are mapped by coordinating aerial photographs with the Global Positioning System. GIS gives counties and municipalities a common tool to accomplish cooperative comprehensive planning.

BENEFITS:

GIS data is a good source of information to use for municipal and county planning. They provide accessibility to property ownership information. GIS mapping allows several layers of information to be readily available and maneuvered through the use of computer technology. Natural resources (wetlands, streams, forests, etc.) as well as infrastructure items (water, sewer, roads, etc.) can be included on the mapping so they can be considered in the planning process. Software can be used to overlay multiple layers of GIS data and analyze how this data is interrelated. Zoning overlays can also be included.

IMPLEMENTATION:

The challenges in implementing GIS mapping across Pennsylvania include the cost of the aerial photography and the technology needs (both in hardware and operator knowledge). After a municipality or county commits to GIS, there is also the challenge of upgrading the information on the maps on a continuous basis so that

they are as accurate as possible.

Another challenge is promoting a standard data environment so that data from local government GIS can be assembled for regional and state level planning.

EXAMPLES IN PENNSYLVANIA:

Several townships and counties are currently using GIS mapping to help develop county and township maps for cooperative planning. **West Bradford, Pocopson and Pennsbury Townships in Chester County**, as well as **Lancaster County** are implementing GIS mapping.

Pennsylvania Geospatial Information Council (PAGIC) –

As part of Governor Ridge's Executive Order 1999-1, the Commonwealth established a statewide geospatial data clearinghouse which provides for the sharing of common geospatial data among state agencies and local governments. PADEP uses the clearinghouse to provide information to local governments on how land use decisions may impact air quality, water quality and quantity, soil erosion and other natural resources.

The Department of Conservation and Natural Resources, Allegheny Heritage Development Corporation and the Conemaugh Valley Conservancy teamed up to develop a new watershed GIS characterization and modeling prototype for the **Kiski-Conemaugh Rivers Watershed** in Western Pennsylvania. Even though the system

(Geographic Information System (GIS) Mapping, Cont'd)

was developed to assess the effects of acid mine drainage treatments on water quality, it can be customized to analyze a wide array of natural, cultural and recreational resource conditions and to analyze the effects and cost of sprawl and other land use decisions.

The Department of Conservation and Natural Resources and Natural Lands Trust have partnered on the development of a "Smart Conservation" GIS modeling system that is being demonstrated in the **Schuylkill River Watershed** in Eastern Pennsylvania.

The Smart Conservation model is a method of identifying, evaluating and prioritizing Natural Areas using criteria developed by regional experts on aquatics, birds, mammals, plants and invertebrates. This model can help policymakers and conservation practitioners prioritize between conservation opportunities and sound land use strategies.

Pennsylvania Department of Environmental Protection GIS
(717) 787-7116
www.dep.state.pa.us. (choose Geographic Information Systems)

DCNR Topographic and Geologic Survey
(717) 783-1582

Allegheny Heritage Development Corporation
(814) 467-6816

Natural Lands Trust
(610) 353-5587 ■

CONTACT INFORMATION:

Chester County Planning Commission
(610) 344-6285

West Bradford Township
(610) 269-4174

Pocopson Township, Chester County
(610) 793-2151

Pennsbury Township, Chester County
(610) 388-7323

Lancaster County GIS
(717) 391-7550

Lancaster County Planning Commission
(717) 299-8333

5. Growing Greener Conservation Design

DESCRIPTION:

Growing Greener Conservation Design is a package of related techniques for conserving interconnected networks of open space within expanding communities. It enables local officials to designate and protect portions of nearly every property as each parcel is proposed for residential development. This package of techniques is unique in the way that it accomplishes its conservation objectives without disturbing landowner equity, without constituting a “taking,” without depending upon public tax dollars or landowner generosity, and without involving complicated regulations for transferring development rights from one part of the community to another. It does not require new state legislation or changes in state agency regulations, and has been carefully reviewed for compliance with the Municipalities Planning Code (MPC) and related case law.

BENEFITS:

The Growing Greener land-use practices benefit the protection of greenways and other interconnected networks of open space. Secondary benefits may, in some cases, include a higher quality of life for residents, enhanced protection for both the quantity and quality of water supplies, increased opportunities for passive and active recreation, improved property values, and extra protection for wildlife habitat and travel corridors. Use of the Growing Greener practices may help conservation values to become fully integrated into the development design process.

IMPLEMENTATION:

Growing Greener combines several land use practices relating to the comprehensive plan, several practices related to zoning ordinances, and several others related to subdivision and land development ordinances. Growing Greener places extra emphasis on Build-Out Maps and Greenway Maps (called “Maps of Potential Conservation Lands”) that essentially predetermine the location of open space within new conservation subdivisions. Among the practices related to zoning is Open Space Zoning, and density determination based on unconstrained lands (“Net-Outs”) or on “Yield Plans.” Those practices pertaining to subdivision ordinances include: the submission requirements, the review procedures, and a special four-step design approach for laying out new houselots and streets around predetermined greenway networks. Among the subdivision practices contained in Growing Greener are those associated with Conservation Subdivision Design and the Conceptual Preliminary Plan.

Information and technical assistance about Growing Greener Conservation Design is being provided by the Department of Conservation and Natural Resources (DCNR) and several other state agencies through a contractual arrangement with the Natural Lands Trust (NLT). Every year NLT conducts several county or multi-county workshops, presents the concept at state-wide or regional conferences and forums, meets with individual municipalities, conducts community audits, and provides ordinance writing and subdivision

(Growing Greener Conservation Design, Cont'd)

design assistance. Several technical assistance products are also available.

EXAMPLES IN PENNSYLVANIA:

- Land use regulations: Communities which have adopted Growing Greener subdivision and zoning ordinances include **Upper Salford Township, Montgomery County** and **West Vincent Township, Chester County**. **Wallace Township, Chester County**, the first Township in the Commonwealth to adopt the full menu of Growing Greener zoning options was awarded the 1999 Governor's Award for Local Government Excellence, in recognition of this innovative approach to land use.
- Land conserved through the development process: Across the Commonwealth there are examples of conservation designs which adhere to the Growing Greener design principles. For example, **Lower Makefield Township, Bucks County** has, during the past seven years, preserved over 500 acres of farmland, at no public cost, as a result of five conservation subdivisions wherein at least half of the buildable ground was set aside as permanently protected open space.



CONTACT INFORMATION:

Pennsylvania Department of Conservation and Natural Resources (PA DCNR) Bureau of Recreation and Conservation
 (717) 772-3742

Natural Lands Trust
 (610) 353-5587 ■

6. Open Space and Natural Areas Acquisition

DESCRIPTION:

This practice is based on the acquisition of land by a municipality or any governmental or public agency for the purpose of preservation of open space and natural areas. The purchase can be of fee simple title or conservation easements and is usually done by a governmental or public agency or a non-profit land trust organization. Land acquisition can be made at every level of government.

Along with farmland preservation programs, the above-described two acquisition programs are the primary methods and tools to help communities and non-profit conservation organizations effectuate sound land use through direct preservation and protection of open space.

BENEFITS:

Acquisition of fee simple title or a conservation easement on land provides a more permanent long-term protection of open space and natural areas than through other methods such as zoning or subdivision requirements. Acquisition provides a means to enable nonprofit groups in partnership with communities to protect open space and natural areas at minimal or no cost and little administrative burden to local governments.

IMPLEMENTATION:

Pennsylvania DCNR has two sources of funding to help communities and non-profit groups implement acquisition of open space and natural areas projects; however, demand for DCNR's acquisition dollars currently exceeds the money

available under the Land Trust and Community Grants programs.

Because protected lands are often a magnet for development on adjacent parcels, communities may wish to adopt the technique called "Open Space Zoning/Conservation Design" (see Section V) that allows developers to create open space buffers along their common boundary with these protected properties.

EXAMPLES IN PENNSYLVANIA:

Cranberry Township, Butler County – In the early development stages of its community, Cranberry Township recognized the importance of the preservation of open space. Since the late 1980's, using the Planned Residential Development (PRD) provisions of the Municipalities Planning Code (MPC) (see Section V), Cranberry Township has protected over 1,000 acres of permanent open space. Since the 1990's there have been 3,080 single family residential units approved on 2,485 acres. Of this acreage, 909 acres, or approximately 37 percent, have been protected as permanent open space.

French Pickering Creek Conservation Trust — French Creek and Pickering Creek Conservation Trust acquired 135 acres to expand and preserve the Pine Swamp Preserve in Chester and Berks counties.

Central Pennsylvania Conservancy — The Central Pennsylvania Conservancy acquired 15 acres of land with

(Open Space and Natural Areas Acquisition, Cont'd)

“champion” trees to protect the Seven Gables natural area in Carlisle Borough and South Middleton Township, Cumberland County.

Western Pennsylvania Conservancy — The Western Pennsylvania Conservancy acquired 160 acres to protect Lake Pleasant glacial lake in Erie County.

Pequea Township, Lancaster County — Pequea Township acquired 66 acres to preserve the historic Pequea Silver Mine and surrounding unique natural areas.

Manheim Township, Lancaster County — Manheim Township acquired 67 acres of old growth woodlands and wet lands in Lancaster County.

Salford Township, Montgomery County — Salford Township, acquired 98 acres for natural resource protection along Ridge Valley Creek.

CONTACT INFORMATION:

Pennsylvania Department of Conservation and Natural Resources (PA DCNR) Bureau of Recreation and Conservation
(717) 783-2663

Cranberry Township,
(724) 776-4806
www.twp.cranberry.pa.us

Pequea Township, Lancaster County
(717) 464-2322

Manheim Township, Lancaster County
(717) 569-6408

Salford Township, Montgomery County
(215) 257-5664

FUNDING SOURCE(S):

Funding and technical assistance for acquisition of land can be obtained from the Pennsylvania Department of Conservation and Natural Resources (DCNR). Fifty percent matching grants are available to nonprofit land trust conservancies for acquisition of land to protect open space and critical natural areas of the Commonwealth. In addition, other conservation organizations are also eligible for matching grants or land acquisition through the recently enacted Growing Greener legislation (Act 68 of 1999). Also, as part of its Key 93 Community Grants Program, an acquisition funding component is also available to help local governments acquire land for parks, open space, and natural areas protection.

During the five years that Key 93 programs have been in existence, over 31,000 acres of land have been acquired under these two Key 93 programs.

Several counties (Lancaster, Chester, Bucks, Montgomery and Monroe) and several communities (Buckingham and Solebury townships in Bucks County and East Marlborough and Willistown townships in Chester County) have passed bond issues or raised taxes for open space acquisition programs that are similar in scope, requirements and procedures to DCNR's programs and can provide the needed matching funds for DCNR's grants. ■



7. Coal Remining and New Reclamation Technologies



DESCRIPTION:

Pennsylvania's abandoned mine lands memorialize a period of great economic and industrial growth in our state and country. However, the coal mining of the past still affects Pennsylvania's land and streams.

Mine reclamation refers to the process of cleaning up environmental pollutants and safety hazards associated with a site and returning the land to a productive condition. Since the 1960s, Pennsylvania has led the way in establishing mining laws and regulations to ensure reclamation occurs after active mining is completed. During the same time, Pennsylvania began an aggressive clean up of abandoned mine sites.

Each year, 1,500 to 3,500 acres of abandoned mine lands are permitted to be remined. The annual reclamation value of remining has reached more than \$7 million on recent years. Most permits issued in the anthracite region are for the remining of abandoned mines.

BENEFITS:

Actively "remining" previously abandoned surface or deep coal mines is the most efficient way to reclaim abandoned mine lands.

Mine operators who mine abandoned areas must reclaim the land to current reclamation standards; remining cannot degrade existing water quality. In re-mining, the mine operator is not responsible for improving the water quality impaired by past mining, but water quality improvements are common with remining projects.

IMPLEMENTATION:

The Pennsylvania Department of Environmental Protection (DEP) offers many incentives to mine operators who engage in remining, but this must be done within the context of a specific permitting and enforcement program to ensure that current mining and reclamation practices will reduce, not increase, overall acid mine drainage.

County Conservation districts work to identify abandoned mine land problems and ways to reclaim them. The Western and Eastern Pennsylvania coalitions for Abandoned Mine Reclamation have organized to advise watershed groups, environmental organizations, and government about reclamation projects. These groups work with DEP to secure funding and technical support for their local projects.

DEP is also actively exploring new technologies for more effective mine reclamation. Research and demonstration projects, conducted in cooperation with other public and private entities, are proving that several different materials and processes enhance existing reclamation and mine drainage remediation projects and have

(Coal Remining and New Reclamation Technologies, Cont'd)

shown positive results on receiving streams. These include passive treatment systems and use of biosolids and alkaline coal ash in reclamation.

The Bark Camp Mine Reclamation Laboratory, Clearfield County, is the main stage for many of these projects. Surface applications of biosolids on mine spoil increase soil moisture and fertility and provide a beneficial alternative to disposal of biosolids in landfills or incinerators.

DEP also approves the beneficial use of environmentally safe by-products to enhance mine reclamation of remined sites. Alkaline rich materials like coal ash and lime dust are combined with mine spoil to prevent the formation and production of acid mine drainage.

EXAMPLES IN PENNSYLVANIA:

Bark Camp Demonstration Project, Clearfield County – The Bark Camp Mine Reclamation Laboratory is the main stage for many of DEP’s research and demonstration projects aimed at new techniques for more effective mine reclamation.

Toby Creek Treatment Plant, Elk County – Carbon dioxide is being used along with limestone to treat mine drainage. This project is done in conjunction with the U.S. Department of the Interior, U.S. Geologic Survey and DEP.

Laurel Run, Cook Township, Westmoreland County - A passive treatment test project using microorganisms to treat mine water for manganese.

Swatara Creek, Lebanon and Schuylkill Counties - Utilizing new system of

anoxic limestone drains and diversion wells where limestone is neutralizing agent that improves water quality.

CONTACT INFORMATION:

PA DEP Bureau of District Mining Operations
(814) 472-1900
www.dep.state.pa.us
(click on to RECLAIM PA)

Eastern Pennsylvania Coalition for Abandoned Mine Reclamation
(717) 622-0709

Pennsylvania Association of Conservation Districts (PACD140)
(717) 236-1006

For more information on the Bark Camp Demonstration Project contact the PA DEP Hawk Run District Mining Office at (814) 342-8200.

Further information on the Toby Creek Treatment Plant can be found by contacting the PA DEP Knox District Mining Office at (814) 797-1191.

Information concerning Swatara Creek can be found by contacting PA DEP Pottsville District Mining Office at (717) 621-3118.

FUNDING SOURCE(S):

DEP provides financial assistance to operators who are applying for remining permits through the Remining Operator’s Assistance Program (ROAP). ■

1. Greenways

DESCRIPTION:

Greenways are generally linear corridors of public and private lands or water-based open space used primarily for recreational purposes. They can be trails, rail trails, rivers and other waterways, scenic byways, heritage tour routes, parks and linked tracts of open space. Greenways not only provide open space for human access and recreational use; they also function as corridors for wildlife habitat and movement, environmental protection and intermodal transportation.

In April of 1998, Governor Ridge created a Pennsylvania Greenways Partnership Commission of 22 members representing government agencies, nonprofit organizations and the private sector. The Commission is currently undertaking a statewide greenways plan and developing a statewide greenways program that will include public workshops, GIS mapping, surveys, a web page, a clearinghouse and other technical assistance, funding, educational and outreach activities.

The Heritage Park Program, multi-county in nature, also is one of the State's leading efforts to promote greenways along corridors that demonstrate the industrial heritage of the Commonwealth.

BENEFITS:

Greenways are a valuable asset to local and regional land use strategies by nature of their ability to create connections, protect open space, and provide economic development

opportunities. Greenways connect communities with each other, connect people with community facilities and connect wildlife with habitat corridors. They are both recreational facilities in themselves and link recreational facilities with each other. They provide venues for both non-motorized and motorized recreation and intermodal transportation uses.

Greenways are an integral part of local, regional and state tourism strategies and are becoming increasingly important generators of economic development in both urban and rural communities. Greenways contribute to environmentally sensitive growth strategies and may improve the quality of life and livability of neighborhoods, communities and regions.

From an infrastructure standpoint, greenways promote green infrastructure — that is, trails for walking, biking and canoeing, among other things. Greenways provide options for non-motorized commuting, thereby reducing vehicle use and creating pedestrian links. Greenways can connect homes and recreational areas.

IMPLEMENTATION:

Greenways can be comprehensively protected through Open Space Zoning/Conservation Design (see Section V), especially when implemented together with township-wide Resource Inventory/Analysis Maps (see Section VI).

(Greenways, Cont'd)

The Greenways Partnership Commission will be identifying barriers to greenways including planning, implementation, and funding that it will address as part of its strategic planning and program implementation process described above. A high priority for immediate analysis will be the policies and practices of state agencies involved in the provision of funding, technical assistance, and regulatory actions impacting greenways. Barriers will be identified and dealt with by the Commission through a grassroots public participation process and with the help of a state agency liaison group and a 120 member Greenways Partnership Advisory Committee.

EXAMPLES IN PENNSYLVANIA:

Many municipalities in Pennsylvania have provisions for the dedication of land for pedestrian walkways, trails, and bikeways in their zoning and land use ordinances. There are several major regional greenway efforts in the Commonwealth, including the **Schuylkill River Greenway** and the **Delaware River Greenway** Projects. Rails-to-Trails projects, regional initiatives involving county and local governments, represent a major part of Pennsylvania's greenway effort.

The **Heritage Park Program**, multi-county in nature, also is one of the State's leading efforts to promote greenways along corridors that demonstrate the industrial heritage of the Commonwealth. Administered by DCED, the program has designated the Lackawanna Heritage Valley in Lackawanna, Luzerne and Susquehanna Counties, as well as other parks. Two other parks are in the advanced

planning stage: the Allegheny Ridge Industrial Park (Blair, Somerest, and Cambria Counties), and the Delaware and Lehigh Canal Heritage Park (Berks, Northampton, Carbon, Lehigh, and Luzerne Counties).

CONTACT INFORMATION:

The PA Department of Community and Economic Development (DCED)
(800) 379-7448

The Pennsylvania Greenways Partnership Commission through the:
PA DCNR
(717) 783-2659

PennDOT - Center for Program Development and Management
(717) 787-7335

FUNDING SOURCE(S):

The primary resources for funding of greenways are the Keystone (Key 93) grant programs and the PA Recreational Trails Program administered by the Department of Conservation and Natural Resources (DCNR), and the Transportation Enhancements (TEA-21) program of the Pennsylvania Department of Transportation (PennDOT). The DCNR programs can fund the planning, acquisition and development of greenway-type projects. ■

2. Rails to Trails Program and Rail Corridor Enhancement

DESCRIPTION:

The post-industrial era has, among other things, provided a large number of abandoned rail corridors. Recently, municipalities and developers have discovered the value of these corridors as developable land. Conservationists have also recognized the value of these lands for trails that can be used for cycling, walking, and horseback riding.

BENEFITS:

The Rails to Trails Program provides excellent recreational opportunities utilizing lands having very limited value for other purposes. Abandoned rail properties within the corridor can be redeveloped for private investment as well. The result is a sounder set of land-uses in and around a municipality.

IMPLEMENTATION:

Rail and trolley right-of-ways can be acquired in a variety of ways. However, the matter of ownership must be carefully researched to determine ownership, and the appropriate mechanism for acquisition. Assistance in implementation is available from sources including DCNR and the Rails to Trails Conservancy.

EXAMPLES IN PENNSYLVANIA:

The **York County Heritage Rail Trail** connects in the north and the Codorus Bikeway in the City of York and the state line with the Maryland Rail Trail providing in total a forty-mile, two-state experience. The York County portion has a parallel operating rail line that is used for recreation and

entertainment as a dinner train, as well as some limited freight shipment. The Rail Trail is heavily used, especially on weekend by bikers, walkers, and horseback riders.

Ghost Town Trail, Indiana and Cambria Counties – The trail is 16 miles long at the present time and the Cambria and Indiana Trail Council plans to add an additional 3.5 miles to the trail.

Youghiogheny River Trail – The YRT North Section is a 43-mile limestone surfaced trail built along the "railbanked" right-of-way of the Pittsburgh & Lake Erie Railroad along portions of 25 municipalities in Fayette, Westmoreland, and Allegheny counties. The trail is designed as a non-motorized, shared-use, recreational trail for bicycling, walking, fishing and canoe access, hiking, nature study, historic appreciation, cross country skiing, picnicking, and horseback riding.

In 1990, when a task force of local citizens, trail groups, and government officials led by the National Park Service prepared the concept plan for the Youghiogheny River Trail. In 1991, Allegheny, Fayette, and Westmoreland Counties formed the non-profit Regional Trail Corporation (RTC) with a mission to acquire, construct, and manage the trail. The Southwestern Pennsylvania Heritage Preservation Commission and the TEA-21 program are providing funding for the engineering and construction of the trail. County governments and private foundations are

(Rails to Trails Program and Rail Corridor Enhancement, Cont'd)

providing matching funds, while local townships and volunteer groups are providing labor and equipment to build the trail.

The **Pittsburgh to Washington, D.C. rail to trail corridor**, which includes 183 miles in Pennsylvania, is a regional coalition of seven nonprofit trail organizations and the counties and communities in southwestern Pennsylvania.

The 24-mile **Susquehanna River Trail** runs from Halifax to Harrisburg's City Island and is the state's first formal water trail for canoeing, rafting, camping, bird watching and other low-impact water-based recreational and stewardship activities.

Pottstown Township, Montgomery County – A proposed 125-acre park would encompass existing trails and parks into the 120-mile Schuylkill River Trail. This trail would link into the proposed light-rail Schuylkill Valley Metro. Using grants from the William Penn Foundation and the Pottstown Historical Society, landscape architects were hired to design a concept plan.

CONTACT INFORMATION:

Rails to Trails Conservancy
PA Chapter
(717) 238-1717

DCNR Bureau of Recreation and Conservation
(717) 783-2659

PennDOT Center for Program Development and Management
(717) 787-7335

Pottstown Borough Manager
(610) 970-6510

Information on TEA-21 and PennDOT's Transportation Enhancement Program can be found by visiting PennDOT's website at www.dot.state.pa.us/penndot/aviation.nsf/Trans+enhance+program?readform.

For more information on the Youghiogheny River Trail visit the Regional Trail Corporation's website at www.youghrivertrail.com or contact them at (412) 350-5875. Information on the York County program can be found at www.york-county.org.

FUNDING SOURCE(S):

Funding sources can be varied. County and municipal funding can play a part. Federal transportation enhancement funds through PennDOT can also be used for this type of activity as well as Keystone funds from Pennsylvania Department of Conservation and Natural Resources (DCNR). Foundation monies and other private donations are also possibilities.

Other programs look to enhance the properties along the corridor. ISTEA, and now TEA-21, established significant funding opportunities for surface transportation projects, including railroad corridor enhancement. PennDOT's Transportation Enhancements Program, part of ISTEA and TEA-21, targets, among other things, "Rehabilitation and operation of historic transportation building, structures or facilities (including historic railroad facilities and canals" and "Preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian or bicycle trails)". ■

3. Foot Paths and Bike Paths

DESCRIPTION:

Foot paths and bike paths form a system of infrastructure that provides other-than-road access to common destinations. For example, paths to schools, shops, a post office, playgrounds or parks can all be connected or interconnected through a system of green infrastructure. This is an effective practice to reduce traffic and pollution and enhance the quality of life for local municipal residents.

These infrastructure facilities can be a portion of roadway, shoulder, or right of way designed for exclusive or preferential use by pedestrians and cyclists. To aid the development of infrastructure for bicyclists and pedestrians in conjunction with roadways, PennDOT adopted the Statewide Bicycle and Pedestrian Master Plan in 1996.

BENEFITS:

When used, this practice promotes a decrease in congestion on local and collector roads as a result of increased bicycle and pedestrian commuting. There is a corresponding decrease in pollution (decrease in use of fossil fuels) as a result of this pedestrian commuting, and an economic advantage to the user (in fuel savings).

IMPLEMENTATION:

Pedestrian and bikeway systems are found in the provisions of a municipality's or county's comprehensive Plan. Dedication of land for these paths can be required

as a condition of subdivision approval. To accommodate bicycles, some would argue that a path must be paved. In order to qualify for federal funds for a bikeway, certain design criteria must be met (e.g., paved a width of 10 feet).

On a significant number of rural and suburban roads, there is a lack of sidewalks and/or shoulders that facilitate pedestrian or bike traffic. There is also a shortage of safe and secure storage facilities for bicycles at many commercial and institutional facilities, as well as shower and changing facilities. Safety issues may be of concern among pedestrians, cyclists and motorists, especially in congested areas or on roads with little or no separation between uses, when trying to encourage the use of such paths. The issues should be addressed when using this practice.

For a landowner who would like to make land available to the public for hiking or other recreation, fears of vandalism, littering and disturbance may inhibit the establishment of pathways. Some protection is provided through Pennsylvania's Recreation Use of Land and Water Act, and Pennsylvania's Rails to Trails Act.

EXAMPLES IN PENNSYLVANIA:

A number of townships regularly require dedication of pathways as a condition of subdivision. For example, the subdivision ordinance of **Pocopson Township, Chester County**, requires

(Foot Paths and Bike Paths, Cont'd)

that land be dedicated for a footpath/bridle path where a portion of the township's footpath/bridle path plan affects the subdivision. The Comprehensive Plan calls for over four miles of paths. The Township Supervisors have appointed a Trails Committee to increase citizen participation in the extension and maintenance of the systems.

Lower Gwynedd Township, Montgomery County, has prepared a Recreation, Park, and Open Space Plan that includes first priority trails and second priority trails. Also in Montgomery County, the Lower Pottsgrove Township Planning Commission has approved a Bikeway/Trail plan.

Manheim Township, Lancaster County has developed a non-motorized path system to give people a safe and alternative means to travel.

Allegheny County Sidewalk and Bikeways Plan — The community development department sought to fully study a network of sidewalks that would foster the concept of community and also increase the safety of transportation within the service area. The goal of the plan is to locate sidewalks and bikeways with the needs of residents in mind. The guiding principles are to give students an opportunity to walk safely to school, pedestrians the ability to travel to points of interest, senior citizens the convenience to walk outdoors, and bicyclists the freedom to ride separate from motorized vehicles.

CONTACT INFORMATION:

Chester County Planning Commission
(610) 344-6285

Pocopson Township, Chester County
(610) 793-2151

Montgomery County Planning Commission
(610) 278-3730

Lower Gwynedd Township, Montgomery County
(215) 646-5302

Manheim Township Park and Recreation Department
(717) 290-7180

Allegheny County Department of Economic Development
(412) 350-1000

FUNDING SOURCES:

DCNR Bureau Recreation and Conservation
(717) 783-2659 ■



1. Silviculture / Forestry Management

DESCRIPTION:

Nearly 80 percent of Pennsylvania's seventeen million acres of forest land is owned by non-industrial private individuals. Similar to the routine use and stewardship of agricultural field crop lands, forests require silviculture management to ensure their long-term health, sustainability and economic viability. A number of programs exist in the state that educate private landowners to manage their forest land for sustained, productive use without having negative impacts on the health, safety or welfare of the general public. These programs recognize that the forests are in constant change and that proper harvesting practices mimic the natural disturbances that sustain forests.

Municipalities can ensure the future of forest land in their communities by encouraging private landowners to properly manage their forest land.

BENEFITS:

Sustainable forestry practices provide both current and long-term benefits to a region. Proper timber management encourages the preservation of open space by providing a local landowner with income from standing timber and a market-driven incentive to maintain their property as forest land. Timber management also promotes forest health, lessens the potential of wildfire, protects sites of special significance, provides a rich and diverse wildlife habitat and encourages recreational opportunities. Finally, sustainable forestry practices provide an important

economic benefit to local communities by providing \$380 million in annual income to forest landowners and supporting the state's \$5.1 billion forest products industry.

IMPLEMENTATION:

A number of Pennsylvania communities have adopted ordinances to control the location and manner in which trees and forests are cut, to protect environmental, recreational, and aesthetic values. Enrolling this land into the Clean and Green program is a good way to conserve forested space. Conversely, municipalities that seek to prohibit forestry or excessively regulate forestry practices may actually experience a loss of forest land as landowners seek an income from their land and convert it to development use. To respond to this problem, the Commonwealth enacted the Right to Forestry Act in 1992 (53 P.S. §10603(f)), which prohibits local governments from using a zoning ordinance to unreasonably restrict forestry activities. Other state laws protect watersheds from the impact of logging operations.

Local ordinances can help control stormwater runoff from logging operations, protect water quality and wildlife habitat, preserve scenic views, and prevent and mitigate logging traffic and road damage. They can also help ensure that timber harvesting practices are consistent with accepted professional forestry practices, sustaining forest quality and health for the long term.

(Silviculture / Forestry Management, Cont'd)

Keeping land in forest uses often requires that at least some timber harvesting occur to provide an economic return for the landowner.

A number of organizations provide landowners with information on how to make sustainable forestry decisions through planning and the utilization of best management practices. The Sustainable Forestry Initiative of Pennsylvania encourages this landowner education through a network of participating and supporting loggers, forestry consultants and members of the forest products industry. The Forest Stewardship Program assists in the development of individual forest plans. The American Tree Farm is a nationwide community of landowners linked by a desire to manage their forest land effectively.

Municipal officials can also access resources from Pennsylvania State University School of Forest Resources Cooperative Extension that outline forestry practices and provide valuable information on the role that municipalities can take in supporting sustainable forestry in their area. A model municipal forestry ordinance has been developed by the Penn State School of Forest Resources, in cooperation with the state Bureau of Forestry, Society of American Foresters and the Pennsylvania State Association of Township Supervisors. The Pennsylvania State Association of Township Supervisors has worked with Penn State to educate local governments about timber harvesting issues and appropriate provisions in local timber harvesting regulations. The report, *Working with Communities to Address Local Timber Harvesting Issues*, is available from the contact organizations below.

EXAMPLES IN PENNSYLVANIA:

As of 1992, according to a Penn State survey, over 135 townships, both suburban and rural, had adopted some type of ordinance regulating timber harvesting. Penn State's School of Forest Resources and the Pennsylvania Division of the Allegheny Society of American Foresters are maintaining a data base on existing timber harvesting ordinances.

CONTACT INFORMATION:

Sustainable Forestry Initiative of Pennsylvania
(888) 734-9366

Pennsylvania Bureau of Forestry
Forest Advisory Services
(717) 787-2106

Penn State University
School of Forest Resources
(814) 863-0401

Pennsylvania Forestry Association
(717) 766-5371

Pennsylvania State Association of Township Supervisors
(717) 763-0930

Pennsylvania Division of the Allegheny Society of American Foresters
(717) 432-3646 ■

2. Forest Land Conservation Easements

DESCRIPTION:

Conservation easements on working forests are a market-driven tool used to preserve open space, like those used to protect working farmland. Easements can be used to protect forests for present and future economic benefit, with subsequent attendant benefits such as wildlife habitat, watershed protection, outdoor recreation, and soil conservation.

BENEFITS:

As open space diminishes while development advances, economically valuable forest land is lost. Timber is one of the top five sectors in Pennsylvania's economy, and its continued availability is dependent upon the existence and preservation of open space and forests. The benefits are economic as well as environmental. Side benefits of easements include lower property taxes for landowners.

IMPLEMENTATION:

Some non-profit organizations, such as conservancies and land trusts, provide financial support for purchasing easements from landowners; they also accept tax-deductible donations of easements from landowners. The U.S. Forest Service's Forest Legacy initiative provides funding to state governments to help purchase easements on private forestland.

EXAMPLES IN PENNSYLVANIA:

The **Western Pennsylvania Conservancy** holds easements on many pieces of privately-owned land that are dedicated working forests.

CONTACT INFORMATION:

U.S. Forest Service
Ecosystem Management and
Coordination
(202) 205-0939

Western Pennsylvania Conservancy
(412) 288-2777

Nature Conservancy
(610) 834-1323 ■

3. Riparian Buffers

DESCRIPTION:

A riparian buffer is an area of vegetation maintained adjacent to a stream or other body of water. It is managed to protect the integrity of the stream channel or shoreline and to reduce the impact of upland sources of pollution by trapping, filtering, and converting sediments, nutrients, and chemicals, and to supply food, cover, and thermal protection to fish and other wildlife.

Buffers can be either forested or herbaceous. While forested buffers may be preferable, buffers that are vegetated with grasses alone provide some of the same water quality benefits as forested ones. However, they do not contribute much benefit to the aquatic ecosystem, which requires shading, leaves, and woody debris.

BENEFITS:

Riparian buffers protect water quality by filtering sediments and nutrients, providing cooling, shading, and dissolved oxygen, stabilizing stream banks, and regulating stormwater flow. They also provide wildlife habitat by supplying food, cover, and breeding and nesting habitat close to water. As with other protection and restoration efforts, every riparian buffer does some good, but ideally adjacent landowners throughout a watershed implement them.

The most significant loss of riparian forests occurring today is through the conversion of agricultural and forest land to urban and suburban

development. Through municipal ordinances that require retention of riparian buffers, such vegetation can be preserved in those areas where they are needed most to protect water quality and habitat from the impacts of development.

IMPLEMENTATION:

Landowners can voluntarily conserve or restore such buffers. A number of municipalities have enacted ordinances to require riparian buffers to be maintained as part of land development. Also, education and technical assistance for landowners are essential to increase their understanding and support for riparian forest buffers. A more comprehensive approach is embodied in the technique called Open Space Zoning/Conservation Design (see Section V).

EXAMPLES IN PENNSYLVANIA:

Montgomery County has developed a model Riparian Corridor Conservation Ordinance.

West Fallowfield Township, Chester County, adopted an ordinance in 1997 that includes natural resource protection overlay districts.

Warwick Township in Lancaster County has adopted a program that has received several awards. These districts are floodplain conservation, wetland protection, steep slope conservation, and woodland protection – all efforts to promote buffer conservation.

(Riparian Buffers, Cont'd)

CONTACT INFORMATION:

Chesapeake Bay Foundation
(717) 234-5550

Alliance for the Chesapeake Bay
(717) 236-8825

Montgomery County Planning
Commission
(610) 278-3730

Chester County Planning Commission
(610) 344-6285

West Fallowfield Township, Chester
County
(610) 593-5279

PA Association of Conservation
Districts
(717) 545-8878

PA Department of Environmental
Protection
(717) 787-5267

PA Department of Conservation and
Natural Resources
(717) 783-5877 ■

4. Stream Bank Stabilization and Restoration

DESCRIPTION:

Changes in stream hydrology are dynamic. However, they also are frequently accelerated as a result of human activity along streams, such as removal of trees and other vegetation, increased runoff resulting from urbanization, overgrazing of livestock, cultivation too close to the stream, and earthmoving and paving for development. These activities create changes in stream bank and bed configuration, soil erosion, and also alter the natural flow of stormwater. Loss of soil from fields and stream banks causes excessive sediment to enter streams, creating water quality problems for fish and aquatic life.

There are a variety of techniques that landowners can use to stabilize stream banks to prevent erosion and sedimentation, and to restore eroding streambanks. These include stream bank fencing to restrict livestock grazing to specific points along streams, “rip-rapping” banks with stone or concrete to prevent erosion, and revegetation of stream banks with grasses, shrubs, and trees.

BENEFITS:

Stream bank stabilization measures can reduce nonpoint source pollution caused by sediment and the contaminants that accompany soil particles into waterways, including heavy metals, phosphorus, and other nutrients. They can improve aquatic habitat by reducing the level of suspended and deposited sediments in streams, which impact the ability of fish to breed and reproduce.

IMPLEMENTATION:

The costs of installing stream bank stabilization measures are borne by individual landowners, although there are a number of cost-share and grant programs available to help pay for the expense. These stream bank stabilization and restoration projects are most effective when all streamside landowners throughout a watershed implement them. That way, upstream and downstream sources of excess sediment are eliminated and water quality and aquatic habitat are enhanced.

EXAMPLES IN PENNSYLVANIA:

There are examples of stream bank stabilization and restoration in virtually every Pennsylvania county, especially on agricultural land. Some involve strong grassroots efforts now being highlighted as a model of the Chesapeake Bay Association. It involves several private, non-profit organizations, including:

- Lititz Borough, Lancaster County;
- Local county conservation districts;
- Trout Unlimited;
- Pheasants Forever; and
- private citizens.

The **Franklin County Watershed Association**, an organization comprised of local governments, county agencies, state and federal agencies, civil groups and private individuals, is working on restoration of the Back Creek Watershed in Central Franklin County. The Association has restored 25 acres of wetlands at six sites; fenced and stabilized over six miles of streambank; planted 15,000 trees and numerous acres of warm

*(Stream Bank Stabilization and Restoration,
Cont'd)*

season grasses; and constructed thirteen stream crossings. The Association has received preliminary approval on an EPA grant for \$60,000 to continue its work. Approval of the grant will mark the first time that this particular EPA grant has been awarded in Pennsylvania.

The **East Branch Perkiomen Creek Streambank Restoration Project** (Project #1033-09-002) used approximately 40 volunteers to place rip rap, gabions, lumbers, and tree armoring to protect the streambanks. The Project not only benefited the stream but also provided an environmental education opportunity for the public.

The **French Creek** begins in Chatauqua County, New York and flows for 117 miles through the northwestern Pennsylvania counties of Erie, Crawford, Mercer, and Venango before emptying into the Allegheny River. The project brings together conservationists, landowners, farmers, the business community, local government officials, sportsmen, residents, teachers, and students in a collaborative effort to foster "Conservation Through Cooperation". The project includes an aggressive public education and outreach effort to a variety of audiences, including riparian landowners, local governments, school children, teachers, and the general public. The purpose of the project is to raise public awareness about the outstanding biological diversity of French Creek, and to spur a grassroots effort to reduce pollution.

In 1997, the French Creek Project completed a "Vision Plan" for the watershed, which outlined the various activities and priorities of the project into

the year 2000. The Vision Plan established five main areas of activity for the French Creek Project: education, stream conservation, science and research, work with local governments, and recreation.

CONTACT INFORMATION:

Your Local County Conservation District Office
(See listing in Appendix)

Pennsylvania Department of Environmental Protection (PA DEP)
(717) 787-5267

PA Department of Conservation and Natural Resources (PA DCNR)
(717) 783-5877

Bucks County Conservation District (Project #1033-09-002)
(215) 345-7577

Allegheny College
(814) 332-2946 ■

5. Nutrient Management Planning

DESCRIPTION:

Under Act 6 (Pennsylvania Nutrient Management Act), certain agricultural operations in Pennsylvania are required to have nutrient management plans that specify how livestock waste is managed. Other operations can develop plans voluntarily. The purpose of the law is to prevent pollution from animal feeding operations.

There are several technical assistance and financing programs available to assist farmers in the development and implementation of plans.

EXAMPLES IN PENNSYLVANIA:

There are examples of nutrient management plans in virtually every Pennsylvania county.

BENEFITS:

Improper nutrient management is a significant source of ground and surface water pollution. Nutrient management plans help to protect water quality. Although local governments may not regulate nutrients more stringently than the state, enactment of local regulations that are consistent with the state requirements may give communities the ability to have greater oversight over nutrient management than the county or state can.

CONTACT INFORMATION:

PA State Conservation Commission
(717) 787-8821

PA Department of Agriculture
(717) 787-4843 ■

IMPLEMENTATION:

Plans are developed by individual farmers and their licensed consultants and submitted for review and approval by County Conservation Districts or the State Conservation Commission. Under the Nutrient Management Act, local government is specifically precluded from adopting nutrient management regulations more stringent than the state requirements. Local governments may, however, enact regulations that are consistent with state regulations.

Most nutrient management programs are implemented through County Conservation Districts or State Programs.

6. Wetlands Management and Protection

DESCRIPTION:

Federal and state regulatory programs protect wetlands by requiring permits for activities in or affecting wetlands. However, municipalities must choose the level of involvement to assume in wetlands management and can plan proactively for enhancement and protection of wetlands. Section V describes how local governments can designate natural resource-based zoning districts in the practice called “Open Space Zoning/Conservation Design.” It is applicable to wetlands as well as other natural areas.

Wetlands mitigation banks have been created as a way for mitigation requirements to be met without the applicant having to construct a wetland. This is a particularly useful way for developers of projects with impacts on small wetland acreage to consolidate their mitigation projects into larger wetland acreage. Mitigation banks have been created by state and federal agencies, and also by nonprofit organizations. Local governments could create such banks in conjunction with local wetland protection programs.

BENEFITS:

Wetlands are a critical resource that provide important wildlife habitat and play a key role in flood prevention, surface water management, groundwater recharge, and ground and surface water quality. They improve surface water quality and improve biofiltration (the removal of sediment and pollutants) of ground and surface water. Local (municipal) management can provide

additional protection of wetlands beyond what is available from state and federal agencies enforcement.

IMPLEMENTATION:

Wetlands management tools are generally located in zoning and subdivision and land development ordinances, and can be used to mitigate the impacts of development on wetland resources.

Applications for State and federal wetland permits must demonstrate that applicants have first avoided impacting wetlands to the maximum possible extent, then that they have minimized impacts on wetlands, and finally that any unavoidable wetland impacts are mitigated.

There may be the potential for administrative complexity if municipalities try to require wetland mitigation. Municipal officials may require specialized staff to properly administer wetland ordinances and coordinate with the State and federal governments. A policy basis for wetlands management should be established in the Comprehensive Plan or Open Space Plan. Finally, an implementation plan should be developed, with appropriate language included in subdivision and land development ordinance and municipal zoning ordinance.

Non-profit groups and private property owners can create wetlands to support ecological benefits ranging from flood control to habitat diversification. This proactive approach helps to balance

(Wetlands Management and Protection, Cont'd)

negative impact imposed by filling, grading, and construction elsewhere in the watershed. Groups such as local gardeners, Boy Scouts/Girl Scouts and conservation associations can work with wetland experts at PA DEP to plan, create, and plant wetlands.

EXAMPLES IN PENNSYLVANIA:

The following are examples of municipalities that regulate wetlands and the general approach they take:

Manheim Township in Lancaster County – Relocation of Butter Road and Landis Run with combined benefits to flood control, wetlands preservation and storm water management expansion.

Twenty-three **Bucks County** municipalities have some form of wetland protection zoning through performance zoning or natural resource restriction ordinances.

Numerous **Chester County** municipalities currently regulate wetlands. Some merely require identification of wetlands and notification of state and federal agencies when applicable, leaving the actual regulation to those agencies. Many require identification of wetlands and net them out of lot size or density calculations. Still others include disturbance limits as well. None provides for a wetland mitigation option.

Schuylkill Township, Schuylkill County – Requires wetland delineation and subtracts (nets out) wetland areas from lot size requirements. Requires wetland margin of 100 feet or to the limits of hydric soils, whichever is less. Wetland margin is counted toward lot size calculations.

Thornbury Township, Delaware County – Requires wetland delineation and partially nets out wetlands based on a formula. Does not allow disturbance within 100 feet of any wetland.

A couple in **Venango Township, Erie County**, created four areas of wetlands on their property. The cost is estimated at \$9,500.

A private citizen and the Natural Resources Conservation Service implemented a project to restore two acres of prior converted cropland in **Columbia County**. The project created wetlands by blocking a field drain that was installed to collect and divert several spring seeps. The estimated cost was \$14,000.

The Golden Pond Girl Scout Camp in the Upper Susquehanna River drainage basin in **Huntingdon County** restored approximately one acre of wetland in cooperation with DEP and the Natural Resources Conservation Service. The project was successfully completed by restoring an on-site spring-fed wetland community.

CONTACT INFORMATION:

Manheim Township, Lancaster County
(717) 569-6408

Bucks County Planning Commission
(215) 345-3400

Chester County Planning Commission
(610) 344-6285

Schuylkill Township, Schuylkill County
(570) 668-1039

(Wetlands Management and Protection, Cont'd)

Thornbury Township, Delaware County
(610) 399-8383

Venango Township, Erie County
(814) 739-2688

Columbia County Planning Commission
(717) 389-9146

Huntingdon County Planning and
Development Department
(814) 643-5091

The Environmental Management Center
of the Brandywine Conservancy
(610) 388-2700

PA Department of Environmental
Protection – Bureau of Water Quality
Protection
(717) 787-6827
www.dep.state.pa.us

US Department of Agriculture – Natural
Resources Conservation Service
(717) 237-2200 ■

7. River Conservation/ Watershed Planning

DESCRIPTION:

Watershed planning is a comprehensive approach to assess how the natural and modified environment interface and how the best quality of life for the human community can be achieved with the most benefit and least degradation to natural elements and systems.

BENEFITS:

With appropriate planning, actions and activities that benefit the watershed can result in healthier, cleaner environments; less infrastructure; and lead to more economically viable communities.

IMPLEMENTATION:

Planning on a watershed basis needs to include the following elements: a definition of the sub-watershed or watershed boundaries; a detailed inventory of the natural, cultural, and historical resources and their geographic location within the basin; and a clear picture of the issues, threats, and opportunities within the basin.

The first step is the identification of the watershed's function to the regional ecological system. Secondly, identification of activities within the watershed that threatens its function is also required. Essentially a basic understanding of cause and effect relationships and their outcomes is required to fully understand and implement watershed planning.

Opportunities to extend this information distribution should include training at township/municipal government levels and the public. Venues to approach

the public include information on television environmental programs. Watershed based programs managed by local, state, or federal government agencies, which disseminate literature and provide education is also available. Likewise, elementary/secondary and college curricula are beginning to train future watershed stewards.

Watershed planning is better performed using Geographic Information System (GIS) computer technology (see the practice titled Geographic Information System (GIS) Mapping in Section VI). The GIS can assimilate the multiple facets of the watershed ecological system and systematically assess actions and predict outcomes. A GIS can also serve as a measurement of progress, if the environmental and human activities are tracked as changes occur.

EXAMPLES IN PENNSYLVANIA:

The **Pennsylvania Rivers Conservation Program** has provided grants (50/50 match) and technical assistance to empower local conservancies, watershed organizations and municipalities to develop comprehensive watershed plans on a local level.

Examples of completed plans reflect the vision of the communities, organizations and residents in the watershed. Approval of the River Conservation Plans allows additional funding to be directed to recommendations and management options defined and prioritized in the plan. Each plan reflects the geographic location of the basin in the Commonwealth, both

*(River Conservation/Watershed
Planning, Cont'd)*

through the GIS data base as well as the issues, opportunities and recommended courses of action.

Completed River Conservation Plans done on a watershed basis include: Tulpehocken and Cacoosing Creek, the Clarion River, Upper Mahoning Creek, French and Pickering Creeks, Ridley Creek, Tunkhannock Creek, from its confluence with the North Branch Susquehanna to its headwaters, and the Monocacy Creek from its headwaters to its confluence with the Lehigh River.

CONTACT INFORMATION:

PA Department of Conservation and Natural Resources, Bureau of Recreation and Conservation Division of Conservation Partnerships
(717) 787-2316 ■

1. Agriculture Protection Zoning (APZ)

DESCRIPTION:

Agricultural Protection Zoning (APZ) ordinances designate areas where farming is the primary land use, and discourage other land uses in those areas.

Lancaster County Planning Commission
(717) 299-8333

York County Planning Commission
(717) 771-9870

Berks County Planning Commission
(610) 478-6300 ■

BENEFITS:

Agricultural Protection Zoning stabilizes the agricultural land base by keeping large tracts of land relatively free of non-farm development. This can reduce the likelihood of conflicts between farmers and their non-farming neighbors. Maintaining a critical mass of agricultural land can ensure that there will be enough farmland to support local agricultural services.



IMPLEMENTATION:

Agricultural Protection Zoning can be economically viable by using such tools as Transfer of Development Rights (TDRs) and Purchase of Development Rights (PDRs) (see TDR and PDR descriptions on the following pages).

EXAMPLES IN PENNSYLVANIA:

Examples of Agriculture Protective Zoning can be found in **Lancaster County, York County, and Berks County**.

CONTACT INFORMATION:

County Commissioners Association,
PA Association of Township
Supervisors (PSATS)
(717) 763-0930

2. Transferable Development Rights (TDRs) and Purchase of Development Rights (PDRs)

DESCRIPTION:

Transferable Development Rights (TDRs) is a zoning tool that allows conservation and development to coexist within a municipality. Growth is directed to preferred locations through the sale and purchase of development rights. Development rights are established for a given piece of land and can be separated from the title of that property. These rights can then be transferred in fee simple to another location within a parcel of land (in the case of a planned residential development) or to another location within a municipality where development is desirable and planned for.

The sale of TDRs leave the rural landowner in possession of title to the land and the right to use the property as a farm, open space or for some related purpose. However, it removes the owner's right to develop the property for other purposes. The transfer of development rights allows the purchaser of the development rights to then develop another parcel more intensively than would otherwise be permitted

While the TDR program is part of the municipal zoning ordinance, the actual buying and selling of development rights remain with the property owner. TDRs are implemented on a voluntary basis.

Purchase of Development Rights (PDRs) operate in a similar manner. However, with PDRs, an entity (either alone or jointly) buys the right to develop land

from the landowner. The landowner retains the use of the land, and receives tax benefits. The municipality can pass a bond issue to buy the rights and "bank" them. A developer may purchase the development rights from the municipality when he wishes to develop an area with high density. The municipal bond financing which was entered into to purchase the rights is paid off over the years by the purchase of the development rights, as development occurs.

BENEFITS:

The value of each development right is controlled by the open market, not the municipality. TDRs are an equitable option for preserving open space and agricultural lands by compensating the owner of preserved land, while guiding the growth of development through the allowance of increased density where existing infrastructure can support it.

PDRs give immediate return to the landowner. It compensates the landowners for reduction in development potential and facilitates the goals of the development district concept. PDRs also streamline the time line for development since private sales and negotiations for development rights are not necessary to go forward with high-density development. It allows the municipality to guide the growth since it owns all the development rights.

IMPLEMENTATION:

In PA, TDR programs can only be used to transfer development rights within a

(Transferable Development Rights (TDR) and Purchase of Development Rights (PDR), Cont'd)

single municipality, or among municipalities with a joint ordinance, as authorized by 1992 MPC amendments. While the MPC authorizes the development of a system for transferring development rights, it does not provide a procedure for how the transfer is to occur. It is up to each municipality implementing TDR to set up a mechanism to accomplish the transfer. The easier it is to transfer development rights, the more likely it is that the program will be successful.

Implementing a TDR program requires a complete understanding of the real estate and development market of the municipality and surrounding areas. This information is necessary for setting up the details of a TDR program – the number of development rights per acre, the amount of increased density allowed through use of TDRs at the receiving site, etc. – in a manner that makes the TDR program work for both buyers and sellers.

The structure of a TDR program must make it more financially attractive for a farmer to sell development rights than to develop land. Permitted densities in the receiving area must be set so that developer obtains greater return through buying development rights and developing more densely than through accepting the base density of the site.

TDRs give substantial control to the municipality since it is the municipality that owns all the development rights. In order to purchase those rights, however, local municipalities must locate revenue sources. To support the purchase of the development rights, local communities

may not be willing to float a bond and incur the debt. And, since PDRs are voluntary, they may not achieve acquisition of a critical mass of land.

EXAMPLES IN PENNSYLVANIA:

Two townships in **Chester County** successfully implemented these programs. The first involved **West Bradford Township**, which focused its efforts on a highly visible and scenic property adjacent to an historic village, a strategy that helped to generate broad public support for the new technique. Officials also helped the developer identify a suitable “receiving area” where the new homes could be better serviced and where the visual impact would be lessened by the site’s woodlands.

The second successful example resulted from an initiative by the Board of Supervisors in **West Vincent Township**, where the proposal by a developer to create central water and sewage disposal facilities for 250 homes around a golf course provided an opportunity for the developer to increase his lot yield to 400 by purchasing and transferring 150 development rights from productive farmland around that community’s historic village center.

Manheim Township, Lancaster County, has developed a TDR program. Designated “receiving” areas (the area designated to receive development rights) are planned to be served by public sewer and water service, whereas “sending” (those areas of the municipality designated to be preserved) areas are not.

(Transferable Development Rights (TDR) and Purchase of Development Rights (PDR), Cont'd)

Other municipalities which have adopted TDRs:

<u>Municipality</u>	<u>County</u>
Buckingham Twp.	Bucks
Warrington Twp.	Bucks
Birmingham Twp.	Chester
E. Bradford Twp.	Chester
E. Nantmeal Twp.	Chester
London Grove Twp.	Chester
East Vincent Twp.	Chester
Warwick Twp.	Lancaster
Chanceford Twp.	York
Codorus Twp.	York
E. Hopewell Twp.	York
Lower Chanceford Twp.	York
Shrewsbury Twp.	York

CONTACT INFORMATION:

West Bradford Township, Chester County
(610) 269-4174

West Vincent Township, Chester County
(610) 827-7932

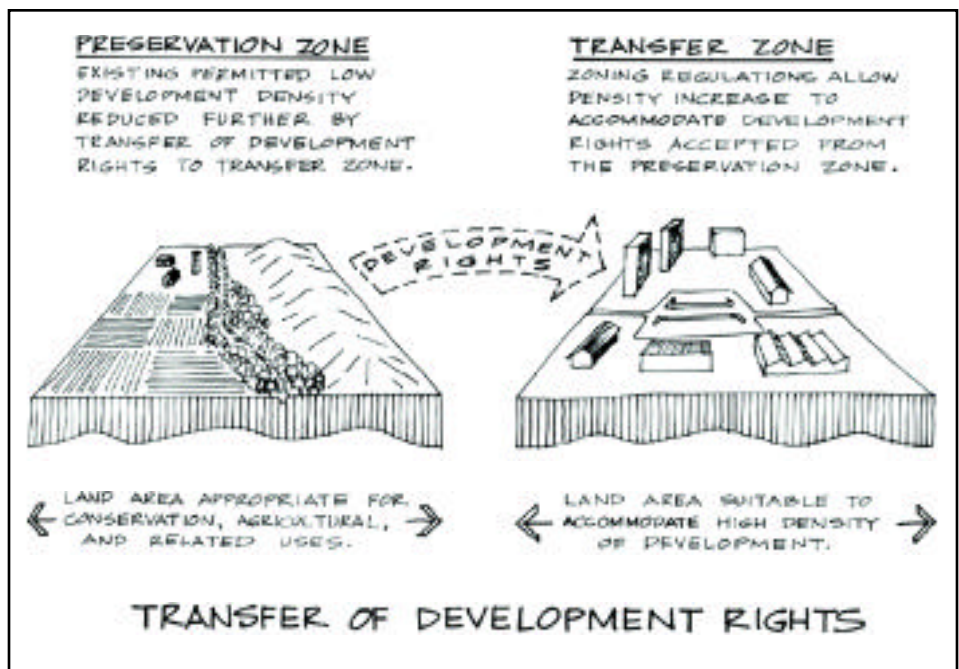
Lancaster County Planning Commission
(717) 299-8333

Manheim Township, Lancaster County
(717) 569-6408

Bucks County Planning Commission
(215) 345-3400

Chester County Planning Commission
(610) 344-6285

York County Planning Commission
(717) 771-9870 ■



3. Agricultural Security Areas (ASAs)

DESCRIPTION:

Agricultural Security Areas (ASAs) are authorized pursuant to the Agricultural Area Security Law, PA Act 1981-43 (Act 43). A landowner or group of landowners whose parcels together comprise at least 250 acres may apply to their local government or local governments for the designation of an ASA. The parcels must be viable agricultural land and may be comprised of non-contiguous tracts at least 10 acres in size.

BENEFITS:

The ASA designation encourages the preservation of agricultural land. ASAs give a landowner protection from local ordinances that restrict farm practices unless those ordinances have a direct relationship to public health or safety. ASAs also protect an area from nuisance ordinances. Additionally, the designation limits land condemnation procedures — eminent domain by the Commonwealth and local agencies — unless approval is gained from the Agricultural Lands Condemnation Approval Board. The ASA designation also qualifies the land (if it is in an area of 500 acres or more) for purchase of conservation easements under the Pennsylvania statewide program. An attractive feature of the ASA designation is that it is not a permanent designation and this may be suitable for some communities and landowners. ASAs are reviewed every seven years.

IMPLEMENTATION:

The process to designate an ASA must be initiated by a landowner or group of landowners.

EXAMPLES IN PENNSYLVANIA:

As of October 1999, there are 824 ASAs in Pennsylvania, with over 3.2 million acres enrolled.

Chester County has one of the few Agricultural Development Councils in the Commonwealth.

CONTACT INFORMATION:

PA Department of Agriculture
Bureau of Farmland Protection
(717) 783-3167

Chester County Agricultural Development Council
(610) 344-6285 ■

4. Agricultural Lands Condemnation Approval Board (ALCAB)

DESCRIPTION:

PA Act 100 of 1979 established the Agricultural Lands Condemnation Approval Board (ALCAB), a six-person independent administrative Board with jurisdiction over the condemnation of productive agricultural lands for transportation projects in Pennsylvania. The Board reviews proposals made by the PA Department of Transportation (PennDOT) or local authorities, and determines whether there is a feasible alternative to the condemnation of farmland. PA Act 43, the Agricultural Area Security Law, expands the ALCAB jurisdiction to non-transportation projects and airports. The PA Department of Agriculture (PDA), Bureau of Farmland Protection is the administrative body for ALCAB.

BENEFITS:

ALCAB gives protection to farmland when feasible alternatives exist. The Bureau of Farmland Protection provides environmental clearance for most transportation projects impacting agricultural lands, as mandated by the National Environmental Policy Act (NEPA). Dozens of projects received PDA concurrence each year. Many are not required to go to ALCAB, but still require agency approval. PennDOT's 10-step environmental process provides resource agencies the opportunity to influence decision-making at the beginning stages of a project. Often, agencies question the adverse effects a transportation project will have on local land use. If concurrence is not reached, a project cannot move forward.

Monthly Agency Coordination Meetings (ACM) are also an avenue for PDA to keep PennDOT and private consultants current on farmland preservation/open space issues.

IMPLEMENTATION:

It is the responsibility of the condemner to petition ALCAB.

EXAMPLES IN PENNSYLVANIA:

Types of projects which may need ALCAB approval are highways, airports, sewage treatment plants, schools, and recreational facilities.

CONTACT INFORMATION:

PA Department of Agriculture
Bureau of Farmland Protection
(717) 783-3167

PennDOT: Center for Program
Development and Management
(717) 787-7335 ■

5. Agricultural Conservation Easements

DESCRIPTION:

Conservation easements permanently protect farms from development. Landowners voluntarily sell conservation easements to a government entity or private conservation organization or land trust. The agency or organization usually pays them the difference between the value of the land for agricultural use, and the value of the land for its "highest and best use" which is generally residential or commercial development. A deed of conservation easement is recorded in the county recorder of deeds office.

Statewide, there are currently more than 1,500 farm owners on county waiting lists to sell agricultural conservation easements. Conservation easements may also be sold or donated to private land trusts.

BENEFITS:

Conservation easements permanently preserve land for agricultural use. Purchase of easements by municipalities on their own can be done more selectively and expeditiously as they do not have to conform to the county or State guidelines. The donation or bargain in sale of a conservation easement can also provide significant federal and state tax benefits to the land owner. PA Act 153 of 1996 allows school boards to cap real estate taxes for preserved land.

IMPLEMENTATION:

County Agricultural Land Preservation Boards have primary responsibility for developing application procedures. They also establish priority order for easement

purchases based on a numerical ranking system. The ranking system is modeled upon state regulations that require consideration of soil quality, conservation practices, development pressures in the County, and the location of other permanently preserved farmland and open space.

EXAMPLES IN PENNSYLVANIA:

As of October 1999, 144,000 acres of farmland (1,160 farms) have been preserved through the Pennsylvania Program. Currently, 47 counties participate in the Program.

CONTACT INFORMATION:

PA Department of Agriculture
Bureau of Farmland Protection
(717) 783-3167

Lancaster Farmland Trust
(717) 293-0707

FUNDING SOURCE(S):

The Commonwealth, counties, and some municipalities provide funding. Total state funding available for 1999 was \$70 million, with county matching funds of \$16 million. ■

6. Agricultural Tax Incentives

DESCRIPTION:

Differential assessment laws direct local governments to assess agricultural land at its value for agriculture, instead of at its full market value, which is generally higher. Differential assessment laws are enacted at the state, and implemented at the local level.

CONTACT INFORMATION:

PA Department of Agriculture
Bureau of Farmland Protection
(717) 783-3167

Chester County Assessment Office
(610) 344-6105

Dauphin County Assessment Office
(717) 255-2435 ■

BENEFITS:

These programs afford protection to farmers to continue operating an agricultural operation in the face of development, thus helping to ensure the economic viability of agriculture. These tax laws align agricultural property taxes with what it actually costs local governments to provide services to the land.



IMPLEMENTATION:

Landowners must apply to the County Assessment Office.

EXAMPLES IN PENNSYLVANIA:

PA Act 319, as amended in 1998 ("Clean and Green") is designed to provide incentives to landowners for preserving land in agricultural use, agricultural reserve, and/or forest reserve. The program is voluntary and provides a financial disincentive to participating landowners to convert the land to other than agricultural uses, since land converted to another use becomes subject to rollback taxes and penalties. Currently, there are over five million acres enrolled in "Clean and Green" in 48 counties.

1. State Heritage Parks

DESCRIPTION:

A State Heritage Park is a multi-county region of the Commonwealth designated by the Governor to plan, conserve, develop and market the natural, historic, cultural, scenic and recreational resources of the area for heritage tourism. It is one of the few programs of the Commonwealth that has attempted, and in most cases accomplished, the creation of economic development opportunities and conservation and preservation strategies that complement each other.

There are currently nine Governor designated State Heritage Parks and two under study. The primary funding and technical assistance resource is the Pennsylvania Heritage Parks Program administered by the Department of Conservation and Natural Resources (DCNR) and a State Heritage Parks Interagency Task Force consisting of other state agencies, the National Park Service and other statewide non-profit organizations. Some of the state heritage areas are also national heritage areas or part of a federal heritage region, and also receive federal funding and technical assistance through the National Park Service.

BENEFITS:

The primary goal for the State Heritage Program is planning, enhancing and promoting heritage conservation, development, and tourism in large-scale geographic and cultural landscapes. The program has been able to advance the coordination of several land use

practices, such as, multi-municipal planning, downtown revitalization, brownfields site reuse, cultural conservation, historic preservation, open space and natural areas protection, greenway corridor and other green infrastructure development, scenic and heritage tour routes, education and interpretation, economic development, the provision of recreational and tourism opportunities, and intergovernmental cooperation.

IMPLEMENTATION:

The State Heritage Park designation process is based on a grassroots process with widespread public participation and partnership coalitions of government, non-profit, private sector and citizen representatives. The heritage conservation development and tourism strategies resulting from this process become part of land use planning in the communities within the Heritage Park region.

This is the primary program of the Commonwealth dealing with heritage conservation, development and tourism. However, the 11 projects currently in the State Heritage Park system do not geographically cover all areas of the state and therefore this is not an available land use tool for all communities. With additional funding, other areas and communities could benefit from similar opportunities.

EXAMPLES IN PENNSYLVANIA:

The designated State Heritage Parks and their general geographic areas are:

(State Heritage Parks, Cont'd)

- **Lackawanna Heritage Valley** in Susquehanna, Lackawanna and Luzerne counties;
- **Allegheny Ridge State Heritage Park** in Blair, Cambria, Somerset and Huntingdon counties;
- **Delaware and Lehigh Canal Heritage Corridor** in Luzerne, Carbon, Lehigh, Northampton and Bucks counties;
- **Oil Heritage Region** in Venango and Crawford counties;
- **National Road Heritage Park** in Somerset, Fayette and Washington counties;
- **Schuylkill Heritage Corridor** in Schuylkill, Berks, Chester and Montgomery counties and the City of Philadelphia;
- **Lincoln Highway Heritage Corridor** in Franklin, Fulton, Bedford, Somerset and Westmoreland counties;
- **Rivers of Steel Heritage Area** in Allegheny, Armstrong, Beaver, Fayette, Greene, Washington and Westmoreland counties; and
- **Endless Mountains Heritage Region** in Bradford, Sullivan, Susquehanna and Wyoming counties.
- **Lumber Heritage Region** and the **Allegheny River Region** of Armstrong County are currently under study for possible inclusion in the Pennsylvania State Heritage Parks system.

CONTACT INFORMATION:

State Heritage Parks
(717) 783-0988

PA DCNR Bureau of Recreation and
Conservation
(717) 783-0988 ■

2. Certified Local Government Program

DESCRIPTION:

The Certified Local Government (CLG) Program is a federal incentive-based program created under the authority of the National Historic Preservation Act of 1966. It provides technical assistance and funding to local governments in order to enhance their ability to implement a historic preservation approach through land use planning and regulation. To participate in the program, a local government must be certified by the Pennsylvania Historical and Museum Commission as having established an ordinance protecting the municipality's historic resources. CLG's can benefit from workshops, special programs, and the opportunity to compete for grant assistance. Presently, there are only 24 Certified Local Governments out of the over 500 National Register-listed historic districts in Pennsylvania.

BENEFITS:

The Certified Local Government Program was established to assist municipalities to develop the best historic preservation programs possible. It encourages boroughs, townships, and cities to professionalize their programs and to have well-trained historical commissions and historical and architectural review boards to guide the future of their communities. To assist in this effort, technical assistance and financial incentives are available.

The program has a broader goal of preserving the neighborhoods, downtowns, and historic assets.

IMPLEMENTATION:

To qualify for the program, a local government must establish a historic preservation ordinance and must appoint a historical commission or historical and architectural review board under the Local Historic District Act or other authority and must implement its provisions.

EXAMPLES IN PENNSYLVANIA:

Certified local governments in Pennsylvania range from the **City of Philadelphia** to the **Borough of Bellefonte**. In **Lancaster City**, funding from the program has supported architectural assistance for the Historical and Architectural Review Board, information on the historic preservation program in Spanish to reach out to the growing Hispanic community in Lancaster, and the development of a conservation district ordinance as an innovative approach to protecting the city's history.

CONTACT INFORMATION:

Pennsylvania Historical and Museum Commission (PHMC) Bureau for Historic Preservation
(717) 787-4363

FUNDING SOURCE(S):

The Pennsylvania Historical and Museum Commission is required to award at least 10 percent of its annual historic preservation funds from the federal government to certified local governments in the Commonwealth. Grant funding can be used for obtaining qualified staff, undertaking historic

(Certified Local Government Program, Cont'd)

surveys, National Register nominations, and other historic preservation planning and educational programs. Funding cannot be used for capital projects and bricks and mortar grants. ■



3. Historic District Act

DESCRIPTION:

The Pennsylvania Historic District Act of 1961 authorizes municipalities, other than first and second-class cities, to protect historic areas through the enactment of historic district ordinances. Governing bodies are empowered to identify historic areas that have historical significance, establish a board of historical and architectural review to advise the local government on alterations, new construction, and demolition within this historic area. The Pennsylvania Historical and Museum Commission is responsible for certifying to the historic significance of any area so protected.

BENEFITS:

The preservation of historic traditional neighborhoods, commercial main streets, and central business districts has been demonstrated to retain and attract businesses and residents. In addition, historic districts attract heritage tourism. The most popular attraction listed in the Pennsylvania Heritage Tourism Study was visiting the state's historic towns and districts.

IMPLEMENTATION:

There are 71 municipalities in Pennsylvania including cities, boroughs, and townships that have established historic district ordinances to protect 93 historic districts (some municipalities regulate more than one historic district). To establish a district, the local government must identify a historic area to be protected, prepare an ordinance that establishes a historical and architectural review board, and requires the review

of changes to the historic fabric for final decision-making by the local government. The Pennsylvania Historical and Museum Commission certifies to the historic significances of the area.

Although local historic district designations have been shown to preserve property values, only one-fifth of the 500 historic districts listed in the National Register of Historic Places has adopted local historic district protection. In some cases, local governments feel the program could be too restrictive to property owners. A number of local governments have addressed this issue by establishing conservation districts. They use the historic district authority to regulate only major changes to properties such as demolition, additions, or new construction.

EXAMPLES IN PENNSYLVANIA:

Of the historic districts established in Pennsylvania, **Bethlehem** and **Gettysburg** have decades of experience in managing a local historic district program that has a demonstrated benefit for the local economy. In addition to these districts that have a long track record, Lancaster has recently adopted a conservation district utilizing the Historic District Act to preserve community character, but only regulates major changes to the district.

CONTACT INFORMATION:

Pennsylvania Historical and Museum Commission (PHMC) Bureau for Historic Preservation
(717) 787-4363 ■

4. Historic Preservation Zoning/ Municipalities Planning Code

DESCRIPTION:

Historic preservation provisions can be incorporated by local governments into municipal planning and zoning through the authority of the Municipalities Planning Code (MPC). Incorporating preservation initiatives into both the comprehensive plan and into the zoning ordinance of a community is particularly effective for townships where historic resources may be widely scattered. Some of the techniques that have been used as part of a local government's zoning ordinance include demolition ordinances, historic zoning overlays, zoning bonuses for the preservation of specific historic resources, and protection of landscape features such as scenic vistas and historic roads. Other zoning techniques such as agricultural zoning can also enhance the historic setting of a region.

BENEFITS:

Placing historic properties within the framework of a local government's planning and zoning make sense and allows local communities to move beyond the preservation of an individual property or historic district and look at the historic everyday landscapes in their region. By incorporating historic preservation into the zoning ordinance, municipalities are in a better position to balance the preservation of resources with development.

IMPLEMENTATION:

The first critical step in protecting historic resources is to include them in the comprehensive planning process.

A historical and architectural survey or inventory may be necessary. The next step is for the public to identify those resources that the community envisions preserving for the future. The local government should incorporate those preservation tools, such as a historic zoning overlay, zoning bonuses to provide an incentive to keep these features on the landscape, and other incentives including special provisions for in-house businesses or bed-and-breakfasts. Finally, agricultural protection zoning can play an important part in preserving the setting of many Pennsylvania townships with an agricultural history.

EXAMPLES IN PENNSYLVANIA:

A number of townships in southeastern Pennsylvania have provided for the protection of their historic past through zoning and planning. **Warwick Township in Chester County** has enacted a comprehensive program to protect its history including historic overlay zones and identification of the area's archaeological sensitivity. The township encourages clustered or higher density options to preserve character and to provide a buffer around historic properties. **West Whiteland Township**, also in **Chester County**, has had 20 years of experience with protecting historic resources in a high development area.

A community that has taken more of an agricultural protection approach is **Oley Township in Berks County**. The entire township is listed in the National Register of Historic Places for its

(Historic Preservation Zoning, Cont'd)

agricultural heritage. Its farmland preservation program protects both the lifeways and the history of the valley.

Hollidaysburg Borough – The National Register Historic District of the borough is protected by a historic district overlay in the recently updated zoning ordinance and map for the Borough.

CONTACT INFORMATION:

Pennsylvania Historical and Museum Commission (PHMC) Bureau for Historic Preservation
(717) 787-4363

Warwick Township, Chester County
(610) 286-6363

West Whiteland Township, Chester County
(610) 363-9525

Oley Township, Berks County
(610) 987-3423 ■

5. Financial Incentives — Historic Preservation Grants

DESCRIPTION:

Funding is available to assist both historic preservation studies and plans and to assist non-profit organizations and local governments in rehabilitating and restoring their historic properties. These grants are available from the Pennsylvania Historical and Museum Commission on a competitive basis and can be used for identification, evaluation, and preservation planning initiatives at the local government or regional level. The rehabilitation and restoration grants can be used for capital projects and major maintenance including roof replacements, exterior restoration, interior restoration and improvements that address the functionality and accessibility of the structure.

BENEFITS:

Both of these grant programs can be used to enhance the preservation and protection of historic resources in neighborhoods and downtowns. They can address quality-of-life issues in existing communities, they can improve the understanding and educational value of historic resources, and they can be used as cornerstones for other economic development initiatives. Protection of the historic integrity of communities and their history contributes to the growing heritage tourism industry in Pennsylvania.

IMPLEMENTATION:

Funding is available on an annual basis for both programs. Historic preservation grants for planning, policy development and public outreach are available to

local governments and non-profit organizations that have been in existence a minimum of two years and are located in Pennsylvania. Historic preservation bricks and mortar grants, also known as Keystone grants, are available to publicly accessible historic properties listed in or eligible for the National Register of Historic Places. The grant applicant must have been in existence for a minimum of five years.

Both programs are very competitive with only one-out-of-three qualified projects funded in the Historic Preservation Survey and Planning category. The ability to fund larger projects such as Comprehensive County Resource Surveys are also limited by funding availability. Funding for the Keystone historic preservation grants is also limited with only 15 percent of qualified projects funded. A preference to Heritage Park projects is given in this program. (See Heritage Park Program for more information).

EXAMPLES IN PENNSYLVANIA:

Many communities have benefited from these programs. Recently, a number of communities have utilized the Planning Grant Program to spur economic development initiatives in their downtowns. These communities include **Milford, Altoona and Oil City**. Keystone grants have also played an important role in preserving critical elements of community character and have sparked revitalization efforts. Examples include restoration of the **Carnegie Library in Homestead, Allegheny County**, fixing the windows

(Historic Preservation Grants, Cont'd)

and siding of the headquarters of the Puerto Rican Organizing Committee in Harrisburg, Dauphin County, and the Ridgeway Library, now the School for Performing Arts in Philadelphia.

CONTACT AND FUNDING SOURCE INFORMATION:

Pennsylvania Historical and Museum Commission (PHMC) Bureau for Historic Preservation
(717) 787-4363 ■



6. Financial Incentives — Tax Credits for Historic Preservation

DESCRIPTION:

Tax credits for the rehabilitation of historic structures are available for qualified projects that rehabilitate properties listed in the National Register of Historic Places or properties located in National Register – listed districts. To qualify for the tax credits, the rehabilitation must meet the Secretary of Interior's Standards for Rehabilitation. The tax credits are available for depreciable properties including commercial rehabilitation, low and moderate-income residential rental housing, and for individual properties in a business use.

BENEFITS:

The Federal Historic Preservation Tax Incentives is a successful and cost-effective community revitalization program. It rewards private investment for rehabilitating historic properties such as offices, rental housing, and retail stores. The tax credits have been particularly effective when utilized with the low-income housing credits to reuse larger abandoned or underused properties such as schools, warehouses, or factories as affordable housing in existing communities. The tax credits can attract private dollars to key character defining properties in a downtown or neighborhood. Additional benefits of this rehabilitation are community revitalization, support for heritage tourism, and attracting additional investment.

IMPLEMENTATION:

A tax credit lowers the amount of taxes owed by a property owner. In general, a dollar of federal tax credit reduces

the amount of federal income tax owed by one dollar. The tax credits available through this program include a 20 percent credit for the certified rehabilitation of a certified historic structure. Also available is a 10 percent rehabilitation credit for the rehabilitation of a non-historic building built before 1936. Certified historic structures must be listed individually in the National Register or be a contributing feature of a National Register district. In addition, the property must meet the Secretary of Interior's Standards for Rehabilitation.

Establishing National Register status or listing a district in the National Register is an important first step for communities to attract this kind of investment. The State Historic Preservation Office will provide technical assistance in both the listing of properties and in the review of buildings during the design and development phase.

EXAMPLES IN PENNSYLVANIA:

Since the beginning of the program, over \$2.5 billion has been expended rehabilitating properties using these credits. Examples include the **PSFS Building in Philadelphia** and a number of other important older properties adjacent to the Convention Center for hotel uses. Tax credits can be used in rural and urban communities, large and small alike. In **Brookville**, for example (population 4,100), more than 15 individual rehabilitation projects have taken advantage of the historic preservation tax credits. In addition,

(Tax Credits for Historic Preservation, Cont'd)

there are many examples of large, older properties rehabilitated for affordable housing including the **McFarland Press Building in Harrisburg**, the **Hanover Shoe Factory in Hanover**, and blocks of properties in the **Manchester Historic District in Pittsburgh**.

CONTACT INFORMATION:

Pennsylvania Historical and Museum
Commission (PHMC), Bureau for Historic
Preservation, The State Historic
Preservation Office (SHPO)
(717) 787-4363 ■