

IX. Regulation and Conservation

I. Introduction

This report examines the principal legal regimes for preserving or conserving land along the banks and sides of the four principal rivers in Allegheny County, Pennsylvania. These rivers are (listed from north to south) the Allegheny River, Ohio River, Monongahela River and Youghiogheny River. Various tools are available, although not all will be available at any particular site. Two basic strategies exist, one dependent on public or private ownership and the other on public regulation. These strategies and tools are summarized in the Appendix. Private ownership controls require an owner, whether a public or private entity, with the desire to devote land to preservation or conservation uses. Regulatory controls require a governmental agency with appropriate authority to adopt the particular measures described. At present, no federal, state or local agency has the authority to adopt all of these measures for any area in Pennsylvania.

A. Terms and Philosophy

This report is directed toward identifying some of the better known techniques for preserving, conserving and restoring the riverine ecosystem in Allegheny County. While these terms are often used interchangeably, they also describe different stages and philosophies of ecosystem protection. Traditionally, the conservation movement put forth the ability and need for humans to manage the natural environment through scientific means. It believes in the importance of human management of the environment for human benefit and is predicated on a firm faith in human capacity to manage nature effectively.¹ The conservationist philosophy's goal is planned and rational use of natural systems for human benefit.

Partly in reaction to the conservationist's focus on management for human use and benefit, the preservation movement developed a philosophy of

protecting natural areas for their own benefit, not necessarily for human use. Indeed, active human intervention is believed neither necessary nor advisable. The struggle to create national wilderness areas, which were to be pristine lands untouched (or nearly untouched) by human hands, is one illustration of the philosophy of this movement.² The preservation movement, as used here, may also be referred to as the environmental movement,³ although the concerns of the environmental movement range far beyond those of either the conservation or the preservation of natural resources.

Restoration refers to the process of deliberately managing a site to establish an identified, native and historic ecosystem. The Society for Ecological Restoration (SER) defines restoration as "the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed."⁴ SER's description is informative: "Ecological restoration is an intentional activity that initiates or accelerates the recovery of an ecosystem with respect to its health, integrity and sustainability." The restoration process contemplates active management of a damaged ecosystem until it has recovered its historical development path. While it may not be possible to restore land to its exact historical condition, it should be possible in many cases to reestablish the direction and boundaries of historical development.

Development is based on a scale of desirable land use as developed by STUDIO for Creative Inquiry's 3 Rivers 2nd Nature project ("3R2N") in its Ecological Report⁵ prepared for "An Ecological and Physical Investigation of Pittsburgh's Hillsides."⁶ This scale is informed by public safety in relationship to soil studies conducted by the United State Department of Agriculture in Allegheny County. The following land use classifications are used when discussing development of the study sites examined later:

Development: Land with environmental characteristics for safe building practices.

Conservation: Land with sensitive but not exclusionary environmental characteristics; land that can be developed if sensitive to the limiting environmental characteristics

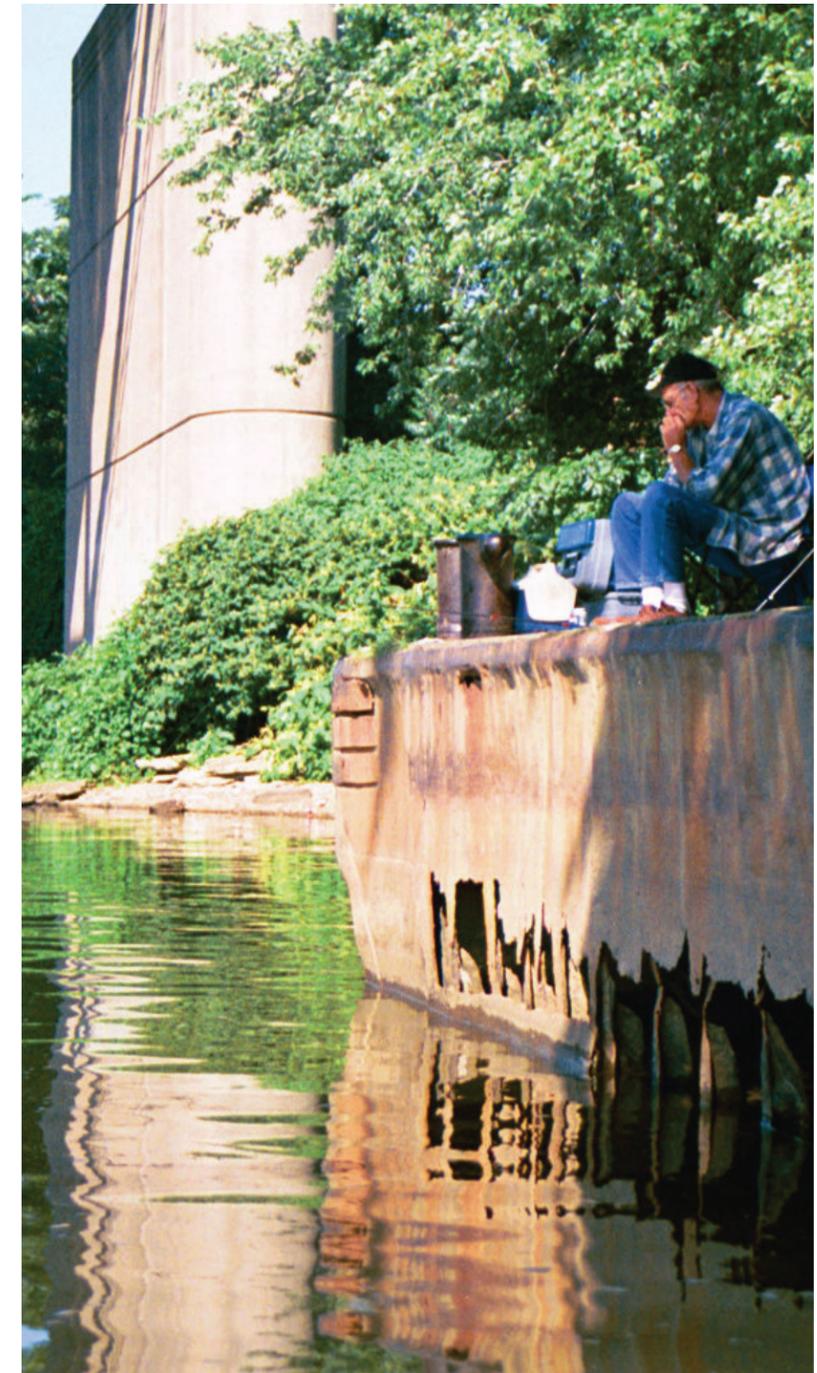


Figure IX.1 An old barge reinterpreted as a fishing spot (Photo 3R2N)

9.1 REGULATORY OVERVIEW: GENERAL ZONING & MUNICIPALITIES

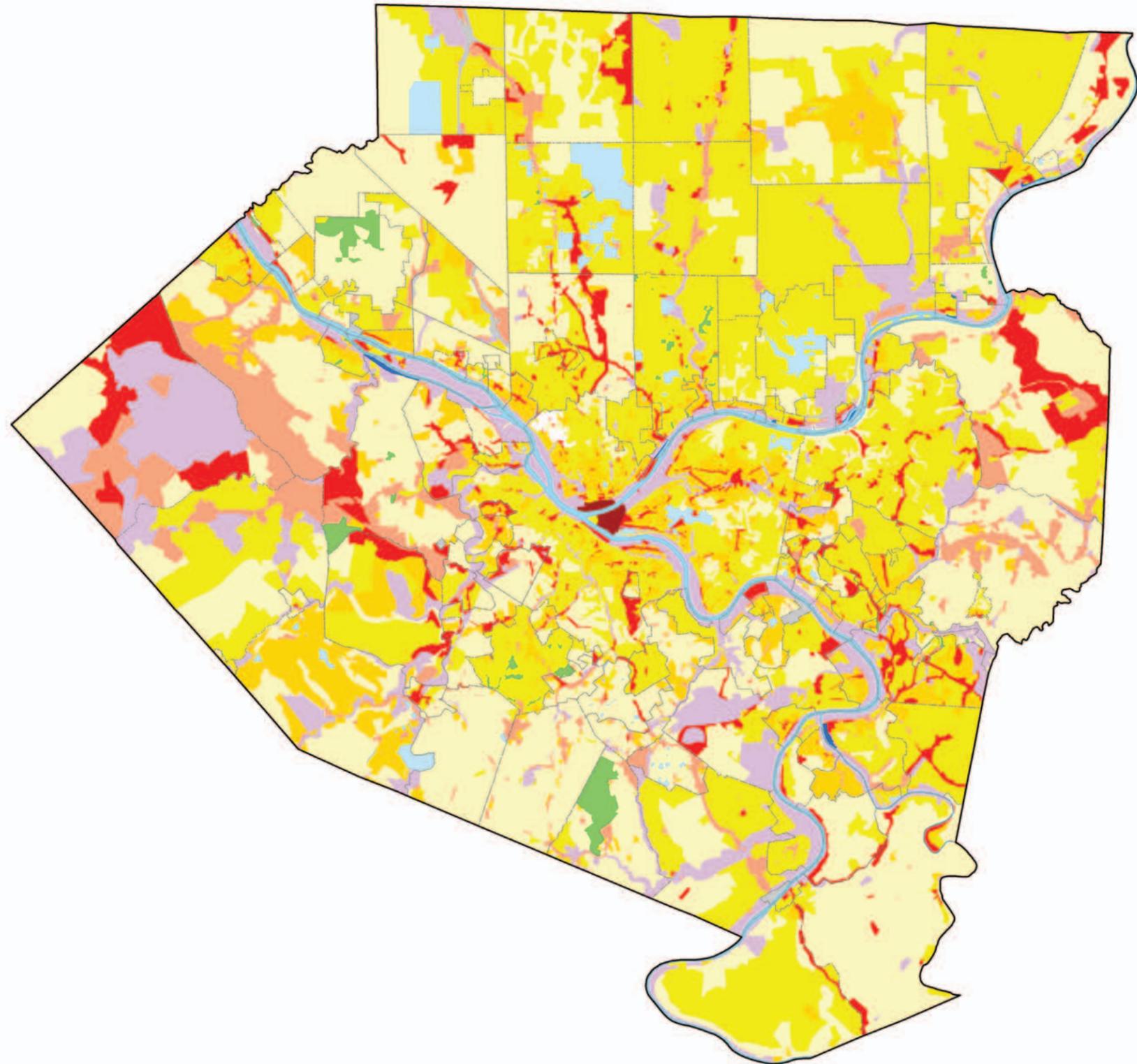
This map shows generalized zoning and land-use of the county. The generalized zoning categories are based upon local municipal zoning. This simplified form does not represent legal zoning classes. Instead it groups multiple local zoning categories with different names and regulations into general types which provide a generalized picture of zoning and land-use regulation in the county.

LEGEND

-  River
-  Municipal Boundary
- General Zoning & Land Use**
-  OSR - Park or Open space
-  PI - Public & Institutional
-  RD - Riverfront District
-  REC - Downtown Pittsburgh
-  C-1 - Commercial - low intensity
-  C-2 - Commercial - high intensity
-  I - Industrial
-  R-1 - Residential - low density
-  R-2 - Residential - medium density
-  R-3 - Residential - high density
-  UNZ - Unzoned
-  NONE - No Zoning



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9.2 REGULATORY OVERVIEW: EROSION HAZARDS

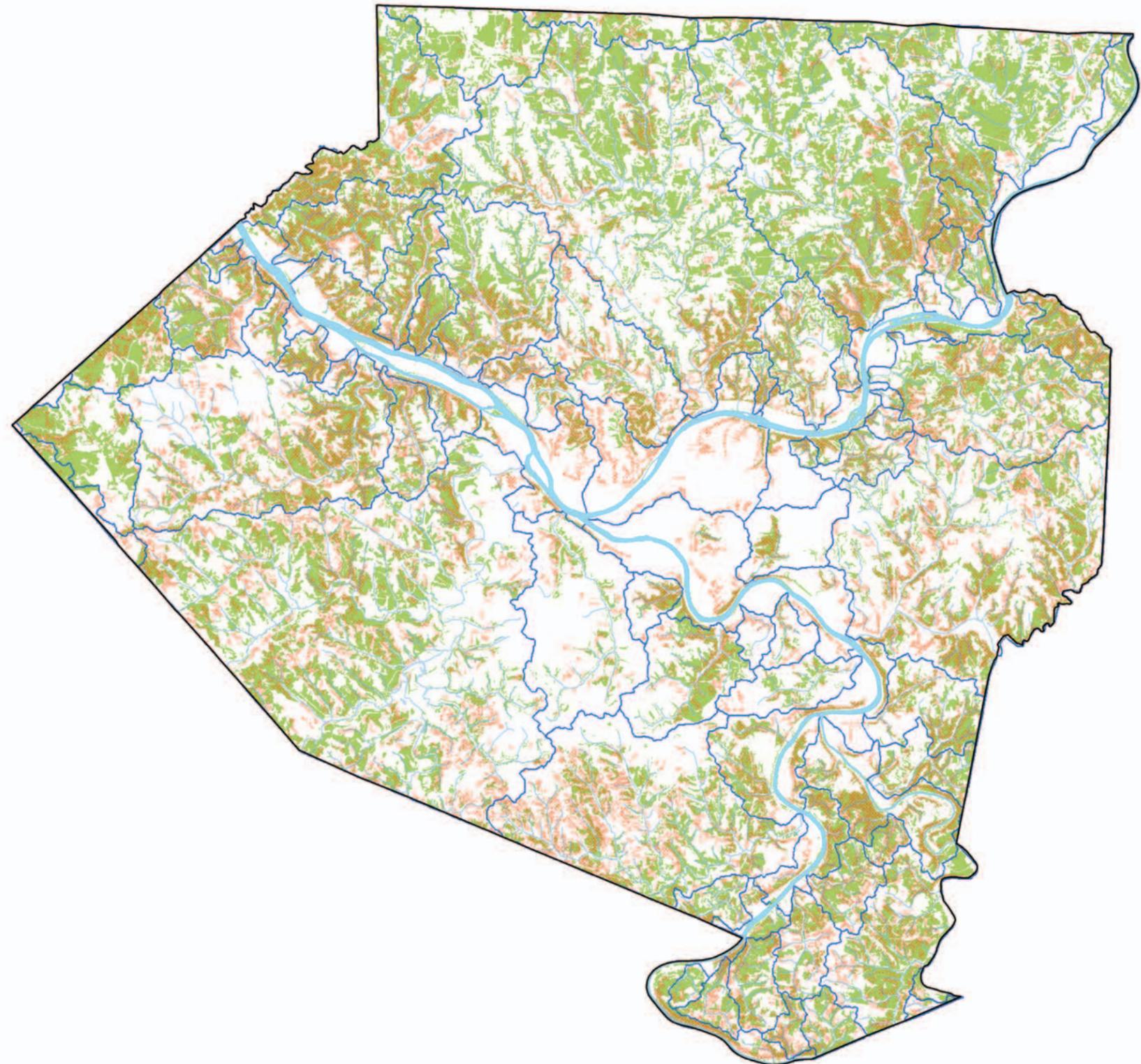
This map shows the county woodlands and areas of severe soil erosion hazard. Severe erosion area is derived from the Soil Survey of Allegheny County Pennsylvania by the Soil Conservation Service of the United States Department of Agriculture published in 1981. The hatched red areas indicate soils that are highly susceptible to the hazard of erosion, unless protective cover is maintained.

LEGEND

-  River
-  Stream
-  Watershed Boundary
-  Severe Erosion Hazard
-  Woodlands



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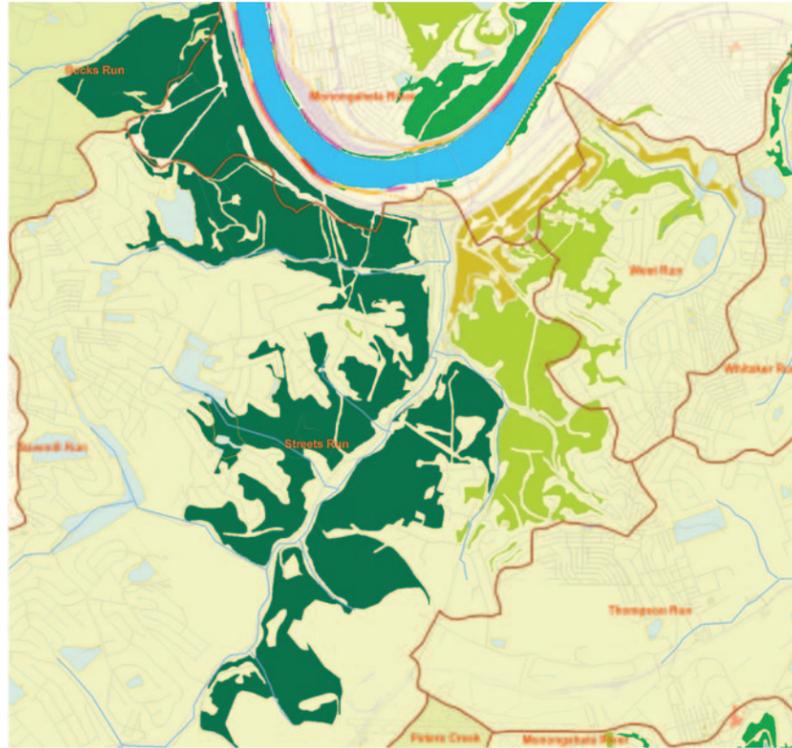


Figure IX.2 The Hays and Streets Run opportunity area ecological summary.

Preservation: Land deemed unfit for development due to one or more environmental characteristics.

Whether the desired activity is conservation, preservation or restoration, protection of the rivers and related land areas will be best served by low impact and low intensity uses. Most low density uses also promote public values of enhancing views of and from the rivers. Low intensity uses along the rivers, their banks and flood plains include public parks, forests, hiking/biking trails, marinas and public boat or fishing access areas. Protection of the rivers and their banks and flood plains also requires protection of many adjacent parcels, particularly the hillsides that define the rivers. Public parks and forests can provide that protection. However, it is unrealistic to expect that public agencies will acquire all of the land along and adjacent to the four rivers. Private landowners must also be brought into the effort, through incentives and regulatory actions that encourage compatible private development in these areas.

It is the purpose of this report to examine some of the public and private opportunities for conserving, preserving and restoring this valuable and important space. It begins by examining ownership options, where public and private owners participate directly in these activities. Next, it looks at some of the public regulatory measures that are available. Finally, it will suggest various approaches for two particular areas along the Monongahela River in an effort to see what strategies might prove successful and what some of the constraints on those strategies may be. In sum, the purpose of this report is to describe the legal frameworks and tools available to preserve, conserve and restore these public assets.

B. Allegheny County

1. Physical Conditions

Allegheny County covers an area of approximately 745 square miles. Its topography can be described as rolling hills punctuated by the four principal river valleys and by several major tributary stream valleys. Most of the valleys were the site of significant industrial development from the early settlement of the county through the 1970s. Beginning in the 1970s, and continuing ever since, heavy industry has declined and, in many cases, disappeared from these valleys. In some cases, it has been replaced by commercial and residential development. In others, the land remains undeveloped and is gradually or rapidly returning to its pre-industrial condition. The rivers, their banks and riparian areas, have begun a process of natural regeneration in many locations, creating valuable natural communities (see Maps 8.1 and 9.2).

Within the county, there are many areas of regenerating or undisturbed land along the rivers and streams that are worthy of protection through preservation, conservation and restoration. One can envision a linear riverside park and trails that stretch from the northeastern county limit of the Ohio River, along the banks of the Ohio, Allegheny and Monongahela Rivers, picking up the banks of the Youghiogheny River, where it joins with the Monongahela. Almost every municipality in the county could be linked to the riverfront by trails that wind along the streams that flow between the hills.

2. Political Constraints

The county consists of a countywide home rule government and 130 individual municipalities. Each municipality has its own authority to adopt land use controls—subdivision and land development and zoning controls. A generalized map of zoning classifications throughout the county shows 12 basic zoning district classifications. Within these generalized classifications, the details of zoning districts can vary widely from municipality to municipality, depending on the degree of control desired and the sophistication of the agency charged with administration (see Map 9.1).

One hundred and twenty nine municipalities find their land use control authority in the Pennsylvania Municipalities Planning Code.⁷ One municipality, the City of Pittsburgh, a home rule municipality, derives its land subdivision and zoning authority from separate legislation. The county government also has development regulation authority under the Municipalities Planning Code, to the extent that any municipality has not exercised its independent authority under that act. Each municipality and the county also have the authority to adopt and enforce general police power measures designed to promote the public health, safety and general welfare.

The many smaller municipalities, coupled with the major city, Pittsburgh, and three cities with less population, Clairton, Duquesne and McKeesport, pose difficulties for coordinated regulation of the river corridors. The Municipalities Planning Code provides for joint or inter-municipal planning and zoning. However, it requires joint zoning of the entire combined municipal area. It neither permits nor encourages joint planning only of specific areas within two or more municipalities.

C. General Discussion of the Strategies as Related to Preservation, Conservation and Restoration.

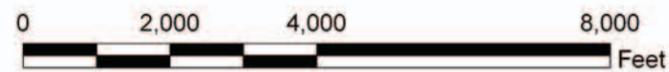
There are two basic options for the preservation, conservation and restoration of riverine ecosystems. One invokes principles of private property ownership; the other, public regulation of private property for pub-

9.3 OPPORTUNITY AREA ZONING: HAYS & STREETS RUN

Local zoning classes and mapping for municipalities in the Hays & Streets Run area.

Legend

- Rivers
- Streams
- Watershed Boundary
- Municipal Boundary
- Streets
- Railroads
- Trails - Status
 - Existing
 - Proposed
 - Public Parks
 - other managed open space
- West Homestead Zoning
 - C - Commercial District
 - I - Manufacturing & Industrial District
 - R-2 - Low Density Residential
 - R-3 & 4 - High Density Residential
 - S - Slope or Park District
- West Mifflin Borough Zoning
 - C-1 - Shopping Center District
 - C-2 - General Commercial
 - I-1 - Heavy Industrial
 - I-2 - Restricted Industrial
 - R-1 - Low Density Residential
 - R-2 - Medium Density Residential
 - R-3 - Hi Density Residential
 - R-4 - Trailer Park (Mobile Home)
- Baldwin Borough Zoning
 - C-1 - General Business District
 - C-2 - Shopping Center District
 - C-3 - Professional Office
 - POPS - Professional Office & Service
 - I-1 - Light Industrial
 - I-2 - Heavy Industrial & Mobile Homes
 - PRD - Planned Residential District
 - R-1 - Low Density Residential
 - R-2 - Residential District
 - R-3 - Medium Density Residential
 - R-4 - Multiple Family Residential
- Pittsburgh City Zoning
 - A1 - Commercial/Residential District
 - AP - Planned Commercial/Residential
 - C1 - Neighborhood Retail
 - C2 - Highway Commercial
 - C3-H - Commercial/Residential District
 - C4 - Commercial
 - C5-A - Golden Triange A
 - C5-B - Golden Triange B
 - C5-C - Golden Triange C
 - C5-D - Golden Triange D
 - C6-A - Downtown Riverfront A
 - C6-B - Downtown Riverfront B
 - C6-C - Downtown Riverfront C
 - CP - Planned Unit Commercial
 - I-C - Institutional Civic District
 - I-M - Institutional Medical District
 - M1 - Limited Industrial District
 - M2 - Limited Industrial District
 - M3 - Light Industrial District
 - M4 - Heavy Industrial District
 - R1 - Single Family Residential
 - R1-A - Single Family Residential
 - R2 - Two Family Residential
 - R2-T - Townhouse Residential
 - R3 - Multifamily Residential
 - R4 - Multifamily Residential
 - R4-H - Multifamily Residential
 - R5 - Multifamily Residential
 - R5-H - Multifamily Residential
 - RP - Planned Unit Residential
 - S - Special
 - S-A - Special
 - SP-1 - Special
 - SP-2 - Special
 - SP-3 - Special



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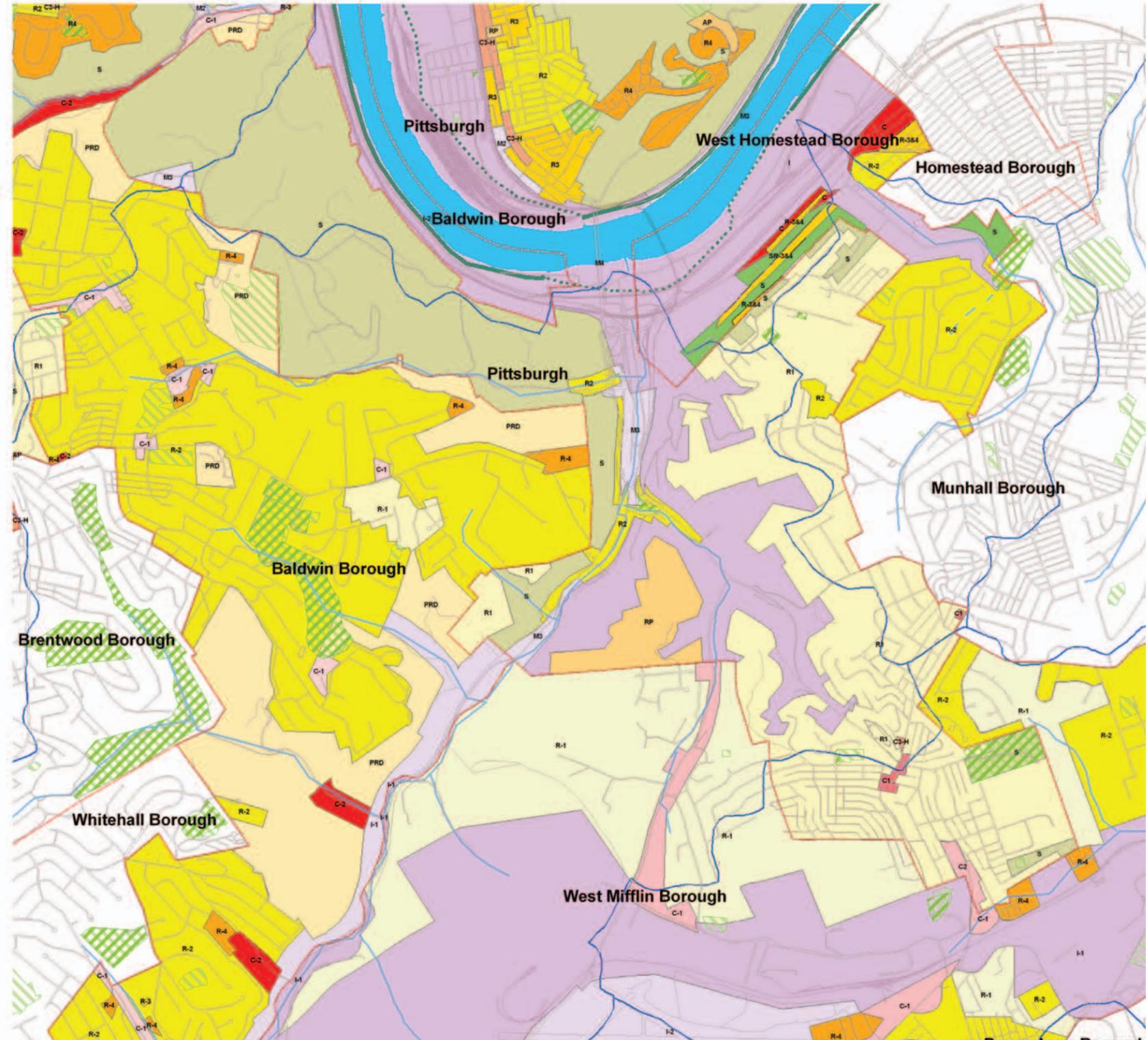




Figure IX.3 The Emerald Arc opportunity area ecological summary.

lic purposes. These are not mutually exclusive. They may operate in a complementary fashion. In many cases, the preferred strategy will be a combination of private ownership options and public regulatory options. Within each basic option, there are a variety of particular strategies that can be employed to accomplish this result. The choice of strategy and line of attack will depend on a number of factors. These include, but are by no means limited to, the degree of active management of the land required or desired, the willingness of landowners—public and private—to participate voluntarily in a program, the choice of persons or entities who should make decisions regarding what lands will be protected and what the future use of protected lands will be, and the degree of cooperation possible between appropriate local governments.

II. Ownership Options

Perhaps the most certain means for assuring that river banks, shores, and related wetlands and hillsides will remain forever free of development is to place them in public ownership dedicated to particular public uses. Publicly owned land includes parks, state and municipal forests, preserves, open space reserve lands, natural areas, boating and fishing access areas, tax delinquent properties owned by county, municipalities or school districts, and other land held in public ownership. Private conservation organizations may also own land that is maintained for conservation, preservation and restoration purposes. The organization may own the property outright, or it may own a more limited interest, usually known as a conservation easement.⁸ A conservation easement serves to restrict the development options of the property's owner. Public agencies and units of government may also own conservation easements on private property as well.

A. Public Ownership Options

1. Parks

It is generally thought that the most difficult land use to alter is a land in public ownership dedicated to public park use. Parkland in Pennsylvania, whether owned by the Commonwealth, a county or a municipality has been pretty much inviolate.⁹ This land is held in trust for the public. As a result, any sale or transfer from park to other use requires court approval.¹⁰ Further, the court proceeding requires notice to the Attorney General as representative of the interests of the public. The proceeds derived from any transfer must be devoted to the same uses as the property sold.¹¹

For this reason, public ownership for park use presents an excellent opportunity for preservation and restoration of land along the river banks and land, providing important ecological support for river front land ecologically. This land is usually removed from active development. Used primarily for passive recreation, it will have the opportunity to regain its pre-industrial era characteristics over time. Some more active recreation uses, such as public boat launching ramps and marinas will capitalize on the riverfront location without significantly interfering with preservation

or restoration of the land. Other active recreation uses, ball fields, playgrounds and picnic areas, for example, may also be appropriate in particular locations.

Parks may be owned and managed by the Commonwealth, the county or a local municipality, if the county or municipality has the authority to acquire land for that purpose.¹² "Park use" can involve a number of uses, some for passive recreation and some for active recreation. In addition, portions of a park may be set aside as a preserve for wildlife habitat, as natural areas or for other limited protective purposes. Parkland along the river banks and river corridors will provide the greatest degree of protection from disturbance and commercial development.

Parkland does involve public costs as well as public benefits. In addition to the initial acquisition cost, parks must be maintained by employees, sometimes using costly equipment. Someone must do the long term and day to day planning for the park, evaluate the appropriate uses of its land, and monitor the activities taking place there.

2. Forests

The Commonwealth owns a number of state forests, which are managed by the Pennsylvania Department of Conservation and Natural Resources, Bureau of Forestry. These forests exist to provide clean water, public recreation, wildlife habitat and commercial forest products. No state forest touches on the four rivers within Allegheny County.

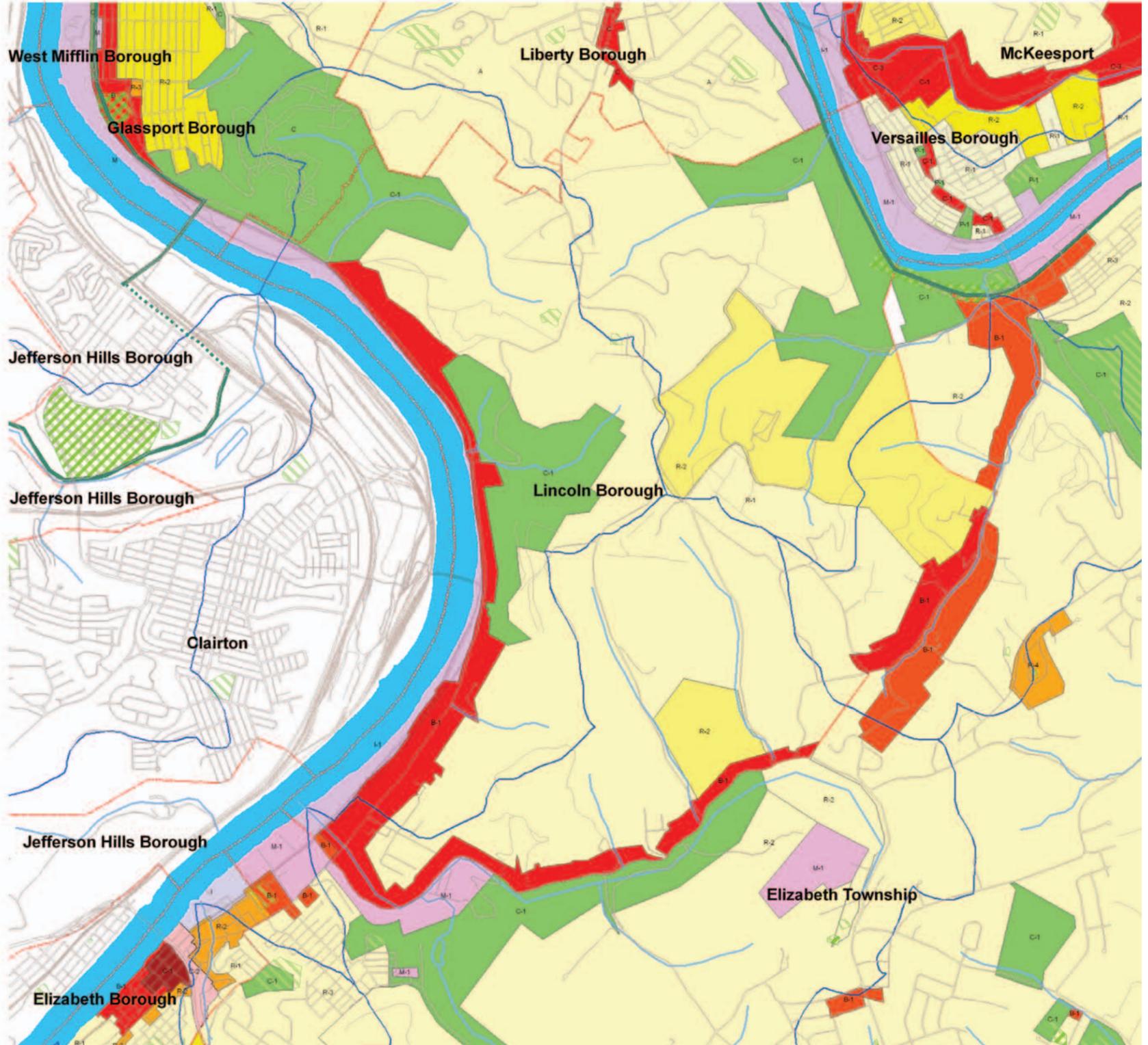
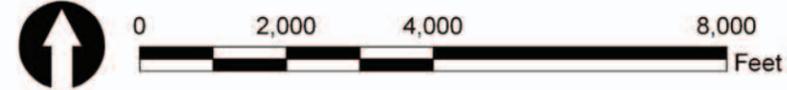
Forest use of riparian land and land supporting riparian land is also a good use to promote conservation and preservation. Forested riparian buffers enhance the water quality of adjacent water bodies by filtering and reducing the pollutants that would otherwise flow over the land in both surface and underground waters. Tree cover captures rainfall, thereby allowing for the recharge of underground aquifers and reducing the chance of flooding.¹³ Forests also provide excellent wildlife habitat, particularly for various species of birds.

9.4 OPPORTUNITY AREA ZONING: THE EMERALD ARC

Local zoning classes and mapping for municipalities in the Emerald Arc area.

Legend

- Rivers
- Streams
- Watershed Boundary
- Municipal Boundary
- Streets
- Railroads
- Trails - Status
- Existing
- - - Proposed
- Public Parks
- Other Managed Open Space
- McKeesport City Zoning
- C-1 - Neighborhood Commercial
- C-2 - Central Business District
- C-3 - General Business
- I-1 - General Industrial
- R-1 - Residential
- R-2 - Residential
- R-3 - Residential
- R-4 - Residential
- R-5 - Residential
- RD-M - Riverfront Development
- RD-Y - Riverfront Development
- White Oak Borough Zoning
- C-1 - Commercial
- C-2 - Commercial
- I-1 - LT Industrial
- I-2 - Industrial
- R-1 - Residence, One Family
- R-2 - Residence, One Family
- R-3 - Residence, One Family
- R-4 - Min 4 Family or Apt.
- Elizabeth Township Zoning
- B-1 - Business
- C-1 - Conservation
- C-2 - Conservation
- M-1 - Light Manufacturing
- R-1 - Rural Residential
- R-2 - Single Family Residential
- R-3 - Single Family Residential
- R-4 - Multiple Family Residential
- Elizabeth Borough Zoning
- B-1 - Bus Dist/Resident Expansion
- C-1 - CBD Commercial
- C-2 - Highway Commercial
- I - Industrial
- R-1 - Low Density Residential
- R-2 - Urban Residential
- Lincoln Borough Zoning
- B-1 - Commercial
- C-1 - Conservation
- I-1 - Industrial
- R-1 - Residential
- R-2 - Residential
- Glassport Borough Zoning
- B - Business
- C - Conservation
- M - Manufacturing
- R-1 - Residential
- R-2 - Residential
- R-3 - Residential
- Port Vue Borough Zoning
- A - Residence District
- B - Residence District
- C - Commercial District
- I - Industrial District
- Liberty Borough Zoning
- A - Residential
- C - Commercial
- I - Industrial
- Forward Township Zoning
- A-1 - Conservation
- A-2 - Agricultural
- B-1 - Business
- M-1 - Industrial
- R-1 - Single Family
- R-2 - Residential
- R-3 - General Residential
- Versailles Borough Zoning
- C-1 - General Commercial
- M-1 - Manufacturing
- P-1 - Public and Semi Public
- R-1 - Residential
- R-2 - Residential



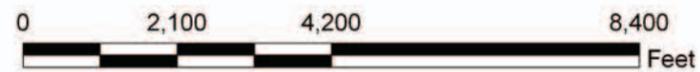
9.5 OPPORTUNITY AREA BUILT ENVIRONMENT: HAYS & STREETS RUN

The built environment in the Hays & Streets Run area. The map shows buildings, property lines, streets, railroads, trails and parks.

Note: Some property parcel lines are missing or incomplete

Legend

-  Rivers
-  Streams
-  Watershed Boundary
-  Municipal Boundary
-  Building
-  Property Lines
-  Streets
-  Railroad
- Trails - Status
 -  Existing
 -  Proposed
-  Public Parks
-  Other Managed Open Space



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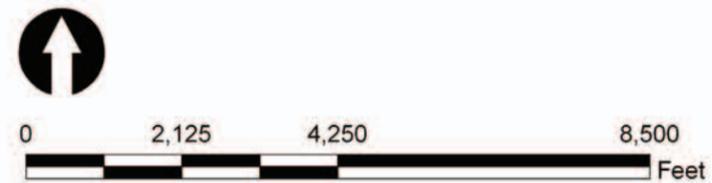
9.6 OPPORTUNITY AREA BUILT ENVIRONMENT: THE EMERALD ARC

The built environment in the Emerald Arc area. The map shows buildings, property lines, streets, railroads, trails and parks.

Note: Some property parcel lines are missing or incomplete

Legend

-  Rivers
-  Streams
-  Watershed Boundary
-  Municipal Boundary
-  Building
-  Property Lines
-  Streets
-  Railroad
- Trails - Status**
-  Existing
-  Proposed
-  Public Parks
-  Other Managed Open Space



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9.7 OPPORTUNITY AREA EROSION HAZARD: HAYS & STREETS RUN

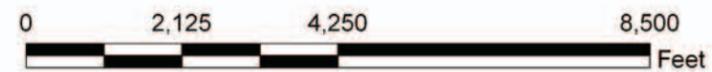
The topography and areas of severe soil erosion hazard in the Hays & Streets Run area. Severe erosion area is derived from Soil Survey of Allegheny County by the USDA (1981). It indicates soils that are highly susceptible to the hazard of erosion unless protective cover is maintained.

Legend

-  Rivers
-  Streams
-  Watershed Boundary
-  Municipal Boundary
-  Severe Erosion Hazard

Contour Elevation

-  710 - 765
-  766 - 815
-  816 - 870
-  871 - 925
-  926 - 985
-  986 - 1040
-  1041 - 1090
-  1091 - 1130
-  1131 - 1175
-  1176 - 1260



Author: Jonathan Kline



9.8 OPPORTUNITY AREA EROSION HAZARD: THE EMERALD ARC

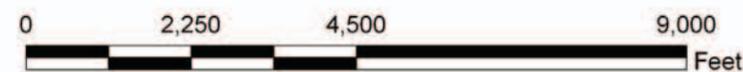
The topography and areas of severe soil erosion hazard in the Emerald Arc area. Severe erosion area is derived from the Soil Survey of Allegheny County by the USDA (1981). It indicates soils that are highly susceptible to the hazard of erosion unless protective cover is maintained.

Legend

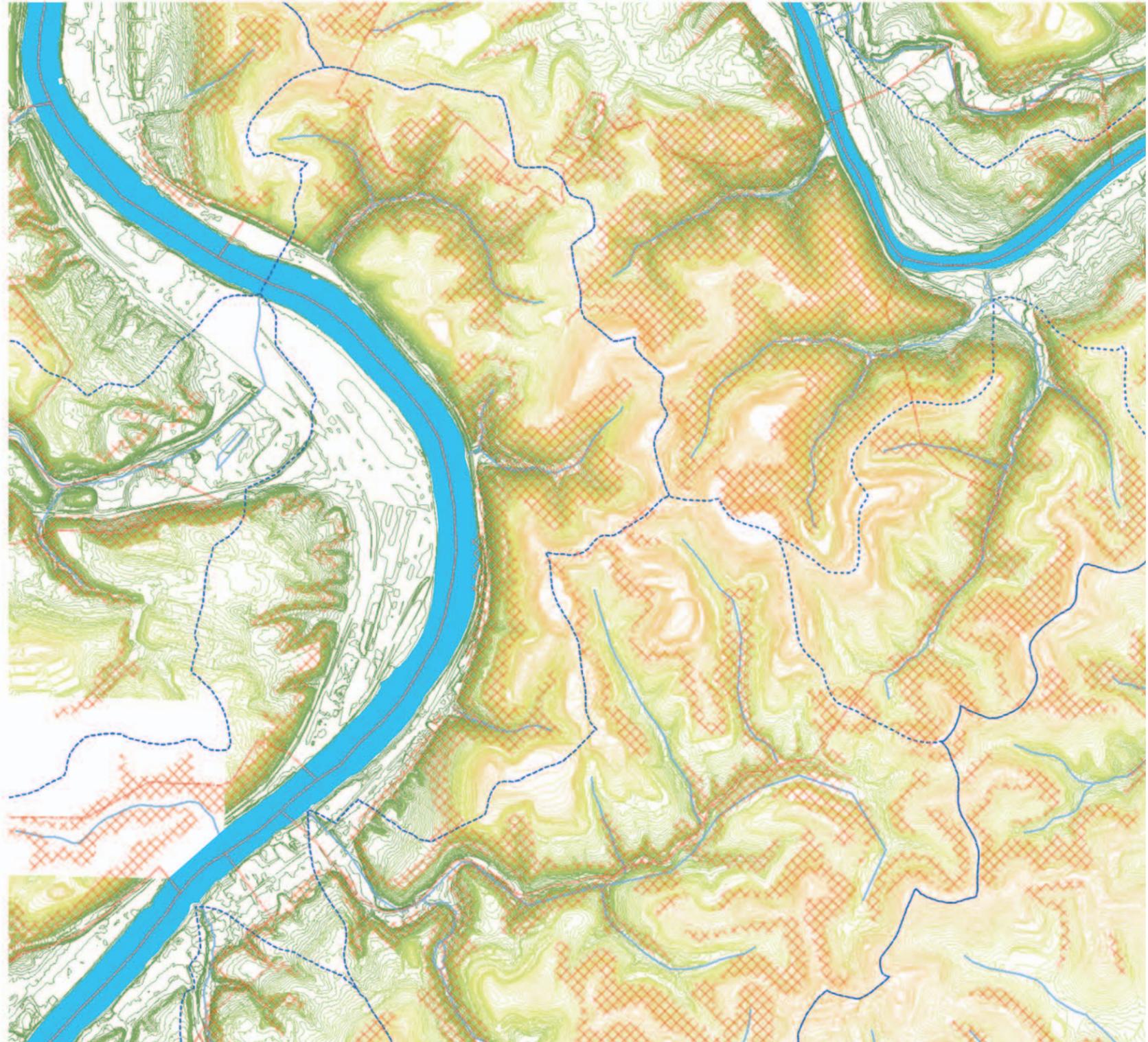
-  Rivers
-  Streams
-  Watershed Boundary
-  Municipal Boundary
-  Severe Erosion Hazard

Contour Elevation

-  710 - 765
-  766 - 815
-  816 - 870
-  871 - 925
-  926 - 985
-  986 - 1040
-  1041 - 1090
-  1091 - 1130
-  1131 - 1175
-  1176 - 1260



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The legislature has provided authority for most municipalities (cities, boroughs and townships of the first class) to acquire land for municipal forests and to administer them under the direction of the Commissioner of Forestry of the Commonwealth (now the Bureau of Forests in the Department of Conservation and Natural Resources¹⁴). Municipal forests are usually smaller in size than state forests, but serve no less important ecological functions.

3. Open Space Reserve

A third technique is the maintenance of publicly owned land as open space reserve lands. These lands may not be public parks or forests, but land owned by the county or municipality that is not otherwise dedicated to a particular public use. For example, tax delinquent properties acquired by the county, municipality or school district (or by all three) at a sheriff's sale under the Municipal Claims and Tax Lien Act¹⁵ or similar authority may be appropriate for inclusion in an open space reserve because of their location or unique characteristics.

Land owned by water supply authorities often includes areas around reservoirs held to protect the water supply. The water authority frequently restricts or prohibits public access to these areas, as public uses would be inconsistent with protection of the water supply. Development of this land is also prohibited for the same reason. These areas, owned by a public agency, provide one example of existing open space reserves.

4. Boat and Fishing Access Areas

The Pennsylvania Fish and Boat Commission is authorized to acquire land or rights of way to provide access to public waters for boating and fishing, including the power to purchase tax delinquent properties from the county.¹⁶ At the present, the commission owns one access area on the Ohio River within Allegheny County, three on the Allegheny, two on the Monongahela, and one on the Youghiogheny. Each of the four rivers also contains several other access areas, some privately owned and some owned and maintained by the local municipality.

Although most access areas occupy only relatively small portions of the riverfront, they do provide important public access points to the navigable or public rivers. This can be particularly important where large areas of riverfront land are in private ownership and those private owners are reluctant or unwilling to allow the public access to the river over their private lands.

5. Tax Delinquent Properties

Tax delinquent properties acquired by the taxing body (county, municipality or school district) often provide a particular opportunity for preserving open space in flood plains, steep slopes and landslide prone areas. Because of the geologic factors pertaining to these properties, it may be in the public interest that they be retained as open space rather than developed for private use. Private development can bring additional public service costs and be hazardous to the private occupants. The taxing body acquired them initially when no private party was willing to bid the amount of the tax delinquency or "upset price." This is an indication of the economic value (or lack of value) of these properties for private development.

While normally, tax delinquent land should be returned to the tax rolls as soon as possible to maintain the taxing bodies' tax base, there are situations where the best public use of that land may not be a return to private ownership and development. Tax delinquent land having characteristics that suggest development could be hazardous to other private property or public facilities—e.g., landslide-prone slopes or flood areas—should not be returned to private development. In addition, where tax delinquent properties would serve to provide open space or parkland that otherwise would have to be acquired by the municipality at public expense, return to private ownership is not warranted. For example, the Pennsylvania Fish and Boat Commission and Pennsylvania Game Commission are authorized to purchase tax delinquent lands for their respective projects from the taxing bodies.¹⁷

Taxing bodies should conduct periodic inventories of these properties and evaluate them for preservation or restoration use as public properties. Where public costs, or geologic or other dangers outweigh the proper-

ty's value for private development, the taxing bodies should explore the options for converting them to public use properties. The same is true where public values for preservation or restoration outweigh the benefits from private development.

B. Private Ownership Options

Private conservation organizations may own land for conservation, preservation and restoration purposes. The organization may own the property outright, or it may own a more limited interest, usually known as a conservation easement.¹⁸ Public agencies and units of government may also own conservation easements on private property. In Pennsylvania, a private owner may enter into a contract or covenant with the county to maintain the property for certain low intensity uses in exchange for a reduction in real estate taxes reflecting the promised use of the property rather than its full development value.¹⁹ All of these mechanisms serve to preserve land in a relatively undeveloped state and are candidates for protection of river related properties.

1. Fee Ownership by Conservation Organization

Conservation organizations dedicated to preserving and restoring land sometimes own the land outright, or in fee simple. Fee simple ownership is the highest ownership interest in our system of landownership. Where this is the case, the organization is generally free to determine how the land will be used in the first instance. Sometimes the prior owner has imposed restrictions on how the property may be used. If properly imposed, the organization is bound by those restrictions. For example, where the prior owner gave the land to the organization on condition that it be used as a nature preserve, the organization cannot use the land as a shopping center or a park for active recreation. Nor can the organization allow public access where the donor specifies that the land is not to be used by the public.

Where certain requirements of the Internal Revenue Code are satisfied, a private owner can obtain federal income tax or estate tax benefits by donating, or partially donating, land or a conservation easement to a qualified

charitable organization.²⁰ Most qualified conservation organizations are charities. This enables landowners to obtain tax benefits when giving land or interests in land to the organization and the organization's supporters to make tax-deductible contributions to the organization's activities. At the same time, property held by the organization and used for its charitable purposes is impressed with a trust for the benefit of the public. The organization's use of that property is limited by its charitable purpose and any restrictions created by the donor. Thus, land held for a nature reserve usually cannot be diverted to another use without court approval. The court examines the proposed change to determine if it is in the interest of the public.

Unless the land was acquired for public recreation purposes, the organization can determine the degree of public access to be permitted. Where the site is environmentally vulnerable and restoration activities are planned or being performed, the public may be denied access to the site, yet the site will still serve its charitable purpose by providing visible open space, protecting water quality and reducing surface runoff and flooding. At the other end of the spectrum, the conservation organization may allow full public access where that is compatible with the conservation purposes of the particular property.²¹

2. Less Than Fee Ownership

Often a desirable alternative to fee ownership is the acquisition by a municipality, government agency or private conservation organization of limited rights in another's land. Because the landowner continues to own the land, but has reduced rights in that land, and the other party now holds some property rights, this mechanism is often called "less-than-fee ownership." The landowner continues to own the land and to exercise all rights of ownership, except as those rights that have been transferred to the other party. The party who owns the conservation easement is usually referred to as the "holder" while the landowner is still called the landowner or owner.

Conservation easements transfer the right to make certain uses of the land—usually specified developmental activities—from the landowner to another party. The holder is usually a municipality, a county, a governmental agency or a private qualified conservation organization. At one time, there were concerns over the enforceability of this transfer of some ownership rights to a third party, at least after the land itself has been transferred to someone other than the original landowner. Most of these concerns have been resolved with the adoption of the Pennsylvania Conservation Easement Act of 2001.²²

Once in place, the landowner and successor owners may no longer use the land in ways prohibited by the conservation easement. The holder has the legal right to prevent unauthorized uses of the land. Conservation easements usually must be permanent restrictions on the owner's rights if the landowner is to gain the benefit of favorable income or estate tax provisions under the Internal Revenue Code. However, conservation easements may have limited durations where federal tax benefits are not the primary benefits sought by the landowner. These limited duration easements are often used to obtain reduction in local real estate tax assessments.

Conservation easements may be created to serve a wide range of purposes. The Pennsylvania Conservation Easements Act lists the following purposes of conservation easements: "retaining or protecting the natural, scenic, agricultural or open space values of real property; assuring the availability of real property for agricultural, forest, recreational or open space use; protecting, conserving or managing the use of natural resources; protecting wildlife; maintaining or enhancing land, air or water quality or preserving the historical, architectural, archaeological or cultural aspects of real property."²³

a) Public Ownership of Less than Fee Interests

The Pennsylvania Conservation Easement Act allows county and municipal governments and the Commonwealth to hold perpetual conservation easements on private land. It also allows charitable organizations that are

registered with the Bureau of Charitable Organizations of the Pennsylvania Department of State and qualified for federal income tax exemption under the Internal Revenue Code²⁴ to hold perpetual conservation easements on public lands. Thus, municipalities may hold conservation easements on private lands and qualified charitable organizations may hold conservation easements on public land to assure its continued use for conservation purposes.

A municipality may wish to protect against undue development on the edges of its public parks by acquiring a conservation easement on adjacent private land. It may use a conservation easement to acquire open space or "green space" within its borders without necessarily giving the public access to the protected land. The same may be true for land within a flood plain where intensive development is to be discouraged, but limited private uses may be allowed. All of these examples would fit in the preservation and conservation of land along our rivers.

A Pennsylvania statute authorizes county governments to acquire the benefit of environmental covenants on private land that will limit the uses of that private land in a manner similar to a conservation easement.²⁵ The land subject to the covenant may be designated as farm, forest, water supply or open space land "in a plan adopted following a public hearing by the planning commission of the municipality, county or region in which the land is located." The covenant has an initial term of ten years beginning on the date it is recorded in the Office of the Recorder of Deeds. It is automatically extended each year for an additional year on the date it was recorded unless either party gives notice that it wants to terminate the covenant before that date.²⁶ The county may only terminate the covenant if the land is no longer designated as an appropriate land use on the plan. The landowner is under no similar limitation. Once a party has given notice of termination, the covenant remains in effect for ten years from the appropriate anniversary date of its recording. Thus, the covenant has a minimum duration of ten years and may last forever if neither party acts to terminate it and the use is designated an appropriate land use on the plan.

In exchange for the landowner's covenant or promise to limit the use of the land as described in the covenant, the county promises that the tax assessment of that property for real estate tax purposes will reflect the fair market value of the land as restricted by the covenant. A landowner who violates the covenant by changing the use of the land to an unauthorized use is liable to the county for damages. The statute requires damages equal to the difference between the real estate taxes actually paid and the taxes that would have been due had the changed use been made up to five years earlier, plus compound interest.²⁷ Certain uses by an entity with the power of eminent domain—rights-of-way, certain telecommunications towers—do not amount to a violation of the covenant.

b) Private Ownership of Less than Fee Interests

Private charitable organizations may hold Conservation Easements under the Pennsylvania Conservation Easement Act. These easements restrict the uses that the private landowner may make of its land, creating opportunities for protection of riverside and related lands without removing them entirely from private ownership. Essentially, the landowner grants the charity the right to make certain uses of the land, so that those rights are now held by the charity. The charity is bound by its charter to exercise or not to exercise those rights.

For example, the landowner may grant the charity the right to use the land for residential, commercial or industrial development, while retaining the right to maintain a single family home on the property and to use it for agricultural or timber purposes. As another example, the landowner might grant the charity the right to maintain and operate public recreational trails over a portion of its land and access to the river from the part of its land along the river bank, while retaining the right to use the remaining portion of its land for more intensive uses.

In both examples, the charity, not the landowner, now has the right to use the land for the stated purposes. In the first example, neither members of the charity nor of the public have a right to make affirmative uses of the land subject to the conservation easement. The charity will have the right to inspect or monitor the landowner's activities to make sure that it

is abiding by the terms of the conservation easement. In the second example, the members of the charity or of the public have the right to make affirmative use of the land for recreational trails and river access, but no right to use the balance of the land.

The landowner can obtain a federal income tax deduction (or estate tax deduction) for the value of the rights transferred to the charity if (1) the rights meet the requirements of the Internal Revenue Code,²⁸ (2) are transferred as a gift, (3) are transferred in perpetuity, and (4) the charity is a "qualified conservation organization." Favorable tax treatment is also available where the rights are sold to the qualified conservation organization for less than their fair market value, often called a "bargain sale."

Qualified conservation organizations include local, state and federal agencies, and private charitable organizations that have met the requirements of § 501(c)(3) of the Internal Revenue Code. These organizations must "have a commitment to protect the conservation purposes of the donation, and have the resources to enforce the restrictions."²⁹ Land trusts and private land conservation organizations generally meet these requirements.

The conservation easement must advance a "qualified conservation purpose."³⁰ These include the preservation of land for

1. Regular and substantial public recreation;
2. Significant, relatively natural animal or plant habitat, including habitat of endangered and threatened species, natural high quality examples of land or water based animal or plant communities;
3. Natural areas contributing to the ecological viability of public parks or preserves;
4. Open space for scenic enjoyment by the public (including farm and forest land) where public entry is not required but the area can be viewed from a publicly accessible viewing point (road, park, trail, waterway);

5. Historically important land and buildings (If for buildings, the buildings must be listed, or in a Historic District listed, in the National Register of Historic Places.).

The conservation easement must specifically prohibit other uses that would be inconsistent with the purpose or purposes for which the easement was created.

This is by no means an exhaustive discussion of conservation easements. There are a number of other requirements for an easement to satisfy the requirements of the Internal Revenue Code, some of which relate to existing or future mortgages on the property or the presence of surface mining rights. Where the requirements can be met, and they are met every day with properties of all sizes, the advantages to the owner can be significant and the advantages to the public incalculable.

C. Acquisition Options

Public ownership of land for preservation and conservation can be accomplished in several ways. The public agency may purchase the land in the open market when it becomes available. Sometimes the agency can exchange other surplus land for the land it wishes to acquire. Where the land is needed for a public use and the present owner is not willing to sell at a reasonable price, the agency may invoke the power of eminent domain to force a sale of the property at its fair market value. Finally, a private owner may be willing to donate the land, or a conservation easement on the land, to the public agency. Donation of full title will usually provide the owner with a charitable deduction measured by the current market value of the land. It will end the owner's responsibilities as owner, including future real estate taxes and potential liability to persons who come on the land.

Private land that has been acquired by the county, municipality or school district as a result of the owner's failure to pay the real estate taxes provides a significant opportunity for low cost land acquisition for preservation and restoration purposes. Most tax delinquent land that is acquired by taxing bodies is acquired because no private party was willing to bid the amount

of the delinquent taxes for which the property was offered for sale. This suggests that the land's market value was less than the delinquent taxes. Land of this value may be more appropriately used by the public for parks, preserves or open space than returned to private development.

Private owners, primarily qualified conservation organizations, do not have the power of eminent domain and do not conduct delinquent tax sales. However, they do have the options of purchase or donation. One of the difficulties with the purchase option lies in the funding of these organizations. Most do not have funds available for intensive acquisition campaigns. They rely on private donations, foundations, and local, state and federal funding sources for most purchase acquisitions. One mechanism for reducing, but not eliminating, their need for acquisition funding, is the "bargain sale." The private owner may be willing to sell the land (or conservation easement) for less than market value, essentially donating the difference to the purchaser. Where the purchaser is a qualified conservation organization, the private owner may be able to obtain a federal income tax deduction for this amount. Because "qualified conservation donations" must be made in perpetuity, the opportunity to exchange land or rights already held by the organization is far less useful for land trusts than for governmental organizations that may have surplus land available for exchange.

Conservation organizations should review public sales of tax delinquent properties in their areas of interest. Useful properties may be acquired in fee at a reasonable price from time to time. While tax sale titles are sometimes infirm, many title problems can be avoided by careful review of the tax file.

D. Conclusion

The acquisition and maintenance of land or conservation easements by public or private entities involves a commitment of resources, both financial and personnel. It may be too much to expect any single entity to acquire and maintain all of the land necessary or appropriate for the preservation of the river banks and related areas within Allegheny County. However, a partnership between the county, local municipalities and vari-

ous conservation organizations, working from a long range, coordinated plan, could make it possible to acquire a variety of ownership interests along the rivers that would provide protection and public benefits.

Now the vision of that linear riverside park and trails stretching from the northeastern county limit of the Ohio River along the banks of the four rivers to the county borders becomes clearer. A hiking/biking trail connects county and municipal riverfront parks with conservation easements. The trail and parks are supported by conservation easements on public and private property, particularly hillsides, facing the river.

The Allegheny County Parks Department could serve as coordinator of land and conservation easement acquisition and maintenance, with contributions from local municipalities of services, funds and land for areas within their boundaries. Trail groups already are responsible for acquiring and maintaining rights-of-way. Trails located within the park area can link different park areas through private lands along or near the riverbanks. Land trusts provide a vehicle for acquiring both fee title and conservation easements on private land along the riverbanks and on adjacent wetlands, hillsides and hilltops appropriate for preservation and restoration in connection with river preservation.

Pieces of this vision are already in place, particularly within the City of Pittsburgh and along parts of the Monongahela and Youghiogheny Rivers. What should follow is a coordinated effort to link as much riverside land as possible, using whatever ownership options best fit a particular parcel of land to its neighbors and the overall project.

III. Regulatory Options

It is not likely that all land desired for the preservation and conservation of our four rivers can be acquired by public agencies or conservation organizations. Indeed, it may not be appropriate to subject all of this land to public fee ownership. Federal, state and local government regulatory programs also play an important role in this effort.

Private property is subject to public regulation where that regulation serves a legitimate public purpose, as by promoting the public health, safety, morals or the general welfare. The regulation must be reasonably related to the accomplishment of that public purpose. It must not be "unduly oppressive on individuals." This means, among other things, that the regulation in question must not be so restrictive that it does not allow the private owner to make a reasonable use of its property.³¹ It is often said that a property owner is entitled to make an economically reasonable use of his or her land, not the highest and best use of that land.³²

Appropriate regulation is a proper end of government. Pennsylvania and federal courts usually will presume that a regulation is valid and impose a heavy burden on the challenger to show that it is not.³³ However, the government does not have a blank check to enact whatever regulations it chooses. Any regulation must relate to a proper governmental purpose and must allow the private property owner a reasonable use of the property. In determining the validity of the regulation, the court will balance the public interest to be served against the rights of a landowner.³⁴

Regulation of private land, or of the activities that may take place on the land, may come from the federal, state, county or municipal government. The broader powers are exercised at the municipal level in the form of zoning ordinances, building codes, forestry ordinances and similar controls. They will be discussed last. The federal and state programs sometimes complement each other and will be discussed first.

A. Federal and State Programs

The federal government has several regulatory regimes that can affect the quality of the riverside environment. These include limits on development in flood plains under the National Flood Insurance Program Act;³⁵ activities that adversely affect protected animal and plant species under the Endangered Species Act;³⁶ historic sites and historic districts under the National Historic Preservation Act;³⁷ and reductions in wetlands areas protected by the Clean Water Act.³⁸

At the outset, it should be noted that these federal statutes are aimed at particular environmental problems. They do not, singly or as a whole, provide a comprehensive strategy for restoration, preservation or conservation of any land. Nevertheless, they can play an important role in any strategy aimed at river land protection and restoration. They should not be overlooked in any development, conservation or preservation strategy.

1. Flood Plains

Canalization of our rivers and industrial development of the riverside land in Allegheny County has eliminated many of the historical flood plains that lay within and along the riverbanks. Present day flooding occurs during and after heavy rainfall events. Major flooding, once a normal part of riverine ecology, has been substantially reduced by distant flood control dams, filling, raising and revetting the river banks, and other human activities.

The National Flood Insurance Program of the National Flood Insurance Act is administered by the Federal Emergency Management Agency (FEMA). FEMA has established criteria for the regulation of land management and use by local municipalities if property owners are to be eligible to participate in the program.³⁹ Before properties in a flood plain are eligible for flood insurance, the municipality must adopt regulations for the construction and maintenance of these structures. The Pennsylvania Municipalities Planning Code contains specific provisions authorizing municipalities to adopt qualifying flood plain zoning provisions.⁴⁰ In addition, Pennsylvania municipalities that do not choose to adopt zoning ordinances and that are not subject to a county zoning ordinance are required to adopt qualifying flood plain regulations without having to zone the entire municipality.⁴¹ These regulations provide some control over riverfront development, but do not prevent development entirely. Many segments of riverbank in Allegheny County have been filled to such a height and are protected by revetments that flooding is unusual. The abutting land has been effectively removed from the river's historical flood plain. In segments still part of the flood plain, flood plain regulations can serve to reduce pressure for intensive riverfront development.

In addition, the state requires that all highways and public utility structures built in flood plains meet flood minimization requirements of the Department of Environmental Protection.⁴² The DEP's regulations cover design, construction and maintenance. For example, the design of a highway in a flood plain must be such that the highway will not significantly alter the flood plain or increase the velocity or direct flow in a way that will result in erosion of the flood plain.⁴³

2. Endangered and Threatened Species

The federal Endangered Species Act⁴⁴ (ESA) is administered by the Fish and Wildlife Service within the Department of Interior. The act is designed to protect certain species of animals and plants. A species is "endangered" when in "danger of extinction throughout all or a significant portion of its range."⁴⁵ A species is "threatened" when it is "likely to become an endangered species within the foreseeable future."⁴⁶ These species will be referred to collectively as "protected species." The Secretary of the Interior, acting through the Fish and Wildlife Service, designates species as endangered or threatened based on a review of information on the health of the particular species.⁴⁷ If qualified for protection, a species is listed as either endangered or threatened on a list maintained by the Service.

The ESA speaks to the federal government and to private property owners. Federal agencies must consult with the Fish and Wildlife Service before undertaking actions that may jeopardize the continued existence of a protected species or result in the destruction or modification of habitat of a protected species. The purpose of the consultation is to determine how the agency may modify its action, or modify a federal, state, local or private project funded in whole or in part by the agency, to protect the species in question.

Private developers and state and local governments whose activities may "take" or adversely affect a member of a protected species must obtain an "incidental take permit" from the Fish and Wildlife Service before proceeding with the activity. This permit should only issue where the "take"

will not endanger the survival of the species. It also requires the preparation and implementation of a "habitat preservation plan" to promote the continued viability of the species.

The federal ESA prohibits the taking of members of a protected species of animals without an incidental take permit.⁴⁸ Protected species of plants are not protected (except on federal land) unless they are also protected under the state's comparable statute.⁴⁹ Thus, it becomes important to discuss briefly Pennsylvania's protection of endangered species.

Pennsylvania divides the responsibility for listing and protecting state endangered and threatened species among three agencies: the Pennsylvania Department of Conservation and Natural Resources (plants),⁵⁰ the Pennsylvania Fish and Boat Commission (fish and mollusks),⁵¹ and the Pennsylvania Game Commission (animals).⁵² The lists of plants, fishes and animals protected under Pennsylvania law are not as extensive as those protected under the federal ESA. As a result, one must consult the Pennsylvania list of protected plants,⁵³ not the federal list, to determine what activities may invoke the "take" prohibitions of the federal statute where protected species of plants are concerned. A developer or municipal or state agency must comply with both the applicable federal and state requirements before beginning an activity that may "take" a protected species.

The term "take" under the ESA is defined as: "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."⁵⁴ The Fish and Wildlife Service has further defined the term "harm" to mean "an act which actually kills or injures wildlife." Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering."⁵⁵ The United States Supreme Court, in a significant decision, held that this definition protects the habitat of listed species as well as members of the species itself.⁵⁶ To be protected, it must be foreseeable that disturbance of essential habitat will actually harm a member of the species.

For example, the removal of earth in which state protected plants are growing, or the compaction of that earth by heavy equipment, would be a “taking” of those plants and would require an incidental take permit and habitat conservation plan from the Fish and Wildlife Service, as well as permission from the Pennsylvania Department of Conservation and Natural Resources. Removal of forest cover used by a federally listed species of birds for nesting (shelter) would require an incidental take permit and habitat conservation plan from the Fish and Wildlife Service and, if the bird were listed by the state, from the Pennsylvania Game Commission. The modification of habitat suitable for a listed species, by itself, will not require a permit if no members of the species actually use that habitat for “essential behavioral patterns.”

3. Wetlands Protection

The history of governmental treatment of wetlands has turned half circle in the past fifty years, from regarding them as undesirable parts of the landscape that should be eliminated wherever possible to important ecological features to protected and preserved.⁵⁷ Today both federal and state programs exist to protect significant wetlands and to protect them from drainage and development.

For regulatory purposes, wetlands are defined by the types of plants found on the ground, rather than the presence or absence of water at a particular time of the year.⁵⁸ This is because many plants that are dependent on wetland soils can live during periods when the soil is not saturated with water. If saturated soil at the time of observation were the test, many wetlands could be destroyed during dry periods of the year, even though they serve the functions of wetlands during most of the year. Determining the existence of wetlands on a site, and the extent of those wetlands if present, has become a matter for experts trained in wetland delineation.

The U.S. Fish and Wildlife Service has developed a National Wetlands Inventory,⁵⁹ consisting of maps created from photo-interpretation of high altitude photographs. Unfortunately, this method locates large wetland areas, but misses the finer picture. To determine if wetlands subject to regulation—“jurisdictional wetlands”—exist on a site, one must survey

the site itself for the presence of marker plants using methodology developed by the U.S. Army Corps of Engineers (Corps).⁶⁰

Section 404 of the Federal Water Pollution Control Act of 1948, better known as the Clean Water Act (CWA), vests regulatory authority over “the discharge of dredged or fill material into the navigable waters at specified disposal sites” in the Corps of Engineers,⁶¹ subject to “oversight” or a veto of specific permits by the Environmental Protection Agency. Section 404, as implemented by the Corps and the EPA, has become the primary federal tool for preserving and protecting wetlands.

Alteration of most wetlands requires a permit from the Corps under Section 404. Many projects having what the Corps regards as minimal impact on wetlands can proceed under what is known as a “general permit.” In most cases the applicant for a general permit need only notify the Corps that it intends to undertake a particular type of activity in the manner specified in the general permit at a particular location. No actual permit issues from the Corps and there may be no government inspections to assure that the project is being carried out in the manner specified. General permits can allow the complete elimination of small wetlands or parts of a larger wetland. Larger scale projects, which may eliminate or significantly modify a wetland, require a specific permit. The applicant must submit an application detailing the project, its impact on an existing wetland, and the means, if any, chosen to reduce or mitigate the impact of the development on the wetland. Mitigation measures may include constructing “replacement wetlands,” which may or may not be in the same location as, and may or may not serve the same functions as, the altered wetland site.

While most wetlands, regardless of size or function, are subject to this program, the United States Supreme Court has held that some wetlands are not.⁶² Congress’ (and thus the Corps’) authority to regulate activities affecting wetlands is founded on the power to regulate interstate commerce under the United States Constitution.⁶³ Where the wetland is an “isolated wetland,” not connected hydrologically to a navigable waterway, or a waterway that feeds a navigable waterway, the wetland is not a part of interstate commerce and not subject to the Corps’ authority, at least not

for the reasons the Corps claimed.

The Pennsylvania Department of Environmental Protection enforces a program regulating structures and activities in wetlands under the authority of the Dam Safety & Encroachment Act.⁶⁴ The DEP employs a general permit and individual permit system similar to the Corps. Unlike the federal government, whose power to regulate rests on the Commerce Clause, Pennsylvania’s regulations are based on its inherent police power. The police power imposes no obstacle to regulating isolated wetlands. The state program requires replacement of wetlands adversely affected by development activities.⁶⁵

Riverbanks and neighboring lands are natural places to find wetlands. Unfortunately, the extensive industrial developments of the previous centuries have eliminated many of the riverine wetlands that previously existed along the Allegheny, Monongahela and Ohio Rivers and their tributaries in Allegheny County. Some remain, with more, perhaps, along the Youghiogheny. Where wetlands exist, they should be given protection.

4. Other Federal and State Regulations

There are a number of other federal and state statutes that can play a role in preservation and conservation of riverside land. These include the National Historic Preservation Act⁶⁶ and its state counterpart, the History Code.⁶⁷ These two statutes provide limited protection to structures and districts placed on the National Register of Historic Places or the state counterpart. Neither statute prevents alteration or destruction of listed properties by private owners, but does require federal or state agencies undertaking activities that may affect these properties to consult with the federal Advisory Council on Historic Preservation or the Pennsylvania Historical and Museum Commission before undertaking an activity that will adversely affect a listed property’s historic character. These are informational statutes, informing the agency of the possible consequences of its actions, not prohibitory statutes guaranteeing protection for protected structures or sites.

The Pennsylvania Stormwater Management Act⁶⁸ requires each county to prepare a stormwater management program for each watershed within its boundaries in accordance with regulations from the Department of Environmental Protection.⁶⁹ These plans are to be prepared in consultation with the municipalities in the watershed. Among the many items to be included in the watershed stormwater management plan are:

- “a survey of existing runoff characteristics in small as well as large storms, including the impact of soils, slopes, vegetation and existing development;”
- “an assessment of projected and alternative land development patterns in the watershed, and the potential impact of runoff quantity, velocity and quality;”
- “an analysis of present and projected development in flood hazard areas, and its sensitivity to damages from future flooding or increased runoff; and
- “an identification of flood plains within the watershed.”⁷⁰

Once the plan is approved, the location of various activities and improvements, including subdivisions and major land developments, highways and transportation facilities, public utility service facilities and facilities owned or financed, entirely or in part, by funds from the Commonwealth must be conducted in a manner consistent with the plan.⁷¹ Any municipality within the watershed that fails to adopt or amend and implement ordinances (zoning, subdivision and development, building code, and erosion and sedimentation, and other ordinances) necessary to the implementation of the plan can lose all future payments due it from the state’s General Fund.⁷²

Persons engaged in land development activities that can affect existing surface water runoff characteristics are also required to implement measures reasonably necessary to prevent injury to health, safety or property, including control of the quantity, velocity and direction of runoff.⁷³ Implementation must be done in a manner consistent with the plan. Activities in violation of the act or plan are declared to be a public nuisance, subject to a suit for injunction by the affected county, municipality or any

aggrieved person. Because an “affected municipality” may be one in the watershed that will be adversely impacted by the activity, not just the municipality in which the activity is taking place, this is a powerful provision for enforcement of ordinances and regulations implementing the stormwater management plan.

As of March 7, 2003, five watershed stormwater management plans had been completed in Allegheny County and approved by the Department of Environmental Protection.⁷⁴ These five watersheds encompass 78 municipalities. One of the major rivers, the Monongahela, is included in this group; its plan includes 33 municipalities. Municipalities are supposed to complete amendment or adoption of implementing ordinances within six months of the approval of the plan. The first plans were approved in 1986; the most recent, in 1998. Yet, not all included municipalities have complied with the act.⁷⁵

Stormwater management plans can help to identify wetlands associated with the watershed that are not identified in other sources. They also provide controls on development that otherwise could contribute to erosion and sedimentation in the associated water body. Because they require coordinated activities among separate municipalities, these plans can also provide consistent development controls that otherwise might not exist.

5. Conclusion

Most federal and state environmental programs are essentially single-purpose programs, designed to protect one element of the ecology, rather than the ecology of a region or area. For example, endangered species receive protection where members of that species are present and wetlands are protected where wetlands exist. Otherwise, these programs offer little of value to an overall plan for the protection of riverbanks and adjacent lands. However, where these protected features are present, these regimes can be quite important. The burden of protection is shifted from the county or local municipalities to the federal or state government, along with the demand on government resources that protection requires. In evaluating riverside lands for protection, one must be ever alert to the possibility of federal or state protected characteristics.

Stormwater management plans do provide an important element in any riverside land protection. These plans are prepared under the auspices of the county. They must recognize and control development over the range of municipalities with the watershed. (Actually, the municipalities are primarily responsible for this regulation, but the plan provides a means of coordinating their efforts in a manner not necessarily possible under other forms of local regulation.) In addition, since stormwater management plans must take into account wetlands present in the watershed, one should expect that they will provide a finer scale determination of wetlands than the National Wetlands Inventory.

B. Municipal Police Power

1. Police Power in General

Municipalities possess a wide range of regulatory powers under the police power that, used properly, can greatly advance the preservation and conservation of the river shores and riverside lands. Police power regulations are intended to guide and control private land use and development to protect the public health, safety or welfare. These regulations must be substantially related to identified public purposes, not be arbitrary or capricious, and allow private owners some economically reasonable use of their property.

As a home rule county, Allegheny County can adopt police power measures. However, a municipality within the county that is exercising the same power at the time the county ordinance is adopted may opt out of the county measure. The citizens of that municipality determine by referendum if the county ordinance should govern the municipality.⁷⁶

Pennsylvania courts strive to maintain a sensitive balance between the needs of the public when adopting regulations for public benefit and the rights of private property owners to make reasonable use of their property.⁷⁷ Regulations are presumed valid. This presumption is a very strong one and difficult to overcome. The municipality must act in a manner that does not sacrifice the constitutionally protected rights of its citizens. Courts will balance the public interest to be served and the rights of the landowner to make reasonable use of his or her property.⁷⁸

Where the regulation treats one property differently from other, similarly situated, properties, it will be found to be arbitrary and, thus, invalid. Activities on property within a flood plain, for example, may be restricted in ways that protect public health and safety from the threat of flooding, as by requiring construction in a manner that will minimize interference with the flow of floodwaters over the surface. Similar restrictions on property not located in a flood plain lacks this justification and could be found to be invalid.

It is important to emphasize that a landowner is entitled to make reasonable use of his or her property, although not necessarily the highest and best use of that property. Where the regulation does not permit a reasonable use of a particular parcel of property, the regulation will be regarded as “regulatory taking” and declared invalid, or the municipality will be required to compensate the owner in money for the loss he or she has suffered.

Successful regulatory taking challenges are rare. They usually involve a situation where the landowner is able to demonstrate that the regulation in question, as applied to that owner’s property, is so restrictive that the landowner is left with no reasonable use of the property. Pennsylvania courts follow the analysis of the United States Supreme Court in evaluating regulatory takings challenges.⁷⁹ The regulation must bear a substantial relationship to the purposes of the police power—protection of the public health, safety or welfare. It must not deny the owner all reasonable use of the land.⁸⁰ Indeed, it must allow the owner some degree of reasonable economic use to withstand a regulatory taking challenge. So long as the ordinance or regulation does serve to protect a legitimate public interest and allows the owner some economically reasonable use of the land, it should be upheld.

While many states recognize the protection of aesthetic values alone as legitimate interests for police power protection, Pennsylvania courts have taken a more conservative approach. A valid police power measure must be “reasonable.” To the Pennsylvania courts, aesthetics alone seem too subjective to allow for an objective evaluation of reasonableness. A quote

from a recent Commonwealth Court decision illustrates the Pennsylvania attitude: “We have stated many times that a ‘municipality may include aesthetic factors in the exercise of its zoning powers, but aesthetics alone cannot justify zoning decisions.’”⁸¹ Yet, Pennsylvania courts do recognize that property values are affected by the aesthetic qualities of the neighborhood.⁸² A regulation that relates aesthetic values to private property values or other legitimate police power objectives should withstand judicial challenge.

2. Subdivision Controls

Subdivision controls regulations govern the initial development of land into individual lots. They also usually determine the type of infrastructure that will accompany development within the subdivision—e.g., street size and quality and the location of utility services. Subdivision controls tend to be a one time affair in that they control the initial development of undeveloped land or the redevelopment of existing built environment. Most municipalities in Allegheny County, and the county itself, obtain their authority to control subdivisions from the Municipalities Planning Code (MPC).⁸³ The City of Pittsburgh’s authority comes from another statute.⁸⁴

When adopting or revising subdivision controls in relation to riverside development, conservation or preservation, the municipality should consider the need for public access to and along the river, as well as the desirability of larger lot sizes for riverside activities so as to reduce the intensity of activities that will occur along sensitive riverside land and nearby land that supports the riverside ecology.

3. Zoning Controls

Zoning ordinances regulate the use of land, watercourses and other bodies of water, the size and bulk of buildings and other structures, the amount of opens space (yards) that must be left between a structure and the lot lines of the lot on which the structure is located, and the density of population and intensity of development in the different areas, or zoning districts, of the municipality.⁸⁵ Again, most municipalities and the county obtain the

authority to enact and enforce zoning regulations from the MPC.⁸⁶ The City of Pittsburgh’s authority comes from a much older and more general statute.⁸⁷ Although the city’s zoning enabling legislation lacks the detail of the MPC, it is broad enough to authorize most, if not all, of the techniques set forth in the MPC. The county may adopt a countywide zoning ordinance, but it will be superseded by the zoning ordinance of each local municipality that chooses to adopt its own zoning ordinance.

County and municipal zoning ordinances, other than that of the city, must be “generally consistent” with any existing county comprehensive plan.⁸⁸ The city also has adopted a comprehensive plan, but its enabling statute does not require the same degree of consistency as the MPC.

The MPC requires that a municipality must adopt a zoning ordinance covering the entire municipality.⁸⁹ Unfortunately, this prevents a municipality from adopting zoning regulations to protect only sensitive areas of that municipality, such as riverside areas, steep slopes, landslide prone areas or flood plains.⁹⁰

A number of zoning techniques are available to promote the conservation and development of riverside areas and related lands. These include:

- Large lot sizes along the river bank to reduce density in environmentally sensitive areas to discourage overly intensive development;
- Large open space or yard requirements with native vegetation for lots abutting a river;
- Riparian buffer zones or riparian corridor conservation zones limiting the clearing of vegetation within the zone to protect water quality, reduce erosion and provide for conservation and preservation of riverside areas;⁹¹
- Cluster building development on riverside, flood plain, and adjacent upland properties to promote vegetated open space for conservation and preservation purposes;
- Land clearance restrictions on riverside properties or hillsides

along the river to protect water quality, prevent erosion or landslides, as well as to promote the natural recovery of riverside areas; and

- Use of voluntary transferable development rights to encourage minimal or low density development in environmentally sensitive areas or areas found deserving of preservation, with transfer districts elsewhere in the municipality allowing greater density development on those lots that acquire transfer development rights.⁹²

There is a difficulty with the use of zoning techniques to protect riverfront and adjacent lands throughout Allegheny County. Allegheny County contains 130 separate municipalities. Exactly one-half of that number, or 65 municipalities, border one or more of the four rivers. Ideally, adequate zoning protection would involve coordination among all of these municipalities. Pennsylvania law provides at least two mechanisms for coordination of zoning among different municipalities. One of these is unlikely to work well in this particular endeavor; the other holds greater promise.

The MPC authorizes joint zoning by two or more municipalities.⁹³ The cooperating municipalities must create a single zoning ordinance to regulate all land with the combining municipalities, with a joint planning commission having representatives from each of the cooperating municipalities.⁹⁴ The number of municipalities with land bordering the four rivers suggests the problems with this approach. It is difficult to expect municipalities with such diverse interests to cede their individual zoning authority to a joint ordinance. The sheer size of the joint planning commission for this undertaking also appears to make this approach unworkable. Finally, the City of Pittsburgh is not governed by the MPC. Substantial portions of three rivers, the Allegheny, Monongahela and Ohio, lie within its borders. Without the city's participation, a joint zoning ordinance would not effectively protect all important segments of the riverside.

A second strategy is to employ the "consistency" provisions of the MPC. A zoning ordinance must be "generally consistent" with the municipality's comprehensive plan.⁹⁵ The municipality's plan must be "generally consis-

tent" with the county's comprehensive plan.⁹⁶ The MPC encourages the development and implementation of countywide comprehensive plans. It specifically authorizes municipalities and the county to enter in intergovernmental cooperation agreements for this purpose.⁹⁷

The county or municipality's comprehensive plan must contain, among other elements, "[a] plan for the protection of natural and historic resources to the extent not preempted by Federal or State law."⁹⁸ Natural and historic resources include, but are not limited to "wetlands and aquifer recharge zones, woodlands, steep slopes, prime agricultural land, flood plains, unique natural areas and historic sites."

This consistency requirement suggests that the county, through its comprehensive planning process, can identify riverside and adjacent areas to be conserved or preserved, as well areas appropriate for development. Comprehensive plans are to be reviewed at least every ten years by the municipality and county. Municipal review includes submitting the local plan to the county or regional planning commission for its review.⁹⁹ Although potentially a long-term strategy, the "consistency" provisions of the MPC provides a means of coordinating riverside protection among the 65 independent municipalities. This strategy could encourage less intensive uses of lands entitled to special protection, more uniform setbacks from the riverfronts and the creation of public spaces and river access points, among other matters.

It should be noted, once again, that the City of Pittsburgh is not governed by the MPC and not subject to its "consistency" requirements. However, the city has evidenced significant sensitivity and concern about the future of its riverfront lands. The citizens of the city are also citizens of Allegheny County and they should expect the city and county to cooperate in the development of consistent policies toward riverside development, conservation and preservation, regardless of the source of their respective legal authorities.

A third strategy would be to seek voluntary cooperation among all 65 municipalities to adopt consistent riverside regulations. The question then arises: Who would do this? A citizen organization dedicated to protection of the important values of our river valleys is a possibility and one not to be dismissed out of hand. However, it does seem as if the county, with its countywide jurisdiction and professional Planning Department, as well as its most professional Department of Parks and Parks Commission, is the more logical actor, particularly because of the "consistency" provisions of the MPC.

4. Police Power Measures to Protect Environmentally Sensitive Lands

Police power measures, other than subdivision and zoning controls, are available to municipalities to protect riverside and sensitive abutting lands. This report has already discussed a few of these, including flood plain regulations where the municipality chooses not to engage in zoning¹⁰⁰ and the implementation of storm water management plans and erosion and sedimentation controls.¹⁰¹ Two other examples will be discussed. These are intended to be illustrative of available police power measures and not an exhaustive catalogue.

A substantial amount of land abutting the banks of our rivers is steeply sloped and contains recovering forest growth. These steeper slopes are often prone to landslides, particularly following development that affects the existing slope or vegetative cover. Pennsylvania courts have recognized that a properly based ordinance, whether enacted as a separate exercise of the police power or as part of the zoning ordinance, may restrict forestry and vegetation clearing activities to preserve woodlands, steep slopes, landslide-prone areas and wetlands. All of these land characteristics are present in many areas along the river banks and abutting land.

One ordinance that has been upheld against various challenges prohibited timber harvesting "in areas determined by the [township] Engineer, with reference to published or commonly accepted guidelines, to be landslide-prone or flood-prone."¹⁰² The ordinance allowed the board of commis-

sioners to grant variances to allow harvesting under certain conditions. A landowner was denied a permit to harvest timber because the township engineer determined that his land was “landslide-prone.” The commissioners denied the request after a public hearing. They found that the area was prone to slide and timber harvesting would increase the risk of slides. The commissioners based their findings on published geological reports and other evidence submitted at the hearing.

On appeal, the landowner (1) challenged the township’s authority to adopt ordinances regulating timber activities and asserted that (2) the MPC did not permit this type of regulation and (3) the denial of the permit resulted in a regulatory “taking” of his land. The Commonwealth Court rejected all three challenges.

The township’s enabling legislation authorized it to enact ordinances for the protection of the public health, safety and welfare.¹⁰³ This ordinance was adopted to prevent landslides and uncontrolled stormwater runoff. The court concluded that it was a valid exercise of the township’s police power because “it seeks to prevent damage to roads, damage to drains, damage to public utilities, damage to watercourses, fire hazards, and reduction in property value; and it seeks to enhance the natural beauty and environment within the ... Township.”

The limitations in the MPC restricting the regulation of timber (silviculture) activities under zoning ordinances did not apply to this ordinance because it was not a zoning ordinance and was not enacted under the authority of the MPC. It lacked what the court called the “exclusive hallmarks of zoning.” It did not deal with subdivision or development of the land; its purpose was to regulate timber harvesting that “may jeopardize the integrity of the land in flood-prone or landslide-prone areas.”

Finally, the landowner did not introduce any evidence of the economic impact of the ordinance on the value of his land. He had failed to carry his very heavy burden of showing a “regulatory taking” of his land. Ordinances are presumed to be valid and it is the challenger’s burden to overcome that presumption.

In another ordinance, upheld by the Allegheny County Court of Common Pleas, a township regulated timber harvesting on parcels larger than one acre.¹⁰⁴ This court also rejected a “regulatory taking” challenge, finding that the landowner had failed to produce evidence sufficient to overcome the presumption of validity. The ordinance prohibited timber harvesting on slopes of 25% or greater or in landslide-prone or flood-prone areas. It also prohibited clear-cutting of forest or secondary growth. Mulching or removal of logging debris, reforestation of harvested areas, and a bond to assure restoration of logged land were required where timber harvesting was permitted.¹⁰⁵

Although the MPC currently prohibits zoning ordinances that “unreasonably restrict forestry activities” and requires that “forestry activities, including, but not limited to, timber harvesting, shall be a permitted use by right in all zoning districts in every municipality,” municipalities are not powerless to regulate forestry activities by zoning.¹⁰⁶ In one case, the Town of McCandless created a special development district in its zoning ordinance. Standards were established in this district for the preservation of steep slopes, forests and woodlands and streams. On sloped land, increasingly smaller lot areas could be developed or stripped of vegetation as the lot’s slope increased from 12% to 15% to 25% and above 25%. The ordinance also limited the area of woodlands that could be cleared and developed and required the remaining area be maintained as permanent open space. The required amount of open space varied depending on whether the lot contained “young woodlands,” “woodlands” or “mature woodlands,” each of which is defined in the ordinance. The district was created following a study of the area by a local architectural firm, which made detailed scientific and engineering recommendations for protecting the sensitive land within the district.

A landowner challenged the ordinance as arbitrary and capricious and as a “regulatory taking” of his land. The Commonwealth Court rejected both challenges.¹⁰⁷ It found that the ordinance was substantially related to the protection of public health, safety and welfare and, therefore, not arbitrary or capricious. As to the “regulatory taking” challenge, the landowner failed to show that his land lacked value because of the restrictions on timber harvesting. In short, the landowner failed to carry the heavy burden

of rebutting the presumption of validity that attached to the ordinance.

A second Commonwealth Court decision upheld a township ordinance against a challenge that it unreasonably restricts forestry activities as prohibited by the MPC.¹⁰⁸ The ordinance restricted clear cutting on steep slopes and the 100-year flood plain. Where harvesting is permitted, at least of 30% of the forest canopy must be retained. Among the purposes of the ordinance was preventing erosion. This ordinance was also based on the results of an engineering study and was found not to be arbitrary or unreasonable, but substantially related to protection of the public health, safety and welfare.

These ordinances were discussed at some length to illustrate two principles. First, the strong presumption of validity that attaches to police power regulations. Second, the importance of adequate studies to support regulation of land clearing practices and their objectives of preventing landslides, erosion, danger to other private property or public facilities, or other hazards to public health and safety and protecting waterbodies and other environmentally sensitive land features. In each case, the studies and other scientific evidence evaluating the harms to be prevented by unregulated land clearing demonstrated to the court that the regulations were not arbitrary, but served a legitimate police power purpose.

5. Conclusion

Properly drafted police power measures, whether through a subdivision or zoning ordinance or in a stand-alone ordinance, can do much to further the legitimate objectives of developing, conserving and preserving riverside land and the abutting areas. These measures include limiting the intensity of development on riverfront parcels, providing appropriate setbacks from the riverbank, protecting flood plains and wetland areas from development harmful to the objectives of the ordinance, including other private properties and public facilities, and protecting vegetation, including trees and shrubbery, on the hillsides adjacent to the riverbank and in the river valley floors. It is important to identify the public health, safety and welfare objectives of these regulations and to relate the particular regulations to those objectives.

IV. Two Study Sites

The report now examines two areas along the Monongahela River to illustrate how a combination of strategies can be employed to further development, conservation and preservation of the land along the river. These are illustrations only. Other strategies could be combined to reach similar results. Some of the suggested strategies may prove unworkable in practice for economic, ecological or political reasons. They are offered as suggestions to encourage further discussion and implementation of all strategies on the four rivers within Allegheny County.

“Left bank” and “right bank” are conventions used here to describe the bank of the river where a study site is located. The “left bank” is the river bank on one’s left hand if one were on the river in a boat traveling downstream toward the river’s mouth; the “right bank” is, of course, the other bank. On the Monongahela and Youghiogheny Rivers, the “left bank” is generally the southerly or westerly bank; the “right bank” is generally the easterly or northerly bank.

The STUDIO for Creative Inquiry’s 3 Rivers 2nd Nature project (3R2N) has prepared an ecological assessment of both areas. The assessment ranks the ecological health of watersheds (5 categories from best to worst), woodlands (5 categories from most significant to least significant), river bank botany in terms of preservation potential (3 categories) and conservation potential (3 categories from excellent to fair). These assessments have guided the selection of areas for protection and protection strategies. The assessments provided some of the maps included in the discussion.

A. The Emerald Arc Site

The Emerald Arc site is located between two rivers. It includes the right bank of the Monongahela as it flows toward Pittsburgh and the left bank of the Youghiogheny River, also flowing toward Pittsburgh. It begins (or ends) at the confluence of the Youghiogheny and Monongahela Rivers at McKeesport.

The site is governed by ten different municipalities,¹⁰⁹ all of which front on one or both rivers. These municipalities have 16 different zoning classifications. Only three municipalities have zoning classifications titled “Conservation.”¹¹⁰ Without examining the text of each ordinance, the precise details of these conservation districts can not be ascertained. The number of municipalities and the disparity of zoning districts within each suggest that a joint municipal zoning ordinance is not a likely strategy to provide coordinated zoning controls. The consistency provisions of the MPC, particularly consistency with the county comprehensive plan, does offer more hope for coordination, while leaving each municipality free to determine the details of implementation (Map 9.4).

The land at and near the confluence is developed for industrial, commercial and residential uses. As one moves down the near banks of each river (left for the Youghiogheny and right for the Monongahela), the land slopes upward, often rather steeply. Here are successfully regenerating forests, often of considerable beauty. Scattered residential and commercial development characterizes the slopes along the Youghiogheny. The lower slopes along the Monongahela are more densely developed, but density decreases as one moves upslope. At the top of both slopes is a gently rounded plateau with somewhat more intensive development. The right bank of the Youghiogheny and the left bank of the Monongahela are far more intensely developed for industrial, commercial and residential uses.

The 3R2N Ecological Assessment for this site indicates substantial woodlands in the highest three categories. The highest category woodlands rise from parts of the banks of both rivers and continue along the plateau. Sporadic sections of both banks of each river contain riverbank botany with the highest preservation priority (Figure IX.2).

The Pittsburgh to Cumberland Trail runs along the left bank of the Youghiogheny throughout its length in Allegheny County. The trail is a non-motorized recreation trail built primarily on rail banked railroad right-of-way, known as the North Yough Trail. It is planned to reach from Pittsburgh to Cumberland, Maryland, where it will join with a similar trail running along the Potomac River to Washington, D.C. It was built by the

Regional Trail Corporation and is maintained by volunteers from various organizations under the guidance of the Allegheny Trails Alliance.

The North Yough Trail provides an anchor for strategies to protect the left bank of the Youghiogheny. Conservation easements on the woodland areas to limit, but not necessarily prohibit, forestry activities would be a welcome support for the trail. Municipalities that include these highly desirable woodlands should also consider adopting ordinances regulating timber activities. Many of the high quality woodlands are located on steep hillsides rising directly from the riverbank. Uncontrolled logging of these areas would almost certainly result in degradation of the water quality in the river and may have the potential for enabling landslides and other hazardous conditions. A public park at the trailhead in Boston provides limited river access. The county and the several municipalities should examine other land along the riverbanks, particularly those identified as priorities for preservation and restoration, as candidates for acquisition and incorporation into a linear park along both banks of the Youghiogheny River.

Creation of a similar trail along the right bank of the Monongahela with the acquisition of land for parks and river access is in order. Conservation easements on, or public ownership of, the supporting hillsides would enhance the riverside experience and protect those hillsides for their important functions of supporting that experience and of preventing pollution and landslides, improving air quality and enhancing the value of private lands.

The following strategies, among others, are appropriate for the Emerald Arc site:

- Develop more parklands and public river access areas;
- Promote expanded use of riverfront lands for trail use;
- Evaluate riverside land for Fish and Boat Commission boating and fishing access points;
- Create conservation easements to protect hillsides along

- all four riverbanks;
- Create conservation easements to protect those riverfront areas containing riverbank botany with the highest preservation priority where ownership remains private;
- Evaluate wooded slopes for county environmental covenants for farm, forestry, water supply or open space purposes;
- Inventory and protect wetlands and habitat of endangered and threatened species;
- Development of a county comprehensive plan sensitive to uses of the riverfront and adjacent lands;
- Use large setbacks for river front areas;
- Provide for low density development on private properties near riverbanks;
- Provide for cluster development along riverbanks and adjacent hillsides to increase required open space;
- Adopt forestry and land clearing restrictions to protect water quality and prevent landslides; and
- Prepare a stormwater management plan for the watershed.

B. The Hays and Streets Run Site

The Hays and Streets Run site includes a portion of the left bank of the Monongahela River as it flows toward Pittsburgh. Much of the land along and near the river bank is undeveloped. As one moves away from the bank, the land remains relatively flat for some distance and then begins to slope upward, culminating in steep upward slopes. Scattered residential and commercial development currently characterizes the land more removed from the bank. A stream known as Becks Run flows into the river about halfway through the site.

This Hays and Streets Run Site is governed by four different municipalities,¹¹¹ three of which front on the river. Although one municipality has

no river frontage, it is included here because both Becks Run and a large acreage of significant woodlands are located within its borders. A portion of the area adjacent to the river and bordering Becks Run within the city is zoned “S” Special District, which provides some opportunity for environmental controls. While the number of municipalities is significantly smaller than in the Emerald Arc site, a joint municipal zoning ordinance still is not a likely strategy. The city is not governed by the MPC and, thus, is not subject to its joint zoning or consistency provisions. The consistency provisions of the MPC, particularly consistency with the county comprehensive plan, offer a coordination strategy for the other three municipalities (Map 9.3).

The 3R2N Ecological Assessment for this site indicates substantial woodlands in the highest or “most significant” category, both near the riverside and along Becks Run. Several sections of both banks of the river contain riverbank botany with the highest preservation priority (Figure IX.3).

A segment of the Pittsburgh to Cumberland Trail runs along the left bank of the Monongahela River. This segment, which currently extends through Homestead Borough and part of Munhall Borough, will eventually connect with the North Yough Trail at McKeesport. Adjacent to the trail, farther from the river, is a right-of-way of the Norfolk and Southern Railroad. The next major feature inland from the river is State Route 837.

A public ownership strategy for the riverfront and immediate historic flood plain would be an important step toward preservation and restoration of this area. Particular attention should be given to wetlands along the river and Becks Run. A stormwater management plan for Becks Run could enhance this wetland protection strategy by identifying wetlands not shown on the National Wetlands Inventory. Hillsides and woodlands can be protected by public ownership, conservation easements or forestry and land clearing ordinances.

The following strategies, among others are appropriate for the Hays and Streets Run site:

- Devote more land to public parks and public river access areas;
- Create conservation easements to protect uplands and hillsides along the river and Becks Run;
- Create conservation easements to protect those riverfront areas containing riverbank botany with the highest preservation priority or where the restoration potential is high if ownership remains private;
- Inventory and protect wetlands and habitats of endangered and threatened species;
- Adopt large setbacks for any development of river front areas;
- Provide for low density development on private land near the riverbank and Becks Run; and
- Adopt forestry and land clearing restrictions to protect water quality and prevent landslides.

V. Conclusion

As this report demonstrates, there are many strategies available to conserve and preserve riverfront and supporting lands. These strategies consist of a mix of public and private actions. No one strategy may be appropriate for all of the land along the four rivers, but combinations of strategies can greatly improve the ecological health of Allegheny County’s river oriented location. The next step is to find public agencies, interested private citizens and private organizations willing to pursue them with vigor.

~END

NOTES

1. See generally Samuel P. Hays, Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920 (1959).
2. See generally, Roderick Nash, Wilderness and the American Mind (4th ed. 2001) and Samuel P. Hays, Conservation and the Gospel of Efficiency, n.1 above; Samuel P. Hays, “From Conservation to Environment: Environmental Politics in the United States Since World War II,” *Out of the Woods: Essays in Environmental* 102–07 (Char Miller & Hal Rothman eds., 1997).
3. Samuel P. Hays, Beauty, Health and Permanence: Environmental Politics in the United States, 1955-1985 (1987).
4. “The SER International Primer on Ecological Restoration” http://www.ser.org/content/ecological_restoration_primer.asp (last visited May 16, 2005).
5. <http://www.alleghenylandtrust.org/Hillsides/3R2NHillsides3DRAFT.pdf> (last visited May 16, 2005).
6. <http://www.alleghenylandtrust.org/Hillsides/PittsburghHillsides.html> (last visited May 16, 2005).
7. 53 P.S. § 10101 *et seq.*
8. There are numerous books, articles and websites providing information about fee and easement ownership by conservation organizations. For an excellent local introduction to conservation organizations, the interests in land which they may hold, see Andrew M. Loza, ed., Pennsylvania Land Conservation Handbook: A guide for conservation organizations, municipalities and private landowners (Allegheny Land Trust 1995) or visit the Allegheny Land Trust website at <http://www.alleghenylandtrust.org>. For much more information on a broader, national scale, see The Land Trust Alliance website at <http://www.lta.org/> (last visited May 16, 2005).
9. See *Goodman Appeal*, 425 Pa. 23, 227 A.2d 816 (1967) (where township purchases land and dedicates it as a public park, township holds the land in

trust as trustee; sale or disposition of the land must be in accordance with [now 20 Pa. C.S. § 8301 *et seq.*]; *Hoffman v. Pittsburgh*, 365 Pa. 386, 391-392, 75 A.2d 649, 651 (1950) (“A municipal corporation has no implied or incidental authority to alien, or to dispose of for its own benefit, property dedicated to or held by it in trust for the public use or to extinguish the public uses in such property, nor is such property ... or the proceeds of sale thereof available for the payment of the debts of the municipality.” quoting 3 Dillon, *Municipal Corporations*, § 1102 (5th ed.). See also cases there cited.))

10. 20 Pa. C.S. § 8301 *et seq.*

11. *Goodman Appeal*, 425 Pa. 23, 31, 227 A.2d 816, 821 (1967)

12. For Pittsburgh (a city of the second class), see 53 P.S. § 23140; for third class cities (Clairton, Duquesne and McKeesport, see 53 P.S. § 38703, for boroughs, see 53 P.S. § 47703 (“Any borough may enter upon, appropriate and acquire by gift, devise, purchase, lease, or otherwise, private property within the limits of the borough, or in any adjacent township, or any borough may designate and set apart any lands or buildings, owned by the borough and not dedicated or devoted to other public uses; and two or more boroughs may jointly appropriate and acquire by gift, devise, purchase, lease, or otherwise, private property within the limits of any township adjacent to any of such boroughs, for the purpose of making, enlarging and maintaining recreation places. All the costs and expenses relative to any such property, acquired by two or more boroughs jointly, shall be paid by the respective boroughs in such proportions as may be agreed upon by the councils thereof.

Any borough may likewise acquire private property within the limits of another borough or city, for the purposes designated in this section, if the other borough or city shall, by ordinance, signify its consent thereto.”); for joint acquisition by two or more boroughs or a borough and a city, township, or county, see 53 P.S. § 47711 (“Any two or more boroughs, or a borough with any city or township, or a borough with a county, may jointly acquire property for, and operate and maintain, any recreation places. Any borough or boroughs shall have power to join with any school district in equipping, operating and maintaining recreation places, and may appropriate money therefore.”).

Allegheny County is authorized to acquire land for public parks and multi-use recreational trails. 16 P.S. § 6925; see also 16 P.S. § 6001 (repealed in part).

13. See Julia C. Klapproth and James E. Johnson, Understanding the Science Behind Riparian Forest Buffers: Effects on Water Quality (2000) <http://www.ext.vt.edu/pubs/forestry/420-151/420-151.html> (last visited May 16, 2005).

14. In general, see 53 P.S. § 3351 to 3356 (“All townships of the first class, boroughs, and cities of this Commonwealth are hereby empowered to acquire, by purchase, gift, or lease, and hold as the property of the municipality, tracts of land at present covered with forest or tree growth, or suitable for the growth of trees, and to administer the same, under the direction of the Commissioner of Forestry of the Commonwealth of Pennsylvania, in accordance with the practices and principles of scientific forestry, for the benefit and advantage of the said municipalities. Such tracts may be of any size suitable for the purpose, and may be located either within, adjacent to, or at a distance from the corporate limits of the municipality purchasing the same: Provided, That it shall be requisite for the commissioners, burgess, or mayor of any municipality, availing itself of the provisions of this act, to submit to the Commissioner of Forestry, and secure his approval of, the area and location of any lands proposed to be acquired for the purposes of municipal forests, previous to the passage of the ordinance provided for in section two.”) (repealed as to boroughs by the Act of May 14, 1915, P.L. 312, c. XII, art. 1, § 1, and as to townships of the first class by the Act of July 14, 1917, P.L. 840, § 1500; and as to third class cities by the Act of June 23, 1931, P.L. 932, art. XLVII, § 4701); now as to third class cities, see 53 P.S. § 38830 to 38837 (“Cities may acquire, by purchase, gift, or lease, and hold tracts of land covered with forest or tree growth or suitable for the growth of trees, and administer the same, under the direction of the Department of Forests and Waters, in accordance with the practices and principles of scientific forestry, for the benefit of the city. Such tracts may be of any size suitable for the purpose and may be located within or without the city limits.”) [NB: Any sale of municipal forest in 3d class city requires referendum and majority approval], as to boroughs, 53 P.S. § 47751 to 47759 [NB: Sale must meet normal requirements for sale of borough real estate but no referendum is required.]; as to Townships of the first class, 58 P.S. § 58040 to 58047 and

as to Townships of the second class, 58 P.S. § 67207 [NB: Referendum requirement imposed in event township determines to sell § 67207(f).]

15. 53 P.S. § 7101 *et seq.*

16. 30 Pa. C.S. § 721.

17. 30 Pa. C.S. § 721(c) Pennsylvania Fish and Boat Commission and 34 Pa. C.S. § 701(c) Pennsylvania Game Commission.

18. There are numerous books, articles and websites providing information about fee and easement ownership by conservation organizations. For an excellent local introduction to conservation organizations, the interests in land which they may hold, see Andrew M. Loza, ed., Pennsylvania Land Conservation Handbook: A guide for conservation organizations, municipalities and private landowners (Allegheny Land Trust 1995) or visit the Allegheny Land Trust website at <http://www.alleghenylandtrust.org>. For much more information on a broader, national scale, see The Land Trust Alliance website, <http://www.lta.org/> (last visited May 16, 2005).

19. See 16 P.S. § 11941 *et seq.*

20. There are many, many articles and texts discussing these tax benefits. One readable and readily accessible source is C. Timothy Lindstrom, A Guide to the Tax Benefits of Donating A Conservation Easement (May 2004) (<http://www.galandtrust.org/PDF%20files/Tax%20guide%202004.pdf>) (last visited May 16, 2005).

21. See Julie Ann Gustanski, “Protecting the Land: Conservation Easements, Voluntary Actions, and Private Lands,” in Protecting the Land: Conservation Easements Past, Present, and Future, 9, 17 (Julie Ann Gustanski & Roderick H. Squires eds., 2000). History of land trusts; Janet Diehl & Thomas S. Barrett, The Conservation Easement Handbook: Managing Land Conservation and Historic Preservation Easement Programs (1988).

22. 32 P.S. §§ 5051 to 5059.

23. 32 P.S. § 5053.

24. 26 U.S.C. § 501(c)(3).

25. 16 P.S. §§ 11941 *et seq.*

26. 16 P.S. § 11944.

27. 16 P.S. § 11946.

28. 26 U.S.C. § 170(h); Treas. Reg. § 1.170A-14. The details of this section and of the provisions for favored federal income or estate tax treatment are beyond the scope of this report. Excellent discussions can be found in a variety of sources, including Steven J. Small, The Federal Tax Law of Conservation Easements (Land Trust Alliance) and C. Timothy Lindstrom, Esq., A Guide to the Tax Benefits of Donating a Conservation Easement (October 2004), available at <http://www.jhlandtrust.org/media/pdfs/taxguide.pdf> (last visited May 16, 2005).

29. Treas. Reg. § 1.170A-14(c).

30. Treas. Reg. § 1.170A-14(d)(1).

31. See, e.g., *Lucas v. South Carolina Coastal Council*, 505 U.S. 1001 (1992) (regulation that deprives owner of all use of land is a “taking” of private property). For the comparable Pennsylvania constitutional view, see *Machipongo Land & Coal Co. v. DEP*, 569 Pa. 3, 34, 799 A.2d 751, 769 (2002).

32. *Miller & Sons Paving, Inc. v. Plumstead Twp.*, 552 Pa. 652, 717 A.2d 483 (1998).

33. See, e.g., *Jones v. Zoning Hearing Board of the Town of McCandless*, 134 Pa. Cmwlth. Ct. 435, 578 A.2d 1369 (1990) (upholding zoning ordinance provision preserving “sensitive natural resources such as woodlands, streams, and steep slopes” against regulatory takings challenge), *citing Boundary Drive Associates v. Shewsbury Twp. Board of Supervisors*, 507 Pa. 481, 491 A.2d 86 (1985) (upholding constitutional validity of agricultural preservation district as applied to owner’s property).

34. “Property owners have a constitutionally protected right to enjoy their property. That right, however, may be reasonably limited by zon-

ing ordinances that are enacted by municipalities pursuant to their police power, i.e., governmental action taken to protect or preserve the public health, safety, morality, and welfare. Where there is a particular public health, safety, morality, or welfare interest in a community, the municipality may utilize zoning measures that are substantially related to the protection and preservation of such an interest.” *C&M Developers v. Bedminster Twp. Zoning Hearing Bd.*, 573 Pa. 2, 820 A.2d 143 (2001) (citations omitted).

35. This program is carried out under the authority of the National Flood Insurance Act of 1968, 42 U.S.C. §§ 4001 *et seq.*

36. 16 U.S.C. § 1536 *et seq.*

37. 3716 U.S.C. § 470 *et seq.*

38. 33 U.S.C. § 1344.

39. 44 C.F.R. Part 60.

40. 52 P.S. § 10605 *et seq.*

41. Pennsylvania Flood Plain Management Act (Act 166), 32 P.S. § 679.202 *et seq.*

42. 25 Pa. Code ch. 106.

43. 25 Pa. Code § 106.31.

44. 16 U.S.C. § 1536 *et seq.* For an excellent introduction, see Ira Houck, The Endangered Species Act and its Implementation by the United States Departments of Interior and Commerce, 64 Colo. L. Rev. 277 (1993).

45. 16 U.S.C. § 1532(6).

46. 16 U.S.C. § 1532(20).

47. See 16 U.S.C. § 1533 and 50 C.F.R. part 424.

48. 16 U.S.C. § 1538(a).

49. 16 U.S.C. § 1538(b).
50. See 32 P.S. § 5307.
51. See 30 Pa.C.S. §§102 and 2305.
52. See 34 Pa.C.S. §§ 102, 925, 2141, 2306-07, 2329, and 2364.
53. A list of Pennsylvania's protected species of invertebrates, birds and mammals, fish, amphibians and reptiles, and plants can be found on a website maintained by Pa DCNR at <http://www.dcnr.state.pa.us/wrcf/contents.aspx> (last visited May 16, 2005). At present, 2 species of invertebrates (both freshwater clams) 20 species of birds and mammals, 27 species of fish, amphibians and reptiles, and 18 species of plants are listed. Specific information is available from some of the other Pennsylvania agencies, e.g., the Fish and Boat Commission at http://sites.state.pa.us/PA_Exec/Fish_Boat/endngre.htm (last visited May 16, 2005) and http://sites.state.pa.us/PA_Exec/Fish_Boat/endang1.htm (last visited May 16, 2005) for more technical information; Pennsylvania Game Commission <http://www.pgc.state.pa.us/pgc/cwp/view.asp?a=458&q=150321> (last visited May 16, 2005).
54. 16 U.S.C. § 1532(19).
55. 50 CFR § 17.3.
56. *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, 516 U.S. 687, 115 S. Ct. 2407 (1995).
57. For an interesting review and critique of wetlands policy in the United States, see Robert E. Beck, The Movement in The United States to Restoration And Creation of Wetlands, 34 Nat Res. J. 781 (1994).
58. "The term wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." 33 C.F.R. § 328.3(a)(8)(b) (Corps regulatory definition of wetlands). See also Field Indicators of Hydric Soils in the United States (VERSION 4.0 March 1998), used by the United States Department of Agriculture, Natural Resources Conservation Service, Wetland Science Institute and Soils Division in cooperation with National Technical Committee for Hydric Soils <http://soils.usda.gov/use/hydric/> (last visited May 16, 2005).
59. <http://www.nwi.fws.gov/> (last visited May 16, 2005).
60. See USACOE 1987 Wetlands Delineation Manual, <http://www.wetlands.com/regs/tlpg02e.htm> (last visited May 16, 2005).
61. 33 U.S.C. § 1311.
62. *Solid Waste Agency of Northern Cook County v. U. S. Army Corps Of Engineers*, 531 U.S. 159, 121 S. Ct. 675 (2001).
63. U.S. Const., Art. I, § 8, cl. 3.
64. 32 P.S. § 693.1 *et seq.*, see particularly §§ 693.3 and 603.6; 25 Pa. Code ch 105, various sections.
65. See 25 Pa. Code § 105.20a.
66. 16 U.S.C. § 470 *et seq.* Historic preservation is a responsibility of each federal department and agency, but policy is coordinated by the Advisory Council on Historic Preservation. To learn more about the national program, visit <http://www.achp.gov/nhpp.html> (last visited May 16, 2005).
67. 37 Pa.C.S. § 101 *et seq.* This program is run by the Bureau for Historic Preservation of the Pennsylvania History and Museum Commission. To learn more about the state program, visit <http://www.phmc.state.pa.us/bhp/overview.asp?secid=25> (last visited May 16, 2005).
68. 32 P.S. § 680.1 *et seq.*
69. The department's current Stormwater Management Policy was adopted in 2002 and can be found at <http://www.dep.state.pa.us/eps/docs/cab200149b1126000/fldr200149e0051190/fldr200149e32221af/doc-20028qc1546017/392-0300-002.pdf> (last visited May 16, 2005).
70. 32 P.S. § 680.5.
71. 32 P.S. § 680.11(a).
72. See 32 P.S. § 680.12.
73. 32 P.S. § 680.13.
74. Pine Creek, Girty Run, Deer Creek, completed 3/6/1986, covering 20 municipalities; Montour Run, completed 2/1/1990, covering 5 municipalities; Monongahela River, completed 6/15/1994, covering 33 municipalities; Turtle Creek, completed 12/5/1991, covering 17 municipalities; and Flaugherty Run, Allegheny, completed 11/19/1998, covering 3 municipalities. Source: http://www.dep.state.pa.us/dep/deputate/watermgt/wc/Subjects/StormwaterManagement/Approved_1.html (last visited May 16, 2005). One plan, Little Sewickley Creek, covering 7 municipalities is currently in preparation, as of March 7, 2003. http://www.dep.state.pa.us/dep/deputate/watermgt/wc/Subjects/StormwaterManagement/UnderPrep_1.htm (last visited May 16, 2005).
75. <http://www.dep.state.pa.us/dep/deputate/watermgt/wc/Subjects/StormwaterManagement/TechnicalInformation/167RegionReport.pdf>, pp. 35-37 (last visited May 16, 2005).
76. See 53 Pa. C.S. § 2963(3).
77. See *C&M Developers v. Bedminster Twp. Zoning Hearing Bd.*, 573 Pa. 2, 820 A.2d 143 (2001) (citations omitted).
78. *Hopenell Twp. Bd. of Supervisors v. Golla*, 499 Pa. 246, 452 A.2d 1337 (Pa. 1982). ("A conclusion that an ordinance is valid necessitates a determination that the public purpose served adequately outweighs the landowner's right to do as he sees fit with his property, so as to satisfy the requirements of due process.")
79. See, e.g., *Machipongo Land & Coal Co. v. Department of Env'tl Protection*, 569 Pa. 3, 799 A.2d 751 (2002); *United Artists' Theater Circuit v. City of Philadelphia*, 535 A.2d 370, 635 A.2d 612 (1993).
80. See *Lucas v. South Carolina Coastal Council*, 505 U.S. 1001 (1992). In

Machipongo Land & Coal Co. v. DEP, 569 Pa. 3, 34, 799 A.2d 751, 769 (2002), the Pennsylvania Supreme Court said: “*Lucas* stands for the proposition that regulations that deprive an owner of ‘all economically beneficial or productive use of land’ are takings unless the use constitutes a public nuisance or are caused by the nature of the use and the owner could have expected that the government might prohibit it.”

81. *Lombardozi v. Millcreek Twp. Zoning Hearing Bd.*, 829 A.2d 779, 782 (Pa. Cmwlth. Ct., 2003) (citations omitted). See also *Norate Corporation, Inc. v. Zoning Board of Adjustment*, 417 Pa. 397, 207 A.2d 890 (1965); *Rogalski v. Upper Chichester Twp.*, 406 Pa. 550, 178 A.2d 712 (1962) (similar language).

82. See *Berk v. Wilkinsburg Zoning Board*, 48 Pa. Cmwlth. Ct. 469, 410 A.2d 904 (1980) (landscaping requirements; “Aesthetics and property values are legitimate considerations in a township’s exercise of its zoning power to promote the general welfare.”).

83. 53 P.S. § 10501 to 10515.3.

84. 53 P.S. § 10501 to 10515.3.

85. See MPC, 53 P.S. § 10603 and 10604 for permissible purposes of zoning.

86. 53 P.S. §§ 10601 to 10621 and various other sections.

87. 53 P.S. , 53 P.S. §§ 25501 to 25508.

88. 53 P.S. § 10105. For the required contents of any comprehensive plan adopted under the MPC, see 53 P.S. §§ 10301 and 10301.1. See also Joel P. Dennison, Comment, New Tricks for an Old Dog: The Changing Role of the Comprehensive Plan Under Pennsylvania’s “Growing Smarter” Land Use Reforms, 105 Dick. L. Rev. 385 (2001).

89. 53 P.S. § 10605.

90. Municipalities in Pennsylvania are authorized to adopt flood plain controls without adopting a zoning ordinance. See note 41, above.

91. For examples of riparian buffer ordinances, see [\[sheds.org/techresources/bufferordinance.pdf\]\(http://www.pawater-sheds.org/techresources/bufferordinance.pdf\) \(last visited May 16, 2005\) Radnor Township, PA, Ordinance No. 2003-22 \[http://www.radnor.com/government/documents/rip_buffer/RiparianDec03.pdf\]\(http://www.radnor.com/government/documents/rip_buffer/RiparianDec03.pdf\) \(last visited May 16, 2005\). Also see EPA Model Ordinance to Protect Local Resources, <http://www.epa.gov/owow/nps/ordinance/mol1.htm> \(last visited May 16, 2005\).](http://www.pawater-</p>
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92. “Transferable Development Rights,” the attaching of development rights to specified lands which are desired by a municipality to be kept undeveloped, but permitting those rights to be transferred from those lands so that the development potential which they represent may occur on other lands where more intensive development is deemed to be appropriate.” 53 P.S. § 10107 (definitions). For MPC, see 53 P.S. § 10619.1.

93. 53 P.S. §§ 10801-A to 10821-A.

94. “A joint municipal zoning ordinance shall be based upon an adopted joint municipal comprehensive plan and shall be prepared by a joint municipal planning commission established under the provisions of this act.” 53 P.S. § 10801-A.

95. 53 P.S. § 10105.

96. 53 P.S. § 10603(j).

97. See 53 P.S. § 11102 *et seq.*

98. 53 P.S. § 10301(a)(6).

99. 53 P.S. § 103012(c).

100. See text, above, at Section III. A. 1.

101. See text, above, at Section III. A. 4.

102. *Taylor v. Harmony Township Board of Commissioners*, 851 A.2d 1020 (Pa. Cmwlth. Ct. 2004).

103. “Although police powers are not without limitation, Pennsylvania courts have recognized that municipalities have the power to enact leg-

islation aimed at protecting the health, safety, and welfare of citizens under the general welfare clauses contained in municipal codes.” Taylor, 851 A.2d at 1025.

104. *Trumco, Inc. v. Zoning Hearing Board for Shaler Twp.*, 132 Pgh. Leg. J. 259 (Allegheny Co. 2004).

105. Township of Shaler Code of Ordinances, Chap. 151, Logging.

106. “Zoning ordinances may not unreasonably restrict forestry activities. To encourage maintenance and management of forested or wooded open space and promote the conduct of forestry as a sound and economically viable use of forested land throughout this Commonwealth, forestry activities, including, but not limited to, timber harvesting, shall be a permitted use by right in all zoning districts in every municipality.” 53 P.S. § 10603(f).

107. *Jones v. Zoning Hearing Board of the Town of McCandless*, 134 Pa. Cmwlth. Ct. 435, 578 A.2d 1369 (1990). This case was decided before § 10603(f) was added to the MPC. However, the court in *Chrin*, below at note 106, stated that this would not have affected its decision in *Jones*.

108. *Chrin Bros. v. Williams Township Zoning Hearing Board.*, 815 A.2d 1179 (Pa. Cmwlth. Ct. 2003).

109. In alphabetical order, these are Elizabeth Borough, Elizabeth Township, Forward Township, Glassport Borough, Liberty Borough, Lincoln Borough, City of McKeesport, Port Vue Borough, Versailles Borough and White Oak Borough.

110. Elizabeth Township, Glassport Borough and Lincoln Borough.

111. In alphabetical order, these are Baldwin Borough, the City of Pittsburgh, West Mifflin Borough and West Homestead Borough. Only Baldwin Borough does not front on the river. The City of Pittsburgh occupies the entire right bank of the river opposite this site.