

SECTION II

EXISTING MANAGEMENT PLANS AND PROGRAMS

A. Planning Functions in Pennsylvania

Under the United States Constitution, planning is a function of the state. States may use enabling legislation to pass down governing powers to lower levels of government such as counties and “local” municipalities (e.g., boroughs and townships in Bucks County). Furthermore, Pennsylvania is one of only four “Commonwealth” states in the United States. Generally, a Commonwealth state defers certain powers, such as land use controls, to the lowest level of government, closest to the people. In Pennsylvania, by enacting enabling legislation, the state has delegated the responsibility of land use planning decision-making and regulating primarily to boroughs and townships with counties playing an advisory role.

1. Pennsylvania Municipalities Planning Code

The state enabling legislation for Pennsylvania is Act 247 of 1968, as amended, commonly known as the Pennsylvania Municipalities Planning Code (MPC). This act sets the framework within which local, county, and regional governments must operate a planning program. Only the cities of Philadelphia and Pittsburgh are excluded from this law and operate under respective home rule charters.

The state planning code specifies the types of controls that municipalities may enact for land use regulations, and the purposes for which such regulations may be enacted. Basically, the MPC allows a community to enact or adopt a comprehensive plan, zoning ordinance, and a subdivision/land development ordinance. Municipalities may also adopt, by ordinance, an official map that is another tool to help implement the comprehensive plan. The MPC also contains the procedures for establishing a municipal planning commission and a zoning hearing board.

No municipality is mandated to plan or zone, although counties are required to adopt a comprehensive plan. However, if a municipality chooses to enact ordinances to regulate certain aspects of development, such as enact impact fees for off-site transportation improvements, it must have adopted either a municipal or county comprehensive plan, subdivision and land development ordinance, or zoning ordinance. It is important for a municipality conducting any planning activity to adhere strictly to the provisions of Act 247. Any procedure, regulation, interpretation or action not based on Act 247 can be declared null and void by a court of law, an action that could possibly be against the best interests of the municipality.

Refer to **Appendix B** for highlights of recent changes to the MPC. More information on the importance of the MPC as an enabling law for local governments to create their own planning and land use program can be found at <http://www.inventpa.com/docs/MPCCode.pdf>.

a. Planning Agencies

The Pennsylvania Municipalities Planning Code specifically gives planning authority to local governing bodies. The governing boards at both the county and/or municipal level may create a

planning agency with powers, duties, and functions such as adopting and amending plans and/or implementing ordinances.

b. Municipalities

The local governing body (e.g., borough council or township board of supervisors) itself generally does not conduct the planning functions within the municipality; a planning commission is usually appointed. The governing body generally monitors the basic functions and operation of its appointed planning commission. The Municipalities Planning Code details the powers and duties of a municipal planning commission. The primary function of a municipal planning commission or agency is to prepare a comprehensive plan, zoning ordinance, and subdivision regulation. In the performance of its function, the planning commission holds public meetings and makes recommendations to the governing body. Administrative and technical planning services may be employed to carry out the duties and responsibilities of the municipal planning office.

c. Counties

Pennsylvania counties have certain planning functions. Each county has an appointed planning commission, most with staffed technical planning departments. Counties are mandated by the Municipalities Planning Code to prepare a comprehensive plan. While advisory only, they provide an indispensable reference for local municipalities that wish to ensure their own plans are consistent with broader development issues. Local municipalities are required to submit many proposed actions to the county planning commission for review. Municipalities with planning, zoning, and subdivision ordinances have procedures for referring development plans to the county planning commission for comment.

d. Planning and Zoning in Pennsylvania

Pennsylvania has given local municipalities (e.g., townships, boroughs, and cities) the primary responsibility for regulating land use. The statutory structure for planning is provided through the provisions granted in the MPC. Their authority to control land use is exercised through zoning and subdivision and land development ordinances, and is limited to those delegated to them by state legislation. There are no ancillary regulations for planning in Pennsylvania. Actions of local municipalities must conform to limits imposed by the state and United States Constitution. Municipal actions are subject to judicial review and must also meet legal standards established by the courts.

Statutes have given municipalities specific powers to guide the location, character, and timing of future development. The comprehensive plan is the principal policy guide for over 50 percent of the commonwealth's municipalities.

Zoning is an important municipal tool to regulate the future use of land. A zoning ordinance divides all lands within a municipality into zones or districts, and establishes regulations for various types of land uses and development. Local subdivision and land development ordinances are the most commonly used land use control in the state. Such planning tools are intended to protect against unwise and poorly planned growth.

Counties can adopt zoning or subdivision regulations for the entire county if there are no municipal ordinances, or for as much of the land within the county as is unregulated. County authority, however, is preempted by enactment of a local municipal ordinance.

2. DCED Planning Series

The Pennsylvania Department of Community and Economic Development (DCED), through the Governor’s Center for Local Government Services, provides a series of publications on planning and the planning process for local officials and appointed members of planning commissions and zoning hearing boards. For more information or to obtain copies of the documents, the reader may wish to contact http://www.dced.state.pa.us/PA_Exec/DCED/government/publications.htm.

B. Comprehensive Land Use Planning in the Pennridge Area

Figure II-1—Pennridge Area Future Land Use Map is composed of projected future land use in the Pennridge Area over the next five to ten years. The composite map was generated by analyzing the comprehensive plans of each of the eight municipalities in the study area (plus Telford Borough).

C. Zoning in the Pennridge Area

Figure II-2—Pennridge Area Zoning Map is a composite map based on the individual municipal zoning maps and identifies the boroughs and the planned development areas of the region. Planned development areas consist of medium- to high-density residential, commercial, and industrial zoned areas. The remainder of the map (white area) signifies lower-density residential zoning. In general, zoning for the municipalities in the Pennridge Area is based on the development district concept, where districts intended for higher-intensity development are designated adjacent to areas of existing development where public facilities and infrastructure are available (e.g., public water and sewerage, access to major roads, etc.).

As can be seen on **Figure II-2**, the Planned Development Areas have been established along major transportation arteries and adjacent to the boroughs, particularly Perkasio and Sellersville, and Dublin in Bedminster’s case. The boroughs essentially are mixed-use areas that generally have little undeveloped land. They typically have higher density of residential development than the surrounding townships, as well as a mix of retail, office, and industrial uses. In West Rockhill, the residential development district primarily is situated adjacent to Sellersville Borough and also along County Line Road, north of Church Road (the Telford Borough line) to the East Branch Perkiomen Creek. Industrially zoned land is located west of Sellersville, from the boundaries of Telford Borough and Hilltown Township to approximately Cat Hill Road. A smaller area of industrial zoning is between Old Mill Road and Old Bethlehem Pike (bordering East Rockhill Township). Commercially zoned land is located along Bethlehem Pike and a smaller district is on County Line Road, north of Church Road.

Hilltown Township’s residential development district is mainly south of Township Line Road from Sellersville and Perkasio boroughs to Silverdale and south of Telford. Industrial-zoned land is located along Bethlehem Pike and PA Route 309. Commercial zones are found along Bethlehem Pike, PA Route 309, and County Line Road, as well as along Swamp Road (PA Route 313) on the east and west sides of Dublin.

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Figure II-1 — Pennridge Area Future Land Use Map

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Figure II-2 — Penridge Area Zoning Map.

In East Rockhill Township, the residential development district borders Perkasio Borough to the north and east. The Industrial district abuts one of Perkasio's industrial districts north of Ridge Road. Several small commercial districts are located along PA Route 313 and on Fifth Street, adjacent to Perkasio Borough. The residential development district of Bedminster Township abuts Dublin Borough. The primary industrial district of Bedminster is along Township Line Road (on the Plumstead Township border) and PA Route 611, with a smaller district on Scott Road adjacent to the township's residential development district around Dublin. Commercially zoned land is along PA Route 611 and Old Easton Road, and on PA Route 313 between Dublin and PA Route 113 (Bedminster Road).

Some villages are shown as residential development areas. The character of these villages is predominantly residential, although some permit limited nonresidential uses; these generally are small-scale, lower intensity uses intended to be consistent with the existing nature of the village. Additionally, the residential use standards for these villages tend to allow smaller lots with shallow setbacks, a more compact development pattern, that is more typical of what is permitted in a development district than in a low-density residential district.

The locations of the Planned Development Areas in the Pennridge Area give an indication of where the major population, retail, and employment centers are found and where continued growth can be expected. Future growth should be guided toward the development districts and away from lower-density districts, such as the R-1 and R-2 districts on **Figure II-2**.

D. DRBC Groundwater Protected Area Regulations

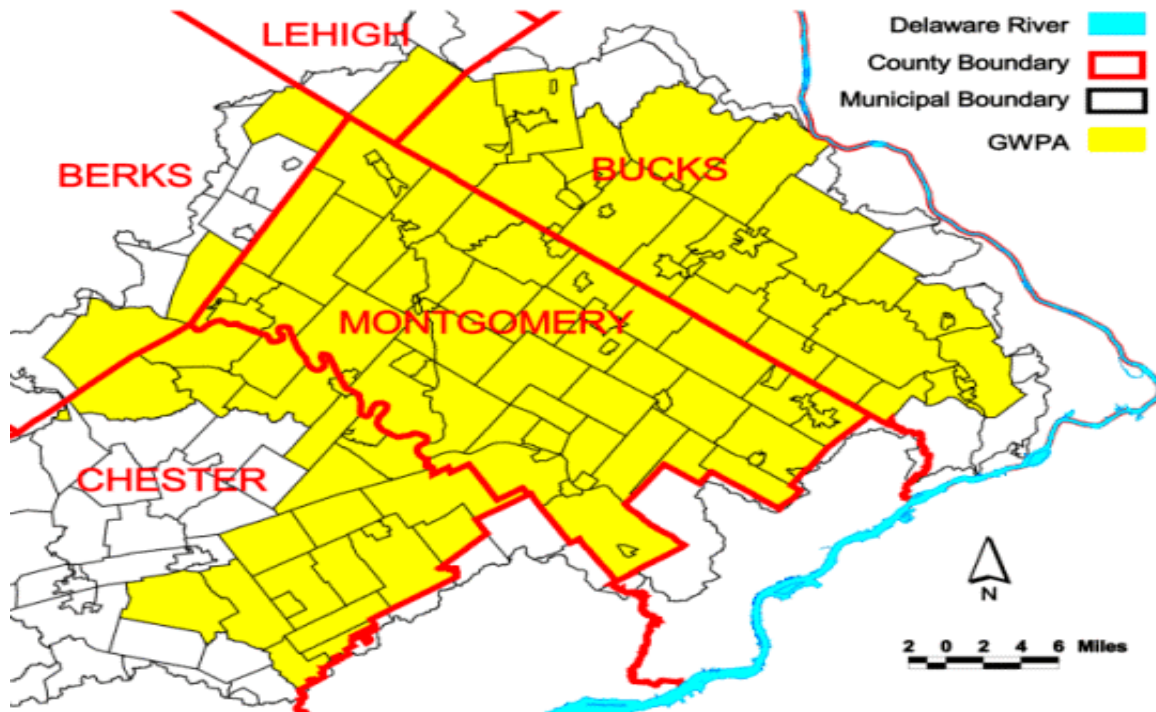
The Delaware River Basin Commission (DRBC) has adopted regulations that establish numerical groundwater withdrawal limits for 76 subwatersheds that fall either entirely or partly within the Groundwater Protected Area (GWPA) of Southeastern Pennsylvania (**Figure II-3**). All municipalities within the Pennridge study area are included in the GWPA.

The GWPA, where more stringent regulations apply to groundwater withdrawals than they do in the rest of the Delaware River Basin, was established by the DRBC in 1980 at the request of the Commonwealth of Pennsylvania after it was recognized that there was an increased and competing demand for the resource brought about by suburban population growth and conflicts among users of the same resource. Although various hydrogeologists have differing opinions, discussions with local experts indicate that lowered water tables in the GWPA may, in part, contribute to reduced flows in some streams. While there appears to be no evidence of "groundwater mining" or long-term, sustained decline of water levels in the GWPA, there is concern that reduction in baseflow can affect downstream water uses, negatively impact aquatic life, and reduce the capacity of waterways to assimilate pollutants. The goal of the GWPA is to prevent depletion of groundwater and protect the interests and rights of lawful users of the same water resource, as well as balance and reconcile alternative and conflicting uses of limited water resources in the region.

The GWPA uses a two-tiered system of water withdrawal limits. The first tier serves as a warning that a subbasin is "potentially stressed." In potentially stressed subbasins, applicants for new or expanded groundwater withdrawals are now required to implement one or more programs to mitigate adverse impacts of additional groundwater withdrawals. Acceptable programs include conjunctive use of groundwater and surface water, expanded water

conservation programs, programs to control groundwater infiltration, artificial recharge, and spray irrigation. The second tier serves as the maximum withdrawal limit. Under the regulations, groundwater withdrawals cannot exceed that limit.

Figure II-3
DRBC Southeastern Pennsylvania Groundwater Protected Area (GWPA)



The Groundwater Protected Area Regulations for Southeastern Pennsylvania also accomplish the following:

- Provide incentives for holders of existing DRBC docket and GWPA permits to implement one or more of the above programs to reduce the adverse impacts of their groundwater withdrawals. If docket or permit holders successfully implement one or more programs, the Commission will extend the docket or permit duration for up to 10 years;
- Specify criteria for the issuance and review of dockets and permits as well as procedures for revising withdrawal limits to correspond with integrated water resource plans adopted by municipalities for subbasins; and
- Establish protocol for updating and revising withdrawal limits to provide additional protection for streams designated by the Commonwealth of Pennsylvania as “high quality,” or “wild, scenic or pastoral” as defined by the state’s Scenic Rivers program.

After holding public briefings and hearings, the DRBC on January 28, 1998, amended the 1980 regulations to establish numerical groundwater withdrawal limits for the 14 watersheds in the Neshaminy Creek Basin. The DRBC on June 23, 1999, again amended its regulations to

establish numerical withdrawal limits for the 62 additional subbasins, or watersheds.

The limits were derived from baseflow characteristics of geologic formations that were developed in a study by the U.S. Geological Survey (USGS). A geographic information system (GIS) was then used to generate overlay maps of the original 14 subbasins located in the Neshaminy Creek Basin. The study later was broadened to include the 62 additional subbasins that fall either entirely or partially within the GWPA, and GIS mapping was prepared for all the watersheds.

The DRBC's Groundwater Protected Area Regulations (GWPAR) are presented in **Appendix C**. More information on the GWPA can be found on DRBC's website at <http://www.state.nj.us/drbc/pagwpa.htm>.

E. DRBC Integrated Resource Plan (IRP)

The Delaware River Basin Commission (DRBC) developed the *Groundwater Protected Area Regulations for Southeastern Pennsylvania* (GWPAR) in response to increasing groundwater use and related problems. The regulations, originally adopted in 1980, aimed to promote conservation, protect the rights of present and future water uses, and acquire additional information for effective planning and management of water resources.

Integrated Resource Planning (IRP) is an approach to water resource management that considers water resource needs on a watershed level. Guidelines have been developed by the DRBC to assist in meeting criteria for IRP's under the GWPAR. **Appendix D** contains the IRP guidelines, approved by the DRBC on April 3, 2002.

The purposes of an IRP are as follows:

Under the Delaware River Basin Commission's GWPAR, Integrated Resource Planning is a tool to

1. Evaluate and develop management objectives and strategies on a subbasin basis to ensure that groundwater and surface water withdrawals are managed in a manner that protects both instream and withdrawal uses in the subbasin.
2. Evaluate the adequacy of existing groundwater and surface water resources to meet all existing and future needs in the subbasin, and assess options for meeting those needs.
3. Engage stakeholders as active participants in developing effective, long-term water resource management objectives and strategies.
4. Consider the interrelationship of water quality and water availability for current and future water uses in a subbasin.
5. Assist planners to better integrate water resources protection in land use planning. Almost all land use decisions affect water resources.

Recognizing that growth will occur in most subbasins, Integrated Resource Plans can assist in better managing how that growth occurs. The availability of groundwater or surface water, individually, may not be a limiting factor for growth, since a combination of both, or sources of water outside of the subbasin, may exist. By evaluating all water resources options, existing and future needs may be met while simultaneously protecting the resources and supporting other uses including instream flow needs.

The following list indicates the nine items that must be addressed in an IRP. Sponsors (municipalities or multimunicipal groups) who anticipate applying to the DRBC to lower their subbasin withdrawal limits should adhere as closely as possible to the guidance for each of these requirements when preparing an IRP. Refer to **Appendix D** for more detail on the IRP guidelines.

Items to be addressed in an Integrated Resource Plan (IRP) per DRBC

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 Water Use Demands
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 Stormwater and Floodplain Management
8. Identify Potential Conflicts and Problems and Outline Plans and Programs to Resolve Conflicts and Meet Needs
9. Benefits of Development of Integrated Resource Plan

F. Bucks County Water Supply Plan and Wellhead Protection Study

The *Bucks County Water Supply Plan and Wellhead Protection Study* (1996) presents recommendations for municipalities and community water suppliers concerning both water quantity and water quality issues. The Water Supply Plan discusses the current and future viability of the public water suppliers operating in the county and makes recommendations on actions necessary to maintain a safe and adequate water supply for Bucks County. The Wellhead Protection Study presents a “how-to” approach that municipalities can use to develop a wellhead protection program that will help protect community water supplies from contamination. Recommended management and implementation strategies for water suppliers and municipalities, as well as state, regional, and county agencies, are included that are intended to foster advance preparation to meet public water supply needs for a ten-year period.

The following summarizes the findings and recommendations of the *Bucks County Water Supply Plan and Wellhead Protection Study* as they relate to protecting water resources in the Penridge

Area. Further discussion of certain recommendations and how they should be implemented in Phase III—Implementation of the *Pennridge Water Resources Plan* is found throughout this document.

1. Water Supply

Currently, many Pennridge Area residents rely on private wells, while others in the more densely populated portions of the study area are served by community water systems that draw from both surface and groundwater sources. In the Pennridge Area there are seven municipal water suppliers that meet the definition of a community water system in a variety of environmental settings¹, and their drinking water sources vary, as does the land use surrounding their origination. Since the population of the Pennridge Area is expected to continue to grow steadily over the next ten to twenty years, proper planning, water resource management, and pollution prevention are critical to ensure that future drinking water needs will be met.

2. Source Water Protection

Recently, “source water protection,” which includes groundwater (wellhead) and surface water source protection has become a pollution prevention and water supply planning tool. Federal and state regulatory agencies have taken the position that it is much less expensive and less hazardous to public health to protect a water resource than it is to restore it once it becomes contaminated. For example, once groundwater is polluted, it remains contaminated for a long period of time. Even if groundwater remediation is undertaken, it is usually a long and difficult process.

3. Benefits of a Water Supply Plan and Source Water Protection Program

The following is a list of potential benefits to be derived from a water supply plan followed by the implementation of a source water protection program:

- *Economic* — Water supply managers and municipal officials can use the pollution vulnerability mapping or projected quantity information to evaluate the potential costs and benefits of developing a water source in specific areas. In addition, the pollution prevention strategies incorporated in a source water protection program may help to eliminate potential clean-up costs.
- *Public health and safety* — The research, analysis, and recommendations on current and projected drinking water sources will help the municipal official or water supply manager avoid potential health or fire-flow storage problems.
- *Protection of water resource quantity* — Information on safe yield and projected quantities can minimize the risk of potential drinking water shortages and depletion of the resource due to over-withdrawal.
- *Small community water systems* — There are problems that are unique to small systems including the financial hardships related to meeting regulatory requirements and

¹ The DEP defines a “community water supplier” as systems serving more than 25 persons on a regular basis or systems with over 15 service connections.

maintaining distribution systems. The information and recommendations incorporated in this study may be useful to small systems trying to avoid such hardships.

- *Regulatory Compliance* — The updated regulatory compliance information and the step-by-step approach to implementing a source water protection program will help the community water suppliers meet the new requirements of the Pennsylvania Safe Drinking Water Act Amendments.
- *Growth management* — Water quantity and quality information and a model municipal source water protection ordinance should be used as tools by municipal planners. For instance, source water protection ordinance language would be adopted or modified during Phase III—Implementation and many of the policies and recommendations applied when reviewing land development and subdivision proposals.

4. Regulations

Section 1428 of the Federal Safe Drinking Water Act Amendments (1986) requires states to establish programs to protect public water supplies from contamination thereby ensuring public health and preventing the need for expensive remedial treatments. The Pennsylvania Safe Drinking Water Act (SDWA) is the Commonwealth's version of the federal legislation. Pennsylvania Department of Environmental Protection (DEP) supports county and municipal water supply planning and provides partial funding to counties for the preparation of countywide water supply plans. The goal of the DEP grant program is to protect the public from the hazards of unsafe drinking water and to ensure safe and reliable water service to the citizens of the Commonwealth through the development of county water supply plans and municipal source water protection programs.

The spreading of disease via drinking water sources has been a public health concern for many years. The widespread use of chlorine as a disinfectant began at the turn of the century, and the practice resulted in a tremendous decrease in water-borne disease outbreaks. Through time, diseases other than typhoid and cholera became a concern as the nation became more industrialized, and the use of man-made chemicals grew more commonplace. As a result, recent environmental regulations and drinking water standards are an attempt to regulate the potential adverse health effects of hundreds of chemical agents that may be present in drinking water sources.

There are both federal and state Safe Drinking Water Acts (SDWA). The goal of the Pennsylvania Safe Drinking Water Act is to provide safe drinking water to populations served by public water supplies, which are systems serving more than 25 persons on a regular basis or systems with over 15 service connections. From this definition, there are hundreds of public water systems operating in Bucks County. The definition is further categorized to include community water supplies (serving the same residents on a year-round basis), nontransient/noncommunity systems (serving at least 20 of the same individuals for at least six months of the year), and noncommunity systems (supplying transient populations). The focus of the SDWA is on community water suppliers (CWS), which include both large and small community suppliers that are serving populations residing in residential developments (single-family and multifamily homes), mobile home parks, and nursing care facilities.

The federal SDWA has several sections addressing water quality. To establish enforceable standards, the Environmental Protection Agency (EPA) determines a maximum contaminant level goal based on health data, and a regulated maximum contaminant level (MCL) for each chemical with a potential health hazard. The water suppliers are then required to periodically test for each regulated chemical. Since the chemicals are categorized by their potential health effects and are given varying MCLs based on that rationale, the sampling requirements, treatment technologies, waivers, and paperwork requirements vary. The Bucks County Department of Health (BCDH) is the local agency that helps the water suppliers to meet the numerous and growing requirements and, among other responsibilities, monitors raw and treated drinking water quality.

5. Local Government and Community Water Supplier Involvement

Local government plays an important role in the implementation of federal and state mandates designed to protect drinking water sources. Several municipalities in Bucks County operate their own community water supplies regulated by the measures and entities previously discussed. In addition, all municipalities may adopt ordinance language protective of drinking water in several ways.

The Pennsylvania Municipalities Planning Code is the enabling legislation that empowers municipalities to plan and govern development at the local level. The code allows a municipality to require that new development incorporate adequate provisions for a reliable, safe, and adequate water supply to support intended uses within the capacity of available resources. The code also states that a zoning ordinance may include provisions regulating the siting, density, and design of residential, commercial, industrial, and other types of development. The reasoning is to ensure the availability of reliable safe and adequate water supplies to support intended land uses. The stated purpose of zoning includes promoting, protecting and facilitating actions that include the provision of safe, reliable water supply.

As metropolitan areas continue to spread outward, pressure is increasing on communities to accommodate the population growth. The growth can create challenging situations not only to accommodating the increased need for drinking water, but also in terms of the quality of future drinking water sources. For instance, if over a period of time, groundwater withdrawal rates consistently exceed recharge rates, regional water table levels may drop. In addition, an increasing concentration of people means an increase in the potential for drinking water contamination.

Not only is increased consumption an issue, but the pollution of drinking water sources has also become a concern. In Pennsylvania, various sources have been identified as producing primary drinking water contaminants. Some of these include leaking underground storage tanks, malfunctioning sewage disposal systems, hazardous waste burial sites, landfills, farms, and residential pollutants. In Bucks County, there are Superfund sites in various stages of remediation, petroleum and other solvent remediation projects in progress, and lead levels exceeding EPA standards have been detected. As a result of solvent contamination, several community water systems have installed costly aeration devices for TCE and PCE removal. According to the Bucks County Department of Health (BCDH), several drinking water systems have been taken out of service due to pollution problems or an inability to meet drinking water

standards. Recently discovered MTBE contamination in private wells in and around the Pennridge Area points to an ongoing need to be vigilant in regulating land uses that may potentially contaminate our water supplies.

Although it appears that the Pennridge Area is currently able to meet the demand for adequate and safe water supply, this may not always be the case. Development is expected to continue, regulations are becoming more stringent; and the cost of treatment to comply with drinking water standards is increasing. Therefore, all of the existing plans and programs discussed in this section need to be built upon in Phase III—Implementation of the Pennridge Water Resources Plan in order to achieve the long-range goal of melding growth management with water resource protection.