Chapter 7

Special Implementation Topics

7.1 Housing, Commercial, and Industrial Needs/Curative Amendments

7.1.1 Exclusionary Zoning Challenges

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Landowners unhappy with the zoning of their land can apply for zoning changes, variances from the strict application of the zoning ordinance, or they can bring a ‘validity challenge’ or ‘curative amendment’ challenging the types of development that are permitted or prohibited on their land.

Pennsylvania has had a long and contentious history of landowner litigation against municipalities claiming that their zoning ordinances were invalid because they ‘excluded’ some lawful land use or failed to provide a ‘fair share’ of land for some required use.
Residential Uses

With respect to housing, the Municipalities Planning Code (MPC), a statewide law that applies to all municipalities except Philadelphia and Pittsburgh, requires a zoning ordinance to contain a provision for ‘all basic forms of housing.’ This provision is found in Section 604 of the MPC, which requires that any municipality that chooses to zone at all must zone ‘to provide for the use of land within the municipality for residential housing of various dwelling types encompassing all basic forms of housing, including single family and two family dwellings, and a reasonable range of multi-family dwellings in various arrangements, mobile homes and mobile home parks...’ MPC Section 604(4).

Court cases have determined, based largely on interpretations of substantive due process under Pennsylvania’s constitution, that a municipal zoning ordinance which fails to include a provision allowing all basic forms of housing and designating land in the municipality for those uses is invalid and ‘exclusionary.’ (See sidebar on page 7-7.) The remedy for an exclusionary zoning ordinance is to permit the challenging landowner to build the desired housing type on the land which is subject to the challenge. This land may or may not be anywhere near where the municipal officials and planners would have chosen to place the land use.

In other words, because the MPC permits a landowner to get ‘site specific relief’ when he challenges a zoning ordinance, a municipality that fails to provide for the required housing types runs the risk that land in any part of the municipality may become the subject of an exclusionary zoning challenge and later developed in a way that is not only inconsistent with the zoning map, but also out of place with the comprehensive plan.

Past cases involving exclusionary zoning challenges in the housing realm have included apartments, multi-family dwellings, high rise apartments, townhouses, mobile home parks, and quadraplex units.
Moreover, it is not enough merely to include the housing type in the zoning ordinance and somewhere on the zoning map. Court decisions have held that the municipality must also have enough land to permit the development of its ‘fair share’ of the housing needs of the areas surrounding it so that statewide law effectively requires that each municipality ‘plan for and provide land use regulations which meet the legitimate needs of all categories of people who may desire to live within its boundaries.’ Surrick v. Zoning Hearing Board of Upper Providence Township, 476 Pa. 182, 382 A.2d (1977).

In determining the ‘fair share’ requirements for a land use in any specific municipality, the courts look at a variety of factors, including whether the community is a logical area for development and population growth, whether the community is in the process of developing (‘in the path of population expansion and not already highly developed’) and whether the percentage of land available under the zoning ordinance for the requested use is appropriate considering population growth, development pressure, and the region generally.

In the Surrick case, the Supreme Court stated, ‘where the amount of land zoned as being available for multi-family dwellings is disproportionately small in relation to these latter factors, the ordinance will be held to be exclusionary.’ The result of a successful exclusionary zoning challenge is that the landowner may build the requested units on the land owned by the landowner and selected for the challenge.

Pennsylvania follows a somewhat different course than other states in determining whether a municipality has met its ‘fair share’ obligation with respect to housing needs. While some states require evidence that a municipality has ‘affordable’ housing, Pennsylvania instead focuses on the type of housing unit and not its price to the ultimate consumer. In Precision Equities Inc. v. Franklin Park Borough Zoning Hearing Board, 166 Pa. Cmwlth. 607, 646 A.2d 756 (1994), the court specifically rejected the argument that a borough’s zoning code violated the equal protection rights

General principles:
After discussing the rather complex case law as it has developed over the years, Robert Ryan, author of Pennsylvania Zoning Law and Practice summarizes the current state of exclusionary zoning law as follows:

1. A municipality must make provision for “basic forms” of housing and business and institutional uses which are not inherently objectionable.
2. If a municipality excludes an industrial, commercial, or institutional use which is not inherently objectionable, it must justify the exclusion. A total exclusion of a basic form of housing cannot be justified.
3. Where the exclusion is not total, a challenger may still be able to prove that the municipality has not made adequate provision for the use. In cases involving “basic forms” of housing, the analysis will follow the Surrick “fair share” analysis. The cases do not give any precise formulation of the standard to be applied to claims involving “partial exclusion” of industrial, commercial or institutional uses. However, it seems unlikely that the courts will invalidate an ordinance which makes provision for such uses unless that provision is clearly inadequate in light of demonstrable current demand.”

Ryan, supra, (Supp 2001) Section 3.5.2, p. 199

In a multi-municipal planning area, the fair share analysis will apply to the area as a whole provided the participating municipalities have adopted and are implementing ordinances generally consistent with their adopted multi-municipal plan. ■
of lower income minorities to live in the borough. Instead, the court stated that Pennsylvania’s approach has been to require various housing types, and not focus on the income of the challenger’s prospective housing market.

In the Precision Equities case, the court reviewed Pennsylvania’s history of exclusionary zoning challenge and commented,

‘Where a municipal subdivision is a logical place for development to occur, it must assume its rightful part of the burdens associated with development, neither isolating itself nor ignoring the housing needs of the larger region. [Citation omitted.] This philosophy finds concrete expression in the fair share principal, which this court has adopted. It requires local political units to ‘plan for and provide land use regulations which meet the legitimate needs of all categories of people who may desire to live within its boundaries.’ A municipality violates this principle if it practices exclusionary zoning, which could exist in one of two forms. A particular use could be totally excluded. Such was the case in Girsh Appeal where the ordinance made no provision for multi-unit apartment buildings. Alternately, a zoning ordinance could partially exclude a use to such an extent that it engages in ‘tokenism’ or ‘selective admission.’ That was the objection we had in Williston v. Chester Dale, where 80 of the township’s 11,589 acres were set aside for apartments.’ 166 Pa. Cmwlth. at 612.”

However, the court in that case went on to hold that the municipality’s zoning ordinance was not exclusionary despite the developer’s challenge that it failed to zone land for small lot, single family development, which would be affordable by low to moderate income individuals.

In Precision Equities, the court found that the borough’s zoning, of which ten percent was zoned to permit the development of various types of housing including single family, multi-family townhouses, and mobile homes on lots of various sizes including small lots, was enough to meet
the borough’s ‘fair share’ obligation.

The advantage of participating in a multi-municipal plan under the new law is that a municipality may, in conjunction with its neighboring municipalities, plan for its fair share of required housing types over a larger geographic area, perhaps enabling a more logical and coordinated development of the required housing types and thereby insulating each of the participating municipalities from exclusionary zoning challenges based on the zoning map of that municipality alone.

Commercial and Nonresidential Uses

There have also been exclusionary zoning challenges based upon commercial or nonresidential development, but the law is less clear with respect to the requirement that all municipalities provide for every lawful land use. However, a successful landowner challenge for a nonresidential use can be disruptive for a community’s overall planning scheme.

All exclusionary zoning challenges, at some level, are based upon the belief that municipalities would, if it were lawful, exclude all ‘noxious’ or simply ‘unattractive’ uses from their borders. Since Pennsylvania has a large number of municipal governments, it was theoretically possible for each one of Pennsylvania’s 2,567 municipalities to exclude all townhouses or all quarries, for example, by enabling each municipality, in designing its own zoning map, to zone out ‘undesirable’ uses. Thus, the doctrine of exclusionary zoning is designed to remedy that situation.

Largely, the theories behind prohibiting “exclusionary zoning” are judge-made laws and not laws enacted by the legislature. For this reason, it is often difficult for an individual municipality or a municipal solicitor to accurately predict an appellate court’s decision on whether a municipality has, in fact, zoned for its fair share of required housing types or its fair share of commercial and nonresidential zoning. The facts, in each case, depend very heavily on factors specific to each municipality.

Continued from prior page:


Performance zoning through lot area requirements that varied within a tract depending on steep slope, deep soil, high water tables, shallow bedrock, and floodplain or wetland conditions, as well as proposed use of on-site sewer facilities were justified, even though some lots exceeded 2 acres, by need to protect neighboring property owners from ground water pollution and contamination. Lack of uniformity of lots and possibility of precluding some single family residences on on-site systems not exclusionary. Reimer v. Board of Supervisors of Upper Mount Bethel Township, 150 Pa. Cmwlth Ct. 323 (1992). See also on performance zoning, Jones v. ZHB of Township of McCandless, 134 Pa. Cmwlth Ct. 435 (1990) where rigorous, but flexible provisions upheld.

For summaries of selected commercial and industrial cases, see the sidebars on page 7-8.
Under the new law, municipalities that plan cooperatively and then zone consistently with their cooperative plan may find that their ability to protect themselves from exclusionary challenges is greater because the court would be required to review the geographic area of the cooperative plan, instead of simply looking to the single municipality, to determine whether the municipality has met its fair share obligation with respect to zoning land for various types.

However, one basic rule is that if a municipality totally excludes a commercial, industrial, or an institutional use which is not inherently objectionable (and there are very few uses that the courts have held are inherently objectionable), it must justify the exclusion or risk the development of that land use wherever the landowner has brought the challenge.

In a recent decision by the Pennsylvania Commonwealth Court involving a landowner’s challenge that the municipality had improperly excluded large retail stores, the Commonwealth Court said, “Moreover, while the Township must in its zoning scheme provide for all reasonable uses, it is not required to zone for every business model; if a smaller version of a commercial use may be constructed in the business district, townships need not zone specifically to allow larger versions to avoid the conclusion that their ordinance is exclusionary. This holding is consistent with the long established rule applicable to residential uses that if an ordinance provides for a particular use, such as apartments, it will not be held exclusionary because it limits that use to a particular size building.” Montgomery Crossing Associates v. Township of Lower Gwynedd, 785 A.2d 285 (Pa. Cmwlth. 2000), allocatur denied, 2001 WL 280135 (Pa. 2001).

The above cases notwithstanding, however, facing an exclusionary zoning challenge is an expensive proposition for any local government.

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Because zoning ordinances may be subject to legal challenges, it is a good idea to have the municipal solicitor review the comprehensive plan and zoning map with an eye toward making sure the municipal fair share requirements are met.
Some basic principles from major “fair share” cases:

**Housing**

Four acre zoning requirement did not serve a legitimate public purpose and was exclusionary. Township must accommodate its fair share of regional development needed by an expanding society. *National Land & Investment Co. v. Easttown Township Board of Adjustment*, 419 Pa. 504 (1965). “Zoning provisions may not be used to avoid the increased responsibilities and economic burdens which time and natural growth invariably bring.” 419 Pa at 528.

Township-wide exclusion of apartments and only token provision for multi-family housing invalid as exclusionary zoning. Arguments that increased population would strain available services and roads and clash with the rural character of residential neighborhoods are not adequate justifications for exclusion. *Girsh Appeal*, 437 Pa 237 (1970); *Township of Williston v. Chesterdale Farms Inc.*, 462 Pa 445 (1973).

Total exclusion of multi-family housing is invalid even in a rural township that is not a logical place for development, with low projected population growth and isolation in terms of transportation. *Fernley v. Board of Supervisors of Schuylkill Twp.*, 509 Pa 413 (1985). However, where multi-family and mobile home parks have not been excluded owner’s claim that township did not provide its “fair share” of land for these uses was properly rejected based on findings as to rural character of township, growth projections through 2010, and the fact that it was not in the logical path of development. *Heritage Building Group, Inc. v. Bedminster Township Board of Supervisors*, 742 A.2nd 708 (Pa Cmwlth 1999).

Lack of public sewers and problems with on-site systems did not justify 2-3 acre zoning in over 10% of township. Where there is an exclusion, the burden shifts to the municipality to demonstrate strong justification for such exclusion. A plan for “staged” growth in relation to provision of infrastructure, for example, might be a justification. Cases will be decided on a case by case review of the facts to determine whether a municipality has provided for its fair share of the use in question. *Concord Township Appeal*, 439 Pa. 466 (1970).

Possibility of a variance for a specific use or density does not justify an exclusion as variances are available only for hardship cases unique to the property. *Girsh Appeal*, 437 Pa. at 240-1.

However, provision for a use by special exception or as a conditional use may be adequate provision of a use, depending on an examination of the facts. *New Bethlehem Borough Council v. McVay*, 78 Pa. Cmwlth Ct. 167 (1983) (multi-family possible in over half of the township).

**Multi-Family Dwellings and Mobile Home Parks**

The case law to the effect that a municipality cannot exclude multi-family dwellings or mobile home parks is codified in MPC Section 604(4), which requires a municipality to provide “a reasonable range of multi-family dwellings in various arrangements,” specifically listing townhouses and both “mobile homes and mobile home parks.” There are a number of refinements on these requirements in the case law.

For example, a developed township that had 12% multi-family and only 29 acres so zoned in the remaining 4% of undeveloped land satisfied its “fair share” of multi-family, but not of townhouses for which it made no provision. *Appeal of Elocin, Inc.*, 501 Pa. 348 (1983). A township that has provided for multi-family housing can impose height limitations and does not have to provide for “mid-rise apartments,” *Board of Supervisors of Northampton Township v. Gentsch*, 51 Pa. Cmwlth Ct. 455(1980). Where a township has provided for mobile home parks but not in the remaining undeveloped land, the fact that the zoned areas were already developed did not establish exclusion of the use. *Overstreet v. Zoning Hearing Board of Schuylkill Township*, 152 Pa. Cmwlth Ct. 1108 (1992).

In developing a multi-municipal plan, the participants do have the ability to distribute uses over the entire area of the plan and to direct more dense housing to designated growth areas in particular municipalities. One municipality may be more appropriate for a greater amount of multi-family or for a mobile home park than another, but reasonable amounts of the various required types of housing must be provided in reasonable areas of the planning area in relationship to identified needs and growth areas.

It will be useful to keep in mind the questions the courts ask in evaluating “fair share” challenges where a municipality has provided for the use and the issue is whether it has adequately provided for the use: (a) the size of the area allocated to the use; (b) whether the municipality is a logical place for development to take place; (c) the history of zoning in the municipality (is there an exclusionary history?); and (d) the presence or absence of exclusionary intent. Ryan, *supra*, Section 3.5.3. Presumably, the courts will apply a similar analysis to a multi-municipal planning area when looking at the plan and any implementing ordinance that has been challenged. ■
Commercial and Industrial Cases


Excluding restaurants as an independent use could not be justified by fact that the municipality was mostly developed and restaurants were available in surrounding townships. Borough Council of Churchill Borough v. Pagal, Inc., 74 Pa. Cmwlth. 601 (1983).


Landfills and quarries cannot be totally excluded as uses, Moyers Landfill v. Lower Providence Twp., 69 Pa. Cmwlth. 47 (1982); Exton Quarries, Inc v. Zoning Board of Adjustment, 425 Pa. 43 (1967), however, evidence may establish that there is no suitable site for these uses in a particular township.


The multi-municipal provisions of Article XI give municipalities planning together the opportunity to plan for all these uses and others in a rational way in relation to existing and projected uses and needs, urban, suburban or rural character, and available land of the participating municipalities. In doing so it will be important to be informed, through consultation with their solicitors, about the case law on specific uses as it has developed prior to the 2000 amendments.
7.2 Infrastructure—Transportation; Water and Sewer Facilities

7.2.1 Infrastructure—A Primer on Transportation

Infrastructure Planning Issues

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I. General Background

Infrastructure became a “buzz word” in the 1980’s to cover the physical components of community development and transportation services. It is an overused term by planners, engineers, elected officials, and the media, and is not clearly understood by the general public. In recent years, usage of the term “infrastructure” has been expanded to cover other physical elements such as “green” infrastructure—parks and the preservation or creation of connected natural areas and recreational space—that is needed for the health and livability of a community or a region. However defined, infrastructure should not be an end in itself but serve the broader goals of the comprehensive plan developed for a community or a region through an inclusive well-informed public process.

Infrastructure—A Perspective:

From the viewpoint of the community planner, developer, or local official, infrastructure systems are critical ingredients to:

1. define a community's prospects and goals for increased growth and development,
2. support the type and magnitude of such development,
3. contribute to the overall quality of life for the community and its residents, and
4. define the fiscal resources currently needed and forecasted to support continued maintenance and possible expansion of infrastructure systems in response to changing community needs.
“The willingness of state and local governments to pay for new roads, utilities, and schools which service far-flung development not only encourages sprawl, it increases the cost of government services. It doesn’t have to be this way. Instead, capital investments can encourage revitalization of existing communities and facilitate new development on vacant or underutilized land already served by roads and other public services. Maryland’s new smart growth law, for example, does not prohibit development anywhere. But it does say that if development is proposed outside of identified ‘priority funding’ areas, the state is not going to help subsidize it. This simple concept encourages development where it makes the most sense and recognizes that government can’t pay for everything.”


What Can Infrastructure Do?

Infrastructure can play multiple roles related to the economic development and quality of life of an area or the ability of an operating or implementing agency to provide a public service. Infrastructure systems can be catalysts for physical and socioeconomic change, and can serve to support, attract, or impede change, growth, and development, depending on system condition or availability.

What Are Key Infrastructure Issues?

System maintenance, system capacity, system expansion, retrofitting, long and short-planning, operating, and capital funding are all key issues. All are related to whether or not the infrastructure system either supports or creates positive benefits or leads to common problems.

How Can We Plan for Infrastructure Systems?

- An essential starting point is an assessment of the geographic area in question; i.e., the setting for the service or project that is under consideration. Thus, whether the discussion relates to the economic well being of a city like Philadelphia, the broader Pennsylvania/New Jersey region, or the future of public transit services and facilities, analysis of what is happening in the specific locale and its environs is critical.
- Key questions that will affect the infrastructure needs of an area relate to the forecasted growth or decline in population and employment; the current condition of the transportation, sewage, storm drainage, and water systems; and the level of community services and facilities (schools, police, fire, etc.).
- Identify community goals regarding desired total development capacity and total desired preserved open space and farmland.
Following the initial assessment of the setting, current and future needs would be identified and a plan developed to address them. In addition to specific rehabilitation and expansion projects, a systematic and continuous maintenance program should also be developed. This can be viewed as a way to protect current assets and new investments, while avoiding a future fiscal or physical crisis that could develop if maintenance is deferred.

II. Planning for Infrastructure Needs

The scope of the infrastructure planning issue has five basic components:

(1) Needs Assessment—What is the current condition in terms of repair, replacement, or expansion?

(2) Goals and Plans—What is the community trying to accomplish and how will improved infrastructure support implementation?

(3) Financial Resources—How much does it cost to meet all of the defined needs? Who should pay for infrastructure? When? Some options are: system users or the general public, user fees vs. general taxes, pay-as-you-go or bonded indebtedness, and privatization.

(4) Setting Priorities—Since there is never enough funding to do everything that we want to do, what do we do first and why?

(5) Capital Programming—What is the schedule of projects, the timetable for completion, and how will they be funded? Under the MPC, this is the capital improvement program that a municipality adopts to implement its plan to meet infrastructure and community facility needs. In a multi-municipal planning area, the participants may develop a multi-municipal capital improvement program that is approved and implemented by each municipality as part of its individual capital improvement program. Examples of capital improvements programs in Pennsylvania are given in the sidebar on pages 7-15 and 7-16.

Under MPC Section 301(a)(4.2) a comprehensive plan must include: A discussion of short- and long-range plan implementation strategies, which may include implications for capital improvements programming, new or updated development regulations, and identification of public funds potentially available.

MPC Section 303(d):

Municipal zoning, subdivision and land development regulations and capital improvement programs shall generally implement the municipal or multimunicipal comprehensive plan or, where none exists, the municipal statement of community development objectives.

For multi-municipal plans, MPC Section 1104(b) provides:

(1) Establish the process that the participating municipalities will use to achieve general consistency between the county or multimunicipal comprehensive plan and zoning ordinances, subdivision and land development and capital improvement plans within participating municipalities, including adoption of conforming ordinances by participating municipalities within two years and a mechanism for resolving disputes over the interpretation of the multimunicipal comprehensive plan and the consistency of implementing plans and ordinances.
III. Levels of Need

The infrastructure issue has been addressed at various levels of government, focusing on needs (in terms of projects and costs) and the gap between needs and usual practice (i.e., current levels of funding vs. what funding is needed to get the job done). In addition, studies have also looked at such issues as the economic consequences of investing or not investing in infrastructure and how different investment levels can affect overall productivity or economic and fiscal impacts.

IV. Transportation Infrastructure (Planning Considerations for Moving People and Goods)

Among the various infrastructure systems, transportation systems (roads, rails, ships, airports, pedestrian and bicycle facilities, etc.) are often more easily understood by local officials and the general public. One reason is their visibility (unlike, for example, most sewer and water facilities) and another is because their effects (or impacts), such as congestion, delays, and physical changes to the landscape are commonly experienced by everyone in our society.

Under MPC Section 301, municipal comprehensive plans are required to include a transportation element that addresses the effects of the overall transportation system and its components on the municipality (or municipalities in the case of a multi-municipal or county plan). To prepare this required plan element, the assessment must look at wider transportation system effects—at area, county, and regional scales. A broader area assessment is particularly critical for transportation services and facilities, which are not defined by municipal boundaries, but instead, reflect corridors or areas that may cross many municipalities, when considering the origins and destinations of all trips. Thus, planning for transportation needs, services, and infrastructure facilities requires a multi-municipal perspective from the very beginning, even if the resulting comprehensive plan or plan amendment only applies to a single munici-
Another key aspect of planning for transportation facilities and services is gaining an understanding of the institutional framework of local and regional transportation systems. The institutional framework has two primary components:

1. Intergovernmental setting and roles involved in planning (townships, boroughs, cities, counties, regions, the state, and the federal government), and

2. Roles and responsibilities of planning, funding, and implementing agencies (federal highway and transit administrations, state departments of transportation (PENNDOT), metropolitan planning organizations (MPO), local development districts (LDD), turnpike authorities, public transit agencies, transportation management associations, county planning agencies, various special purpose authorities, and private sector entities, like the freight railroads).

For effective transportation planning, communication and coordination are required, both vertically and horizontally, among a host of agencies, organizations, and governmental layers. Multi-municipal planning begins to break down the inter-governmental communication barriers, while establishing economies of scale and “strength in numbers” when dealing with transportation problems and solutions.

Data and information for transportation planning can be found at a variety of sources, such as a regional planning agency (or LDD), county planning agency, a public transit agency planning department, the State Data Center, or PENNDOT’s Central and District offices. However, it is recommended that local officials interested in preparing a multi-municipal plan should view their county planning agency as the first stop for advice on an overall direction, methodology, data, and potential financial resources. County planning agencies will have local census and traffic volume information, as well as a network of state and federal contacts for...
further exploration.

Using the Concept of Transportation/Land Use Linkage

When preparing the transportation plan, a key concept to keep in mind is the strong, two-way relationship (linkage) between transportation and land use. Thus, land use, including resulting population and employment changes, strongly influences the level of travel demand for transportation facilities and services. At the same time, transportation facilities and services have impacts, like congestion and improved levels of service, that strongly influence land use change (either positively or negatively). Multi-municipal plans, therefore, need to be simultaneously mindful of broader transportation issues and systems that are beyond the influence of the local municipal comprehensive plan, while defining, the community’s future land use vision, as well as the future population and employment growth (or the lack of growth) expected and desired in the community. This visioning step would then proceed to the transportation plan step to define a multi-modal transportation system that responds to and meets the community’s identified future needs and goals.

The era of independently considering land use and transportation issues is no longer prudent, because of the potential to waste resources (both monetary and environmental). In addition, there is now more widespread local official and public recognition of past mistakes and unintended consequences (like induced growth and the loss of community character) that often resulted from dealing with them separately. It is now accepted and advocated that focusing on land use/transportation linkage is the best way to approach transportation planning and implementation.
Mt. Lebanon Township, Allegheny County
“Capital Improvement Program Leverages Municipal Tax Dollars”

Required by Mt. Lebanon’s municipal charter, the Capital Improvement Program (CIP) allows Mt. Lebanon to plan for the replacement of equipment, the maintenance of facilities, and the construction and/or expansion of facilities. The CIP allows the municipality to improve and maintain public infrastructure by following a five-year schedule of expenditures. Each capital item must meet at least one of the following CIP-qualifying criteria: tangible results requiring more than one year to complete; a nonrecurring purchase costing more than $50,000; a substantial increase in the value of land or buildings, regardless of cost; or significant enhancements to the township’s tax base. As part of the CIP review process, projects must be justified under one of the following categories: risk to public safety or health; deteriorated facility; systematic replacement; improvement of operating efficiency; coordination; equitable provision of services/facilities; and new or substantially expanded facilities.

Under Mt. Lebanon’s CIP, each department head or office chief submits a list of capital projects proposed over a five-year period. The municipality’s annual budget appropriates funds for priority capital items, subject to funds availability. Projects do not receive ultimate expenditure authority until incorporated into the annual budget, adopted each December. Mt. Lebanon funds its CIP through general funds, grants, separate bond issues, and user fees for sewerage projects. Mt. Lebanon’s 2002-2006 CIP includes 38 projects, totaling more than $13 million.

Contact Information:
Mt. Lebanon Township
(412) 343-3400
http://www.mtlebanon.org

Borough of Carlisle, Cumberland County
“Capital Improvements Plan Helps Mid-State Community Promote Fiscal Responsibility”

The Borough of Carlisle uses capital improvements programming to identify and coordinate the funding and timing of capital improvement projects. Carlisle is working under the 2001-2005 Capital Improvements Program (CIP), the second round of capital improvements programming it has undertaken. To be considered a viable CIP project, each capital improvement must cost in excess of $10,000 and have a life expectancy of at least three years. The Carlisle Borough Council approved the CIP, which is prepared every five years. Subject to the availability of funds, the borough’s annual budget appropriates funds for priority projects and improvements. Projects slated for future years in the CIP do not receive ultimate expenditure authority until incorporated into the annual budget. The CIP is beneficial because it enables the municipality to financially plan for major projects over an extended time period. It reduces unplanned and uncoordinated fiscal spending, and makes better use of taxpayer resources. Examples of capital projects completed or underway through current CIP include: a $1.2 million community center renovation; the purchase of public works and safety vehicles; and a telecommunications system to network municipal facilities.

Contact Information:
Borough of Carlisle
(717) 249-4422
http://www.carlislepa.org

The following examples of capital improvement programs are excerpted from the Governor’s Center for Local Government Services forthcoming 2nd edition of Land Use Practices and Tools:
City of Philadelphia
“City of Philadelphia Capital Program”

Required by the City of Philadelphia’s Home Rule Charter, the City maintains an aggressive capital improvements program. The FY2003-2008 Capital Program, which provides nearly $4.3 billion to renew Philadelphia’s extensive system of public facilities, represents a significant commitment to sustain and enhance the City’s competitiveness as a place to live, work, and visit, now and in the years to come.

Philadelphia’s Capital Program is the City’s six-year plan for the construction and renovation of public buildings, facilities, and other physical infrastructure. The first year of the Program is the City’s Capital Budget: the following five “Program” years establishes a schedule for future improvements. The total cost for the 567 projects in FY2003, the first or “budget” year of the current program, is almost $1.6 billion, of which $508 million represents new funding, the remainder being carried over from the FY2002 Capital Budget. Philadelphia’s Capital Program is financed through general obligation bonds, revenue bonds, and federal and state grants. The annual Capital Program process begins in October when City departments submit project requests to the Philadelphia City Planning Commission. The City Planning Commission prepares a Recommended Capital Program for transmittal to the Mayor’s Office. The Mayor then submits this Recommended Program to City Council for public hearings and legislative approval.

As the Capital Program costs reflect, Philadelphia’s capital improvements projects are significant in terms of cost and magnitude. The projects are grouped into categories such as economic development, neighborhood development, quality of life, health and safety, and fiscal stability. Representative projects scheduled for funding in the current fiscal year include: $482 million for improvements at the Philadelphia International Airport; $499 million for projects supporting the City’s Neighborhood Transformation Initiative which include basic renewal of community street, public transportation, water, recreation, fire, police, library and health facilities; and $288 million for improvements to the City’s water purification and wastewater treatment plants.

Maintaining a well-run capital improvements program substantially reduces the burden of paying for sizable capital improvements needs of a community the size of Philadelphia.

Contact Information:
Philadelphia City Planning Commission
(215) 683-4615
www.philaplaning.org

Adequate Public Facility Ordinances

The adequate public facility ordinance is a growth management tool used in a number of jurisdictions to condition approval of new development projects above a certain size or density on the presence of existing or planned public facilities adequate to serve the new development. The objectives of such provisions are to avoid the sprawl-inducing and land-consuming effects of having to provide public infrastructure in reaction to scattered new development. Instead, infrastructure is planned to accommodate existing needs and projected growth through orderly, efficient locations and extensions of public services in ways that meet community goals for growth and conservation, and to attract growth to the areas where such infrastructure is provided. Where they exist, such ordinances are based on a regional plan for growth and development, often a county plan implemented by county ordinance.

Such ordinances depend on establishing clear standards, “levels of service,” needed for the particular infrastructure, be it roads, water and sewer facilities, schools, or other public facilities, and on municipalities building the planned facilities as planned. If the services are not provided, new development will inevitably go elsewhere. Some jurisdictions also rely on impact fees to shift the burden of providing particular infrastructure improvements to developers. This option is limited in Pennsylvania by the requirements of Article V, the subdivision article of the MPC. Further, such ordinances may contradict revitalization goals by discouraging development in already dense urban areas unless carefully crafted to avoid this result.

Participants in a multi-municipal plan may want to consider the use of adequate facility ordinances. Authorization to adopt such ordinances is not specifically given in the MPC, but could be implied from a number of the provisions, particularly the authority given to designate growth areas and public infrastructure areas in a multi-municipal plan. However, if municipalities do wish to employ this tool, the ordinances must be very specific as to facilities, levels of service, and capital improvement plan requirements, and the participants must be prepared to improve or build the planned infrastructure on a reasonable schedule to permit the called-for development.

For a thorough discussion of adequate public facilities controls, including planning and legal considerations, various state programs, limitations, and proposed model legislation, see the APA Legislative Guidebook, Chapter 8, pp 166-179.
7.2.2 Sewage and Water Facilities

Michael Stokes
Montgomery County Planning Commission

The location and capacity of water supply and sewage management infrastructure exerts a tremendous influence on where (and how much) growth occurs in any community. Therefore it is imperative that all decisions about water and sewage facilities infrastructure are guided by municipal or regional planning. Presently, the municipality can play an important role in sewage facilities planning through Act 537. Key decisions about the provision of water supply service, however, are often made without significant municipal guidance.

Sewage Facilities Planning:

On January 24, 1966, the Pennsylvania Sewage Facilities Act (Act 537, as amended) was enacted to correct existing sewage disposal problems and prevent future problems. To meet these objectives, the law requires proper planning and permitting of all types of sewage systems, permitting of individual and community on-lot systems, and uniform standards for on-lot systems.

Municipalities are required to develop and implement official sewage plans that: address existing sewage disposal needs or problems, account for future land development, and provide for future sewage disposal needs of the entire municipality. Official sewage facilities plans include information about natural features, sewage and water infrastructure, local zoning and land use provisions, and proposed sewage facilities to address future needs.

Consistency with comprehensive plans prepared under the Municipalities Planning Code must be addressed during the preparation of sewage facilities plans. Conflicts between the two should be resolved before the
The Pennsylvania Sewage Facilities Act, 35 P.S. § 750.1 et. seq., contains the requirements for official sewage facility plans and plan revisions.

Official Plans—Section 5(d):
Every official plan shall:

1) Delineate areas in which community sewage systems are now in existence, areas experiencing problems with sewage disposal including a description of said problems, areas where community sewage systems are planned to be available within a ten year period, areas where community sewage systems are not planned to be available within a ten year period and all subdivisions existing or approved;

2) Provide for the orderly extension of community interceptor sewers in a manner consistent with the comprehensive plans and needs of the whole area, provided that this section shall not be construed to limit the development of such community facilities at an accelerated rate different than that set forth in the official plan;

3) Provide for adequate sewage treatment facilities which will prevent the discharge of untreated or inadequately treated sewage or other waste into any waters or otherwise provide for the safe and sanitary treatment of sewage or other waste;

4) Take into consideration all aspects of zoning, planning, population estimates, engineering and economics so as to delineate with all practicable precision those areas that would be in the public interest.

The municipality commits to implementing the official sewage facilities plan update. The consistency assessment should address the various wastewater management alternatives evaluated by the municipality as potential solutions to its wastewater facilities needs.

Since the passage of Act 537, advances in sewage facility technology, recognized in DEP regulations and guidelines, enable individual or community on-lot systems to be permitted in most locations. These systems are paid for by the homeowner, or in the case of subdivision development, by the developer, who includes the cost of an individual on-lot system or a proportionate share of the cost of a community system in the cost to the homebuyer. Much of the development occurring today in rural and rural suburban areas of the state relies on these variations of on-lot systems. Many of them are maintained by homeowners associations or other private entities after the developer has sold all the properties and moved on. Professional management is rarely involved.

Municipal officials and planners should be fully informed about the impacts of alternative systems such as sand mounds, community systems using a package plant with stream discharge or discharge through spray irrigation on open land, and the long term implications for municipal maintenance of such systems should they fail. Pennsylvania has many problems with failing systems of an older vintage (see summary of Investing in Clean Water Report on page 7-24). Residents and taxpayers look first to municipalities to solve these problems, yet are often opposed to paying for the cost of public sewers and treatment needed to remedy the situation.

Under Act 537 and its implementing regulations, municipalities must approve plan revisions or “planning modules” for new development. Amendments to Act 537 in 1994, subsequent changes to DEP regulations (see sidebars on pages 7-20 and 7-21), and the practice of municipalities, have made approval of these plan revisions the norm, regardless of their consistency with comprehensive plans. Options such as the private re-
quest for plan revision allow the landowner or developer to get a plan revision approved by DEP despite the planning objections of the municipality. However, municipalities routinely approve plan revisions that are inconsistent with their comprehensive plans and these revisions are routinely approved by DEP. Other potential conflicts arise when the local sewer authority, which develops and manages public wastewater facilities, seeks to attract new customer revenue by extending water and sewer services into areas not planned for dense growth.

At its best, a sewage facilities plan should provide a clear picture of how sewer service needs will be met including the phasing of various public sewer improvements and the role that will be played in the provision and management of various sewage facilities by municipalities, local authorities, and various private entities. The growth area established in an individual or multi-municipal comprehensive plan is a very significant plan element. Municipalities do not have to automatically amend their plan to expand the growth area if the plan adequately meets the needs for sewage disposal in rural areas with on-lot systems on one or more acre lots. Decisions to amend a growth area to add a proposed development or to add several properties should be made very carefully based upon the current comprehensive plan and documented health needs.

It is important to realize that municipalities do have it in their power to insist on public treatment systems for more dense development (less than an acre lot area requirement) by coordinating their comprehensive plan and sewage facilities plan and refusing to approve plan revisions that are not consistent with their plans for where dense development should go. In updating their official sewage facility plan and coordinating that plan with the comprehensive plan, municipal officials should seek to base both plans on data and analysis of water resources in the municipality and the region. (See water resources planning, Chapter 7.3.)

Sewage facilities plans or any plan update or revision may be prepared jointly by two or more municipalities. Municipalities can also adopt a
county or regional sewage facilities plan. Multi-municipal sewage facilities plans may establish a more logical scale that takes into account watersheds. Such a plan can integrate planned water and sewer facilities and stormwater management with water quantity and quality goals in the watershed. (See Water Resources Planning, page 7-25.) Also these plans may more effectively identify and establish viable sewage facilities alternatives that utilize non-centralized sewage treatment processes which may be more practical and affordable. From a practical perspective, regional plans can identify potential areas of cooperation in the overall sewage management responsibilities leading to future cost savings to participating municipalities.

In 1994, amendments to Act 537 were enacted to increase the responsibility of municipalities in managing various sewage disposal systems. This additional responsibility is often times difficult for individual rural municipalities to handle. Also, rural municipalities with low population density and scarce funds have a difficult time addressing their sewage management needs. In many cases it is impossible for individual rural municipalities to correct existing problems and accommodate limited development utilizing conventional wastewater collection and treatment systems. As an alternative, rural municipalities can work together to manage both their existing and proposed new on-lot systems and their small flow wastewater systems as an alternative to conventional systems. If properly managed, these more appropriately scaled systems may better match the municipalities’ wastewater and growth management needs. The Pennsylvania Department of Environmental Protection will reimburse the municipality for 50% of the sewage facilities plan preparation costs.

The Pennsylvania Sewage Facilities Act requires complete and timely implementation of the activities described in the plan. Implementation is often carried out by local sewer authorities or by private developer investments.
A community can allocate the costs of providing water and sewer service to developing areas by means of capacity, connection, and customer facilities fees, collectively called “tapping fees.” These fees are strictly regulated by statute (53 P.S. sec. 306B. (t) for municipal authorities and 53 P.S. 10507-A for townships and boroughs) and need to be calculated in accordance with the law by professional engineers. Developers can also construct facilities and either dedicate them to the municipality or seek to operate as a private utility. These processes can raise complex legal issues, which should be reviewed by the municipal solicitor. Moreover, as the addition of public water and sewer facilities can often act as an incentive for development, municipalities are well-advised to remember the “big picture” when considering how and when these services are expanded.

Water Facilities

In Pennsylvania, there is no local planning mechanism for water supply systems similar to Act 537. Choices to extend public water service are largely private investment decisions made by water providers and developers. Under Section 608.1 of the MPC, water providers now have to notify municipalities regarding their plans to extend water mains to solicit comments about the consistency of water service expansion with local planning and zoning. (See sidebars on page 7-22.) Though municipalities must be notified and given the opportunity to comment, the language of 608.1(c) and (d) of the MPC makes it clear that the municipality has little or no power to limit or alter a water supplier’s plans to expand service.

The provisions of 608.1(c) and (d) and 1105(c) and (d) create a potential conflict with the new powers given to municipalities to plan and zone to assure reliable water resources for all development. In summary, the MPC: authorizes planning commissions to conduct water surveys (209.1 (b)(7.1)); mandates that comprehensive plan elements address water
MPC Section 301(b):
The comprehensive plan shall include a plan for the reliable supply of water, considering current and future water resources availability, uses and limitations, including provisions adequate to protect water supply resources. Any such plan shall be generally consistent with the State Water Plan and any applicable water resources plan adopted by a river basin commission. It shall also contain a statement recognizing that:

(1) Lawful activities such as extraction of minerals impact water supply sources and such activities are governed by statutes regulating mineral extraction that specify replacement and restoration of water supplies affected by such activities.

(2) Commercial agriculture production impact water supply sources.

MPC Section 603(d):
Zoning ordinances may include provisions regulating the siting, density and design of residential, commercial, industrial and other developments in order to assure the availability of reliable, safe and adequate water supplies to support the intended land uses within the capacity of available water resources.

supply and distribution and include “a plan for the reliable supply of water” (Section 301(a)(4), 301(b)); provides that zoning ordinances may regulate to assure reliable sources of water to support all land uses (Section 603(d)); and authorizes subdivision and land development regulations establishing standards for water facilities (Section 503(3)).

Municipalities thus have significant power to plan for and regulate water resources in relation to development of all kinds. If such planning and zoning is done in a thorough, careful way, working with all providers, there should be consistency between the actions of public and private providers and municipal plans and regulations. Where municipalities planning together have done a water resource plan for the planning area, they should be able to implement their plan through agreements with providers as authorized in Section 1102.

The Public Utility Commission (PUC) establishes franchise areas and approves rate increases proposed by privately-owned water companies. The focus of the PUC is the overall service and the cost to the customers, but not necessarily how or where public water service is provided within a franchise area. The PUC does not require the establishment of water service growth areas by private water companies nor do they generally require consistency between water service and municipal plans and ordinances. Municipal authorities that supply public water generally are not regulated at all by the PUC. Water companies regulated by the PUC are required to provide water to new customers on the basis of a “demand for service.” Where there is a conflict between a demand for service and a multi-municipal plan and implementing regulations, there should be a process for resolving that conflict in a way that does not simply override the local plan and ordinances. These are issues that still need to be addressed.
(a) A municipal authority, water company or any other municipality that plans to expand water, sanitary sewer or storm sewer service via a new main extension to a proposed development that has not received any municipal approvals within the municipality shall notify the municipality by certified mail, return receipt requested, of its intention and shall provide the municipality an opportunity to provide written comment on whether the proposed expansion of service within the municipality is generally consistent with the zoning ordinance.

(b) The purpose of the requirement of this section is to provide the municipal authority, water company or any other municipality with information regarding how its decision to expand service may potentially enhance and support or conflict with or negatively impact on the land use planning of municipalities.

(c) Nothing in this section shall be construed as limiting the right of a municipal authority, water company or any other municipality to expand service as otherwise permitted by law.

(d) Except as provided in section 619.2, nothing in this act shall be construed as limiting the authority of the Pennsylvania Public Utility Commission over the implementation, location, construction and maintenance of public utility facilities. The requirement of this section shall not apply to an expansion of service by a municipal authority, water company or other municipality which is ordered by a court or a federal or state agency.

(e) As used in this section:

(1) A “decision to expand service within the municipality” shall mean a decision to expand the number of its individual service connections for distribution or collection within a municipality as a result of a main extension; but, if the number of individual service connections are not being increased, locating or acquiring transmission lines or interceptors, or wells, reservoirs, aquifers, pump stations, water storage tanks or other facilities by a municipal authority or water company in a new area of a municipality shall not be deemed an expansion of service.

(2) A “water company” shall include any person or corporation, including a municipal corporation operating beyond its corporate limits, which furnishes water to or for the public for compensation.

(f) Nothing in this section shall be construed to authorize a municipality to regulate the allocation or withdrawal of water resources by any person, municipal authority or water company that is otherwise regulated by the Pennsylvania Public Utility Commission or other Federal or state agencies or statutes.

MPC Section 1105(c) and (d):

(c) Nothing in this article shall be construed to authorize a municipality to regulate the allocation or withdrawal of water resources by a municipal authority or water company that is otherwise regulated by the Pennsylvania Public Utility Commission or other Federal or State agencies or statutes.

(d) Except as provided in section 619.2, nothing in this article shall be construed as limiting the authority of the Pennsylvania Public Utility Commission over the implementation, location, construction and maintenance of public utility facilities and the rendering of public utility services to the public.
Investing in Clean Water: A Report from the Southwestern Pennsylvania Water and Sewer Infrastructure Project Steering Committee developed by the Allegheny Conference through the Pennsylvania Economy League, Western Division, issued in April 2002, identifies the need for “a regional approach to protecting, treating, and delivering the region’s water.”

The Report describes the severe sewage contamination problems in the 11 counties of southwestern Pennsylvania that contain more than 500 municipalities with over 1,000 different entities responsible for aspects of “ensuring quality water and wastewater services,” but “limited by their customers ability and willingness to pay for those investments.”

The major problem is combined sewage overflows (CSOs)—treatment systems, public and private, that leak or that overflow into streams and groundwater in wet weather and cause significant pollution of the regions groundwater and many waterways. In Allegheny County alone, an estimated 16 billion gallons of mixed rainwater and sewage overflow into waterways annually. To a lesser degree, CSOs are a problem elsewhere in Pennsylvania as well; however, in southwestern Pennsylvania with its abundant water and waterways, EPA and DEP are requiring solutions that may be hard to come by. It is estimated that the cost could be as much as $10 billion over 10 years.

A few figures: 896,000 homes in the region are connected to public sewer systems and are responsible for the pipe that carries sewage to municipal sewers. Defects, breaks, and improper connections of pipes contribute as much as 30 to 60% of stormwater to public treatment plants. 264,000 homes rely on individual on-lot septic systems. Studies indicate that 10 to 37% of these (and probably more) are malfunctioning and contributing to groundwater pollution. 11,000 to 27,000 homes are not connected to public systems or on-lot systems so sewage is dumped directly into ditches, creeks, cesspools, and mines.

The Report notes the unfortunate consequences of the lack of adequate water and sewer infrastructure in the regions, including health risks, especially for rural residents on on-lot systems, contamination of the region’s environment and exceptional natural assets, inability to develop the many former mill sites and highway interchange sites causing companies that wish to expand to go elsewhere, and growth restrictions in many communities because existing systems cannot handle new homes or businesses.

The Report does recognize that water and sewer infrastructure should not promote sprawl. Rather it should “control sprawl while encouraging growth in appropriate locations.” The Report calls for:

- A Regional Water and Sewer Development fund established by the state to provide revolving loans and recoverable grants to provide funds for up front infrastructure investments to “attract business and industry to Pennsylvania.” The fund could also be used to purchase adjacent open land for open space preservation.
- Requiring “compliance with comprehensive regional infrastructure and growth plans” to avoid encouraging sprawl. Looking to the example of Maryland’s Priority Funding Areas program, “Pennsylvania should consider adopting an approach to state infrastructure funding that would encourage the financing of projects in areas where development is planned and where the infrastructure improvement would support smart growth goals.”
- Linking sewage facility plans to local comprehensive plans.
- Designating public infrastructure areas in multi-municipal plans and consistent ordinances, which state agencies “shall consider and may rely upon” in reviewing applications for funding or permitting decisions of infrastructure or facilities.” Priority for state funding for projects consistent with such plans is also noted. “These provisions could encourage planning and discourage sprawl if aggressively interpreted by local governments, county governments, PENNVEST, DCED, and other state agencies.”
- Reducing unintended development under the public notice provisions
- Requiring managed service for significant new development—“Allowing construction of substantial developments that rely on on-lot septic systems encourages sprawl, drives later demand for expensive sewer retrofits, and threatens water quality. Requiring sewer service or managed septic systems for such development would encourage greater density near existing infrastructure or at high-value sites such as highway interchanges, and would lower the incentive for leapfrog development in forests and fields. Action by local governments—using land-use and policing powers—and/or the General Assembly would be needed to implement such a requirement, which would substantially change the way development is done in the region.”
- Developing model sprawl-reduction ordinances.
- Providing public outreach—“The right mixture of funding for infrastructure for targeted development, and controls on the potential sprawl-inducing effects of such development, can help ensure that the state and the region maximize growth opportunities, water quality, and quality of life.”
7.3 Water Resources Planning

Multi-Municipal Water Management
Carol Collier, AICP
Executive Director
Delaware River Basin Commission

Pennsylvania is a water rich commonwealth. Potential new employers may wish to site facilities here because of the abundance of water. The improving quality of our streams, lakes, and rivers continues to increase outdoor recreation and tourism. The abundance and quality of our water resources presents Pennsylvanians with an opportunity to work toward a plan to ensure that the use and distribution of water can support needed economic growth while protecting surface and ground water resources and our quality of life. In some areas of the Commonwealth, however, the demand for water already exceeds the local supply. There are many more areas that need to plan so that water supplies are not over allocated in the future. We also need to assess where areas of growth will be and ensure that those designated areas have adequate water supply now and in the decades to come.

Do you know how much water your municipality has to allocate to new residential development or commercial or industrial uses—how much water can be withdrawn from wells or streams before other wells go dry or the stream shrinks to an unhealthy level—under what hydrologic conditions we want to be able to provide water for all needs? Often we have sufficient water when rainfall is normal, but during periods of drought, do you know which water needs may not be met? These are hard questions to answer, but the information is very important when developing a new comprehensive plan or reviewing a new land use application.

Unfortunately, water does not respect political boundaries, so it is very difficult to do water planning one municipality at a time. With the new amendments to the Municipal Planning Code (MPC), however, it is eas...
Key sections in the MPC are:

Article III—Comprehensive Plan
Section 301(b):

The comprehensive plan shall include a plan for the reliable supply of water, considering current and future water resources availability, uses and limitations, including provisions adequate to protect water supply sources. Any such plan shall be generally consistent with the State Water Plan and any applicable water resources plan adopted by a river basin commission. It shall also contain a statement recognizing that:

1. Lawful activities such as extraction of minerals impact water supply sources and such activities are governed by statutes regulating mineral extraction that specify replacement and restoration of water supplies affected by such activities.

2. Commercial agriculture production impact water supply sources.

Another difficulty is the labyrinth of players involved in water management: River Basin Commissions, the U.S. EPA, U.S. Army Corps of Engineers, Pennsylvania DEP, Pennsylvania Utilities Commission (PUC), and County Conservation Districts, to name the most important. Often multiple permits and approvals are required for any land development project—wastewater discharge (NPDES), water withdrawal, storm water discharge, erosion and sediment control, and/or wetlands encroachment.

The Delaware River Basin Commission (DRBC) has a recommended process through which municipalities within a watershed can jointly plan for the sustainable use and allocation of water resources. It is called “Integrated Resource Planning.”

Integrated Resource Planning

Integrated Resource Planning (IRP) is a comprehensive approach to water resource management that evaluates water resource availability and demands on a watershed level. The process encourages planning to meet multiple objectives and evaluate competing uses of water resources. Almost all land use decisions affect water resources. The IRP process can help multiple municipalities manage how growth will occur in their watershed. By evaluating all water resource options, existing and future demands can be met while simultaneously protecting instream flow
needs to ensure sustainability. The IRP process offers an opportunity to comprehensively evaluate a broad range of issues related to water resource management: water supply, stream corridor protection, water quality, and storm water management, as well as economic and social factors.

Integrated Resource Planning is a tool to:

- Evaluate and develop management objectives and strategies on a watershed basis to ensure that ground and surface water withdrawals are managed in a manner that protects both instream and withdrawal uses on a sustainable basis.
- Evaluate the adequacy of existing ground and surface water resources to meet all existing and future needs and assess options for meeting those needs.
- Engage stakeholders as active participants in developing effective, long-term water resource management objectives and strategies.
- Consider the inter-relationship of water quality and water availability for current and future water use.
- Assist planners to better integrate water resource protection in land use planning.

DRBC has designated a Ground Water Protected Area in southeastern Pennsylvania where water demand is currently exceeding or is projected to exceed water availability. In 76 watersheds in the area, DRBC has determined how much groundwater can be withdrawn before stream flows are negatively affected. The Basin Commission encourages the development of IRPs in any watershed. However, if your municipality is located within the Groundwater Protected Area, you can request that DRBC lower the withdrawal limits where additional protection is required due to sensitive instream uses. Any application for more stringent withdrawal requirements must be based on sound scientific investigations. To satisfy the requirements of the Ground Water Protected Area regula-
All the municipalities within a watershed must: 1) officially adopt the IRP as part of their comprehensive plan and amend the comprehensive plan to be consistent with land use changes and other elements cited in the IRP, and 2) officially adopt any ordinances necessary to implement the IRP.

Eight elements should be considered in an Integrated Resource Plan.

1. Incorporate public participation.
2. Assess water resources and existing uses of water.
3. Estimate future water demands and resource requirements.
4. Assess the capacity of the subbasin to meet present and future demands for withdrawal and nonwithdrawal uses such as instream flow.
5. Evaluate supply-side and demand-side alternatives to meet withdrawal needs.
6. Assess options for wastewater discharge to subsurface formations, streams and other surface waters.
7. Consider storm water and floodplain management.
8. Identify potential conflicts and problems and outline plans and programs to resolve conflicts and meet needs.

When preparing an Integrated Resource Plan, it is essential to look outside the watershed too. Is there a growth area within the watershed that may require more water than is currently available? Can water be brought to the area by interconnections through public authorities or private water companies? If water is moved across watershed boundaries, the increase in the “receiving” watershed and decrease in the “sending” watershed must be noted so water is not over allocated.

While DRBC developed the IRP process for the critical area in southeast Pennsylvania, the commission recognizes the value of IRPs in any watershed.
Goal-Based Watershed Management

The integrated resource planning process can be expanded to incorporate water quality.

Currently, local communities have a limited role in determining how watershed protection fits in with community priorities and needs. While it is recognized that federal, state, and local standards must be met, communities should have greater input into HOW these standards are met.

Under the existing regulatory framework, it is difficult to develop a cohesive watershed plan that addresses multiple water resource issues in a unified approach. Existing regulations force a piecemeal approach to watershed management. Land use and water quality, water quality and quantity, surface water and ground water are often treated separately. As a consequence, cost effective and innovative solutions are missed.

The goal-based approach is based on active community participation. It starts with local communities setting goals for their watershed. Both water resource and socioeconomic goals are established.

Water resource goals address water quality, water quantity, fish species and habitat, and streambank erosion. These goals are considered holistically. Through the goal-setting process, important water resources within the watershed that should be preserved and enhanced are identified.

Socioeconomic goals address future conditions needed to support the local economy and the desired quality of life of the residents. These include important economic sectors that should be preserved and strengthened and community and development patterns that should be encouraged.
Once the goals are established, management strategies are developed to meet the goals. Management strategies are evaluated in terms of their costs and other socioeconomic impacts. Then, the local communities select and implement the preferred approach. Watershed protection is achieved by tailoring protection measures to meet each watershed’s unique characteristics as well as the communities’ priorities and needs. DRBC and a number of partners are conducting a goal-based watershed management pilot study on Pocono Creek, a 50-square-mile watershed near Stroudsburg, PA.

The Upper Perkiomen Creek Watershed Conservation Plan was developed in partnership with the Upper Perkiomen Watershed Coalition and the Pennsylvania Environmental Council. It is the result of a study of the upper portion of the Perkiomen Creek Watershed conducted by Natural Lands Trust river conservation planner David Harper. The plan covers a 144 square mile area of the watershed extending north of the Green Lane Reservoir.

The plan and study determined that this area of northwestern Montgomery County, and adjacent parts of Berks, Lehigh, and Bucks Counties, should be preserved and protected from encroaching development and sprawl. The area is mostly rural, and includes forested headwaters areas that are critical to the continued health of the watershed. The conservation plan identifies ways to prevent the degradation of the Upper Perkiomen Watershed by outlining 16 major recommendations. The plan includes detailed GIS mapping of existing features and land use patterns and is available to local governments, non-profit organizations, and individuals. For more information about the plan, visit www.upwcwatershed.org.

Summarized from “Upper Perkiomen Creek at the Crossroads of Sprawl,” Natural Lands Update, July 2002.
7.4 Open Space Planning

The Multi-Municipal Comprehensive Plan—Managing Growth and Conserving Land Through Open Space Elements

Ann Hutchinson, AICP
Natural Lands Trust

Overview. Pennsylvania communities now have at least two reasons to consider open space in multi-municipal comprehensive plans. First, the open space element enables a strategy for greenways, recreational facilities, and the preservation of natural and historic areas in a more regional, cost-effective fashion. Second, communities can create a strategy for managing growth around this newly defined “green infrastructure.”
Introduction. Walk into any municipal building across the Commonwealth and chances are good that the first employee you meet can direct you to information on local “grey” infrastructure—the streets, public sewer lines, and water lines. But ask what natural features need to be designed around, the “green infrastructure,” and you are likely to be met with a blank stare. A thorough open space element in a comprehensive plan will define interconnected “green infrastructure” as carefully as it considers streets, sewer, and water lines.

Historically, open space plans contained natural features inventories for a single community, but rarely looked beyond the municipal boundary. The plans often documented parkland, existing and future, and those areas too constrained for development. Creative municipal officials will realize that multi-municipal planning offers efficiencies of scale where regional parks can be identified and greenway connections considered beyond a single, municipal boundary. Multi-municipal plans should acknowledge that open space is not just an amenity, it is a green necessity from an environmental and economic perspective. Those values include preservation of habitat, reduction of air pollution, management of stormwater and prevention of flooding, increased housing values for lands adjoining open space, a “sense of place,” tourism opportunities, increased use of non-vehicular transportation such as bicycle trails, and improved cardiac health.

Randall Arendt, author, designer, and lecturer in the field of conservation design has observed that planners must do more than “color maps green and cross their fingers hoping that the identified lands will never be developed.” The primary motivation behind identifying open space should be the intent to achieve an open space network through a combination of private and public conservation efforts, including sound land use regulations that conserve land through the development process.

Why Plan for Open Space? Municipal officials that are progressive enough to consider joint municipal plans, probably need little convincing of the
importance of the open space element. The question is not whether to include an open space element, but how to do so in a manner that leads to implementation of an evolving conservation network.

As noted in *Growing Greener: Putting Conservation into Local Plans and Ordinances* (Arendt, 1999):

Because municipal comprehensive plans in most states are not regulatory documents, with which zoning and subdivision ordinances must be consistent, many people mistakenly discount the critical role such a document can play in the local land-use planning process. For that reason they frequently focus relatively little attention on producing plans with thorough inventories of their community’s natural features and cultural resources. They also generally finish writing their plans without carefully examining how those special places could be protected through improved zoning and subdivision ordinances. Because such land-use codes are potentially the municipality’s best available tools for implementing its comprehensive plan, the plan should always critically review existing local regulations with respect to their effectiveness in truly protecting the community’s varied resources.

Furthermore, the comprehensive plan should also include specific recommendations for adopting clear standards in local zoning and subdivision and land development ordinances that will address land conservation issues as squarely as these ordinances already address development issues. All too often local land-use ordinances do not protect any lands beyond those that are wet, steep or floodprone, as if these three severely constrained kinds of areas were the only elements of the community that are worthy of conservation. In those communities with this kind of limited approach to land conservation, the fate of all the land that is not preserved through public acquisition or through private ease-
space and recreation plans in 2000 and are nearing completion. The planning initiatives were or are being developed through an extensive public participation process which includes surveys, key person interviews, and monthly study committee meetings. Two initiatives are described below:

West End Regional Open Space and Recreation Plan—Chestnut Hill, Eldred, Polk, and Ross Townships developed a plan to establish goals for each municipality’s open space conservation, recreation, and resource protection. Preserving the strong agricultural background and heritage of the region is a priority in the plan. Other issues include identifying significant resource areas, providing methods to conserve key natural areas, acquiring recreational lands, and identifying historical sites.

The Eastern Monroe Regional Open Space and Recreation Plan is a strategy for preserving and enhancing the natural environment of Middle Smithfield, Price and Smithfield Townships and Delaware Water Gap Borough. The plan describes how local development regulations can better protect vulnerable natural features. New approaches to regulating land use are a key part of the state’s Growing Greener strategy for promoting balanced growth and conserving Pennsylvania’s natural environment.

Source: Meredith Miller, Senior Planner, Monroe County Planning Commission. For more information on all of the initiatives in Monroe County, visit www.monroe2020.org.

Because it provides the formal rationale and basis for all local land-use ordinances, the comprehensive plan is an extremely important link in the whole municipal regulatory process. For this reason it is essential that the comprehensive plan adequately document the full range of a community’s special features and land resources, and provide well thought-out recommendations as to how current codes should be updated to protect those features and resources. It should also articulate a compelling vision for the future, focusing in particular on the overall pattern of conservation and development to be achieved. Such visions typically include generalized maps showing the most suitable locations for new development, and the most appropriate places that should ideally be designed around to create a permanently protected network of interconnected open spaces.

NOTE: If the Comprehensive Plan in your community does not yet contain a very detailed inventory of its natural, cultural, and historic resources, you should consult a good how-to book that focuses on this kind of document. One recent example of such a book is Where We Live: A Citizen’s Guide to Conducting a Community Environmental Inventory, published by Island Press (Harker and Natter, 1994).

The open space programs described in the sidebar preceded the current multi-municipal efforts beginning across the state. However, the open space plan requirements from these three counties are invaluable resources for any multi-municipal effort.

Individual municipalities that have recently completed open space plans may still find it valuable to consider conservation on a multi-municipal level. Maps created in Geographic Information Systems (GIS) formats can be added to as additional data and funding becomes available. GIS offers the ability to create alternative conservation scenarios, involving the community in identifying those “places of the heart” they most wish to see conserved as development and change occur. Pat Noonan, Presi-
The technique to develop the Map of Potential Conservation Lands is described below. Excerpted from Growing Greener: Putting Conservation into Local Plans and Ordinances, by Randall Arendt. Copyright 1999 Natural Lands Trust. Reprinted by permission of Island Press, Washington, D.C. and Covelo, California. All rights reserved.

This relatively new approach is loosely related to the Official Map. Unlike its more formal counterpart, the Map of Potential Conservation Lands does not identify land earmarked for public acquisition. However, it is similar in that it identifies those parts of undeveloped properties where the municipality has preliminarily determined the importance of designing new development around certain land and water features in such a way that an interconnected network of conservation land can be protected. Such areas typically include lands along stream valleys but also potentially include blocks of mature woodland, prime farming soil, historic and cultural features, etc. In practice, a number of the information layers from the Community Resource Inventory Map (in the Comprehensive Plan) are superimposed on a parcel map of the municipality. This technique produces an extremely useful working document that shows the pattern of resources in relation to the undeveloped properties—which is where future changes will occur. When these data layers have been computerized on GIS (geographical information systems) maps, combining any number or mixture of layers becomes extremely easy.

Besides informing local officials of the nature and extent of particular kinds of resources on any property proposed for subdivision development, the potential conservation lands map also supplies the contextual view so that all parties will be able to see and appreciate how designing around certain features could help to preserve an interconnected network of open space running across numerous parcels.

The most critical elements of the plan are summarized below. Excerpted from Growing Greener: Putting Conservation into Local Plans and Ordinances, by Randall Arendt. Copyright 1999 Natural Lands Trust. Reprinted by permission of Island Press, Washington, D.C. and Covelo, California. All rights reserved.

What to Include in an Open Space Element of a Comprehensive Plan. The following list provides a basic description of the principal resources recommended for inclusion in the community inventory and sources of readily available published information where such data may be easily obtained.

1. **Wetlands and Their Buffers.** Lands that are seasonally or permanently wet constitute one of the most basic resources in any community. These should be one of the first kinds of resources to be identified, together with dry, upland buffer areas around them. These buffers perform a number of significant functions such as filtering stormwater runoff, providing critical habitat at the land-water interface, and offering opportunities for wildlife travel corridors. They also provide opportunities for informal walking trails for use by residents of the immediate neighborhood.

   A good general idea of wetland location can be determined by consulting the medium-intensity soil survey maps published by the USDA Natural Resources Conservation Service (formerly the Soil Conservation Service). Soils that are classified as “very poorly drained” fulfill most people’s definition of wetland, as they comprise soils in which water is ponded at the surface for at least three months of the year. Other soil types that are sensitive due to their seasonally high water table are called “hydric,” where water is typically within 6 or 12 inches of the surface during the late winter and spring. These soils also do not meet minimum standards for septic system installation and should generally be avoided for construction if other more suitable places are available on the property for development. However, these soils will support homes without basements when wastewater is treated off-lot. Another good source of wetlands data is the National Wetlands Inventory maps published by the U.S. Fish and Wildlife Service in the Department of the Interior.

Continued on next page ⇩
2. Floodways and Floodplains. The maps published by the Federal Emergency Management Agency (FEMA) constitute the most accurate and readily-available data on the location of floodways and floodplains in most communities. Floodways are the areas where floodwater is expected to move at relatively high velocities, such as along the edges of rivers and creeks, or where floodwater is channelized. Floodplains are those areas expected to be inundated with two or more feet of water at least once during the time period that is specified (typically 100 years).

3. Moderate and Steep Slopes. Most communities will find it helpful in achieving their resource conservation objectives to identify two different categories of slopes. Due to their high potential for erosion and consequent sedimentation of watercourses and water bodies, slopes with gradients over 25 percent should be avoided for clearing, regrading, or construction [although case law in the western part of the state indicates judicial tolerance of development on slightly steeper slopes]. Slopes of between 15 percent and 25 percent require special site planning and should also be avoided whenever practicable. Although slope maps are not published, they can be easily prepared by a surveyor, engineer, planner or landscape architect working from readily available topographic sheets printed by the U.S. Geological Survey.

4. Groundwater Resources and Their Recharge Areas. The term aquifer refers to underground water reserves occupying billions of tiny spaces between sand grains and other soil particles, including gravel. They are “recharged” with surface water seeping downward through coarse sandy or gravelly deposits, and at low points in the landscape where wetlands frequently occur.

5. Woodlands. In areas where the majority of original forest has long been cleared away for commercial agriculture, woodlands may be described as remnants, often located in lower-lying areas with relatively damp soils or on the steeper slopes. Despite—and perhaps because of—their small areal extent, these small woodlands play a particularly pivotal role for wildlife in such areas. In other more densely wooded areas, key distinctions will involve those woodlands that comprise the largest, oldest, and healthiest stands of mature native trees, as differentiated from younger second-growth woodlands, conifer plantations, or forests overgrown with invasive vines such as Japanese honeysuckle, rosa multiflora, greenbriar, oriental bittersweet, and wild grape. In recent years concern has risen among conservation biologists and others who point out that decreases in the number of some species of “neo-tropical” songbirds (that summer in this country and migrate to Central and South America every fall) have been caused in part by both the reduction and the fragmentation of our temperate woodland habitat.

The best sources for defining the extent of woodlands, hedgerows, or tree-lines are vertical aerial photographs that are commonly available through county offices of the USDA Natural Resource Conservation Service. These may be ordered as enlargements at working scales (such as 1 inch = 100 feet) and are indispensable in accurately locating not only tree stands but even individual trees (in meadows or fields, or alongside roads). Aerial photos can also be helpful in locating the relative positions of coniferous and deciduous trees, even when the latter are in leaf, due to the darker coloration of conifers as registered on black-and-white film.

6. Productive Farmland. Maps showing the location of soils rated as being “prime” or “of statewide significance” can be obtained from the county conservation districts. Because these maps are typically reproduced on aerial photographs in the county soil survey, it is relatively easy to isolate the instances of these soil types that occur on unwooded parcels where farming actually occurs or where it could take place without the need for massive tree clearing. In certain regions where the vast majority of the land is wooded, the fields, meadows, and pastures take on an added significance—at least in local terms—regardless of the productivity of their soils. In such areas, these open fields constitute much of what people generally consider to be “rural character,” and they are often highly prized for their scenic value in maintaining a sense of the country landscape. In such cases it is recommended that small fields down to five acres in area should be mapped. At the suggested mapping scale of 1 inch = 1,000 feet, this would be an area about an inch long and one-quarter inch wide.

Continued on next page ⇦
7. **Significant Wildlife Habitats.** Habitats of threatened or endangered wildlife species should be mapped, at least in their general location, wherever possible. Such information is available from a statewide Natural Diversity Inventory, typically produced by the Department of Natural Resources. Although the exact location of such areas is deliberately not revealed on the published maps (in order to protect the sites from collectors, poachers, and other unauthorized people), the generalized data provides at least a “warning flag” clue to local officials that any development proposed in that area should be laid out with extreme care. Likely wildlife travel corridors linking the areas used as food sources, homes, and breeding grounds should be mapped whenever possible. Anecdotal information from local game wardens and sportsmen can be invaluable in this regard. Also, it is an unfortunate fact that the places where such travel corridors cross roads are likely to be those with the greatest occurrence of road kills.

8. **Historic, Archaeological, and Cultural Features.** Because published documentation on the location of buildings or other resources with historic, archaeological, or cultural significance is far from complete, landowners and local historians or historical groups should always be consulted, after a review of official lists such as the National Register of Historic Places and the historic or archaeological site inventories compiled by state and county offices of historic preservation and cultural resources. In most cases old buildings, ruins, cellar holes, abandoned roads, stone walls, burial grounds, or other resources will be of local rather than county-wide or regional importance. In areas that witnessed battles, skirmishes, or troop movements during the Revolutionary War or Civil War (or other notable conflicts), it is likely that many such lands will remain entirely unprotected. Earlier sites, such as areas used for burials or encampments by Native Americans or prehistoric peoples, should also be mapped wherever they have been documented. “Windshield surveys” can be a useful source of local information about historic and cultural features. When undertaken, the best results usually occur when teams of two people conduct the surveys as described in item 9.

9. **Scenic Viewsheds from Public Roads.** Most communities have not conducted scenic viewshed surveys, but many of them could do so quite easily with local volunteer help. At least two people are needed: one to drive and one to annotate a map as they go along. The most helpful type of base map is one that shows existing buildings and the patterns of field and forest. When this information is displayed on a topographical sheet with the ground contours indicated, sight-line limits can be fairly accurately estimated. Tips on conducting scenic road inventories appear in Chapter 12 of *Rural by Design* (Arendt et al. 1994), a comprehensive resource book on rural planning available from the American Planning Association. Although scenic viewshed protection does not provide sufficient grounds for denying subdivision approval in a conventional subdivision, it can play an important supporting role, supplementing other features of secondary importance. ■
dent of the Conservation Fund, has said that “haphazard conservation is as bad as haphazard development” and multi-municipal planning can overcome such shortcomings. A summary of the most critical elements of a multi-municipal open space plan, as described by Randall Arendt in *Growing Greener: Putting Conservation into Local Plans and Ordinances* (Arendt, 1999), is excerpted in the sidebars on pages 7-35, 7-36, and 7-37.

Creating a Plan that Leads to Implementation. Creative municipalities will find that they can target growth around (rather than over!) the special places that define their community. The first step in directing growth to areas where it will have the least impact, is to create a Map of Potential Conservation Lands. A summary of the technique, from the publication *Growing Greener: Putting Conservation into Local Plans and Ordinances* (Arendt, 1999), is excerpted in the sidebar on page 7-35.

Implementations. Consideration of open space in a multi-municipal plan is just good common sense from an economic standpoint. Participating municipalities can provide a range of recreational activities “close to home” for residents and avoid duplication of facilities that serve a larger region. As Pennsylvanians look for opportunities to meet fair share obligations on a multi-municipal level, rather than within a single municipality, the Map of Potential Conservation Lands becomes a necessary framework for guiding growth. Examples of using the open space plan element to manage growth:

One of the goals of DVRPC’s regional land use plan, is the preservation of 440,000 acres of farmland, natural resources, and open spaces in the nine county region (five PA and four NJ counties) by 2025. In addition to land acquisition and the purchase of conservation easements and development rights, municipal land use planning and regulation will be key to maintaining and achieving this vision.

DVRPC conducted a study of municipalities in the region to see which use plans and ordinances to protect sensitive natural features and open space. The study focused on the application of these 14 major planning techniques:

1. Open Space Plans
2. Environmental Resource Inventories
3. Floodplain Management Ordinances
4. Stream Corridor Protection Ordinances
5. Wetlands Mapping
6. Wetlands Management Ordinances
7. Steep Slope Ordinances
8. TDR Ordinances
9. Cluster Development Ordinances
10. Netting-Out of Resources
11. Performance Zoning
12. Agricultural Zoning
13. Environmental Impact Statements
14. Locally Funded Open Space Programs

A new webpage includes a set of maps that illustrates the results of the study. Planning and environmental commissions may use the maps to assess the natural resource protection tools in their own ordinances and those of neighboring municipalities. DVRPC plans to post sample ordinances of each planning technique.

For more information see: www.dvrcp.org/planning/openspace/ProtectionTools.htm.
1. Stretch Scarce Public Funds for Acquisition. A national poll recently confirmed that public support for open space preservation continues, even after the economic slowdown following September 11th. Progressive municipalities will set aside funding for open space acquisition and match local money with private and public dollars. However grand their intentions, few communities can afford to purchase all of the land they wish to see protected. The process of involving residents in defining the conservation lands network ensures that public dollars first go towards purchasing lands that could not otherwise be sensitively developed. Examples include areas of rare and endangered habitat or great historic significance where the integrity of the landscape would be lost if any development occurred. Setting priorities for acquisition is one purpose for the open space element in a comprehensive plan.

2. Targeting Landowners for Donations of Land or Easements. Municipalities should not overlook the generosity of landowners. Pennsylvanians have created great legacies through the donation of land or protection of land from development through perpetual conservation easements. Such actions are usually assisted by non-profit land conservancies. Communities that are successful at conserving land establish dialogues with their largest landowners and work with conservation organizations to educate landowners about options to conserve land voluntarily. The maps generated in an open space chapter can bring clarity to where the most critical lands lie and which landowners are most important with whom to work.

3. Designating Future Land Use. Future land uses have traditionally been designated primarily in relation to “grey” infrastructure such as sewer and road expansions. Planners are also beginning to recognize that natural features such as groundwater recharge areas, woodlands, rare habitat areas, and recreational opportunities are equally important when siting future land uses. Considering both the “gray” and “green” infrastructure results in Smart Growth.
Growing Greener: Conservation by Design

This is a collaborative program of the Pennsylvania DCNR; the Governor’s Center for Local Government Services; Natural Lands Trust, Inc., a regional land conservancy located in Media, PA; and an advisory committee comprised of officials from state and local agencies including the Pennsylvania Environmental Council, the Pennsylvania State University Cooperative Extension, and other non-profits and the private sector. Natural Lands Trust is the lead agency in this statewide initiative through which its staff provide practical, legally permissible tools to help municipalities shape residential development in a way that conserves land.

Many Pennsylvania municipalities already provide standards for “conservation subdivisions” in their zoning ordinances. The required open space areas may be private lands designed for the benefit of the residents of the development, or the landowners and developers can donate the land to the township for use by the general public, as in these examples:

- West Vincent will receive over 80 acres in one subdivision,
- London Grove is receiving several hundred acres along White Clay Creek,
- London Britain received a 90-acre donation.

4. Designating Transfer of Development Rights (TDR) Sending and Receiving Zones. Open Space elements, especially a composite Conservation Lands Map, are a perfect tool for examining possibilities for transfer of development rights programs. The sending zone—land to be conserved—is seldom difficult to determine as there is usually great consensus that a large number of properties should never be developed. A more challenging task is designating the area to receive the development. While the new MPC expands such opportunities by allowing transfer within the larger multi-municipal area, it is likely that there will be controversy over where high density development should occur.

Pennsbury Township, Chester County, employed a Map of Potential Conservation Lands to define potential TDR “sending zones” as a small number of the most environmentally constrained lands that they could not bear to see developed. Working with the Brandywine Conservancy’s Environmental Management Center (see sidebar), township officials took a very practical, creative approach to the technique, which at this writing, has not yet been implemented. West Bradford Township, Chester County, preserved one of its highest priority farms by designating another large tract, served by public sewer, as the “receiving” zone. Even on the higher density “receiving” zone tract, the township required an open space set-aside. Readers are also directed to programs in Manheim Township, Lancaster County and Buckingham Township, Bucks County, for successful applications of the technique.

5. Creating Greenways. Even when development is inevitable and acquisition funds and the generosity of landowners falls short, communities can conserve half of the buildable ground, through conservation standards in land use regulations. Such standards are available through the statewide Growing Greener: Conservation by Design Program (see sidebar). In short, the landowner develops the ground at an appropriate underlying density, but arranges the development on half or more of the developable ground,
leaving the remainder as permanently protected open space. Such con-
servation lands form the foundation of a community-wide greenway net-
work, often at no public cost, as many developers are willing to donate
land as they receive profit from the sale of the homes. Townships should
not overlook the opportunity to turn adversity to advantage by using the
development process as the engine that drives conservation.

6. Designating Areas for Traditional Neighborhood Development (TND).
When officials in a multi-municipal planning region must provide for
higher density uses, they are well-advised to consider the traditional
neighborhood development standards in the MPC. TND offers a refresh-
ing opportunity to accommodate high-density development and to pro-
vide for a diversity of housing types in a more context sensitive manner
than planned residential developments and single-use districts. Unfortu-
nately, TNDs are rare in the Commonwealth, in spite of the fact that a
handful of firms in the Pittsburgh and Philadelphia regions have designed
nationally acclaimed TNDs across the United States. Pennsylvania com-
unities have a wealth of design talent on which to draw in their own
backyards.

Whether designed as infill on a brownfield site or developed on an ex-
urban “greenfield,” these TND communities should incorporate green-
ways that link them to the surrounding community. By imposing the Map
of Potential Conservation Lands “green infrastructure” on the plan for “gray
infrastructure,” regions can identify areas most appropriate for TND de-
velopment. In an urban area, this will be a relatively large site, with con-
sideration of how to link the site to the surrounding community with
trails and parks. On an undeveloped suburban site, the exercise will in-
volve determining where higher density development can be accommo-
dated with the least impact on the natural environment and the greatest
access to gray infrastructure—streets, sanitary sewer, and services.

7. The Official Map. As noted in Growing Greener: Putting Conservation into
Local Plans and Ordinances (Arendt, 1999):
A time-tested technique that enjoyed more prominence during the early decades of planning and zoning is the Official Map. The purpose of this technique, which is explicitly authorized under the Pennsylvania Municipalities Planning Code, is to provide notice to landowners and intending developers that the municipality has identified certain areas or corridors for future acquisition to serve public needs, typically street connections and parkland. Although land can be identified on Official Maps many years before its intended acquisition, municipalities are legally obliged to purchase that land, at fair market value, within twelve months if the landowner specifically notifies the governing body of his/her intent to build, subdivide, or otherwise develop the land. If within those twelve months the municipality fails to initiate a purchase-and-sale agreement, or to begin condemnation proceedings, the designation is deemed null and void.

While this technique should be used judiciously, there appears to be potential to map greenways, at least on a county level, on an equal footing with the street systems commonly set forth on the Official Map.

Closing. Communities that are successful at managing growth and conserving land seldom rely upon a single technique. While the multi-municipal plan is a critical first step, the “proof of the pudding” will be in the ability to implement the vision with a combination of strategic acquisitions, donations of land and easements, and creative regulations that generate open space, each time a property is developed. Out of a focused open space element, a green strategy evolves. Such a strategy sets the pattern for managing growth in a manner that produces high-quality communities interwoven with greenways.
7.5 Traditional Neighborhood Development

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Traditional Neighborhood Development, or “TND” as it is often referenced, now has an elevated status as a planning and design technique in Pennsylvania. Article VII-A of the Pennsylvania Municipalities Planning Code (MPC), simply entitled “Traditional Neighborhood Development,”

“In the early 1990’s, American LIVES and Intercommunication Inc. conducted several nationwide surveys to determine what features and amenities homebuyers would most like in a new community. One surprise was that people said they preferred ‘town centers’ with a village green surrounded by shops and civic buildings to commercial strip malls strung out along major highways...

All over the country failed strip malls are being recast as walkable town centers with a mix of stores, offices, housing, and civic buildings...

Town centers are becoming one of the hottest trends in both retailing and community development...Ironically, small town main streets have long been touted for their mix of uses, walkability and charm, but until recently walkable town centers were treated as anachronisms rather than as models for how we could build in the future. This outmoded view is changing.”


The American LIVES and Intercommunication Inc. surveys are reported on by Brooke Warrick and Toni Alexander in Urban Land, Urban Land Institute, February 1997.

Website: www.plannersweb.com.
“Traditional neighborhood development,” an area of land developed for a compatible mixture of residential units for various income levels and nonresidential commercial and workplace uses, including some structures that provide for a mix of uses within the same building. Residences, shops, offices, workplaces, public buildings, and parks are interwoven within the neighborhood so that all are within relatively close proximity to each other. Traditional neighborhood development is relatively compact, limited in size and oriented toward pedestrian activity. It has an identifiable center and a discernible edge. The center of the neighborhood is in the form of a public park, commons, plaza, square or prominent intersection of two or more major streets. Generally, there is a hierarchy of streets laid out in a rectilinear or grid pattern of interconnecting streets and blocks that provides multiple routes from origins to destinations and are appropriately designed to serve the needs of pedestrians and vehicles equally.

became effective in August 2000.

Before describing TND in detail, it is important to understand the difference between TND and Conventional Suburban Development or “CSD.”

TND is noted for:

- compact pattern of uses
- mixed uses
- shallow setbacks
- narrower streets
- on-street parking
- integrated street network
- sidewalks
- pedestrian oriented
- neighborhood emphasis

Places that are notable for their TND character include examples such as West Chester, Doylestown, Media, Swarthmore, and Ephrata.

CSD typically consists of:

- spread out uses
- separated land uses
- deep setbacks
- wide roads
- no on-street parking
- cul-de-sacs
- no sidewalks
- automobile dominated
• subdivision emphasis

Places that are examples of CSD include the nearby strip shopping center, the industrial park, and residential subdivisions with cul-de-sacs.

The TND definition quoted in the sidebar, is one of the longest definitions found in the MPC. It is long because it describes the complex set of interrelated concepts associated with a TND:

• compatible mix of uses
• interconnectedness of where one lives, works, shops, and plays
• neighborhood context
• compact and walkable places
• an identifiable center, focused on the public realm
• interconnected streets and blocks for pedestrian and vehicular systems

Prior to the passage of Article VII-A, TND ordinances were written by this author in West Chester and Doylestown. The TND Ordinance in the Borough of West Chester was adopted in September 1995. It applies to the NC-1, Neighborhood Conservation-1 District, where several undeveloped properties could have been subdivided to become more conventional and suburban in character, or to become a “clustered development.” The borough repealed the cluster development provisions, and replaced them with TND provisions. With a minimum tract size of two acres, a developer can pursue TND as a conditional use. In order to qualify for a bonus (you can build four dwellings for every three permitted as-of-right): parking must be in the rear of the dwellings and accessed off alleys, dwellings must be placed on a build-to (not setback) line, and front porches are required. In short, the TND Ordinance in West Chester is intended to blend new urbanism with old urbanism. The placement, parking, access, and detailing of new development is intended to emulate the character of the existing neighborhoods built primarily from the

Lantern Hill is a traditional neighborhood development with residential, retail, and office space at an infill location in historic Doylestown. The developer, Granor Price Homes, has an interest in salvaging abandoned properties for new mixed use development. The Lantern Hill site was a manufacturing plant, surrounded by single family homes, apartments, homes for the elderly, and a shopping center.
Another pre-Article VII-A TND ordinance written by this author was adopted by the Borough of Doylestown in June, 2000. Titled as TND-1, the Zoning Map was changed to designate a brownfield site (former industrial tract) as Doylestown’s newest neighborhood. The TND-1 Ordinance, while written for what is now being developed as “Lantern Hill,” has its underpinnings in a 1998 booklet entitled “Community Design Guidelines,” which addressed a series of important building type, streetscape, and parking issues. The TND-1 Ordinance includes definitions for such terms as: corner store, heritage character, live-work units, and streetscape. Key design elements are described, along with use and building type regulations. Percentages of residential and nonresidential uses are provided, and a variety of dwelling unit types are required, including multi-family, single family attached, single family semi-detached, live-work units, and single family detached.

The Doylestown Borough TND Ordinance also prescribes green space amounts and dimensions, and residential and nonresidential density/intensity. Design standards are specified for:

- Greens
- Streets, alleys and accessways
- Curb cuts, driveways, and garages
- Sidewalks and pathways
- Street trees and other landscaping
- Buildings and neighborhood design
- Parking and parking lots

Dimensional requirements are specified for:

- Streetscape
- Principal buildings
- Dwelling unit types
Nonresidential uses
Lot coverages

The success of the Doylestown TND Ordinance stems from its likeness to the existing neighborhoods in the borough.

If one wishes to craft a context sensitive TND ordinance, a good start is to measure an existing model neighborhood. Instead of guessing the dimensions and design elements of a TND, or arbitrarily selecting numbers, first find the place that you value most for its town character, and then measure it. The West Chester and Doylestown TND Ordinances, while being similar in overall scope, are modeled after neighborhoods that their borough councils and borough planning commissions appreciated the most. We measured both places, then we wrote the ordinances.

Another aspect of a good TND ordinance relates to the overall character of the place that is being emulated. Titled Village/Hamlet District, Warwick Township, Chester County (with the assistance of this author) enacted provisions in December 1994 (pre-Article VII-A) and revised them in August 2001 (post-Article VII-A). The Village/Hamlet District enables new village-scale development to emulate the historic villages of St. Peters, Knauertown, Harmonyville, and St. Mary’s. Instead of conventional suburban development on two acre lots, the Village/Hamlet District allows for a compact, mixed use, walkable place (just like the 19th and 20th century models that exist).

When preparing a TND ordinance, Article VII-A must be followed. The “big picture” aspects include:

- Purposes
- Objectives
- Overlay zone provisions for greenfield sites
- Infill or extension provisions for existing places like boroughs or villages
- Comprehensive plan relationships
VILLAGE OVERLAY DISTRICT

DRAFT OUTLINE

WARWICK TOWNSHIP—BUCKS COUNTY, PA

EXAMPLE

ARTICLE 28
VILLAGE OVERLAY DISTRICT

§ 195-160. Purpose and Statement of Intent
“Jamison Village” as a mixed-use, pedestrian-scaled, compact, walkable place

§ 195-161. Applicability
Section 605 of the MPC
Existing Zoning Districts Overlain by Jamison Village
Article VII-A of the MPC pertaining to TND

§ 195-162. Key Design Elements
Village Features—generally described

§ 195-163. Conditions of Eligibility
Within Jamison Village, as shown on the Overlay District Map
Public Water and Public Sewer
Meet the requirements of this Article 28

§ 195-164. Definitions
New terms to be added

§ 195-165. Use and Building Type Regulations
Mix of Uses
Building Types
Permitted Principal Uses
Accessory Uses
Conditional Uses
Uses by Special Exception
Nonconforming Uses

§ 195-166. Area and Bulk Regulations
Lot Area & Net Buildable Area
Setbacks & Build-To Lines
Yards (Front, Side, Rear)
Building Coverage & Impervious Coverage
Lot Width at Street Line & at Building Line

§ 195-167. Height Regulations
Maximum Heights

§ 195-168. Design Standards and Dimensional Requirements
Mixed-Uses: Specific Regulations
Streets: Front Streets
Streets: Back Streets (Lanes/Alleys)
Parking: On Street
Parking: Lots
Off-Street Loading Areas
Curb Cuts and Driveways
Garages
Building Types
Residential Buildings
Commercial Buildings
Mixed-Use Buildings
Live-Work Units
Sidewalks and Pedestrian Paths
Civic Spaces
Park and Recreation Areas
Landscape—Street Trees and Other
Hardscape—Pavements and Other
Lightscape
Outdoor Storage and Trash Disposal Areas
Variations in other Standards

§ 195-169. Special Plan Review Requirements
Concept Plan
Regulatory Plan

§ 195-170. Graphic Design Guidelines
Images from Bucks County Villages
Measurements from Bucks County Villages
Towns vs. Sprawl

“For three centuries, America built villages, towns, and cities with strong centers and clear edges beyond which lay farms, forests, and countryside. Since the 1950’s, the centrifugal forces of sprawl have erased the distinction between city and countryside and taken all the objects that once made up cohesive human settlements—homes, schools, shops, offices, factories—and flung them randomly across the countryside...

The real question is not whether our communities will grow, but how. The failure to understand this is what causes some people to regard all development as the enemy. Instead of debating whether growth will occur, we should be discussing the patterns of development: where we put it, how we arrange it, and what it looks like.

Starting from this premise I believe that there are several steps builders can take to alleviate public opposition to development:

1. Support Open Space Protection Efforts
2. Save the Trees
3. Stop Building Look-alike Houses
4. Provide Public Plazas and Places to Walk
5. Build Town Centers, Not Strip Centers
6. Cooperate With Environmentalists for Mutual Benefit”


Standards
- Conditions
- Staging
- Manual of written and graphic design guidelines

A recent outline prepared by this author for a Bucks County municipality appears in the sidebar on page 7-40. Warwick Township, Bucks County has received a grant from the Pennsylvania Department of Community and Economic Development (DCED) to prepare a TND ordinance as a Village Overlay District for Jamison Village. This outline is a good one to consider when drafting provisions for TND in an overlay district setting.

TND Built Examples. Nearby built examples of TND include “The Kentlands” and “Lakelands” in Gaithersburg, Maryland, and “Eagleview” in Uwchlan Township, Chester County (near the Downingtown exit of the Pennsylvania Turnpike). A TND that is just starting to be constructed is “Lantern Hill” in Doylestown Borough. Common to the built TNDs are their spatial characteristics which are based on precedents found in places like West Chester or Doylestown. Realize that there are over 150 TNDs that have already been built across the United States. Realize that there are thousands of pre-1950’s neighborhoods and villages that can be emulated. Some of the common elements that these places have, which are emulated in the newer TNDs include:

- neighborhood size and scale based on a 5 to 10 minute walk from the edge to the center, comprising 40 to 160 acres;
- commercial and other nonresidential land use, typically comprising from 2 to 10% of the total land area (and more than 10% in certain infill settings);
- parks, plazas, squares, and greens typically comprising from 8 to 15% of the total land area (and occasionally more than 15%).
streetscape dimensions of quaint and more historic scale places, ranging from 60 to 85 feet from “street wall” to “street wall” (Main Street in Manayunk is 59’-6” wide, Gay Street in West Chester is 60’-6” wide, New Oxford near Gettysburg is 74’-9” wide, Water Street in Nantucket is 84’ wide); outdoor rooms are created in this space when two to four story buildings stand as “bookends” along Main Street;

“outdoor rooms,” when ranging from 60 to 85 feet in width, are conducive to pedestrian interaction. (When the streetscape dimensions—from street wall to street wall—are wider than 85 feet, the scale of the space is not as intimate);

block sizes ranging from 400 to 800 feet in length are conducive to shorter walks (and easier “twists and turns” as the network of streets and blocks responds to the topography);

lot widths ranging from 40 to 65 feet for single family detached dwellings, and building widths in the 18 to 24 foot range for narrow lots with rear garages accessed off alleys or lanes; and

lot sizes typically ranging from 4,500 to 8,500 square feet in the more greenfield-type settings, and 2,000 to 4,500 square feet in the more infill-type settings.

Obviously the dimensions for a place will vary, depending on its location in the transect, be it in the neighborhood center or along the neighborhood edge. Dimensions will also vary based on the dwelling unit types, and the types of nonresidential development.

TND can be a highly useful tool in multi-municipal planning. Many boroughs, like West Chester and Doylestown, can extend to the adjoining municipalities as graceful and seamless neighborhoods. The surrounding townships now have the specific tools to convert their conventional sub-
urban zoning provisions to more neighborhood-based places. When used as an overlay district, many townships could enable more village-like development. Collectively, TND should be considered as a viable tool for helping to curb sprawl. Now that TND is part of the MPC, we should begin to see more of them built in Pennsylvania over the next five years.

7.6 Specific Plan

The Specific Plan in Pennsylvania—A New and Creative Way to Implement a Comprehensive Plan

Ronald T. Bailey, AICP
Lancaster County Planning Commission

Introduction
A specific plan may provide for all aspects of a nonresidential development, including building heights, front yard setbacks, parking locations, etc. This example illustrates a specific plan for a large site in an existing downtown commercial area.

Section 1106 of the Pennsylvania Municipalities Planning Code (MPC) enables municipalities that have either adopted and are implementing the county comprehensive plan or that have participated in the development and adoption of a multi-municipal comprehensive plan to adopt specific plans. As part of the intergovernmental implementation agreements, municipalities that participate in those agreements may choose to individually or jointly adopt specific plans.

A specific plan is a tool that can be used by municipal governments for the systematic implementation of comprehensive plans. It effectively establishes a link between implementing policies of the comprehensive plan and the individual development proposals in a defined geographic area. Provisions of a specific plan shall include the type, location and intensity of land uses, the design and capacity of infrastructure, the standards for preservation or development of natural resources, regulation of land development, and financing of capital improvements.

The specific plan is an accumulation of information collected, organized, and transformed into a set of detailed objectives, policies, programs, and standards that can be used to guide future development. The information collected as part of public and agency involvement ensures that concerns, preferences, priorities, and needs are discussed and used in the decision making process. The municipality must provide opportunities, as required by the MPC, for the involvement of citizens, property owners, public agencies, neighboring municipalities, school districts, public utility companies, and other community groups through public meetings and hearings and other means that are appropriate for the community.

It is important to note that specific plans do not create additional planning or permitting requirements. Everything that is involved in a specific plan is required as prerequisite for approval and recording of a final plan for a subdivision or land development. The difference is that the specific plan acts as the vehicle for the planning and permitting, without having to wait for a development application. When a development proposal
In San Luis Obispo County, California, Design, Community & Environment (DC&E) prepared a Specific Plan and Environmental Impact Report for the small coastal town of Avila Beach, a popular summer destination for locals and tourists. The call for the Specific Plan resulted from the need to remediate existing groundwater and soil contamination under the town’s existing buildings and road system, which required the removal of a substantial number of the buildings along the town’s main commercial street. DC &E’s efforts centered around a community visioning process with a series of eight well-attended workshops. The completed Specific Plan includes land use, circulation, community design, public space, infrastructure, economic recovery and implementation components. Specific design elements of the plan include design guidelines, a town center plan, gateway designs, streetscape plans and detailed designs for key opportunity sites. The Avila Beach Specific Plan won the award for Planning Implementation for a Small Jurisdiction by the Central Coast Chapter of the American Planning Association. Excerpted from the DC & E website. For more information visit www.dceplanning.com.

subsequently occurs, permitting may move directly to the final plan, since all the planning and approvals normally required for a preliminary plan—sewer module, stormwater retention plan, earth disturbance permit, highway occupancy permit, utility extensions, etc.—will have been accomplished.

Why Should Specific Plans be Developed?

Pennsylvania exists in a global economy. The standards of the Commonwealth and of local government are comparable to development and environmental standards found in other states. The development permitting process, however, is fragmented among a large number of municipal governments, county and regional planning commissions, and state agencies. As a consequence, the time that it takes to obtain development approval for large commercial or industrial projects in Pennsylvania is sometimes much longer than in competing regions.

The result is that Pennsylvania often loses jobs and capital investment to other locations. When an industry, for instance, is ready to invest in building a new plant or facility, it may be discouraged from locating in Pennsylvania. Too often, industry may be confronted with a complex permitting process that requires zoning approvals, such as conditional use permits or special exceptions, development of preliminary and final plans, design of stormwater controls, negotiation of highway occupancy permits, issuance of sewage modules and pollution discharge permits, and other discretionary permits. None of the permits, individually, is inappropriate, but when an industry wants to break ground in 45 to 60 days, it is often very difficult, if not impossible, to accommodate such time lines.

By adopting specific plans, municipalities that participate in the county comprehensive plan or multi-municipal comprehensive plans, can make areas ready for development. In cooperation with the property owners, municipalities can complete the preliminary planning, design work, and...
MPC Section 1106:

(a) Participating municipalities shall have authority to adopt a specific plan for the systematic implementation of a county or mult munici-  

pital comprehensive plan for any nonresidential part of the area covered by the plan. Such specific plan shall in-  

clude a text and a diagram or diagrams and implementing ordinances which specify all of the following in detail:

(1) The distribution, location, extent of area and standards for land uses and facilities, including design of sewage, water, drainage and other essential facilities needed to support the land uses.

(2) The location, classification and design of all transportation facilities, including, but not limited to, streets and roads needed to serve the land uses described in the specific plan.

(3) Standards for population density, land coverage, building intensity and supporting services, including utilities.

(4) Standards for the preservation, conservation, development and use of natural resources, including the protection of significant open spaces, resource lands and agricultural lands within or adjacent to the area covered by the specific plan.

(5) A program of implementation including regulations, financing of the permit reviews that would be required prior to submission of an application for a final plan. Questions such as how intensely the land will be used and for what types of uses, what infrastructure needs to be installed or improved, what improvements would be needed to abutting roads and intersections, what transportation impact fees would need to be collected, if any, how utilities would be extended to the site, how stormwater flows will be managed, what type and design of landscaping or buffering needs to be provided, how ingress and egress will be provided to the site, etc., can all be answered. Once adopted, property owners and developers can rely on the provisions of the specific plan to prepare a final plan for approval and recording. A specific plan, can, therefore, be used to prepare property for quick response to development proposals and also to provide more certainty to the development process.

Specific plans create an opportunity for municipal governments to control the future of their communities. Specific plans can be used to ensure that development meets standards that will enhance the quality of life in the community, create the types of jobs needed by the residents of the area, and, at the same time, create real incentives for development by reducing delays and uncertainty. Specific plans can be adopted by municipalities to refine the standards for development needed for a specific geographic area without affecting the balance of the jurisdiction. Specific plans could be adopted to implement county or multi-municipal plans for nonresidential development, where the municipality has not yet adopted jurisdiction-wide zoning.

Specific plans can be prepared for “brownfield” sites. Specific plans can be used in conjunction with Keystone Opportunity Zone designations. Specific plans can be adopted for downtown revitalization and improvement districts. Specific plans may involve hundreds of acres or be as small as one acre in size.
Specific plans represent relatively precise development criteria, guidelines, and diagrams, which may provide additional direction in establishing uses and infrastructure improvements. Such plans also set forth in detail the planning and implementation programs that will lead to the successful development of projects. In addition, the precision of specific plans can be useful in estimating the costs of public improvements to be funded by tax-increment financing and other fiscal programs.

**Financing Specific Plans**

Some municipalities may choose to “up front” the costs of preparing a specific plan as an investment in the municipality’s future, recovering the cost through increased tax revenue generated by the development of the property. For example, if a tract of land yields $25,000 in tax revenue prior to development of a specific plan, and, if creation of a specific plan encourages new development, the property may now yield five or six times as much tax revenue per year. The increased taxes that the taxing jurisdictions might have foregone, if the specific plan had not been adopted, might well repay the investment. In addition, various financing mechanisms are available to fund the programs of a specific plan including special assessment districts, general obligation bonds, tax-increment financing, municipal and county general fund money, state and federal grants, transportation impact fees, and other means.

For instance, municipalities may use Community Development Block Grants for projects that benefit low and moderate income workers and residents. Other federal and state grants may also be employed. Tax increment financing may be utilized to fund capital improvements. Transportation improvements may be financed through impact fees, if a municipality adopts an ordinance pursuant to the authority of Section 504-A of the MPC, or through Transportation Partnership Districts. Municipal authorities and public utilities may finance infrastructure improvements with costs recovered through connection fees and rate payments. Other capital improvements and provisions for repealing or amending the specific plan. Regulations may include zoning, storm water, subdivision and land development, highway access and any other provisions for which municipalities are authorized by law to enact. The regulations may be amended into the county or municipal ordinances or adopted as separate ordinances. If enacted as separate ordinances for the area covered by the specific plan, the ordinances shall repeal and replace any county or municipal ordinances in effect within the area covered by the specific plan and ordinances shall conform to the provisions of the specific plan.

(b) (1) No specific plan may be adopted or amended unless the proposed plan or amendment is consistent with an adopted county or multi-municipal comprehensive plan.

(2) No capital project by any municipal authority or municipality shall be approved or undertaken, and no final plan, development plan or plat for any subdivision or development of land shall be approved unless such projects, plans or plats are consistent with the adopted specific plan.
financing techniques, or combinations of techniques, may also be used. In fact, in some cases property owners may find it beneficial to pay for, or voluntarily contribute to, the costs of specific plans, since such plans may render their property more developable and valuable. The costs of preparation of a specific plan would otherwise be paid in engineering and legal fees to prepare preliminary plans and permit applications. Counties and municipalities, however, may not assess the costs of specific plan preparation or implementation to property owners or developers through subdivision or land development application fees.

Contents of a Specific Plan

To an extent, the range of issues that is contained in a specific plan is left to the discretion of the municipal governing body. However, all specific plans, must be consistent with the adopted county comprehensive plan or the adopted multi-municipal comprehensive plan of the jurisdiction within which it is located. Regulations adopted by ordinance to implement the specific plan must be consistent with the specific plan. In turn, all subsequent subdivision and land development actions, must be consistent with the specific plan and the applicable implementing regulations.

Initiation of the process for developing and adopting a specific plan may come from a variety of sources. Specific plans may be created at the initiative of the municipal governing body or upon the recommendation of the planning commission. Elected officials and planning commissioners may seek to use specific plans to implement newly adopted comprehensive plans. Municipal authorities or private property owners may apply to the municipality to create and adopt a specific plan covering all or a portion of their property as a way to make the land ready for development. All parties may benefit from the use of specific plans by matching land uses with supporting public facilities. A specific plan may be used to implement the policies of an economic development element of a comprehensive plan.
As with a comprehensive plan, the specific plan may be prepared by a planning commission or a planning agency. The authority for adoption of the specific plan, however, is vested solely with the municipal governing body. The adoption of a specific plan is a legislative act, similar to adoption of a comprehensive plan, and municipalities must follow all the procedures required in Section 301 of the MPC. Likewise, any amendment to the specific plan has to be adopted by the municipal governing body, subject to the same procedural requirements provided by statute for amendment of comprehensive plans.

Consistency with the Comprehensive Plan

A specific plan may not be adopted or amended unless the proposed plan or amendment is consistent with the county or multi-municipal comprehensive plan. Consistency is important since the purpose of a specific plan is to implement the county and multi-municipal comprehensive plans. Consistency may be demonstrated through statements of the relationship of the specific plan to the comprehensive plan or through a discussion of the individual policies and programs and how each implements the comprehensive plan. Specific plans may contain conceptual subdivision maps equivalent to a preliminary plan, which can be used to present the pattern of development for the plan area. Subsequent final plans must comply with the standards for design, improvements, land use, and density, as shown on the specific plan.

7.7 Transfer of Development Rights

General Principles, Methods, and Possibilities

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General Description. Much of the developed or developable land in America is regulated by county or local zoning regulation. These regulations establish the “by right” terms under which an owner can develop, build,
and use that land for residential, commercial, agriculture, or other purposes. The right to develop is a major factor in determining the market value of land. These “rights” can be bought and sold like other physical aspects of real estate if state and local law recognize them as rights that can be “transferred” to another owner and another place. They then become analogous to mineral rights, which can be sold by the landowner to an oil driller (for instance) while the owner retains all the other rights that go with owning the land. Similarly, an owner can sell all or a portion of the rights to develop while retaining the right to use the land for allowable uses other than development.

A simple example is that of the farmer who owns a 100 acre property on which 50 houses could be built under zoning regulation. The farmer could sell the rights to develop 48 or 49 lots, and still continue to live on the land with an extended family and operate the farm. Thus, while living and working on the land, the farmer has received cash for development rights. Depending on location and markets, the cash can be substantial.

Obviously, when the development rights have been sold to another party, the land that remains (in the example above) is now a farm, and not a “development opportunity.” The underlying value of the property is now that of farmland only, which makes it possible to sell in the future to another farmer (or to anyone who wishes to live on a large open property).

**Legal Authorization.** The ability to sell development rights, which are rights that grow out of regulation rather than intrinsic aspects of the land (such as minerals or forests), does have to be recognized by state and local law. The 1988 amendments to the MPC authorized adoption of ordinances by local governments creating and providing for the transfer of development rights (TDRs) within a municipality. The 2000 amendments now allow development rights to be transferred from rural resource areas to growth areas among municipalities that have adopted and are implementing a multi-municipal plan. Section 1105(b)(2). Section
619.1(d) also now allows TDRs within the boundaries of municipalities that have adopted joint zoning or within the boundaries of municipalities that are parties to a written agreement that provides for transfer of development rights. (See sidebars on pages 7-57 and 7-58.)

The typical ordinance establishes such rights by assigning lot area requirements to land (e.g. one or two acres for a residential unit) and identifying areas from which these rights can be sold—the “sending areas”—and areas to which they can be sold—the “receiving areas” or growth areas. The ordinance may provide for keeping track of TDR transactions through a required notification of the municipalities involved, leaving the transfer negotiations and process entirely to the private market. Or the municipalities may want to be more proactive and establish a “bank” that enables them or a designated private entity to acquire and hold development rights for future use in attracting more intense development to designated growth areas.

**Intentions.** There are many reasons for establishing a TDR program:

- In the case of the farmer, the farmland is preserved and the farmer receives a significant payment for the development rights. The owner continues to use the land, but has also been paid to keep it a rural use. This is true for any large piece of property in the sending area, whether it is a farm, a forest, or a private estate. Thus, TDR is a strong tool for farm and open space preservation.

- When the rights are transferred to another undeveloped property or an older developed area, they are added to the development rights on that property. Depending on the ordinance provisions, more compact communities (including both residential and commercial uses) can be created that include businesses, shops, schools, and churches within reasonable walking distances for people of all ages. Such development can be in keeping with the historic scale and...
TDR and Tax Sharing

It will likely be desirable for municipalities with a shared TDR program to consider sharing of tax revenues as well. This can help meet the service needs of communities that agree to preserve rural lands and refrain from building large commercial or industrial facilities that compete with projects in more developed municipalities. (See Chapter 7.9.)

character of older urban and suburban areas and rural villages.

- Fairness to property owners is a major asset of a TDR program, in that it distributes the value of land to all landowners in an area—and not merely to those who benefit by having their land zoned for development.

- Fundamentally, TDR responds to the American belief in the right of each property owner to make reasonably profitable use of his or her land. It permits owners to remain and work on rural land while still getting the financial reward from the sale of development rights.

What Happens, What Can Happen

Under Act 67 it is now possible to transfer development rights across municipal boundaries—from rural resource areas to growth areas—which makes use of TDR much more flexible and likely than it was when TDR could only be used within an individual municipality. All communities involved in a multi-municipal comprehensive plan and implementation agreements can use this tool to balance rural land and open space preservation with development.

TDRs can be used effectively in any multi-municipal planning area where growth areas and rural resource areas are designated. Optimally, the growth area would include a city, borough, developed suburban area, or rural village with development rights transferable to identified areas in and around those communities. The rural resource areas from which rights could be transferred would be identified areas of agricultural and forested lands, mineral lands, and possibly large areas of recreational lands adjacent to state game lands, forests, and parks where limited development is desired. Such a program would accomplish the goals of supporting economic vitality and use of infrastructure in existing developed areas and conserving rural lands for rural uses.
A simple hypothetical example of how TDR can work:

A zoning ordinance that includes TDR under a multi-municipal plan might give a property owner several options:

1. Develop the property as allowed under the base zoning.
2. In the case of a large rural property:
   a. Develop the property in a compact village pattern if it is in a designated growth area (usually with a small bonus—say 10% more houses—to encourage this action).
   b. Join with adjacent property owners to develop a larger village center by pooling all development rights into one location in a designated growth area.
3. Sell the development rights to a land trust interested in farmland or open space preservation for that organization to hold and sell for development in a designated growth area. The land remains in the owner’s possession for use or sale as a farm or residence with no further development permitted.
4. Sell the development rights to a developer for use in designated growth areas elsewhere in the municipality or municipalities in the planning area.

A hypothetical example of option 4 could be:

- Assume a 150 acre property with 120 developable acres (after subtracting wetlands and/or other limitations).
- Assume zoning permits single family residences on 2 acre lots, so the net subdivision capacity is 50-55 dwelling units (after subtracting for streets, etc.).
- Assume the value of the developable property is $10,000/acre or $1,200,000.

Municipalities planning together have the ability to plan coherent and environmentally sensitive open space systems. By cooperating and transferring development rights across boundaries, larger and more contiguous open spaces can be established. Native forests, wetlands, and stream corridors can be linked into regional recreational and environmental systems. Farmlands, which require large contiguous areas for efficient farming operations, can be protected from development through this process. Every land use can be made more useful and attractive for each community, since planning for a larger area gives more flexibility, more choice, and more possibilities for realizing community visions and plans.

Need for Economic Analyses

The creation of a TDR program requires careful analysis of the real estate market for the region and for the various specific targeted land uses. A successful transfer of development rights is based on a willing buyer and a willing seller. The price must be appropriate for the rights in order for that to happen. In many cases an open, publicly-created, legal process enables the buyer and seller to privately agree on the price and other conditions of the sale. In other cases, it is necessary as a public policy to...
establish development bonuses in the zoning code (or other incentives) to make an acceptable economic “deal” to take place.

For example, in some locations the costs to a developer of buying a parcel of land (which has development rights of its own), and of buying additional developments rights from another parcel (which would preserve the open space of that parcel), can be too high. If it is the policy of one community (or more than one community) to encourage the preservation of that open space, and to have a larger and more compact development take place on the first parcel, a bonus in the form of greater development densities must be offered in the zoning regulations. The issue that must be resolved in this situation is the exact extent of the bonus. The only way to correctly establish this bonus, and to assure that the TDR process will be used by private investors, is to assess various economic conditions of the area. The costs of land, the costs of new homes (or other development uses), the remnant costs of each development right, and the difference in costs that must be balanced.

An alternative example could include public incentives outside of bonuses in the code. In some communities that wish to guide the preservation of open space, improvements funded by the municipality, such as public streets or utilities (especially sewers) could be a sufficient incentive to a developer. If this is done, no added dwellings (or other uses) need be built; it also gives great and specific public control over where development takes place. In order to assure that this method meets public economic goals, the same careful financial calculations must be made as for bonuses. These calculations must also include an analysis of the public costs incurred, the value of the preserved open space, the appropriate benefit to the developer, the tax implications, and any other relevant factors. A good deal must be created for all parties.

**Conclusion**

Under present land use practices, development takes place in a random
pattern based largely on the intention of a landowner to sell and a developer to buy. Even though a large tract may be zoned for agriculture, zoning changes or variances (especially where two acre residential lots are already allowed) are often granted allowing development that is incompatible with surrounding agricultural use. Such development may also be at odds with community goals for development and conservation. Some critics call this “tax parcel planning,” which is really a lack of planning.

Using TDR programs enables communities to guide development in a way that meets public objectives as well as the objectives of private landowners and developers. The use of TDR’s across municipal boundaries expands the opportunity to meet all these objectives by opening up more land and more uses for thoughtful public planning.

TDR programs can also assure that the entire community participates in the planning and decision-making, and shares in the appreciated value of land from the planned land uses.

In the end, use of TDR is one of the most powerful tools available to communities to address market conditions, to collaborate with their neighbors to prevent development in one community from negatively affecting another, and ultimately to chart their own destiny.

7.8 Revitalization of Communities: Brownfields/ Infill Development / TOD

7.8.1 Brownfields Redevelopment

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Opportunities and Constraints for Redeveloping Brownfields
Brownfields redevelopment is about turning underutilized and derelict sites into new uses that can generate jobs, recreational opportunities, and/or new housing. As a public policy, the strategy of redeveloping brownfields works to achieve both environmental and economic objectives such as: removing blight, recycling already developed land, catalyzing economic development and neighborhood revitalization, reusing infrastructure, increasing local tax revenues, preserving open space, combating suburban sprawl, protecting public health, enabling environmental justice by addressing hazardous conditions in low-income neighborhoods, and protecting ecological systems. This breadth of benefits has attracted a wide spectrum of “partners” that are actively promoting and supporting brownfields redevelopment, including government at all levels, community groups and neighborhood development corporations, historic preservation groups, environmental and conservation groups, smart growth proponents, health organizations, private developers and builders, environmental professionals, financial institutions, utilities, and even the faith community.

Cities, boroughs, and townships across Pennsylvania face the challenges of finding new uses for these idle sites. Many brownfields are “upside down sites”—but for the environmental risks, they would otherwise be attractive investment opportunities. Once the environmental concerns are dealt with, these properties become marketable for investment and development. Other sites, especially vacant and derelict industrial sites in low-income communities, will need the local government or a community development corporation to be the redevelopment driver. In every case, the fact that a site is a brownfield makes the redevelopment process more complicated. A community or neighborhood development corporation will need to go through the normal redevelopment process, with its hoops and hurdles, and, since the site is a brownfield, they will have an added layer of challenge in dealing with environmental unknowns and risks.

Barriers that may need to be overcome to succeed in the brownfield
redevelopment process include: understanding the nature and extent of contamination on a site; funding potentially significant costs of remediation; overcoming lenders’ reluctance to lend due to uncertainty of market value and environmental risks; overcoming and untangling legal liability issues that may obstruct development and promote existing landowners to avoid “discovery” of environmental concerns; and resolving public health and environmental risks of contamination in a way that meets regulatory requirements and community wariness.

**State and Federal Brownfield Redevelopment Incentives**

Major actions have been taken by Pennsylvania and the federal government that make it easier for communities to overcome these barriers and successfully “put brownfields back to work.”

**Legal Incentives**

The Pennsylvania Land Recycling Program (“Act 2”) of 1995 managed by the Department of Environmental Protection (PADEP) makes it possible to redevelop brownfield sites for whatever future use is deemed desirable—whether it be residential, commercial, industrial, open space or recreation.

The first step of any environmental due diligence is to perform a Phase I Environmental Assessment on a site to evaluate past historical uses, existing surface and building conditions, government records, and to determine if there are any suspect “areas of concern” that should be investigated further to determine presence of actual hazardous materials. If there are, the next step is to perform a Phase II Environmental Assessment that investigates the nature and extent of hazardous materials and contamination. If evidence of contamination is found, it may be that the site owner is in violation of Pennsylvania environmental regulations.

Excerpted from the DEP Land Recycling Fact Sheets:

**Cornerstones**—The four cornerstones of the land recycling program are: uniform cleanup standards based on health and environmental risks, standardized review procedures, releases from liability and financial assistance.

Anyone who wants cleanup liability protection under Act 2 must select one or a combination of the following three environmental remediation standards:

- **Background Standard**—The background standard is defined as the concentration of a contaminant present at a site, but not related to any release of contamination at the site. For example, the contaminant could be present because it is a natural component of soil or because it has been released to the groundwater from an off-site facility.
- **Statewide Health Standard**—The statewide health standards are established by regulations which present a list of cleanup levels for various contaminants. “Medium-specific concentrations,” or MSCs, are the concentrations of contaminants associated with a specific environmental medium for potential risk exposures. Different exposure potentials, such as residential and industrial settings, are reflected in different cleanup concentrations providing for equivalent levels of human health protection.

Continued on next page ⇢
Act 2 enables a property owner to receive legal liability relief for known contamination once they can demonstrate that conditions have been cleaned up to a level that meets any one of three cleanup standards for contaminants found in either soil, soil to groundwater interface, or groundwater (meaning that the concentration of metals or chemicals in any or all of these media is less than the published standard). These three standards (background, statewide health, and site specific) vary in stringency depending on whether the reuse of the site is to be residential, with a presumption of 24-hour use, or nonresidential, with more limited use, and whether or not the groundwater is in a used or non-used aquifer. The liability release can be transferred to a new owner of a property if a future sale occurs. If conditions are found that can be entirely removed, such as wastes from some oil tank spills, asbestos, lead paint, and there is thus no remaining residual risk, then there may be no need to seek liability relief through Act 2.

The advantages of the Pennsylvania risk-based system is that it enables a prospective or existing landowner to clean up a site within the confines of conservatively-approved health standards that are stated and do not need to be negotiated on a site-by-site basis and do not require that the site be brought back to pristine conditions. Site planning and design of facilities or open space can be done based upon the knowledge of environmental concerns and in a manner that minimizes remediation costs. Advances in assessment and remediation have also made cleanups more predictable and less costly, so there is now a track record that local officials, businesses, community groups, private developers and lenders can look to when faced with evaluating a brownfield site. In January 2002, the Pennsylvania Department of Environmental Protection executed its 1,000th Act 2 liability release, more evidence that the program is successfully encouraging cleanup of brownfield sites.

The US Environmental Protection Agency (EPA) has been the principal federal agency promoting reuse of brownfield sites and working to clarify liability concerns between the federal and state regulatory levels. EPA
developed the terminology of “brownfields” for the thousands of sites that, while potentially contaminated and needing to be cleaned up, did not meet the criteria for federal attention and cleanup through the Superfund program and should be regulated and attended to by state environmental programs and laws. However, until recently there was no official definition of a brownfield and distinction of federal and state liability boundaries. In January 2002, President Bush signed into law the “Small Business Liability Relief and Brownfields Revitalization Act.” This act provides federal EPA liability protection for innocent landowners who take title to a brownfield property but had no prior relation to that property, owners of contiguous properties that may find contamination coming onto their property from another source, and prospective purchasers that want to be assured that they are not assuming any liability by buying and working to improve a brownfield. This Act also assures owners who have cleaned up their properties according to Pennsylvania Act 2 standards that they need not worry that the federal EPA will pursue them for any federal enforcement action relating to that property.

The issue of mitigating legal risks associated with brownfields redevelopment that these Pennsylvania and federal laws provide is critical because it removes a cloud over brownfield properties that previously hindered interest by “innocent” private businesses, lenders, developers, and local governments not wanting to assume any risk or take on liability for any real or perceived contamination caused by others. While not airtight in every case, it appears that the new federal law is a big step forward toward removing some of the legal barriers that have continued to deter investment in brownfields.

Financial Incentives

At the same time Pennsylvania passed Act 2, it also passed Act 4, which established the Industrial Sites Reuse Program through the Department of Community and Economic Development (DCED). This program

Financial Opportunities and Incentives:

- BIG—Brownfields Inventory Grants
- ISRP—Industrial Sites Reuse Program
- Infrastructure Development Program
- KOZs—Keystone Opportunity Zones
- Key Sites Initiative
- “Growing Greener” Initiatives

To learn more about these programs contact: 717-787-6264 or landrecycling@dep.state.pa.us.

provides grants and loans for environmental site investigations and cleanup—up to $200,000 for investigations and $1 million for remediation (per project per year)—to targeted communities that meet certain distress criteria. The scope of work for the intended investigation or cleanup must first be approved by the PADEP to assure that the approach meets technical requirements. Projects do not need to be on an Act 2 track to be eligible—funds are available to encourage cleanup of former industrial sites for any reuse, remove asbestos from buildings, remove underground storage tanks, and eliminate tire piles.

PADEP has also initiated the BIG program—Brownfield Inventory Grants—that provides grants to municipalities, counties and development authorities to inventory brownfield properties in their area and submit them to an online property search list called PA SiteFinder.

On the federal level, EPA has taken a leadership role over the past five years in providing Brownfield Pilot Grants of $200,000 for planning and site assessments by local governments, states, and tribal governments. Cities and counties throughout Pennsylvania have taken advantage of this program. The new EPA “Brownfields Revitalization Act” authorizes $200 million per year for the next five years for brownfield programs, to be used for Phase I and II assessments, brownfield site inventories, site remediation, and establishing revolving loan funds that can be lent out to private or non-profit developers for brownfield projects. Again, the reuse can be creating new jobs, housing, or creating open space and recreation. Regulations and applications for these federal funds are anticipated to be advertised in Fall 2002. In addition, other federal agencies such as HUD and EDA offer grant programs that can be used specifically for aspects of redeveloping brownfield sites.

Also, on the federal level is the Brownfields Tax Incentive (Taxpayer Relief Act of 1997) that affords private redevelopers who purchase previously contaminated property the ability to lower their taxable income by deducting all expenses for investigations and cleanup in the
year incurred, rather than having to capitalize these costs over several years. Initially, this credit was only available for targeted areas; however, that restriction was lifted in 2000 and the credit was extended through January 1, 2004 (H.R. 4577). The Bush Administration has proposed to make this tax incentive permanent.

On the private financing level, there is a new public purpose community development initiative in the planning stages—the development of a lending vehicle to provide loans for remediation of contaminated properties. The new entity, Financial Resources for the Environment, would review loan applications referred by banks and take in direct applications from property owners and developers seeking to develop or expand on brownfield sites. The objective of this financing vehicle is to fill a gap in financing brownfields that the traditional lending market finds too risky and does not have the expertise to be able to evaluate properly. The PADEP has been supporting the development of this new entity in an effort to spur the redevelopment of Pennsylvania brownfield sites.

Roles Municipalities Can Play

Municipalities can play a range of roles to support and stimulate brownfields redevelopment, including:

- Developing an inventory of brownfield sites in the municipality or county that can be used to set priorities for public attention and redevelopment and for marketing sites to private businesses and redevelopers.
- Conducting Phase I and Phase II investigations on brownfield sites to provide information on environmental risks, costs of cleanup, and prospects for reuse. This information would be useful in order to develop a reuse strategy.
- Acquiring brownfield sites and stabilizing them in order to, at a minimum, remove public health concerns and blight conditions. More aggressive steps could be taken to investigate...
and remediate a site in order to gain an Act 2 liability release and ready a site for redevelopment.

- Establishing a one-stop shop for brownfield site information, work on regulatory concerns for specific sites, market sites, and facilitate redevelopment and acquisition by others.
- Providing grants and loans to private businesses and community development organizations to facilitate their redevelopment of brownfield sites.

Communities in Pennsylvania are playing all of these roles in their attempts to provide leadership and support for tackling brownfields.

Success

When success stories about redeveloped brownfields are cited, they typically highlight both the new use—the bike trail, the new golf course, the affordable housing project, the jobs created, the new office complex, as well as the environmental technology that was used to resolve the contamination problem—the geosynthetic cap, bioremediation, hot spot excavation, phytoremediation, groundwater pump and treat system, vapor extraction system. There is great pride that these properties were brought back to health and renewed. This environmental cleanup process is in itself an economic engine. The many opportunities for brownfield redevelopment—whether driven by the private or public sector—are creating the energy and pressure for new and less costly investigation and remediation technologies to be developed by environmental engineers, insurance products to be developed by environmental insurance companies, and for lawyers to be creative about resolving legal liability issues. Jobs are being created in engineering firms, law firms, planning and hazardous materials remediation firms—the brownfields industry is a source of community economic development in itself.

There is no question that there is a learning curve if municipal officials want to understand the issues around brownfields. The good news is
Examples of Pennsylvania sites cleaned up and reused:

1. Armstrong County—AMCO
This key site is an abandoned industrial tract along the Allegheny River. The owner leased the property to AMCO for a machine shop and foundry operation. After six years, AMCO filed for bankruptcy and abandoned the site. The owners agreed to sell the property to the Borough of Ford City.

At the time the site was abandoned, various hazardous substances were discovered that could pose human and environmental risks. DEP conducted a response under the Key Sites Initiative that included site characterization and disposal of hazardous substances. The Greater Ford City Community Development Corporation is planning a redevelopment of the site that will be the first reclamation project in Armstrong County to convert industrial land to greenspace.

2. Bucks County—Corell Steel
The Bucks County Redevelopment Authority (BCRA) acquired the Corell Steel site, located in an Enterprise Zone in Bristol Township, and is working with DEP to facilitate reuse of the property. Abandoned waste slag and storage tanks, and contaminated soils and groundwater were existing barriers to redevelopment. DEP conducted a remedial survey and prepared an environmental report for the Redevelopment Authority’s use.

The results of the investigation indicated that no significant contamination was present. Once the BCRA receives a clear title to the property, a remedial plan will be implemented, involving some demolition of structures and removal of contaminants. When complete, the BCRA hopes to negotiate the sale of Corell Steel for reuse.

3. Northampton County—BRW Realty, Inc. Site
In Bangor, Northampton County, an abandoned three acre site was acquired by BRW Realty, Inc. from the county in May 1999. The property housed a textile manufacturing, dyeing, and finishing operation for 45 years, and included fire-damaged structures, as well as leaking underground fuel tanks, dye pits, transformers, and wastewater discharge areas.

In cooperation with Northampton county, Bangor Borough, the Lehigh Valley Economic Development Corporation, the Lehigh Valley Land Recycling Initiative, and DEP, a remediation project was started. Deteriorated buildings, contaminated soil, transformers and storage tanks were removed, and the site is now on its way to productive reuse.

Funding was made available by Key Sites Initiative and Industrial Sites Reuse monies through a grant to Northampton County. According to BRW Realty, Inc. President Steve Skrapits, the company would not have sought the property for redevelopment without the environmental assessment and clarification of risks and responsibilities provided by DEP’s Land Recycling Program.

Pennsylvania cleanups as of the publishing of Pennsylvania’s Land Recycling Program’s Annual Report 2001:

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that there are many examples of successful projects that have gone through the Pennsylvania regulatory system and been assisted with funding. There is also a cadre of seasoned legal and engineering professionals developing a solid track record in brownfields redevelopment who can be called upon for assistance.

7.8.2 Infill Development

Gianne Conard, former president (2001), Pennsylvania Chapter of the American Institute of Architects

For centuries our cities and towns have been the center of civilization. As our society has moved outward, we have compromised the strength and value of our town centers. Rebuilding our older communities on tenable, economically strong foundations is critical to our economic and environmental health. It will reduce the need for new infrastructure (roads
Society Hill, Philadelphia—A historic district converted from a deteriorated residential and commercial area to a highly valuable residential neighborhood through an aggressive urban renewal program in the 1960’s and 1970’s that attracted significant private investment.

“Martin Luther King Housing: By overlaying mixed income residential development on an existing neighborhood with its own social and cultural infrastructure, activities such as shopping and entertainment are already in place.”

Our older cities and towns are under great pressure to prove themselves economically, socially, and politically. They have great potential in terms of quality of life, sense of place, and accessibility to work and play. Revitalization of these places also benefits the environment by using and improving existing infrastructure, reducing levels of pollution from traffic, and reducing the amount of farmland and rural lands that are consumed for new development.

The primary approaches to urban revitalization are infill and brownfields redevelopment. The new Kimmel Center in Center City Philadelphia, the new stadium for the Pittsburgh Pirates greeting the downtown across the Allegheny River, and other high profile projects help to make vibrant downtowns that attract residents and regional visitors. But they are not necessarily the projects that have a direct impact on the lives of neighborhoods and local communities, and that can mend the fabric of our cities. They are also not typical of the development in communities around the Commonwealth.

It is the smaller, more discrete projects that ultimately affect the way we live. There are many good examples of this type of development in Pennsylvania. A brief study of a few communities and the projects in them can bring to light the advantages and opportunities they afford these communities. These projects are representative of the community involvement, complex funding, and public/private partnerships that are often required to realize their completion:

**Philadelphia.** Like most major cities, Philadelphia comprises many smaller communities, each of which has an identity, a shopping district, and a cultural base. It is in these neighborhoods that Philadelphia developers have been practicing infill development for several decades now, not as part of a “smart growth” strategy, but simply as a part of the natural
evolution of the city. The redevelopment of Society Hill, begun in the 1960’s, is an example of this evolution. A part of the city that had become unsightly and depressed has transformed in the past four decades into one of the most sought after urban neighborhoods in the country. That growth has now expanded into other neighborhoods, such as Queen Village and Bella Vista in South Philadelphia and Old City and Northern Liberties in North Philadelphia. Projects, both private and public, are being developed all over the city.

Just a few blocks west of Bella Vista is the site of Martin Luther King Plaza, an urban revitalization project for the Philadelphia Housing Authority and Uni-Penn, LLC, designed by Torti Gallas and Partners • CHK, architects and urban designers. Constructed on the grounds of four demolished public housing high rises, it will restore the site to the scale and street pattern of the Philadelphia row home, while providing infill housing in adjacent blocks. The project combines both rental and “for sale” units. It is funded by a complex package of monies from Hope VI (HUD), state tax credits, and city funds (for land acquisition and infrastructure). Comprising private and public participation, market rate and subsidized housing, as well as a renovated and expanded community center, this project is a creative example of mixing economic groups within a defined neighborhood. The project also incorporates provision of economic and social support services to those who need them. The community center was preserved in memory of a speech by Martin Luther King, after whom the center is named, given on the steps in the 1960’s. By overlaying the project on an existing neighborhood with its own social and cultural infrastructure, activities such as shopping and entertainment are already in place. Its adjacency to the Avenue of the Arts, the new High School for the Creative and Performing Arts, and the hip retail district on South Street, puts this project in the middle of a healthy and expanding center city.

There are many other examples of efforts, both public and private, to revitalize Philadelphia’s neighborhoods—from Mayor Street’s new city-wide
Main Street Village is only one example of the public/private partnerships underway to revitalize Downingtown. Other Downingtown projects include Kardon Park, an industrial site given to the borough, which is being redeveloped as a community park, and which is currently being remediated through the Industrial Site Reuse Grant program; and the revitalization of the downtown business district with a $500,000 Communities Opportunity Grant and a $350,000 Community Development Block grant (CDBG).

While Philadelphia tries to hold and increase its population, outlying communities in Chester, Delaware, Montgomery, and Bucks Counties complain about an excess of development, traffic, and pollution. Through the efforts of individuals and groups across the region, both problems can be addressed as one, bringing residents back into the city, where there is an infrastructure designed to handle them, while helping to retain the bucolic surroundings of suburban and rural communities.

Downingtown. 30 miles west of Philadelphia is the borough of Downingtown in Chester County. A town of just under 7,600, with extensive abandoned industrial sites near the middle of town, Downingtown has learned to work with multiple partners in the public and private arenas to obtain funding for planning and remediation work, and to see projects built.

One completed project is Main Street Village, an old 22 acre industrial site adjacent to downtown, which was successfully remediated through Neighborhood Transformation Initiative and the efforts of the Philadelphia Planning Commission, Representative Robert Borski, and the Pennsylvania Environmental Council to redevelop 11 miles of the Delaware waterfront, to the work of Philadelphia Neighborhoods First and many community development corporations throughout the city. The Center City District, a private-sector-directed municipal authority supported by mandatory assessments on real property, has made great strides in promoting revitalization of the inner core. The University of Pennsylvania, the city’s largest employer, has begun a major renewal program in West Philadelphia, which includes building an elementary school with the school district. Philadelphian, musician, and community builder Kenneth Gamble founded Universal Community Homes in South Philadelphia to create a working model for rebuilding our cities. Architects like John Bower AIA of Bower Lewis Thrower Architects have been involved for over three decades in revitalizing the city, from working with city planner Edmund Bacon in the 1960’s to designing new townhouses at Raymond Rosen Manor in North Philadelphia today.
Governor Tom Ridge introduced the Keystone Opportunity Zones (KOZ) Initiative in 1998. The legislation promotes economic revitalization by offering 12-year tax relief. The following criteria must be met for a community to qualify as a KOZ:

- Provide evidence of adverse economic and socioeconomic conditions;
- Establish a binding public commitment by all taxing bodies;
- Demonstrate ties to regional, community and economic development activities;
- Outline viable reform objectives of regulations;
- Implement educational improvements and crime reduction measurements; and
- Obtain public and private commitment of resources.


the state’s Industrial Site Reuse Grant program for residential development (the most stringent level of remediation). Originally a foundry in the 1800’s, it was the former home of O’Brien Machinery and a Superfund site. The project is based on a preliminary plan by R. Douglas Stewart and Associates, which was used to market the site and create “R-C Infill” zoning designation, allowing 80% residential and 20% commercial development. The project includes a commercial anchor for downtown, connecting the residences and the main street shopping district. It was funded by both private and public dollars, including back tax subsidies from the school district, county, and borough, a lien forgiven by EPA, and $1,000,000 from the Commonwealth.

The site of a Keystone Opportunity Zone (KOZ), Downingtown is on the SEPTA Regional Rail Line and the Amtrak Keystone line between Harrisburg and Philadelphia. In Spring 2000, the KOZ Committee engaged Torti Gallas and Partners • CHK to lead an urban design and planning study for the KOZ area. The process, funded by the borough, DVRPC and Chester County, included design, market, and transportation analysis.

The study had several objectives, including exploring the potential of the KOZ site, enhancing neighborhoods adjacent to the KOZ, using public spaces to enhance and shape future planning and development, and developing a preliminary plan that could be endorsed by civic leaders, public sector representatives, community groups, and the development community. It was also important that the plan be integrated with other planning efforts such as the Strategic Plan for Downtown Revitalization being developed for the borough under funding by Vision Partnerships, a Chester County grantor.

To accomplish these objectives, a four day charrette, or brainstorming, session was organized to define hopes, concerns, goals, and ultimately a vision for the project and the borough. Five schemes were developed for the community to consider, each with increasing levels of development.
Pride in the city’s heritage, architecture, and culture has motivated both public and private sectors to address the economic and environmental health of the city, and to commit to the betterment of the community as a whole.

Currently, the borough is reviewing a proposed pedestrian tunnel with SEPTA, studying the access road into the KOZ, and preparing a unified development plan, based on the community charrette.

Thanks in large part to the efforts of Main Street, Inc, a non-profit economic development corporation that works with the municipality, Downingtown has to date obtained over $5,000,000 in funding from sources as varied as PENNDOT through federal transportation funding, T-21 and CMAQ, and Vision Partnerships. That money has been creatively packaged with other public and private funding, to create both comprehensive plans and real projects. Revitalization of smaller communities like Downingtown can aid greatly in reducing the congestions of our suburbs. The potential for transportation oriented development (see Chapter 7.8.3), which is built in an existing infrastructure area, is enormous, and the attraction of the small town lifestyle is marketable.

York. York is another municipality that has recognized the value and potential of its downtown and its existing infrastructure. Through their Downtown Action Plan and Illustrative Design Guide, the citizens and government of York are controlling their future and starting initiatives to improve the image and quality of public spaces, community amenities, and visitor attractions, as well as to provide new office buildings and housing. They have defined eight key challenges that include: improving water quality in the Codorus Creek (which runs through the middle of town); increasing office development and employment; establishing a unique and positive downtown image; establishing a perception of a safe downtown; and encouraging upper level residential development in the downtown. Pride in the city’s heritage, architecture, and culture has motivated both public and private sectors to address the economic and environmental health of the city, and to commit to the betterment of the community as a whole.

Susquehanna Commerce Center, in downtown York, is an example of what can happen when there is a shared vision for bringing about quality
The Golden Triangle may be home to exciting revitalization, but there are many projects beyond downtown. Once home to powerful steel companies, Pittsburgh has learned how to reuse industrial sites. Examples of brownfield development include Washington’s Landing on Herr’s Island, a mixed use development that required the encapsulation of 17,000 cubic yards of contaminants under the park lands; Pittsburgh Technology Center, a 48 acre industrial site which was developed using $25 million in public funding and $104 million in private funding; and South Side Works, a mixed development across the Monongahela River from the Technology Center. All these projects were the result of the Pennsylvania Land Recycling Act of 1995, public/private financing, and multiple funding sources, including tax incentive financing, and funding from a variety of alphabet soups (IDP, ISP, PIDA, et cetera).

With a commitment to purchase the property from the city’s Redevelopment Authority, Susquehanna hired Wallace Roberts and Todd LLC in the capacity of architects, landscape architects, and planners, and began to plan development of the new 7 acre urban office complex. On the site of the former Columbia Gas Company, adjacent to Codorus Creek, the project comprises two six story office buildings (235,000 sf) with some ground floor retail, a parking garage, a renovated historic building, designed by Richard Levengood and Richard Mula, and surface parking. Adjacent to downtown York, the location provides convenience as well as easy access. York’s “Rabbit Transit” loop around downtown reduces the need for short automobile trips.

The economic impact of this project includes bringing over 600 employees to this part of downtown York, attracting related business needed to serve those new and relocated office workers, increasing property values, as well as the unmeasured impact of future development and revitalization projects. Many of the relocated workers would have been moved to the suburbs if this project had not allowed their employers to relocate to new, larger downtown quarters.

As both a major tenant in and developer of the site, Susquehanna
Pfaltzgraff Co. has demonstrated a commitment to the health and economy of York. By introducing a technologically advanced complex, they have helped to bring York into the 21st century and through promotion of the downtown location have announced the relevance of an older community to today’s society.

Pittsburgh. Always a city of neighborhoods, Pittsburgh has successfully revisioned itself from a gritty steel town to a clean and healthy urban environment. Building on the ruins of manufacturing technology, Pittsburgh today is a collection of 88 vibrant, vital communities. There have been extensive discussions, presentations, publications, and planning proposals for Downtown Pittsburgh, including the work of the Downtown Planning Collaborative, which has endeavored to articulate a vision of what the downtown should become; the ‘Plan B’ development with PNC Park and the Steelers stadium along the waterfront; and Urban Design Guidelines from the Department of City Planning.

While the brownfields discussed in the sidebar are found along the river in former industrial areas, there are other revitalization projects in the middle of existing communities. Crawford Square represents a landmark event in the process of rebuilding Pittsburgh’s Lower Hill District. Once viewed as dangerous and undesirable, the Hill District now has a new role as an attractive and appealing front door to the whole city. Planned and designed by Urban Design Associates (UDA), this once desolate area has been revitalized. By creating a series of streets and public spaces in what was a vacant wasteland, UDA instilled a sense of community and place for the new residents. By creating new linkages to other parts of the city, the designers were able to integrate the Hill District into the life of the city.

It is not only large scale projects that restore the urban fabric. Firms such as Strada, EDGE Architecture, and IAS have designed smaller infill projects, which are also vital to a community’s well being. South Side Local Development Corporation (SSLDC) has developed several projects on the
By strengthening the economic base and returning population to existing communities, we are helping to protect our air quality, our waterways, and our green spaces.

Pittsburgh is proof that cities can transform. Crippled by the demise of the steel industry, the city has capitalized on its other assets—the waterfront, the natural landscape, and the high tech potential, manpower, and knowledge of local institutions—to create a renewed spirit and sense of place.

Erie. While the waterfront in Erie has been experiencing a renaissance since the late 1980’s, more recently other parts of the city are being revitalized. In the downtown area just east of State Street, private development has spurred public development. Lovell Place, an old washing machine factory, which has been renovated by Steve McGarvey of Signature Management, is a mixed use development with ground floor commercial (bookstore and restaurants), new state offices, and residential units. Since that project was started, a nearby block of Redevelopment Authority land has been developed for low to moderate income housing. The fifteen houses, designed by Crowner King Architects, were developed as lease-to-purchase housing by Erie’s non-profit housing agency, Housing and Neighborhood Development Services, and were funded through low income tax credits and HUD’s Home Investment Partnership Act.

Along State Street itself are new restaurants and entertainment venues within walking distance of the new residences. The Erie Civic Center Complex, which serves as the home to minor league hockey and baseball teams, is located four blocks north of Lovell place and one east of State Street. Closer to the waterfront, the former Boston Store on State Street...
has been renovated for ground floor commercial and 120 residential rental units on the upper levels; and the old Warner Theater is slated for a major renovation.

Just a few blocks east on Parade Street, the merchants have banded together to promote improvements on their street. PNC Bank is leading the initiative, which is to include renovation of old buildings, streetscape, facade and sidewalk improvements, as well as a loan program. Application for a new enterprise zone, which will include this initiative, is underway, while some sections of Parade Street are already parts of existing KOZ.

Conclusions. These are just a few of the many examples of efforts to revitalize cities and towns in Pennsylvania. There are many others across the state. These examples demonstrate the continuing viability and desirability of our older communities. They also show the need for creativity on the part of the municipalities, the community, and developers. Financing, zoning, and other approvals must be in place for a project to be a success. Community support is crucial, as is awareness of and interface with other development efforts. Federal, state, and local resources are available; finding and packaging those resources is time consuming, but, as these examples show, the results are worth it. The impact on the local community is evident. What might not be so apparent, however, is the broader impact these projects can have in the regional context. By strengthening the economic base and returning population to existing communities, we are helping to protect our air quality, our waterways, and our green spaces. We are providing people with the opportunity to live closer to work, shopping, and entertainment. We are returning to Main Street and away from the Mall, while still encouraging the growth and development that our economy and culture need to thrive.

If you are interested in developing land in an older community, contact your local planning commission, redevelopment authority, or community/economic development corporation for information. They will know
what properties are available for development, or put you in touch with those who do, and suggest how proposed development can fit into the comprehensive plan.

7.8.3. Transit-Oriented Development

Patrick Starr
Vice President for Southeastern Pennsylvania
Pennsylvania Environmental Council

Great Places with Transit: Once the Norm, Is It Time to Go Back to the Future?

Communities have been clustered around transportation throughout human history—from the first paths and crossroads to today’s highways.
“...DVRPC has nearly completed a study, Transit Village Design in Burlington County, that will encourage transit-oriented development (TOD) along New Jersey Transit’s Southern New Jersey Light Rail Transit System (SNJLRTS). The transit system will connect Trenton and Camden and is scheduled to open in 2003.

The implementation of the SNJLRTS is an attempt to restore a bit of history to the towns that grew up along the old Camden and Amboy Railroad, constructed in the 1830’s. In the nineteenth and early twentieth centuries, many communities along the Delaware River were vibrant centers with a mix of compact residential neighborhoods, downtown business districts, and industrial facilities. Post-World War II suburban development, along with a decline in industry and population, contributed to the end of passenger service in 1963.

The DVRPC study, which began in 2000, promotes TOD as a land use strategy...The goals of the study include encouraging TOD around study stations and benefiting the surrounding host community, while promoting ridership along the rail corridor...

...DVRPC made several recommendations for implementing TOD, including zoning and master plan changes, identification of development opportunity areas, access improvements, and funding resources.”

Excerpted from DVRPC News—The Newsletter of Delaware Valley Regional Planning Commission Winter 2002. For more information on this study, contact 215-592-1800 or visit www.dvrpc.org.

Since the first horse drawn trolleys and steam powered locomotives, communities have been built around transit. Many of Pennsylvania’s greatest places were built around transit: towns large and small grew around train stations, or the ubiquitous street car lines of the early 20th century. From Philadelphia’s Main Line to Squirrel Hill and from Chambersburg to Williamsport, early transit infrastructure shaped our communities.

One objective of this manual is to revive the lost art of creating these places—“back to the future.” Society has turned its back on transit for more than sixty years and invested overwhelmingly in auto-dependent communities. A major consequence is sprawl, the major symptom is congestion, and the legacy is places where, as poll after poll has confirmed, Americans’ dreams turn to frustration, as the rural or small town character they sought is overwhelmed by development and traffic.

Americans love vibrant towns with sidewalks filled with people to watch, stores to browse, and lots going on. We take our vacations in those places. Disney World with its Main Street, Cape May, New Hope, Annapolis, Paris, Rome. The question is: if we love these places so much, why aren’t there more of them? Why doesn’t the “marketplace” build them?

The answer: building great places isn’t easy; building them with transit can be even more challenging in today's political climate. The barriers to these types of places run the gamut from lack of zoning to lack of financing to lack of inter-governmental cooperation to citizen hostility based on opposition to density.

Basic Design Principles of Transit-Oriented Development (TOD)

The central idea of TOD is to allow people to drive their cars less by making the use of public transit, walking, biking and other alternatives to automobile use convenient and easy. TOD accomplishes this by provid-
ing attractive mixed-use development in close proximity to a public transit station or stop, as well as enhanced auto, pedestrian, and bicycle connections.

The important design elements of TOD are as follows:

- **TOD is mixed-use in character**: Depending on size, it may combine residential, retail, and commercial uses with public open spaces. These mixed uses add to the convenience of TODs, making it easy for people to run errands, socialize, and meet basic needs without having to use a car for every trip.

- **TOD is compact and centered around a train station, bus stop, or other transit stop**: Lot sizes are smaller than those in suburban-type development, and often apartments or offices are located above retail spaces. Usually, all parts of the development are no more than a half-mile from the transit stop (about a 10 to 15 minute walk). Secondary areas of less compact homes and low-intensity businesses may lie beyond the compact half-mile radius of a TOD, up to one mile from the transit stop—an easy bike ride.

- **TOD is designed to be people-friendly**: Proper lighting, safety, and aesthetics are incorporated into the design to make people feel comfortable walking between the transit station, residential areas, and commercial areas. Ideally, buildings are pedestrian in scale, rather than high-rise.

- **TOD incorporates open space whenever possible**: Public open space is an important component of TOD. Some TODs contain a central park or public square; smaller TODs include attractive landscaping.

- **TOD utilizes a grid street pattern and incorporates bike lanes**: A grid-like pattern makes it easier for cars, bikes and pedestrians to access the transit facility. Streets should include bike lanes separate from pedestrian and car lanes when possible.

“Over the past few months I’ve visited a number of exciting new development projects around the country. These include traditional neighborhood developments... I’ve also toured revitalized downtowns... and observed the growing popularity of transit-oriented development...

Despite these bright spots, however, the vast majority of new development is still the same old, single-use, land-consumptive, ‘Anywhere USA’ type development that has been the norm since the 1950’s...

... there are alternatives to sprawl that are more attractive, more efficient, more profitable, and more environmentally sensitive... So why is the development paradigm so hard to change?

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... seven key barriers to development:

1. Inflexible Local Regulations
2. Outdated Market Perceptions
3. High Development and Process Costs
4. Financing by Formula
5. Proposing High Density Without Amenity
6. Public Infrastructure Subsidies
7. Low Expectations

Fortunately, the barriers to better development... can be overcome. Community by community and project by project, elected officials, builders, and bankers are all beginning to recognize that there is a market for projects that make more efficient use of land, reduce infrastructure costs, increase transportation choices and which are more respectful of community character and natural resources. “


An “Easy-Bake Recipe” for TOD in Pennsylvania

One thing is certain, TOD is a huge real estate trend. It is gathering momentum in unlikely places such as Salt Lake City, Denver, and Houston. In those places, transit-oriented development is a matter of regional and local policy. Specific programs have been established and funds are flowing to facilitate new development in support of transit and vice versa.

In January 1999, funded by a grant from the Delaware Valley Regional Planning Commission, the Pennsylvania Environmental Council issued a report outlining the barriers to transit-oriented development (TOD). This report was the culmination to three years of research and discussion. Reviewed and approved by an advisory group consisting of leading planners, transit, and development experts, the report outlined 17 barriers to TOD in southeastern PA. Key barriers included:

1. The difficulty of coordinating actions by municipalities, transit authorities, and private developers.
2. Lack of community understanding and support.
3. Lack of supportive zoning and land use policies.
5. Lack of funds for capital improvements and facility maintenance.
6. Market skepticism about demand for TOD.

In response to these barriers, a concept for state legislation that would facilitate the formation of Transit Redevelopment Investment Districts (TRID) was put forth. The concept drew on decades of experience with community redevelopment, and because time is money, placed the primary burden of “pre-development” costs on the public sector players. It relies on private developers to build the development delivering both riders and tax ratables. In exchange, tax payments from future development help to pay down infrastructure investments by the public sector.
Partnerships Are Key

The TRID concept defines a relationship between a municipality, a transit authority, and a developer. Borrowing from the Commonwealth’s redevelopment process, the local government would be in the driver’s seat. It would designate an area within a half-mile or less of a transit stop to be a TRID; yet unlike the redevelopment process, TRID designation would come without the “baggage” that “blight” certification brings. Through a public process of planning and discussion, community education can be conducted and community support for TOD generated.

Supportive Land Use Policies, Accessibility & Land Assembly

Once the TRID is established, several barriers to TOD could be tackled in quick order. First, the local government could assess the existing zoning and subdivision ordinances and alter these accordingly to accommodate the desired redevelopment. Second, the municipality and transit authority could coordinate capital investments in the transit infrastructure and enhance access to the station for all travel modes. Auto, bicycle, and pedestrian connections to the station and adjacent development parcels would necessarily be enhanced. Third, the transit authority or redevelopment authority would be empowered to assemble land for both transit use and transit-related development. If warranted by extreme circumstances, eminent domain could be exercised to assemble the necessary land.

Public Amenities and Enhanced Financing

Because transit stations will serve, in effect, as the “front door” to private development, public amenities and maintenance must be of the highest quality. Parking facilities, bike storage, the station facilities, landscaping, and public open space must meet the highest standards to create a safe, attractive environment that draws people. Traditionally, funding such
Case Studies: Phoenixville and Cheltenham

Phoenixville: Model Transit-Oriented Development Proposed

The Borough of Phoenixville, in Chester County, Pennsylvania, could be a new “hot” development site of the 21st century. The future location of new homes, retail, and office space lies not on the outskirts of town, but downtown on the site of the former Phoenix Iron and Steel Works. On a stretch of land adjacent to a proposed train station on the Schuylkill Valley Metro and bordered by the French Creek, Delta Properties has proposed the French Creek Center, a large mixed-use infill development—a model transit-oriented development (TOD).

In the late 1980s, Phoenixville was a poster child for the post-industrial age of the Rust Belt. The mill, situated at the center of town, had sat dormant since 1991, downtown retail was faltering, and property values were falling. What’s more, neglect began to mar some of the attractive residential districts—especially the North Side. Meanwhile, development had boomed all around the borough. Large headquarters for pharmaceutical companies had been built nearby at Route 422 and PA Route 29, while big-box retail (a style of development in which freestanding buildings house large retailers like Home Depot or Walmart) had sprung up in adjacent Schuylkill Township.

However, a burst of civic energy, sparked in part by the Landscapes 2020 Comprehensive Plan—the long-range plan for the growth and development of Chester County—brought about the Vision Partnership Task Force, a group whose mission was to plan for the revitalization of Phoenixville. With the equivalent of $20,000 in service from the Chester County Planning Commission and energetic community leadership, the Task Force pieced together a vision of how the Iron Works site could link the old downtown and the North Side and attract new jobs and businesses that would earn the borough tax dollars.

As the real estate market heated up in the 1990s, rumors of likely redevelopment on the Iron Works site began to circulate. A new owner, the Phoenix Property Group, assembled 120 acres, and in 1999 proposed a suburban-style corporate office park, a corporate long-stay apartment complex, and suburban-style townhouses. Borough leadership, feeling that the plan did not match their vision for downtown Phoenixville’s rebirth, prepared for a fight with the developer, and tensions began to rise.

Late in 1999, the Chester County 2020 Trust, an organization that brings together groups and individuals committed to managing escalating growth and sprawl in Chester County, brought Klaus Phillipsen, a renowned town planner from Baltimore to Chester County. The Trust arranged a meeting for Phillipsen with the developer and members of Phoenixville’s Vision Partnership Task Force, including members of borough council and the planning commission. After discussions, the developer decided to hire Phillipsen to revise the proposal to incorporate traditional town planning principles and to convene a presentation with borough officials and key stakeholders to float the revised plan informally before seeking official approvals.

The January 2000 presentation was a great success, as borough officials saw their desires incorporated and concerns addressed. Central to the new plan was the integration of the development with an attractive transit station, the dedication of 39 acres of parkland along the French Creek, and careful connection to the downtown and the newly restored Phoenix Iron Works Foundry Building.

At a special planning commission meeting, the developer submitted a carefully crafted unified development master plan and a zoning ordinance proposal for the needed changes to the present ordinance that will allow the project to be realized. According to John Messina, the chair of Phoenixville’s planning commission, “Throughout the planning process, we had public meetings, and the presentation of the master plan was televised, so the community has been very involved. All of the feedback I’ve received regarding the plans and the zoning overlay has been great—everyone in the borough is excited about this long-overdue redevelopment, which has been in the works for the past 12 years.” In addition to working closely with the community, the borough will seek the support of government agencies in the form of funding for infrastructure, including transit, roads, and parks to enable the full realization of the plan.

The development design is totally transit-oriented and pedestrian friendly. It is also mixed-use in character, with 800,000 square feet of commercial space (to provide roughly 5,000 new jobs), 500 units of corporate apartments and townhomes, and 50,000 square feet of retail that may include more apartments and/or live-work units on the upper floors. The proposed Schuylkill Valley Metro station will be no more than a half-mile from all parts of the development.

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Lest skeptics wonder about the economic prospects of such an ambitious and unusual infill development, research performed by Zimmerman & Volk Associates on behalf of the GreenSpace Alliance (a project of the Pennsylvania Environmental Council) and 10,000 Friends of Pennsylvania predicted brisk sales of “New Urbanist” style residential units at the site. (New Urbanist principles encourage mixed-use, compact, pedestrian-friendly development, including TOD.) “By providing a range of newly constructed housing alternatives, a traditional neighborhood development on the site will not only retain existing Phoenixville households but also attract new households that might otherwise have settled in exurban greenfield locations,” said Todd Zimmerman of Zimmerman & Volk. “Younger families will be the most common household type, but some empty-nesters and retirees will also be attracted to the new neighborhood.”

Cheltenham Township: Enhancing Commerce with Transit

Many communities in southeastern Pennsylvania grew up around transit. Often, these areas developed as “main streets” named for a train station stop. Hence, Cheltenham Township, which lies adjacent to Philadelphia to the north along SEPTA’s R-1, R-2, R-3 and R-5 lines, contains the villages of Glenside and Elkins Park, among others.

Cheltenham Township has been pursuing transit-friendly development as part of a community revitalization plan, not with the express purpose of increasing transit ridership, lowering automobile air emissions or decreasing congestion on nearby Route 309. Instead, the township’s goals are grounded in its own needs. “The Commissioners and staff saw the plan as a means to boost commercial areas and help to create tax ratables. We’ve become concerned about relying too much on our residential tax base,” says David G. Kraynik, Township Manager. The plan cites an enhanced quality of life for township residents as another goal.

The township’s commitment was such that it obligated general revenues to hire a consultant team led by Carter van Dyke Associates (CVDA), planners and landscape architects, together with Urban Partners (economic planners), Gannett Fleming (transportation planners) and Runyan & Associates (architects). CVDA is a consulting firm based in Doylestown, with extensive experience in crafting sensitive town plans with a strong slant toward pedestrian-friendly neo-traditional design. “Early on, Cheltenham Township recognized the needs and the benefits of reinvesting in its transit centers, commercial centers and infrastructure,” says the firm’s president Carter van Dyke. “A coordinated planning approach enables the Township to strengthen neighborhoods and commercial centers simultaneously.”

Five areas in the township were studied—Glenside, Elkins Park East and West, Cheltenham Village and Cheltenham Avenue. For each, the planning team held three public meetings to develop “community goals.” Of these, the Glenside recommendations are the most ambitious, including:

- Creating commercial destinations that meet community needs.
- Reducing residential taxes by expanding commercial uses.
- Reinvesting in infrastructure—streets, sidewalks, trees, lighting.
• Slowing traffic and creating safer streets.
• Creating places for people to meet, walk, bike, and access transit.

The actual conditions in Glenside were essentially the opposite of these goals—too few commercial destinations, a lack of tax-base appreciation, an aging infrastructure, fast-moving traffic and the lack of a clear focal point. The historic focal point, the train station, once fronted onto a lovely town green, long since paved for commuter parking.

To make the station area a focal point again, a critical step is to turn SEPTA’s surface parking lot back into a town green. The key to this is constructing a 450-car parking structure with ground floor retail to provide more spaces in a “shared” facility behind the station. This frees land for the erection of a large restaurant on the Easton Road side, a farmers’ market, and an attractive “kiss & ride” drop-off between the restaurant and the station. The market would benefit from the high-visibility location and the flow of passengers into and out of the station. The restaurant, too, would be highly visible and very accessible to the parking structure, and its use of the parking would be heaviest in the evening when demand for SEPTA commuter parking would be lowest. Additional restaurant sites would be created across from the northbound station. All told, the elements at the station area are designed to support each other in a synergistic way.

Other interventions are proposed for the commercial corridor along Easton Road, including façade enhancements and reconfiguring of on- and off-street parking to increase capacity and improve access. Most importantly, traffic lanes would be narrowed slightly, intersection curb bump-outs would be installed, textured crosswalks would act as “rumble strips,” and planted medians would be introduced to slow traffic and enhance the pedestrian environment. These measures take advantage of the latest know-how about slowing cars through physical design—a practice known as traffic calming. Other traditional streetscape improvements such as the planting of trees and flower beds, the erection of banners and the improvement of lighting would be the “icing on the cake.”

One specific outcome of the study was that Cheltenham approached SEPTA about building the mixed-use parking structure, and following a determination of parking demand, SEPTA has agreed. Now, the township, Montgomery County, and SEPTA are each chipping in to a $45,000 feasibility assessment to determine the actual size, operation, retail mix, management, and funding for the facility, with the intention of pursuing federal dollars.

“I think that our plan and community commitment has driven the other players and has unlocked resources we would never have otherwise obtained,” says Kraynik. “From the beginning, we saw our expenditure of general revenues for the plan as an investment in our future. We are already seeing returns.”
improvements has been tough, especially the transit facility improvements. Through a “value capture mechanism” enabled in the TRID law, tax revenues from future development could be dedicated to paying for these, creating a funding stream to amortize capital debt.

Market Skepticism

Without a doubt, the type of development proposed has to be in line with market dynamics. As part of the TRID designation and planning process, market demand analysis could be performed as a part of the local planning process. Additionally, at the time that a prepared site is put out to bid among developers, developers could perform their own market research. Location is still the key to market demand. Fortunately, transit accessible locations are increasingly popular among all sorts of users due to sprawl and congestion. The proof is in the pudding; where similar actions have been taken—extraordinary development has resulted in areas as disparate as suburban Washington D.C., downtown Atlanta, and exurban Portland, Oregon.

With more than a dozen public transit agencies statewide, including SEPTA and Pittsburgh’s Port Authority (not to mention Amtrak), extensive transit infrastructure exists all across Pennsylvania. However, many municipalities lack the skills and resources to put together complex redevelopment projects by themselves. The Transit Redevelopment Investment District concept could be the key to fostering this type of development opportunity. The TRID concept has already been introduced in the General Assembly in 2002.

7.9 Sharing of Tax Revenues and Fees

By: Joanne R. Denworth

One of the special tools available to municipalities that adopt a multimunicipal plan and implementing ordinances is the ability to share tax revenues and fees through cooperative agreements. (See Section 1105(b)(1):

MPC Section 1105(b)(1):

Participating municipalities that have entered into implementation agreements to carry out a county or multimunicipal plan as described in this article shall have the following additional powers:

(1) To provide by cooperative agreement for the sharing of tax revenues and fees by municipalities within the region of the plan.

MPC Section 619.2(c)(2):

When municipalities adopt a joint municipal zoning ordinance:

(2) The municipalities may, by agreement, share tax revenues and fees remitted to municipalities located within the joint municipal zone.

7.9 Sharing of Tax Revenues and Fees
“Today’s Winner’s Become Tomorrow’s Losers”—David Rusk, former mayor of Albuquerque and land use expert, has analyzed the fiscal and social disparities among cities and older and newer suburban communities in relation to current development patterns. In the series of research presentations for many areas of the country titled above, he looks at the changing fiscal health of communities as development moves further out from core cities to first, second, third, and fourth ring suburbs. One such study done for the Reading, Berks County region in 1997, shows how the mean household income as a percentage of the regional mean and property tax valuations, which declined significantly from 1970 to 1990 in Reading and the region’s older boroughs, were also beginning to decline in the first and second ring suburbs. During this time, urban population grew by 16% while urbanized land grew by 81%, and per capita consumption of land by 56%. 1992 to 1997 census figures showed these trends continuing with increases in property values in third ring and exurban townships and further declines in the older developed areas.

To address the negative social, economic, and fiscal impacts of these trends in metropolitan areas, Rusk prescribes three major reforms: regional land use controls, regional tax base or revenue sharing, and a requirement for “fair share” mixed income housing in all new construction.

In Article XI, the MPC gives counties and local governments the tools to address these issues themselves by empowering them to do regional planning and to carry it out through consistent local ordinances and tools such as tax revenue sharing.

Section 619.2 (c)(2) gives similar authority to municipalities that have adopted a joint zoning ordinance. (See sidebar.)

This tool is potentially powerful, and can be used in a variety of ways. Some of the options are:

- A fiscal disparities approach that provides for sharing general property or income taxes or both among municipalities participating in a multi-municipal plan through an administrative process provided for by intergovernmental cooperative agreement. The sharing could be based on a fiscal formula that calculates a percentage of the entire tax (e.g., 10%) and some percentage of the growth in tax revenues over a base period to be paid into a common pool, and distributed to participant municipalities on a formula basis, usually based on income or tax capacity of each participant.

- A variation of this approach is limited to sharing of particular tax revenues or fees, such as property tax revenue from industrial or commercial development for general or specific purposes.

- An approach that is limited to sharing of tax revenues or fees from a particular development project or specific nonresidential plan area for commercial and industrial development that will impact and benefit the participating municipalities

Why Do It?

Many of the reasons given in Chapter 1 for planning with neighboring municipalities are likely to lead municipalities planning together to consider sharing of tax revenues and fees. Perhaps the primary concern of municipal officials is to assure a balance between existing and new development and adequate tax and other revenue to sustain the economic vi-
In multi-municipal planning, land uses and tax revenues can both be shared so that, for example, one township contains the schools (which are supported by tax revenues) and the other contains the shopping and office centers (which provide the tax revenues). The arrows on this illustration symbolize the sharing across the municipal boundary line.

Sources:
Baker and Hinze, Minnesota’s Fiscal Disparities Programs, February 2000.

Duplication of schools, infrastructure, and services in so many municipalities costs all Pennsylvania taxpayers money. It also leads to decline and abandonment of many older commercial and industrial areas, which affects Pennsylvania’s attractiveness for investment by the newer high technology, knowledge-based industries that all states and regions seek.

A further negative aspect of this competition is that it can drive down the quality of development by putting most of the power in the developer as opposed to the community. For example, a big box store developer that shops for a location among competing municipalities, can more easily insist on getting its way, which may not serve the community well in the long run. (One Pennsylvania municipality simply repealed its zoning ordinance rather than face granting the thirty some variances required by the developer to build the proposed store.)

Cooperation in planning for economic development, as well as fiscal sharing of the benefits, can assure that municipalities get the kind of well-planned and sustainable development, both economically and environmentally, that they want. Using the specific plan authority in Section 1106, together with the sharing of tax revenues and fees authorized in Section 1105, will be particularly effective for attracting quality development. This approach will enable the participating municipalities to work...
The real estate tax is the only tax authorized by law to be levied by all classes of local government in Pennsylvania. Every property owner pays real estate taxes to three independent classes: the county, the local municipality, and the school district. In 1996, the property tax accounted for 70% of local taxes, or $8,710 million. Real estate taxes produced 85% of school taxes, 94% of county taxes, and 34% of municipal taxes. Taxation Manual, Center for Local Government Services (1999), p. 2.

with developers and to be flexible in developing their specific plan for a commercial/industrial area; it will also enable them to insist on the physical and environmental aspects of the development that they want to see in relation to their whole planning area. There will always be competition for development, but municipalities cooperating on a regional basis are likely to be more effective in attracting high quality development than they will be going it alone as competing local governments.

Where It’s Been Done

1. The Fiscal Disparities Approach

The Twin Cities Fiscal Disparities Program, which is the only regional tax base sharing program among counties in a metropolitan region in the United States, can serve as a conceptual model for smaller, regional programs developed by voluntarily cooperating municipalities. The program was first mandated for the seven counties in the Minneapolis-St. Paul region by the Minnesota Fiscal Disparities Act of 1971. The object of this program was “to respond to a number of concerns, including increasing property tax rates, tax-base and tax-rate disparities, and interjurisdictional competition for development.” American Metropolitics, p. 90.

Under the program each municipality has been required to contribute 40% of the growth in the value of commercial/industrial property tax capacity in every year since 1971 to a regional pool administered by the Metropolitan Council of the seven county region. Municipalities are assigned a portion of that pool, based on population and the ratio of the total market value of property per capita in the jurisdiction and the average market value of property per capita to the region. The formula assigns a share of the pool that is greater than their share of population to municipalities with lower-than-average market value per capita; high market-value localities receive a lower portion than their population
A number of tax base sharing programs are have been entered into in other states, some that required legislation and some based on intergovernmental agreements. Some examples:

New Jersey passed the Hackensack Meadowlands Development Commission and Reclamation Act in 1970 to coordinate development of the Meadowlands through a regional commission for an area encompassing 14 municipalities in 2 counties. Intermunicipal tax sharing was authorized through specific enabling legislation in 1972 “because it was recognized that centralized district-wide authority to prescribe and coordinate land use would have varying effects upon the property tax revenues of individual municipalities." Under the program all the affected municipalities "equitably share in the new financial benefits and new costs resulting from the development of the Meadowlands District as a whole." Because municipalities designated for industrial, shopping center, and high density residential uses have valuable property tax revenue potential, whereas municipalities designated for parks, highways, and schools do not, the "common pool" called the Intemunicipal Account assures that each municipality gets a fair share of tax revenue generated by new development regardless of where it occurs. There is also a fund for capital improvements to encourage individual municipalities to undertake improvements that will benefit the district as a whole.

For how it works, see www.hmdc.state.nj.us/taxshare/.

The Minnesota program shares a portion of the property tax. A fiscal formula could be applied to income or sales taxes as well, depending on the taxes available for sharing in particular jurisdictions. Sharing of the real estate tax probably will make the most sense for most regional planning areas in Pennsylvania because it is the biggest generator of local revenues and pays for both schools and services. Income tax could also be shared, but sales tax is only levied by the state and two counties, Allegheny and Philadelphia by specific authority of the legislature.

2. Sales Tax Sharing

The Allegheny County Regional Asset District provides a successful example of tax sharing of the sales tax. In 1993, the Pennsylvania legislature authorized Allegheny County to levy a 1% local option sales tax and to create the Allegheny Regional Asset District. The district disbursest half the proceeds of the countywide tax to parks, sports facilities, libraries, and other facilities such as zoos, museums, and cultural organizations. The remaining half of the funds is divided 50/50 between the county and local municipalities. The money is used primarily to reduce property taxes and to balance fiscal disparities among local governments. The redistribution formula, which considers population, local tax effort, and property market value, allocates more funds to poorer communities. In 2001, the county sales tax generated

3. Sharing of Sales and Property Taxes For and From Economic Development

What the program has meant for the Twin Cities region is that all municipalities have benefited from regional developments such as the Mall of America. For example, in the year 2000, the program shared about 28% of the region’s commercial/industrial tax base, representing about 12% of total tax base, which generated roughly $300 million in revenue to be shared.
Ohio has a good example of tax base sharing of county sales tax and local government income taxes for economic development using agreements. Montgomery County’s Economic Development/Government Equity (ED/GE) Program is run by the county for its 14 cities (including Dayton), 5 villages, and 9 townships.

Begun in 1992, the program uses a one-half percent increase in the county sales tax projected to produce $50 million over 10 years. The program distributes $5 million a year for economic development projects (determined on a competitive basis by the county commissioners), based on the recommendations of a representative advisory committee. Grants are also provided to participants through the Government Equity component sharing a portion of increased property and income tax revenues resulting from economic growth among the participants. A settle up provision assures that no participant contributes more to the Government Equity fund than it receives in grants from the Economic Development fund.

The program is strongly supported in the community and at the time of renewal in 2000, all 28 county jurisdictions became members. Since 1992, program awards have helped retain and generate more than 30,000 jobs and over $1 billion in public and private funds were leveraged.

For more information contact Montgomery County’s Economic Development/Government Equity Coordinator Linda Gum at (937) 225-5711.

4. Sharing of Tax Revenues from a Specific Project—The Waterfront Project in Allegheny County

The Waterfront Project in Allegheny County is an exemplary economic development project that involves tax increment financing (TIF) for infrastructure improvements and prospective sharing of tax revenues from
the project among Allegheny County, Homestead Borough, West Homestead Borough, Munhall Borough, and the Steel Valley School District. The project is an extensive mixed use redevelopment of the US Steel Homestead Works site, a 266 acre tract of land in the three boroughs along the Monongahela River, which was shut down in 1980 (the TIF “District”).

The project developer, Waterfront Partners, and government partners began infrastructure improvements in 1998 that will be financed with a combination of TIF bonds, and state and federal grants, totaling approximately $32 million. This investment will leverage nearly $274 million of private investment in commercial, residential, entertainment and recreation buildings and facilities. Under the project agreements, the project will continue to provide specifically allocated tax revenues to the participants through 2028.

As part of the agreements, each borough has amended its zoning ordinance to allow for the uses described in the TIF Plan, which contemplates distinct uses and designs within four development sub-districts. The ordinances have been amended to provide for development standards across municipal boundaries that will help assure uniform and seamless development in the entire District. Each ordinance provides for certain permitted uses and certain conditional uses, with conditions believed reasonable to allow full development of the District.

The significant benefits that this project will provide were summarized in the initial documents as follows:

- Redevelopment of blighted former USX Homestead Works, anchoring new development in Mon Valley.
- The Waterfront development site is the single largest industrial site reuse project in the county. The project is being carried out by a private development partnership.
• The project spans three boroughs. The three boroughs are working together to coordinate the overall development and share in the increases in taxes.
• The property represents a major potential portion of the tax bases of the three boroughs and the school district.
• Several of the taxing bodies are in critical fiscal conditions. Ultimately, the proposed project will increase the overall tax base of West Homestead by almost 50%, Munhall by 25%, the Steel Valley School District by almost 60%, and Homestead Borough by over 250%.
• The Waterfront will complement regional economic development strategies of reusing former industrial sites, creating competitive sites for expanding businesses, and attracting private investment into the community.
• Creation of access and on-site infrastructure necessary to support private investment and development, including open and public access to riverfront.
• Private investment of almost $273 million in new buildings.

Specific projected benefits from The Waterfront include:

• Almost 5,500 new jobs in commercial and flex office/distribution development
• Over $122 million in new annual payroll on site.
• Over 510 new housing units along riverfront.
• Over $320 million in annual commercial sales from new developments on the project site.
• Over $29 million annually in tax revenues, including $7 million in local revenues.

Sharing of Tax Revenues

In the initial project documents, anticipated tax revenues from the Waterfront Project were estimated as follows:
• $300,000—earned income taxes during the construction period (assuming 20% of workers come from the boroughs);
• $291,076—earned income taxes annually among the three boroughs (assuming various percentages of retail, entertainment, and office flex workers from the boroughs).
• $19,500,000—state sales tax yearly based on $320 million gross sales annually.
• $5,800,000 million in new property taxes annually to be shared by the county, school district and the three boroughs based on a distribution formula that calculates projected borough taxes from the assessments and millage rates of each, and from that, after deduction of debt service amounts, the Net TIF revenues to be paid by each borough to the county and school district. Net TIF revenues are then divided among the boroughs based on their share of TIF District acreage. Prior to county and boroughs distributions payments are made to a Maintenance Fund for maintenance of District roads ($120,000 per year), and the Main Street Development Fund for developments along the main street that runs through all three boroughs ($100,000 per year).

What’s happened. As of 2002, the project is well underway and highly successful with 700,000 square feet of big box stores, 400,000 square feet of retail and entertainment space, 217 luxury apartments, headquarters and offices for several companies, and attractive site improvements, including a river trail. Projected tax revenues are not as great as projected, largely because of major reassessments in Allegheny County. Also, the boroughs are realizing that more should have been demanded by way of capital and development concessions (reserving smaller square footages) for Main Street, which has not yet seen any benefits from the development. It is hoped that a greater connection between the development and the communities can be forged in the years ahead.

For information on the Waterfront Project, contact the Redevelopment
Authority of Allegheny County at www.county.allegheny.pa.us; the developer, Continental Real Estate at www.continental-realestate.com; and the Pittsburgh History & Landmarks Foundation at www.phlf.org.

5. Legal Issues

Where tax sharing programs have been established, they have often been challenged on a variety of constitutional and legal grounds: as violating the uniformity clause that exists in many state constitutions; or being a violation of equal protection because those burdened by the tax may not benefit from the tax to the same degree; or as being an improper delegation of legislative power; or on collection and disbursement grounds that tax assessed in one jurisdiction cannot be used to benefit another jurisdiction.

Generally, the courts have rejected these claims. Minnesota’s Fiscal Disparities Program was upheld in Village of Burnsville v. Onishuk, 301 Minn. 137 (1974) against all of these arguments, and an appeal to the US Supreme Court was denied. Similarly, New Jersey’s meadowlands program was upheld in Meadowlands Regional Development Agency, et al. v. State of New Jersey et al., 112 N.J. Super. (1970). Ohio’s ED/GE program was upheld against a challenge that it violated statutory requirements for collection and disbursement of economic development funds by requiring participation in the equity part of the program. City of Centerville et. al v Charles J. Curran, et. al., 1992 Ohio App. Lexis 304 (1992). In upholding the program, the court noted that it was a voluntary program entered into by agreement and that all local governments were encouraged to participate, but could not complain if they chose not to.

Article VIII §§ 1 of Pennsylvania’s Constitution provides “All taxes shall be uniform, upon the same classes of subjects, within the territorial limits of the authority levying the tax, and shall be levied and collected under general laws.” Since taxes that are shared would be uniform on all classes of subjects within each jurisdiction and are levied under general
laws, the uniformity argument does not appear available as an objection to sharing of tax revenues.

A more likely objection is that tax sharing programs are usually authorized by specific, detailed legislation, rather than the general authority to enter into cooperative agreements to share tax revenues as provided in the MPC. However, Pennsylvania has strongly encouraged intergovernmental cooperation through agreements legislatively in the Intergovernmental Cooperation Law and now in the MPC. The courts would undoubtedly look to the legislative purposes to be served and to the voluntary nature of the agreements that are negotiated. Cooperation for a specific development project, such as the Watershed Project, could certainly be accomplished by cooperative agreements. A more comprehensive sharing of general tax revenues may require specific legislative authority, such as that provided for the Allegheny RAD, depending on analysis of relevant statutory and case law.

6. A Tool for Looking at Tax Base Sharing Potential in Multi-Municipal Planning Areas

10,000 Friends of Pennsylvania asked Myron Orfield and Tom Luce of Ameregis to develop a tool that would enable Pennsylvania municipalities planning together under Article XI to look at the possibilities for sharing of tax revenues using simulated models that show contributions and distributions depending on the variables chosen. A description of the tool they developed follows. If municipalities wish to use this tool, they should contact 10,000 Friends of Pennsylvania at 1-877-568-2225 for the CD that will enable them to run the program.

Description of the Tax Base Sharing Simulations

The two major tax instruments used by municipalities in Pennsylvania are the earned income and property taxes. Tax-base sharing involving each of these tax bases can be modeled with this program.
A tax base sharing program has two components: (1) a contribution formula that determines how much tax base each municipality in the region contributes to the regional tax base pool, and (2) a distribution formula that determines how much tax base each municipality receives from the pool.

**Contributions.** Two types of contributions are modeled. In the first, each municipality contributes 10% of its current tax base (either property or earned income) to the shared pool. In the second, each municipality contributes 40% of the growth in the relevant tax base between 1993 and 1999.

**Distributions.** Distributions from the tax base pool (the sum of all of the contributions) can be modeled in three ways—by income per capita, poverty rate, or total tax capacity (property plus income) per capita. (How tax capacity is measured is explained below.) Each of the methods uses a distribution formula modeled on the one used by the Twin Cities Fiscal Disparities Program—the only regional tax base sharing program in the United States. With this formula, a municipality’s distribution from the regional pool is determined by two factors: its share of total population in the area included in the sharing program; and how it compares to the rest of the region (above or below the regional average) with respect to the characteristic being used to determine the distributions (income per capita, poverty rate, or tax capacity per capita).

Essentially, the formula scales a municipality’s population share (local population divided by the regional population) up or down based on whether its income per capita, poverty rate, or tax capacity per capita (whichever is used to determine the distribution in a given simulation) is above or below the regional average.

When income or tax capacity is used to distribute the tax base in the pool, a municipality’s distribution is determined by (1) its population and
Formula for Calculating Distributions to Tax Sharing Municipalities

Example: Contributions = 10 percent of property tax base and distributions are determined by tax capacity per household.

Contribution to the pool by municipality i = \(C_i = (0.1) \times \text{Property tax base}_i\)

Total size of the pool = \(\sum C_i\)

Distributions from the pool:

Distribution index for municipality i = \(I_i = \frac{(\text{Population}_i) \times \sum \text{Tax Capacity}_i}{\sum \text{Population}_i}\)

Distribution to municipality i = \(D_i = \frac{I_i \times (\sum C_i)}{\sum I_i}\)

The formulation guarantees that \(\sum C_i = \sum D_i\) (total contributions = total distributions.)

Example: Pennsylvania Tax Base Sharing Data Base

The tax base sharing database allows users to perform sharing runs for a selected set of Pennsylvania municipalities.

The Database:

- Created: January, 2002
- Type: Microsoft Access 2000

Tax Base Sharing:

- Tax base sharing runs may be performed using 10% of property or income tax bases, 40% of growth in property or income tax bases, or a user specified tax base amount.
- The distribution of tax bases are determined by a municipality's aggregate income, percentage of persons in poverty, or total tax capacity.
- The initial database contains the following data for each Pennsylvania municipality: 1990 aggregate income (U.S. Census Bureau), 1990 population (U.S. Census Bureau), 1990 persons in poverty/poverty universe/percentage of persons in poverty (U.S. Census Bureau), 1993 Population (PA Governor's Center for Local Government Services), 1993 and 1999 Real Estate Market Values (PA Governor's Center for Local Government Services), 1993 and 1999 Real Estate Revenues (PA Governor's Center for Local Government Services), 1993 and 1999 Real Estate Mill Rates (PA Governor's Center for Local Government Services), 1993 and 1999 Earned Income Tax Base (PA Governor's Center for Local Government Services), 1993 and 1999 Earned Income Tax Rates (PA Governor's Center for Local Government Services), 1993 and 1999 Earned Income Revenues (PA Governor's Center for Local Government Services), and 1999 population (calculated using 1993 population and 2000 population from the Census Bureau using an average rate of change).
- To search for Pennsylvania tax base data follow this link: [http://www.inventpa.com/](http://www.inventpa.com/), click the 'Communities in PA' link, then click the 'Governor's Center for Local Government Services' link, and finally click the 'Electronic Filing, Municipal Statistics and Local Tax Information' link. The tax base sharing database utilizes the financial statistics and tax rate data available at this site.

NOTE: The data source for real estate market values (property tax base values) used in the tax base sharing database is not the source used in the Pennsylvania Metropatterns report.

Continued on next page...
Tax Base Sharing Type Descriptions:

- 10% of Property Tax Base—Sharing based on the contribution of 10% of a municipality’s property tax base for a selected year.
- 10% of Income Tax Base—Sharing based on the contribution of 10% of a municipality’s income tax base for a selected year.
- 40% of Change in Property Tax Base—Sharing based on the contribution of 40% of a municipality’s growth in property tax base for a selected two-year span.
- 40% of Change in Income Tax Base—Sharing based on the contribution of 40% of a municipality’s growth in income tax base for a selected two-year span.
- User Specified Shared Tax Base—Sharing a user specified dollar amount.

Tax Base Share by Descriptions:

- Aggregate Income—The shared base is distributed based upon the aggregate income for a given municipality. Aggregate income is the total income value for a municipality derived from census data.
- Poverty—The shared base is distributed based upon the percentage of persons in poverty for a given municipality. The product of total persons in poverty divided by the total poverty universe for a municipality derived from Census data.
- Tax Capacity—The shared base is distributed based on a municipality’s total tax capacity. Total tax capacity is the sum of property and income tax capacities for a municipality.