Official Comprehensive Plan for

Warrington Township
York County, PA

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Amended: March 7, 2012

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All maps and aerials presented within this Plan rely upon digital information of the York County Geographic Information System. While the accuracy of this information is believed to be very high, it should only be used for community planning purposes and cannot be relied upon for definitive site survey delineation.

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I. Introduction

A. PURPOSE OF THE PLAN

Healthy, attractive and economically-sound communities do not "just happen." They are created through vision and foresight and grow and change successfully with the same. Today, local governments are responsible for guiding growth and development within communities, for setting aside open spaces, and for delivering public services. Like any business, local governments need to chart future plans so that they can assure the efficient use of resources. The preparation of a comprehensive plan provides a deliberate framework of information that can be used to make future decisions regarding local government functions. The Comprehensive Plan further provides a sound legal basis for specific implementing measures, such as zoning and subdivision regulations designed to carry out the intent of the Comprehensive Plan.

> Comprehensive Planning:
> "the allocation of municipal resources towards local goals and objectives."

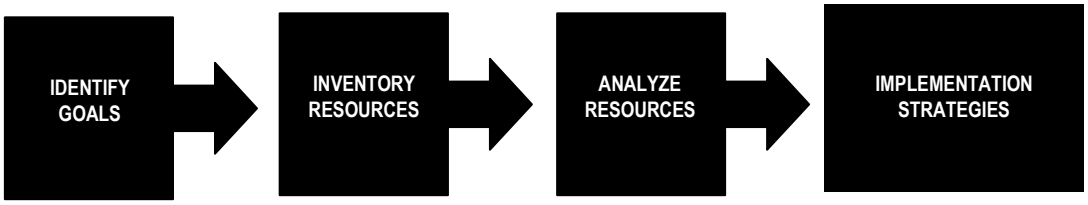
The Warrington Township Comprehensive Plan represents the work of many people. Local elected officials, planning commission members and other appointed citizens oversaw the preparation of the Plan by reviewing the plan content and conducting monthly public meetings. The Plan was funded by a Community Development Block Grant administered the York County Planning Commission who also appointed a staff liaison to monitor the plan process and ensure that Plan outcomes align with the County's Comprehensive Plan. Next, the Plan sought specific input from various local, County and State officials and staff regarding the Township's resources and possible programs available to implement the Plan's findings. Finally, the Plan incorporates the many public comments received during the planning process.

This Comprehensive Plan first sets forth a set of Community Planning Goals. These goals include broad objectives, such as the provision of adequate housing and employment opportunities, the protection of the environment, and the provision of a balance of public services. They also seek to correct existing or foreseeable deficiencies or problems, such as improving the design of a particular road intersection or reducing localized flooding through improved storm water management.

Next, this Plan inventories, maps and describes the Township's resources over several chapters. These resources include many features, such as land, streams, roads, utilities, parks, housing, schools, police and fire service, businesses, and so on. Analyses are performed within each of the Plan's chapters to determine their capabilities in meeting the desired future. Each chapter makes specific recommendations to improve the capabilities of these in attaining locally-expressed planning goals.

Then, the analyses of resources and recommendations are used together with the Community Planning Goals to develop a future land use scenario and a plan for the future delivery of public and other services. The time-frame for this Comprehensive Plan is to the year 2020; all recommendations made within this Plan are structured around this time period.

Finally, implementation strategies are discussed and recommended that will enable the Township to set in motion the goals, objectives and recommendations identified in the Plan. In the end, any planning process is meaningless unless its recommendations find application as part of the Township's business—the protection of public welfare and the delivery of public services.



B. MPC REQUIREMENTS

Pennsylvania's Constitution gives the General Assembly the power to enact laws that protect the public health, safety and general welfare of its citizens. The General Assembly has, in turn, given local municipalities primary responsibility for community comprehensive planning. Municipalities in Pennsylvania are empowered by the Pennsylvania Municipalities Planning Code (MPC), Act 247 of 1968, to prepare and adopt comprehensive plans according to specified requirements and procedures. Revisions to the MPC made by Act 170 of 1988 expanded the subject matter and goals of comprehensive planning to enable municipalities to manage growth more effectively, and to provide greater protection for environmentally sensitive lands and important historic and cultural sites. Furthermore, Act 170 also requires that all counties in Pennsylvania prepare and adopt comprehensive plans and that municipal plans be generally consistent with the adopted county plans. Municipalities are also empowered by this Act to carry out joint planning with one another. Finally, the most recent amendments to the MPC specifically enable municipalities to work together and develop regional plans for the allocation of growth and development, along with the delivery of public facilities and services.

These MPC standards are the foundation upon which the Comprehensive Plan for Warrington Township is built. This Plan, therefore, is born not only out of a belief that sound planning is the key to a healthy, attractive and economically sound community, but also out of a respect and regard for the laws of the Commonwealth of Pennsylvania.

C. HOW TO USE THIS PLAN

This Comprehensive Plan is designed to serve several important purposes. Principally, the Plan is intended to share with Township residents a vision for the future. Secondly, it is designed to assist the Township in the administration of land use planning programs. A detailed table of contents appears at the beginning of the text that provides quick reference to the appropriate sections of the Plan. ***Action-oriented recommendations within each of the Plan's chapters are printed in bold, italicized letters so that the decision-maker's attention is immediately drawn to them.*** Many of these recommendations tie in to specific implementation strategies discussed in the Plan's final chapter.

The numerous maps within the Plan have been carefully prepared so that the information can be easily visualized and is meaningful. Related features are composited together so that

the reader gains a better understanding of their connection. The many analyses utilized throughout the study are intended to maximize the utility of the findings. Step-by-step descriptions of these methodologies are furnished to enable the reader to gain a better understanding of the issues and their planning implications. All of these features will aid local decision-makers in their evaluation of future planning proposals. Data used to compile the maps in this Plan was largely furnished by the York County Planning Commission's Geographic Information System (GIS); the data was dated November, 2004. Therefore the data is readily consistent with the County's database and new layers of data created by this Plan are similarly compatible with the County's system.

An additional function of this Plan is its collection of important information. The term *Comprehensive Plan* accurately describes the composition of this report; its contents are quite comprehensive. Accordingly, the Plan provides convenient access to a wealth of up-to-date factual information concerning the Township's resources. This information will not only serve local officials, but also service agencies, property owners, residents, business leaders, and prospective developers. The inventories of existing conditions will also provide the groundwork upon which future Plan updates can be more easily accomplished.

Finally, the Plan provides a future land use scenario that can be useful to many landowners. For example, residents can get an idea of the land uses that are projected around their homes. Prospective developers can use the Plan to package development proposals that conform to the municipal goals, thereby ensuring a smooth development review process. Business leaders can glean a sense of secure investment climate from the Township's future land use scenario. In all, the Plan considers many competing interests and devises a strategy to assure their relative harmonious coexistence. It is hoped that the Plan will become a powerful and practical tool in local decision-making. ***It is important for all persons involved and/or interested in the future of the Warrington Township to read and understand this Plan. Local decision-makers should keep the Plan handy when evaluating future development proposals, service adjustments or public investments.***

D. REGIONAL SETTING

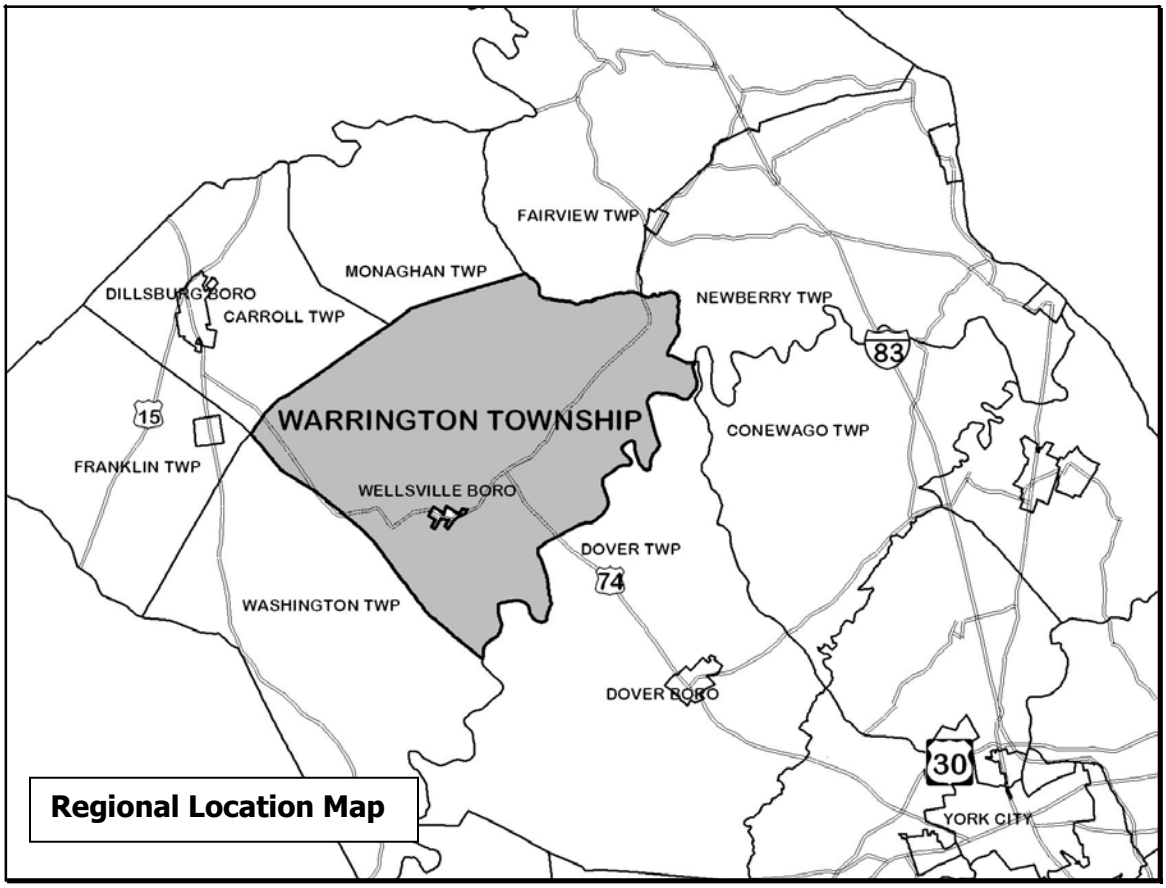
Warrington Township is situated in the northwestern portion of York County in southcentral Pennsylvania. The Township has an irregular shape that has an east-to-west width of almost 9 miles and a north-to-south length of nearly 8 miles. At its closest point, the Township is about 8 miles northwest of the City of York, the York County seat. Warrington Township contains a total of approximately 36.1 square miles with some 23,100 acres.

The western half of the Township has man-made boundaries while the eastern half are natural and are formed along the Big Conewago Creek and Stony Run. Along the northern boundary the Township abuts Carroll, Monaghan and Fairview Townships. To the east is Newberry, Dover and at one point Conewago Townships. To the south is Dover Township, and to the west is Washington and at one point Franklin Townships. All of the adjoining municipalities are located within York County.

Historically, the Township has retained its rural character as a fertile farming/pasturing valley amid its lush and rolling hills with clean-running streams. What little development that has occurred is largely rural in character along the Township's winding rural roads. Several small-scale commercial uses and services have "sprung-up" around the Township's three large recreational attractions of Gifford Pinchot State Park, PA State Gamelands No. 242

and Ski Roundtop. Local officials hope that this Plan will preserve this rural quality of life through positive and legally-defensible planning strategies.

Warrington Township is "a bit off of the beaten path" when compared with many municipalities that have major traffic arteries passing through. Aside from PA Route 74 (Carlisle Road), Warrington Township's rugged landscape has historically prevented significant roadway development, although major arteries are nearby. Specifically the Township has convenient access to Interstate Route 83 about 4 miles to the east at the Lewisberry, Yocumtown and Newberrytown Exits. This corridor offers convenient commuting access to the Harrisburg and York metropolitan areas to the north and south, respectively. The I-83 corridor also links within a few miles with the PA Turnpike (I-76) and US Route 30; these roads offer access throughout Pennsylvania and beyond. PA Route 15 is also within a few miles of the northwestern corner of the Township in Dillsburg. Here commuters can proceed north towards Harrisburg and southwest towards Gettysburg. While the Township's affords rural comfort, its proximity provides for ready access throughout the northeastern United States.



Regional Location Map

II. Planning Goals

"*If you don't know where you are going, any road will take you there!*"
-An old saying

To derive the goals for this Plan, members of the study committee were asked to complete a 37-question community development objectives survey. Then, in January 2005, the Committee met and discussed the results of the survey. The following presents an overall narrative vision of the desired future followed by a detailed listing of specific planning goals for the Township.

A. Community Vision

Warrington Township senses an influx of growth. Today, locals believe that they sit in the path of approaching change. Major development pressures are swirling in municipalities just beyond them. Local officials intend to continue the Township's overall planning and zoning policies which emphasize the preservation of rural character. At the same time, the Township hopes to update and strengthen standards that protect the environment and "dovetail" with more recent programs and policies of state agencies. (e.g. DEP, DCNR, PA DOT, etc.)

They recognize that their landscape is largely sensitive and should be immune from rampant suburban growth. They also know that many of the region's residents rely upon the Township's large parks, gamelands and ski resort for local recreation opportunities. Local officials hope to prolong agricultural operations and are committed to preserving the "hilly" and sensitive terrain that dominates much of the area. Finally, they intend to defend the water quality within the watershed draining into Pinchot Lake to ensure continued use and enjoyment of this valuable regional park.

But all areas must accommodate some growth and local officials understand that change will occur. They envision a future where new developments are designed with greater sensitivity to their natural surroundings. The Township will accommodate limited residential growth that is closely tied with projected population trends in settings that are efficient and compact amid rural and agricultural uses.

Out here in the country, residents are largely undisturbed by the bustle of modern life. Their large lots protect their privacy and rural habits. Some crossroad and home-based businesses are permitted to encourage local employment, but only if such uses don't interfere with their neighbors' residences. The Township also hopes to attract new commercial uses and services into well-designed small-scale shopping centers that serve residents and the many visitors who make use of the nearby recreation facilities.

The Township continues to rely upon a rural level of public service and utilities; however, "urban" uses will be targeted along the existing sewer line of the Wellsvile Sewer Authority.

B. Community Planning Goals

The following goals were derived from discussions with local officials and citizens of the Township plus the review of completed surveys by local officials. These specific goals will guide the rest of this effort by allocating the Township's resources towards expressed needs. The goals are presented by functional category.

Environmental Goals
1. Prolong active agricultural use upon prime and productive farmlands.
2. Support local, County and State programs of agricultural preservation and acknowledge the landowners who have donated or sold conservation easements.
3. Strengthen the Township's conservation strategies of sensitive environmental conditions (eg. floodplains, wetlands, habitats, steep slopes, etc.)
4. Coordinate local development policies with the management plans for improvement of the water quality in Pinchot Lake.
5. Protect the integrity of the PA State Gamelands located within the Township.
6. Promote the preservation of historic sites with a voluntary referral program and adaptive-reuse options.
7. Blend an overall program of environmental stewardship that reflects the Township's rural heritage and recreation use.
Community Development Goals
8. Permit the creation of accessory businesses and occupations as a means of accommodating a proper scale of commerce and industry that is consistent with the Township's rural character and lack of infrastructure.
9. Rely upon larger commercial centers in nearby municipalities for commercial goods and services beyond those needed on a regular basis by local residents.
10. Promote new principal commercial businesses that reflect a local orientation and scale in small-scale shopping centers.
11. Promote adaptive reuse of historic structures within the Township as a means of preserving old buildings through federal tax credits while accommodating limited new businesses and other service uses at a proper scale.

12. Limit proposed growth areas based upon projected population so to accommodate the Township's "fair-share" of development while protecting and preserving outlying areas in a rural condition.
13. Locate new rural residences in areas with suitable conditions to support the use while protecting any sensitive environmental features on the building site.
Public Facilities, Services & Utilities Goals
14. Aside from the Township's recently acquired community park, continue to rely upon the abundant recreation facilities and programs offered at the Pinchot State Park and the School District.
15. Coordinate local planning policies with the need to support local volunteer emergency services.
16. Ensure that new rural residences provide for adequate emergency vehicular access.
17. Improve coordination between the Township's overall planning review processes with that of the Northern York School District and emergency service providers.
18. Continue to rely upon on-lot utilities; however, target "urban" land uses along the existing Wellsville Sewer Authority lines.
19. Coordinate zoning policies with the availability of public utilities.
Transportation Goals
20. Assess current road conditions and compare with adopted design standards.
21. Monitor the long range plans concerning major road corridors that may affect the Township.
22. Coordinate future land uses with roads that have sufficient capacity to handle the additional traffic.
23. Maintain the Township's rural road characteristics to reduce vehicle speeds and discourage "short-cut" through traffic movements.
24. Look to improve road conditions that create traffic safety problems (e.g. inadequate sight distance, speeding, dangerous alignments, roadside obstructions, etc.) as developments occur.

Planning Program & Process Goals
25. Devise a technically competent and legally defensible strategy to accommodate the Township's "regional fair-share of growth and development" in a manner that retains the Township's desirable rural character.
26. Prepare this Plan so that it complies with the grant requirements of the York County Planning Commission's Community Development Block Grant Program and is consistent with the County's Comprehensive Plan.
27. Devise a pro-active land use policy that eliminates the need for incremental rezoning and development reviews that lack coordination and overall vision.
28. Provide for a firm, yet cooperative, approach to development reviews that enable local officials to readily identify and protect important natural and cultural features.
29. Engage a proactive plan development process that invites public participation and awareness.
30. Prepare this comprehensive plan in an unbiased manner that responds only to direction from local officials and avoids undue influence from special interest groups.
31. Schedule meetings and the delivery of draft materials to the committee members in a manner that provides a generous period of time for review and comment.

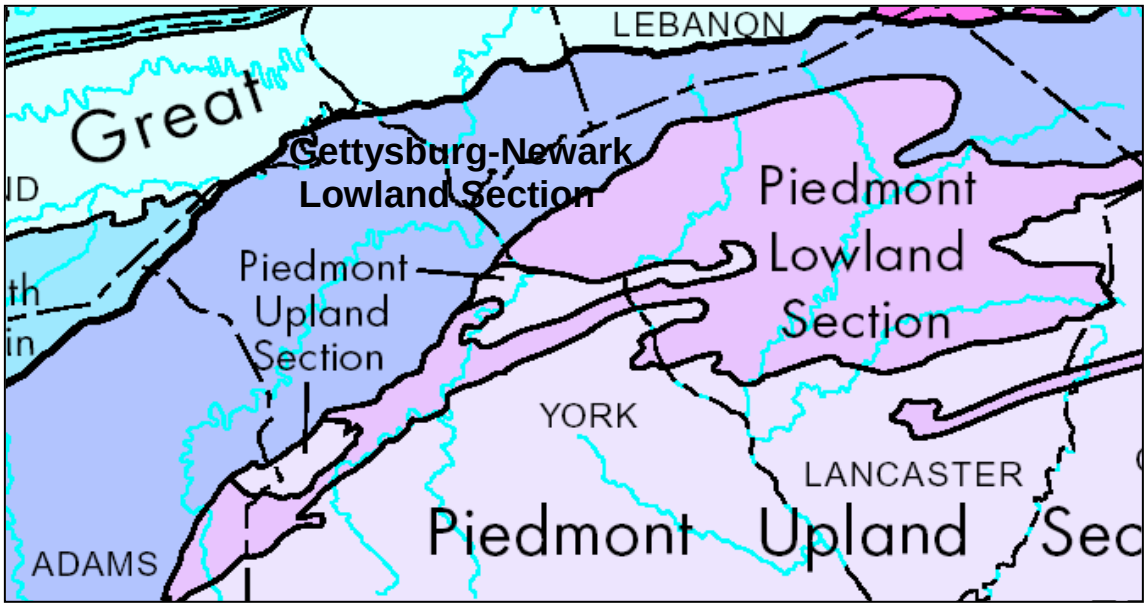
III. Natural & Cultural Features

This chapter will describe and map Warrington Township's natural and cultural resources. This information is extremely useful in allocating future land uses within the Township, as well as in formulating policies and implementing measures that protect these natural and cultural resources. Much of the information contained within this Section has been derived and/or updated from the former Township Comprehensive Plan adopted in 1989.

A. PHYSIOGRAPHY

Physiographic regions are areas that are broadly categorized based on terrain texture, rock type, and geologic structure and history. Warrington Township, along with the northwest corner of York County, is situated amid the Gettysburg Newark Lowland Section of the Piedmont Province.

The Gettysburg-Newark Lowland Section consists mainly of rolling low hills and valleys developed on red sedimentary rock. Some isolated higher hills occur on diabase, baked sedimentary rock, and conglomerates. Almost all of the drainageways are oriented in a northeast-southwest direction and the basic drainage pattern is dendritic. Soils are usually red and often have a visually striking contrast to the green of vegetation. Elevation in the Section ranges from 20 to 1,355 feet. The Section is made up of sedimentary rock that was deposited in a long, narrow, inland basin that formed when the continents of North America and Africa separated more than 200 million years ago. This Section occurs in southeastern Pennsylvania and extends from the Pennsylvania-Maryland boundary in Adams County across parts of York, Dauphin, Lancaster, Lebanon, Berks, Chester, and Montgomery Counties to the Delaware River in Bucks County. [1]



[1] http://www.dcnr.state.pa.us/topogeo/map13/13pus.aspx, Jan. 4, 2005.

B. GEOLOGY

The geology of an area plays an important role in determining the surfacial shape of the environment. Throughout the ages, underlying rock is subjected to natural weathering forces that chemically and physically erode its original shape. The physical properties of underlying rock determine its strength and suitability to support development, including the ease of excavation, and ability to support the foundations of various structural types and availability of groundwater. In addition, the geology offers valuable mineral deposits that can be the source of commercial enterprise and construction materials.

GEOLOGIC FORMATIONS

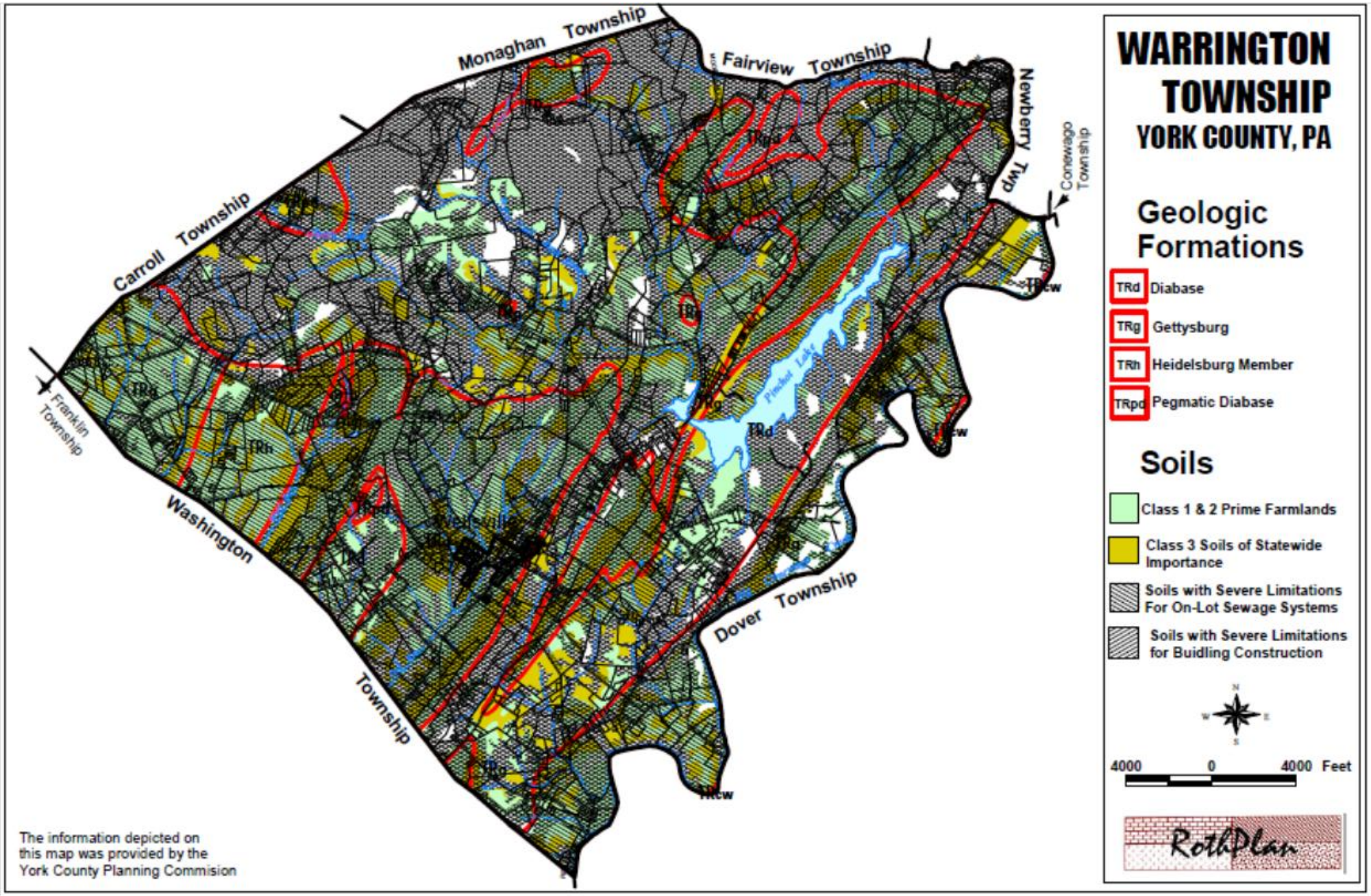
The *Soils and Geology Map* illustrates the geologic conditions within the Township.

Stretching across the northern part of York County from southwest to northeast are the youngest rocks of the region. They were formed 180 to 220 million years ago during the Triassic period, when Warrington Township was part of a lowland. Carrying sediments from the slopes of the huge, newly-formed Appalachian Mountains, streams laid down their deposits until the resulting formation reached a thickness of thousands of feet. While this process occurred, the older rocks that formed the floor of the lowland were gradually sinking, tilting downward towards the northwest. Finally the floor of rock broke, and through the resulting fault came molten rock (diabase) that flowed through cracks and layers of the new sedimentary rock, baking and hardening some of the shale and sandstone with its heat. The following describes each formation along with its engineering characteristics as reported in *Engineering Characteristics of the Rocks of Pennsylvania* (Harrisburg, PA: Pennsylvania Geologic Survey, 1982) Alan R. Geyer and J. Peter Wilshusen.

The Geology Map shows the makeup of Warrington Township's bedrock. A portion of the rock is diabase. Another portion of the rock is red shale and sandstone, a combination referred to as Gettysburg shale. Most of this type of bedrock lies in the southern half of the Township. One kind of Gettysburg Shale, called the Heidlersburg member, contains numerous harder gray sandstones that are interbedded with the redbeds. Several smaller areas are underlain by Pegmatic Diabase.

Diabase (TRd) underlies the largest areas within the Township. Diabase is more resistant to erosion than other neighboring redbeds and, therefore, tends to form the higher hills and ridges within the Township. Rocks are gray to black, and dense with fine grain particles. Weathering produces large rounded boulders and undulating hills with moderately steep but stable slopes. Groundwater yields are low as is permeability and porosity. Median well yields of 5 gallons per minute (gpm) are usually obtained in the fractured and weathered zones on top of the bedrock; however, groundwater tables are strongly influenced by seasonal conditions. These areas are difficult to excavate but stability is good and the materials are a good source of construction materials. This formation also includes several small nodes of Pegmatic Diabase **(TRpd)** compsed of pink feldspar and hornblende; however, no information is available on the engineering characteristics of this material.

Gettysburg Shale (TRg) also underlies large areas of the Township. This formation features reddish-brown shale with soft red-brown sandstone. This material is


WARRINGTON TOWNSHIP
YORK COUNTY, PA
Geologic Formations
TRd Diabase
TRg Gettysburg
TRh Heidelsburg Member
TRpd Pegmatic Diabase
Soils
Class 1 & 2 Prime Farmlands
Class 3 Soils of Statewide Importance
Soils with Severe Limitations For On-Lot Sewage Systems
Soils with Severe Limitations for Buidling Construction
4000 0 4000 Feet
RothPlan
Monaghan Township
Fairview Township
Newberry Twp
Conewago Township
Carroll Township
Franklin Township
Washington Township
Dover Township
Pinebat Lake
The information depicted on this map was provided by the York County Planning Commision

ENGINEERING CHARACTERISTICS OF GEOLOGIC FORMATIONS					
Formation Name (composition)	**Symbol**	**Porosity & Permeability**	**Groundwater**	**Ease of Excavation**	**Foundation Stability**
DIABASE FORMATION; PEGMATIC DIABASE (Diabase occurs in Pennsylvania, primarily as dikes and sheets; the dikes are generally 5 to 100 feet thick and the sheets much thicker, in most places, the rock is dark gray to black, dense and very fine-grained, and consists of 90 to 95 percent labradorite and augite.)	TRd TRpd	Joint openings provide a very low secondary porosity; low permeability.	Median yield is 5 gal./min.; yields are usually obtained from the fractured, weathered zone at the top of bedrock; water levels show strong seasonal influence.	Difficult; large boulders are a special problem; slow drilling rate.	Good; should be excavated to sound material.
GETTYSBURG FORMATION (Reddish-brown shale and soft, red-brown, medium-to-fine grained sandstone; minor amount of yellowish-brown shale and sandstone; may be metamorphosed by intrusive diabase to dark-purple to black argillite.)	TRg	Joint- and bedding-plane openings provide a secondary porosity of moderate magnitude; moderate permeability.	Median yield is 66 gal./min. hardness and total dissolved solids are frequently high.	Weathered zone may be excavated moderately easy; unweathered rock is difficult; moderate to fast drilling rate, except next to diabase where rock is harder and drilling rate is slow.	Good; should be excavated to sound material.
GETTYSBURG FORMATION, HEIDLERSBURG MEMBER (Gray to white sandstone having interbeds of red shale and sandstone; some green, gray and balck shale; near diabase sheets these rocks have been altered to white quartizite, white sandstone and dark-purplish argillite.)	TRh	Primary porosity of moderate magnitude in weathered sandstones, and low magnitude in fresh, unaltered rock; Joint- bedding-plane openings provide a secondary porosity of moderate magnitude; low permeability.	Median yield is 50 gal./min. 90 % of all nondomestic wells drilled exceeded 18 gpm from wells to 275 feet or more.	Weathered material is moderately easy; unweathered rock is difficult; drilling rate is moderate to slow.	Good; should be excavated to sound material; good drainage may be required.
Source - Engineering Characteristics of the Rocks of Pennsylvania (Harrisburg, PA: Pennsylvania Geologic Survey, 1982) Alan R. Geyer and J. Peter Wilshusen.					

moderately resistant to weathering and tends to form the lower hills of the Township. Slopes are moderate but stable. This formation has good surface drainage with moderate porosity and permeability. Median groundwater yield is 66 gpm with frequent concentrations of total dissolved solids. Excavation is moderately easy in weathered horizons but more difficult in unweathered sections. Cut slope stability is poor but foundation stability is good when excavated to sound material and drainage is provided.

Formation offers good source of road material and fill.

A smaller single area of the **Gettysburg Formation Heidelsburg Member (TRh)** underlies the area straddling the intersections of Spring Valley and Old Mountain Roads and Mount Zion and Old Mountain Roads. This formation features gray to white sandstone with interbeds of red shale. Near Diabase sheets, these rocks have been altered to white quartzite and sandstones. This formation has a block pattern with moderately abundant fractures. These materials are moderately resistant to weathering and produce medium-sized blocks and irregular shapes. Formation produces low hills with moderate but stable slopes. Surface drainage is good with moderate porosity in weathered sandstones and low porosity elsewhere. Permeability is low. Median groundwater yield is 50 gpm. Excavation is moderately easy in weathered material but difficult elsewhere. Cut slope and foundation stability are both good and this formation offers a good source of road material and fill.

Summary - From this analysis, several important land use implications can be derived. The Townships geologic formations are characterized by features that could support rural forms of development. First, each formation produces median groundwater yields that exceed the rule-of-thumb 5 g.p.m. standard needed for domestic well supplies. Next, all formations exhibit sufficient strength to support building foundations; however, most require excavation to solid material.

GROUNDWATER PROTECTION

Geology is also a primary determinant of groundwater quality and quantity. Groundwater is surface water that has seeped into and is contained by underground geological formations called aquifers. Water stored in aquifers is sometimes released to the surface through springs or can be pumped to the surface through wells. Groundwater aquifers are part of an interconnected network that includes surface waters, such as streams, ponds, wetlands, and lakes. Aquifers regulate the levels and flow rates of these surface waters by collecting and retaining water reaching the ground and gradually releasing it during dry periods.

Some of the primary geological determinants of groundwater quality and quantity are the type, structure, permeability, porosity, and chemical composition of the bedrock formations present in the area. An understanding of local groundwater conditions is necessary to (1) plan for future public sewer and water needs, (2) allocate future land uses so as to protect important groundwater recharge areas, and (3) protect existing and potential future groundwater sources from contamination.

A typical household with three family members requires an average flow of 0.2 to 0.4 gpm with a peak rate of use ranging between 3 and 5 gpm. The Township's geologic formations record median yields of 9 to 73 gpm and can adequately accommodate a sparsely-developed rural land use pattern.

The Gettysburg Shale and Gettysburg Formation Heidelsburg Member formations' higher yields offer the opportunity for a public or commercial water source. Also, local artesian wells offer potential groundwater sources worthy of protection. However, local geologic characteristics that provide for abundant groundwater yield often present the opportunity for its contamination. Therefore should the Township develop a public or commercial water source here, it should be accompanied with a suitable wellhead or springhead protection program. Wellhead and springhead protection is a particularly sound investment because protection is more effective and less expensive than cleaning a contaminated groundwater source, which may cost 30 -40 times more than initial protection.

The following presents a brief synopsis of the five initial steps of the pla nning process needed to undertake a wellhead protection program as presented in *the Wellhead Protection Plan* (York County Planning Commission):

(1) ***Form a Water Planning Team*** of local officials, citizens, and interested experts who are interested in a successful wellhead protection program and can commit the time to assist in the work involved. Then establish a regular meeting schedule:

(2) ***Define the land area to be protected*** - A wellhead is defined as an area above or below grade that contributes water to, and could potentially contaminate a water supply. Wellhead protection areas should be delineated by a professional geologist at the outset. A water supplier may use its own municipal engineer or retain a qualified consultant for this work. Not all public gr oundwater sources warrant a wellhead protection program. That is a decision that should be made based on several factors: feasibility of protecting the recharge area, influence of surface water on the water supply, existence of a filtration plant, possible interconnection to buy water from another system, or designation of the water source as a sole-source aquifer. Within Pennsylvania wellheads are generally divided among three different zones:

Zone I is a 100 to 400 foot radius immediately surrounding a well or spring in which no development should be permitted. Activities in this area generally pose the greatest risk to groundwater because of the short distance (and correspondingly short travel time) that contamination must travel to reach the well.

Zone II is a larger area from which the groundwater is pulled into a well by pumping. Generally, the harder a well is pumped, the further out the water is drawn from. Because springs are not pumped, a Zone II is not delineated for springs.

Zone III is the area from which any rain that falls to the surface and eventually flows into Zone II or a spring.

Not all wellhead protection programs utilize the three zone approach and local officials should tailor their program with appropriate levels of regulation and implementation that meets local protection goals and responds to local conditions.

(3) ***Identify potential contaminate sources*** - The water planning team should review the list on the next page of potential sources of groundwater contamination then specifically inventory and map such sources within their respective wellhead zones.

(4) **Evaluate alternative tools and techniques** – Based upon results from the previous task, select from the many techniques that can be used to protect grou ndwater, including but not limited to those tasks listed on the bottom of the following page:

(5) **Develop and implement a plan of action –** Using any combination of the above, prepare a plan that assigns duties and schedules completion. Then, conduct public hearings with local officials for official adoption of the plan, and ordinances or approval of resolutions needed to implement the Plan. Regularly review the status of the Plan's effectiveness and related developments within the field of wellhead protectio n. Conduct ongoing public education about the need for groundwater protection and possible consequences for violations. Whatever, the first step the municipality or water provider takes (either modest or comprehensive) it must have local official and comm unity-based support to be effective.

POTENTIAL SOURCES FOR GROUNDWATER CONTAMINATION	
AGRICULTURE Animal burial areas Irrigation Animal feedlots Manure storage areas Pesticide and herbicide storage areas	**RESIDENTIAL** Fuel storage systems Septic systems, cesspools, water softeners Furniture and wood strippers and refinishers Sewer lines Household hazardous products Chemical applications to lawns
COM MERCIAL Airport Boat Yards Medical Institutions Paint shops Photography business Printing business Carwashes Railroad tracks Railroad yards or maintenance facility Cemeteries Research laboratories Construction areas Road deicing operations (i.e. road salt storage or use) Dry cleaning establishment Scrap and junk yards Gas station Auto Repair Shops Storage tanks and piping (either above ground or underground) Golf courses (chemical applications) Jewelry and metal plating Laundromats	**INDUSTRIAL** Abandoned properties Asphalt plants Chemical manufacture, warehousing and distribution Electrical and electronic products and manufacturing Electroplaters and metal fabricators Foundries Fire Training Facilities Machine and metal working shops Manufacturing and distribution sites for cleaning supplies Quarries Petroleum products production, storage and distribution Pipelines (e.g. oil, gas) Septage lagoons and sludge Storage tanks (i.e. above ground, underground) Toxic and hazardous spills Wells- operational and abandoned (e.g. water supply, injection, monitoring) Wood Preserving facilities
OTHER Rifle and pistol ranges	**WASTE MANAGEMENT** Hazardous waste management units (e.g. landfills, land treatment areas, surface impoundments, waste piles, incinerators, treatment tanks) Municipal incinerators Municipal landfills Municipal wastewater and sewer lines Open burning sites Recycling and reduction facilities Stormwater drains, retention basins, transfer stations

ASSORTED STRATEGIES & TECHNIQUES FOR GROUNDWATER PROTECTION	
Regulatory Techniques	**Non-Regulatory Techniques**
• Overlay Zones; • Prohibited Land Uses; • Special and temporary permitting; • Performance standards; • Amortization of land uses; • Restrictive agricultural or conservation zoning; • Lot coverage regulations; • Transfer of development rights; • Staging of development; • Setbacks; • Disturbance requirements; • Conservation plans; • Stormwater management regulations; • Materials & waste handing requirements; • Fuel storage tank regulations; • Well drilling regulations; • OLDs maintenance; • Sewage planning strategies; • Nutrient management plans; • Integrated pest management	• Emergency preparedness; • Contingency planning; • Signage; • Monitoring; • Remediation; • Land purchase; • Land donation; • Easements; • Land banking; • Comprehensive planning • Regional wellhead / watershed protection planning; • Public education; • Environmental watch groups; • Street sweeping; • Household & hazardous waste collection; • Storm drain labeling; • Sinkhole cleanup; • Streambank cleanup; • Streambank fencing & stabilization.

Given this Plan's goals and the Region's sensitive environmental conditions, it is recommended that all existing and/or future public wellhead protection areas be reserved for low intensity rural uses with limited permitted lot coverages and woodland preservation requirements that will reduce potential impact on groundwater volumes and quality. Furthermore, any home-based businesses or rural occupations should require the applicant for such uses to demonstrate the means by which he/she will properly handle materials, and dispose of any wastes, that could threaten groundwater contamination.

In addition it is recommended that the following "Best Management Practices" (BMPs) for the control of stormwater be applied to:

1. ***Minimize on-site impervious areas by preserving natural wooded cover and drainage-ways on-site.***
2. ***Utilize pervious surfaces, such as porous pavement and gravel as ways to minimize runoff.***
3. ***Minimize directly connected impervious area. Promote natural removal of pollutants using vegetation and soil. Direct impervious area runoff to pervious. For example:***
   a. ***roof downspouts to lawns***
   b. ***driveways to lawns***
   c. ***parking areas to lawns or grassed swales***
4. ***Eliminate the opportunity for pollutants to mix with storm water runoff by:***
   a. ***street sweeping***
   b. ***cover chemical storage areas***
   c. ***dike potential spill areas***
   d. ***regular sediment removal from drainage system***
5. ***Minimize the potential for concentrating pollutants and concentrating storm water runoff by:***
   a. ***utilizing grass swales and filter strips: and,***
   b. ***utilizing infiltration trenches, where applicable.***

Decades ago, it was a common practice to dispose of our wastes at convenient, low points such as sinkholes and mountain gaps. Today, with better scientific information on the health effects of common chemicals, we have learned that improper waste management can have some very undesirable consequences. For example, the contents of a full 2 ½ gallon gasoline container could make the drinking water for a town of 1,000 people unfit to drink for almost two months!

Homeowners can do a number of things to protect their home water supplies:

- New wells benefit from the use of casing and grout.
- Periodic water quality testing may be beneficial. Some useful tests include coliform, bacteria and nitrate-nitrogen.
- Protect water quality by being careful with chemicals and fuels near the well.
- Some of the most common problems with home water supplies come from malfunctioning septic systems. Pump your septic tank regularly, and inspect your leach bed for proper functioning.
- If you use water treatment (such as softeners or disinfection), check the treatment equipment regularly.

C. SOILS

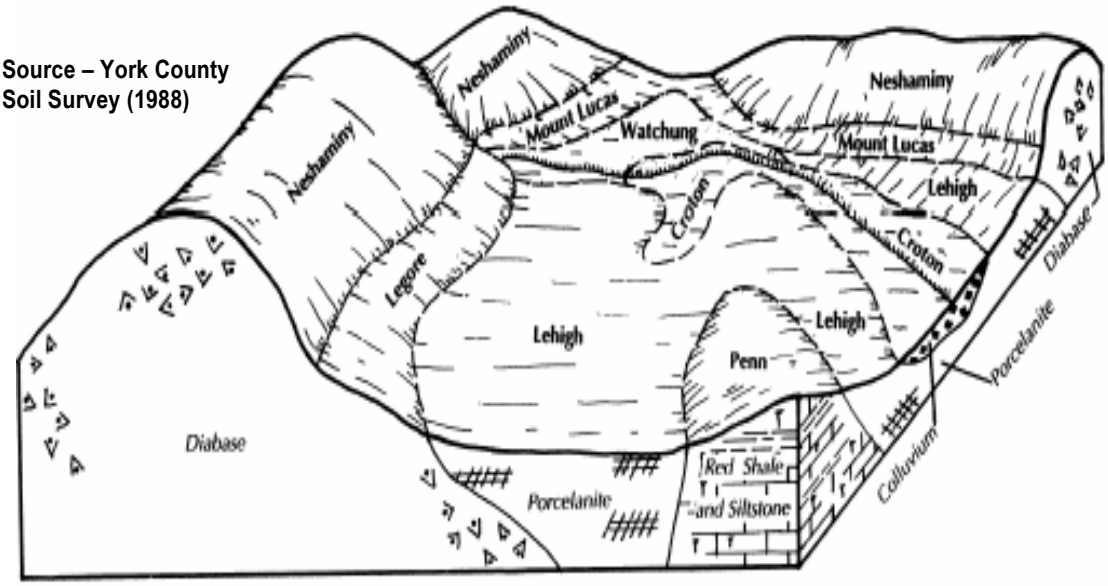
A soils analysis is essential to planning for future land uses, which are best located on soils that are suitable and have complementary characteristics for specific land uses. For example, agricultural land uses are usually found where soils are level, well-drained and fertile. Residential land uses are suitably located where soils are fairly level and sufficiently above bedrock and the water table. The appropriate siting of development significantly reduces the costs associated with excavating a foundation, as well as locating and designing an on-lot sewage disposal system. Finally, industrial uses favor soils that are relatively flat and sturdy so as to withstand the heavy weights associated with the operation of large plants.

The York County Soils Survey forms the basis of information about the Township's soils. Soils are named for a town or geographic feature near where they were originally mapped. The Township's soils have been analyzed for their suitability for farming and development purposes; these results are depicted on the *Soils and Geology Map*. The constant weathering of geologic formations produces various soil types. The capabilities and constraints exhibited by these soils are related to the geologic characteristics of the underlying rock and the local climatic conditions.

There are fifty-two (52) specific classifications of soils found within Warrington Township. The most recent soil survey identifies two general soils types found within the Township each named for the major soils in it. Since soils are a byproduct of the constant weathering of geology over the millennia it is no surprise that these major soils associations correlate with the geologic formations that underlie them.

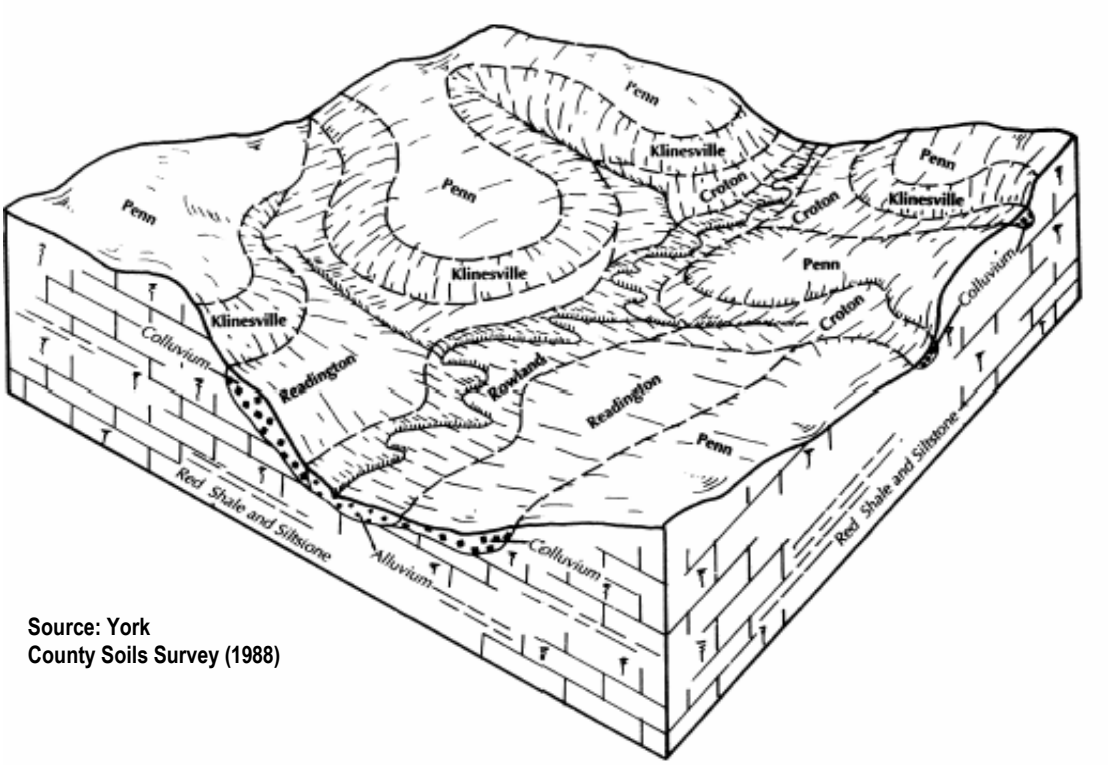
By far the largest general soil type within the Township is the **Neshaminy-Lehigh** association. This group occupies all but the extreme southern and eastern edges of the Township. As the below diagram reveals the Neshaminy soils occupy the upland areas of the landscape underlain by the more resistant Diabase geology. The Lehigh soils are situated in the valleys. Smaller pockets of minor soils (Legore, Mount Lucas and Watchung) transition between these two principal soils types along the foothills and Croton soils form the floodplains along the streams and creeks.

Source – York County Soil Survey (1988)



"In most areas these soils are used as cropland, orchards, woodland, and recreation areas. In some areas they are used for urban development. The major crops are corn, soybeans, small grain, fruit, hay, and pasture. Slope is the major limitation. Erosion is the major hazard. These soils range from being well suited to generally unsuited for cultivated crops and specialty crops. They are fairly well suited to improved pasture. On the steeper slopes, erosion is a severe hazard and hay crops are impractical. These soils are suitable to woodland use. On the steeper slopes, however, use of logging roads and skid trails is restricted. Slope generally is a severe limitation to urban uses. On Neshaminy soils, it is a difficult limitation to overcome. On Lehigh soils, depth to bedrock and wetness are severe limitations for urban development and sanitary facilities. Suitability is poor for recreation development because of slope on Neshaminy soils and wetness on Lehigh soils. "[2]

A smaller general soils group identified within the Township by the York County Soils Survey is the **Penn-Klinesville-Readington** association. This general soil group is confined to the extreme southern edge of the Township straddling the Big Conewago Creek and along the extreme western edges of the Township. As depicted below Penn soils occupy the upland settings followed by Klinesville soils which form the hills side slopes and then the Redington soils are located at the foothills. Rowland and Croton soils form the local floodplain soils in this association.



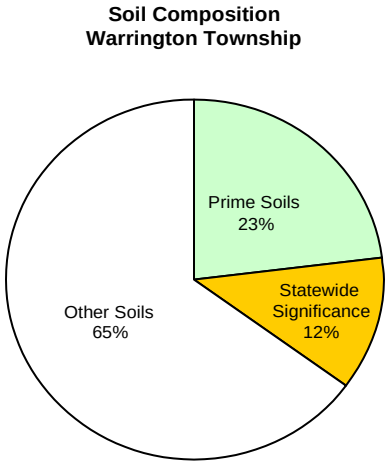
Source: York County Soils Survey (1988)

"In most areas these soils are used for cropland and woodland. In some areas they are used for urban development. A few areas are idle land. The major crops are corn, soybeans, small grain, hay, and pasture. Erosion is a hazard if cultivated crops are grown. These soils are well suited to poorly suited to cultivated crops and specialty crops. They are well suited to hay, pasture, and woodland use. Many dairy farms are on these soils. In most areas these soils are poorly suited to sanitary facilities. The Penn soils, however, are fairly well suited to most urban uses. Klinesville soils are poorly suited

[2] U.S. Department of Agriculture, Natural Resource Conservation Service, York County Soils Survey (1988) pg. 28.

to urban uses because of slope. On Readington soils, wetness is a limitation for most urban uses. On Penn, Klinesville, and Readington soils, suitability is good for some types of recreation development."[3]

PRIME FARMLANDS



Section 604.3. of the Pennsylvania Municipalities Planning Code (MPC) requires municipalities to develop zoning ordinances that "preserve prime agriculture and farmland considering topography, soil type and classification and present use."[4] The United States Department of Agriculture (USDA) rates all soil suitability for agricultural purposes and assigns a numerical rating from Class I to Class VII. ***Prime farmland*** soils are those soils with an agricultural rating of Class I or II. In addition, the USDA considers Class III soils to be of ***Statewide importance*** to agriculture. The MPC recognizes Class I-III soils as prime farmlands. The USDA describes prime agricultural land as "the land that is best suited for producing food, feed, forage, fiber and oilseed crops." It possesses the soil quality, growing season and water supply needed to economically produce a sustained high yield of crops when it is treated and managed using acceptable farming methods. Prime farmlands are rich in chemical nutrients, have good permeability to air and water with few rocks, are well-drained but resistant to erosion, and have relatively flat topography. Prime farmlands produce the highest yields with minimal inputs of energy and economic resources, and farming them results in the least damage to the environment. The USDA encourages all levels of government and private individuals to effectively use these valuable resources to meet the nation's food and fiber needs.

The low-lying flat lands contain about 207 acres of Class I and 10,444 acres of Class II prime agricultural soils. The foothills tend to have more Class III soils of Statewide importance totaling some 5542 acres. Unfortunately, the soils most suitable for agricultural purposes are also those most suitable for development, creating competition between these uses for these soils, and resulting in the loss and fragmentation of the most productive farmlands. Certainly some valuable farmlands have been lost within the Township but many remain. ***Prime farm soils and soils of Statewide importance should be protected from conversion to other uses through appropriate planning and zoning.*** Information about various agricultural preservation programs is contained with Chapter VI of this Plan.

However, the Township believes that the remaining farmlands do not offer sufficient mass to warrant effective agricultural zoning that would severely limit rural residential development. Instead local officials intend to permit low-density developments here with incentives to continued farming (Agricultural Nuisance Disclaimer, farm occupations, farmer-friendly regulations, etc.) However, intensive livestock operations will require strict scrutiny under this approach since new residences will be possible amid these intensive uses.

[3] U.S. Department of Agriculture, Natural Resource Conservation Service, York County Soils Survey (1988) pgs. 27-28.

[4] PA Municipalities Planning Code, Act 247, as amended, Section 604.3.

DEVELOPMENT CONSTRAINTS

Another important soils consideration relates to those soils that produce constraints for building development and the operation of on-lot utilities. Building development constraints can include a wide range of soil characteristics, including steep slopes, wetness, depth to bedrock, frost action, shrink-swell, low strength and cemented pans, and flooding. Other soil-related constraints become important if on-site sewage disposal systems are contemplated. Constraints associated with the installation and operation of these systems include steep slopes, wetness, flooding, slow percolation rates, poor filtration characteristics, and high secondary porosity due to the presence of fractures and solution channels. It is important to identify and map those soils that possess building development and on-site sewage disposal constraints so that future land uses can be kept away from these environmentally sensitive areas.

Warrington Township has most soils that are severely limited for urban growth and development, particularly if on-lot sewers are used. Unsurprisingly, many of the soils that possess severe development constraints are not productive farmlands; however, this is not true in every instance. ***Future planning should avoid intensive development in areas with severe soil constraints or be accompanied by strict siting standards in local zoning or subdivision and land development ordinances (SLDO) to protect their vulnerable characteristics.***

The following table lists the soil types and their characteristics found within Township:

SOILS TABLE

SOILS CHARACTERISTICS OF WARRINGTON TOWNMSHIP

Soil Symbol	Soil Name	Slope	Agriculture Rating	Hydric	Severe Soil Limitations			
					On-lot Sewer	Dwelling	Road	Severe Limitations*
Be	Bermudian silt loam	0	1		X	X	X	FL,LS,W,PF
BgA	Birdsboro silt loam	0-3	1		X			W
BgB	Birdsboro silt loam	3-8	2E		X			W
Bo	Bowmansville silt loam	0	3W	X	X	X	X	FL,W,FA,PS
BrB	Brecknock Channery silt loam	3-8	2E		X			PS
BrC	Brecknock Channery silt loam	8-15	3E				X	SL
BrD	Brecknock Channery silt loam	15-25	4E		X	X	X	SL
BsD	Brecknock Channery silt loam	8-25	6S		X	X	X	SL
BsF	Brecknock Channery silt loam very stony	25-60	7S		X	X	X	SL
CrA	Croton silt loam	0-3	4W	X	X	X	X	W,PS
CrB	Croton silt loam	3-8	4W	X	X	X	X	W,PS
Hc	Hatsboro silt loam	0	3W	X	X	X	X	FL,W,FA
KnD	Klinesville Channery silt loam	15-25	6E		X	X	X	SL,DR
Lc	Lamington silt loam	0	4W	X	X	X	X	W,FA,PS
LeB	Lansdale silt loam	3-8	2E					
LfC	Lansdale Channery silt loam	8-25	3E					
LgB	Legore Channery silt loam	3-8	2E					
LgC	Legore Channery silt loam	8-15	3E					
LgD	Legore Channery silt loam	15-25	4E		X	X	X	SL
LhA	Lehigh Channery silt loam	0-3	2W		X	X	X	W,FA,PS
LhB	Lehigh Channery silt loam	3-8	2W		X	X	X	W,FA,PS
LhC	Lehigh Channery silt loam	8-15	3E		X	X	X	W,FA,PS
LhD	Lehigh Channery silt loam	15-25	4E		X	X	X	W,FA,PS,SL
LkB	Lehigh Channery silt loam v ery stony	0-8	7S		X	X	X	W,FA,PS
MdA	Mount Lucas silt loam	0-3	2W		X	X	X	W,FA,PS

SOILS TABLE								
SOILS CHARACTERISTICS OF WARRINGTON TOWNMSHIP								
Soil Symbol	Soil Name	Slope	Agriculture Rating	Hydric	Severe Soil Limitations			
					On-lot Sewer	Dwelling	Road	Severe Limitations*
MdB	Mount Lucas silt loam	3-8	2E		X	X	X	W,FA,PS
MeB	Mount Lucas silt loam very bouldery	0-8	6S		X	X	X	W,FA,PS
NaB	Neshaminy Channery silt loam	3-8	2E		X			PS
NaC	Neshaminy Channery silt loam	8-15	3E		X			PS
NdB	Neshaminy Chan. silt loam ex. bouldery	0-8	7S		X			PS
NdD	Neshaminy Chan. silt loam ex. bouldery	8-25	7S		X	X	X	SL,PS
NdE	Neshaminy Chan. silt loam ex. bouldery	25-45	7S		X	X	X	SL,PS
PbD	Penn loam very stony	8-25	6S		X	X	X	SL,DR
PcF	Penn Channery Loam very stony	25-50	7S		X	X	X	SL,DR
PeB	Penn silt loam	3-8	2E		X			DR
PeC	Penn silt loam	8-15	3E		X		X	SL,DR
PoB	Penn Klinesville complex	3-8	2-3E		X			DR
PoC	Penn Klinesville complex	8-15	3-4E		X		X	SL,DR
PpB	Penn-Lansdale complex	3-8	2E		X			SL,DR
RaA	Raritan silt loam	0-3	2W		X	X	X	W,PS
RaB	Raritan silt loam	3-8	2E		X	X	X	W,FA,PS
ReB	Readington silt loam	3-8	2E		X			PS
RfB	Reaville silt loam	3-8	3W		X	X	X	W,FA,PS,DR
RfC	Reaville silt loam	8-15	3E		X	X	X	W,FA,PS,DR
Rw	Rowland silt loam	0	2W		X		X	FL,FA,PS,W
StC	Steinburg Channery sandy loam	8-15	3E		X			DR
Uc	Urban land	NA	8S					
UgB	Urban land Penn complex	0-8	8S-2E		X			DR
WaA	Watchung silt loam	0-3	4W	X	X	X	X	W,FA,LS,PS
WaB	Watchung silt loam	3-8	6W	X	X	X	X	W,FA,LS,PS
WbB	Watchung silt loam extremely bouldery	0-8	7S	X	X	X	X	W,FA,LS,PS
*DR–depth to rock / FA–frost action / FL–flooding / LS–low strength / PF-poor filter / PS – percs slowly / SL–slope / W -wetness								

D. SURFACE WATERS

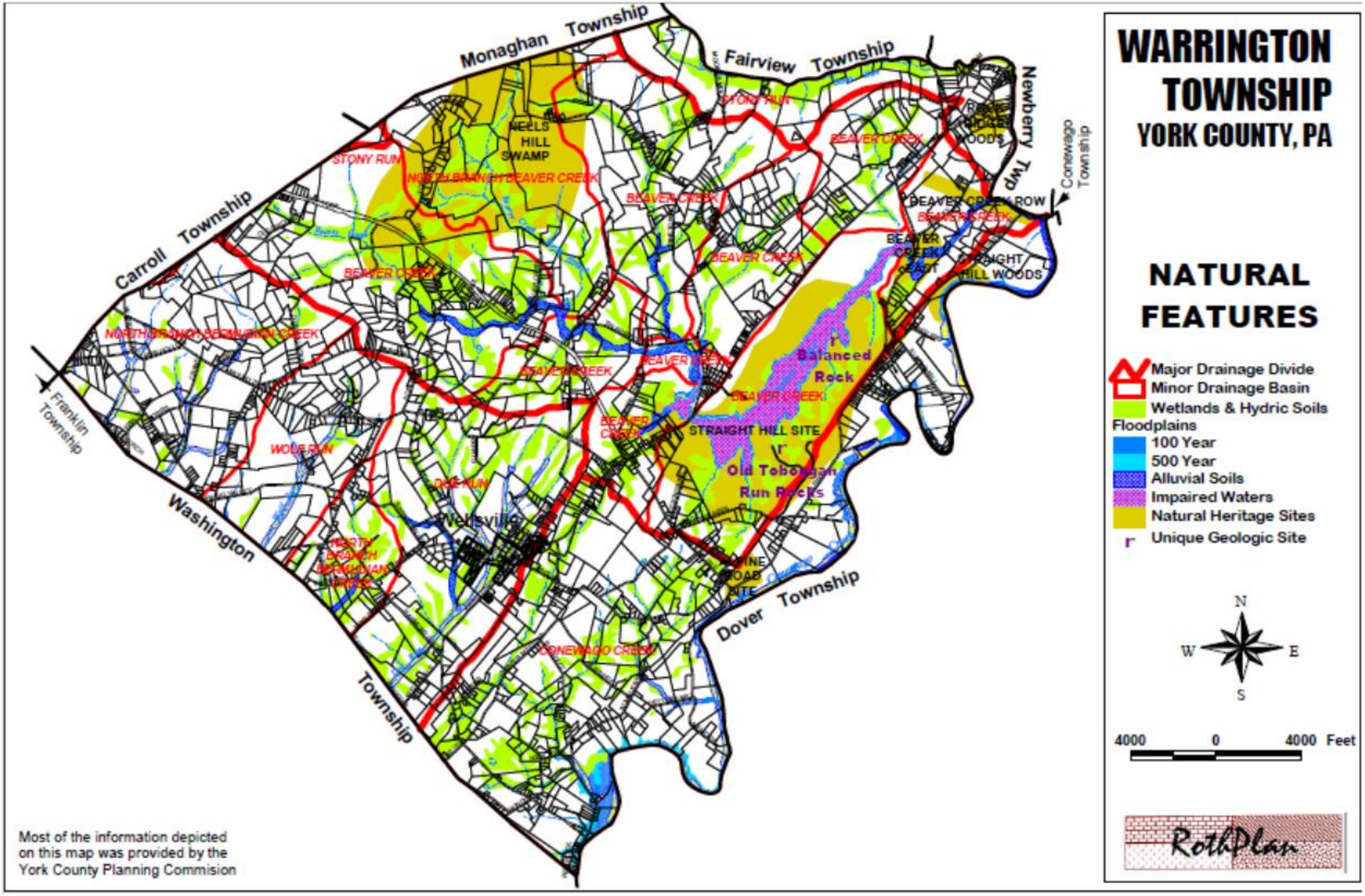
The way in which water moves through our environment has implications for land use planning. First, rivers, streams, creeks, runs, and their floodplains present hazards to development. Second, land areas adjacent to surface waters offer high quality habitat, conservation and recreational opportunities. Finally, the drainage basin within which surface waters flow is a basic geographic unit used to plan and design sanitary and storm sewers; systems that can make use of gravity-fed lines could reduce the costs of these types of utilities.

DRAINAGE BASINS

A drainage basin consists of the streams and associated floodplains that dispose of surface water from that area. Drainage basins are separated by ridgelines. All of the water draining from Warrington Township flows into the Big Conewago Creek, Susquehanna River, Chesapeake Bay and ultimately the Atlantic Ocean. The Township's major and minor drainage basins as identified by the PA Department of Environmental Protection (DEP) are depicted on the *Natural Features Map*.

Beaver Creek is the largest drainage area and drains the northeastern half of the Township. Within the Township most water flows south into the western end of Pinchot

WARRINGTON TOWNSHIP
YORK COUNTY, PA



Most of the information depicted on this map was provided by the York County Planning Commision

Lake and then eastward where it joins Stony Run and then outfalls into the Big Conewago Creek along the Township's northeastern boundary. The main branch of the Creek located north and south of Pinchot Lake is a designated warm-water fishery. **Stony Run** forms the Township's northeastern boundary and directly drains a narrow band of land along this border. Other various tributaries "fan-out" in a dendritic pattern forming the low-lying valleys characteristic of the Township's rugged landscape.

Big Conewago Creek forms the Township's southeastern boundary. It directly drains the southern corner of the Township and a narrow band of land along the Township's irregular eastern border. Tributaries within the Township flow in a southeasterly direction but the main branch of the creek flows towards the northeast. This creek ultimately drains all areas of the Township and it outfalls into the Susquehanna River at the Brunner Island Electric Station just south of York Haven Borough. This Creek is a designated warm-water fishery. It is noted that a Rivers Conservation Plan is presently under development for this creek involving representatives from various State, County and private agencies from Adams and York Counties. This plan will seek ways to make efficient use of the watershed and protect its resources. The next public meetings are to be held in Fall, 2005 at which time a list of management options will be presented.[5]

Doe and Wolf Runs and the **North Branch of the Bermudian Creek** all drain the western reaches of the Township. Water in these sub-basins generally flow in a southwesterly direction into adjoining Washington Township where they converge into the North Branch of the Bermudian Creek. This Creek follows a sinuous course to the southeast where it converges with the Big Conewago Creek in the southeastern corner of Washington Township.

HIGH QUALITY & EXCEPTIONAL VALUE WATERS

The Federal Clean Water Act of 1972 was passed to "restore and maintain the chemical, physical and biological integrity of the Nation's waters."[6] To implement this Federal mandate, the PA DEP passed the Pennsylvania Clean Streams Law and designated some 12,500 miles of rivers and streams as "special protection water," including **Exceptional Value Waters** and **High Quality Waters**.

High Quality Waters include streams or watersheds that have excellent waters and environmental or other features that require special water quality protection. High quality waters are to be protected as they exist; water quality can only be lowered if a discharge is a result of necessary social and economic development and all existing uses of the stream are protected.

Benefits of High Quality Waters

1. Recreational values
2. Fisheries protection
3. Aesthetic/visual
4. Health and welfare

Exceptional Value Waters include streams or watersheds that constitute outstanding national, state, Township, or local resources, such as waters of national, state, or county parks or forests; waters which are used or projected for use as a source of water supply; waters of wildlife refuges of state game lands; waters which have been characterized by the Pennsylvania Fish Commission as wilderness trout streams and other waters of substantial recreational or ecological significance.

[5] Conewago Creek Rivers Conservation Plan Brochure, PA Environmental Council

[6] Pennsylvania Department of Environmental Protection, *Local Protection of High Quality Streams* (Harrisburg, PA: June, 1981), p. 1.

Exceptional value waters are to be protected at their existing quality because they have outstanding ecological and/or recreational values. The social and economic justification procedures do not apply. Water quality in exceptional value waters simply cannot be degraded."[7]

Presently none of the Township's watercourses have been identified as high-quality or exceptional value waters; however, it is noted that the main branch of Beaver Creek located north of Pinchot Lake is a designated warm-water fishery. The lack of high quality or exceptional value waters is surprising given the Township's rural character and rugged wooded landscape. These traits typically produce high quality surface water conditions. ***Local officials may wish to investigate the quality of water to determine an actual level of water quality. Often designation involves a nomination process that originates at the local level. Then should areas receive protected status, the Township should adopt specific practices and policies to protect such waters.***

Water Quality Protection Measures

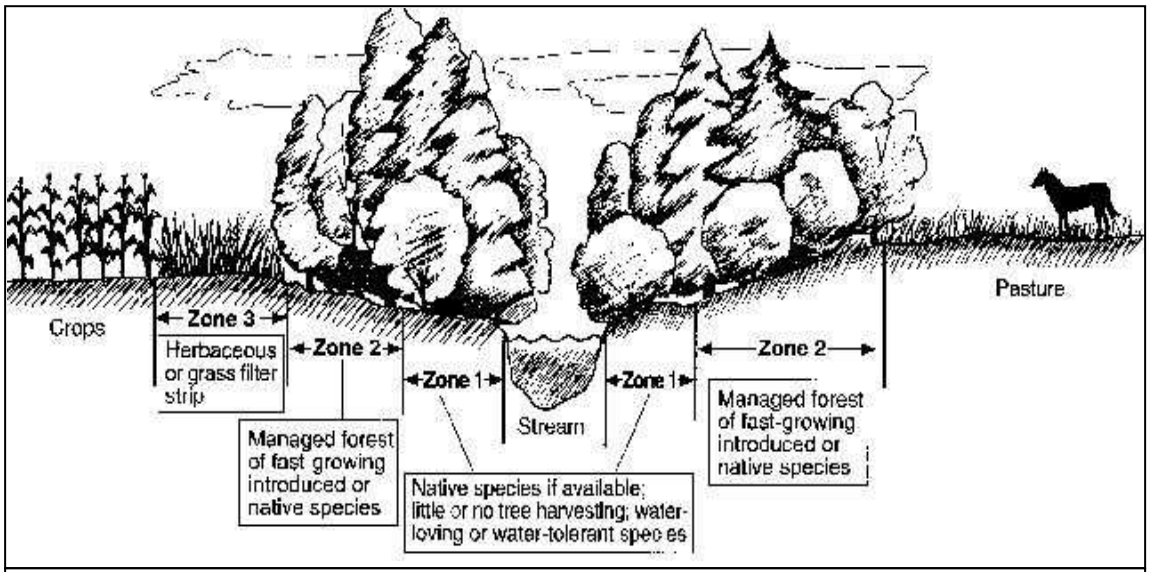
1. Riparian buffers
2. Streambank stabilization
3. Streamside fencing
4. Filter strips
5. Conservation plans
6. Development setbacks
7. Limitations on land uses
8. Proper waste disposal

The PA DEP also provides a measure of protection by regulating the discharge of wastewater, and other point sources of pollution. However, nonpoint source pollution such as agricultural and other types of runoff is only partially regulated. Under Pennsylvania law, the regulation of land uses and activities which generate nonpoint source pollution is largely a municipal function. To avoid degradation of surface waters, existing and potential future land uses and activities must be carefully scrutinized.

Riparian buffers are areas adjoining streams where naturally successive vegetation is protected. While protection of floodplains and wetlands are widely accepted land use management techniques, recent awareness of diminishing surface water quality suggests the need for more protection. Studies conducted by the U.S. Forest Service demonstrate that riparian buffers offer real advantages in the removal of harmful nutrients and sediment from storm water before it enters the stream. These same riparian buffers can increase the food supply and create interconnected natural systems of movement for local wildlife.

The U.S. Forest Service estimates that 85% of all surface water occurs in smaller streams and creeks. Therefore, the inclination of society to focus upon water quality of larger streams, creeks, rivers, and bays is ineffective. It is vital that surface water quality of small stream headwaters and low-order tributaries becomes our priority. Without such measures, our higher order creeks and rivers are threatened by poor surface water quality. Surface water quality is a direct function of the interaction between water and the land and vegetation through which it flows. The greatest interaction occurs within lower order streams. Within high order streams and rivers, water is principally contributed from tributaries rather than the adjoining streamside areas; therefore, the opportunity for water quality improvement is minimal. For example, no overhead tree canopy could possibly span the width of the Susquehanna River and reduce its summer water temperature. Conversely, a well-designed riparian buffer along a low order stream can offer direct water quality benefit to the adjoining property owner and those located downstream. More information about this topic and a sample ordinance are contained with Chapter X of this Plan.

[7] Pennsylvania Department of Environmental Protection, *Local Protection of High Quality Streams* (Harrisburg, PA: June, 1981), pg.3



Typical cross-section of a riparian buffer along a stream in a rural or agricultural setting.

Within rural areas, the disposal of wastes can threaten local water quality. ***The Township should adopt waste handling and waste disposal reporting requirements within its zoning ordinance.*** Such zoning provisions should require prospective uses to demonstrate compliance with all applicable waste handling and disposal regulations at the local, state and Federal levels as applicable.

For large-scale industries, concentrated feeding animal operations (CAFOs) and/or other uses that generate large waste volumes or hazardous wastes, the reporting of this information should be tied with the grant of a special exception or a conditional use so that expert testimony can be provided and scrutinized prior to approval of the use. For other less intensive uses the provision of this information should be prerequisite for granting a zoning permit and all subsequent activities should be required to comply with such handling and disposal techniques for continued use and occupancy. Should a use need to change its waste handling and disposal techniques, such changes should be reported to the Township. The provision of this information can also be helpful to local fire companies who may have special procedures to follow for uses with hazardous materials and wastes.

IMPAIRED WATERS

"The Department of Environmental Protection (DEP) has an ongoing program to assess the quality of waters in Pennsylvania and identify streams and other bodies of water that do not meet water quality standards as "impaired." Water quality standards are established for the different uses that waters can support and the respective goals established to protect those uses. Uses include, among other things, aquatic life, recreation, and drinking water. Water quality goals are numerical or narrative water quality criteria that express the in-stream levels of substances that must be achieved to support the uses. Periodic reports on the quality of waters in the Commonwealth are required under section 305(b) of the federal Clean Water Act.

"Section 303(d) of the Act requires states to list all impaired waters not supporting uses even after appropriate and required water pollution control technologies have been applied. For example, a waterbody impacted by a point source discharge that is not

complying with its effluent limit would not be listed on the 303(d) list. The Department would correct the water impairment by taking a compliance action against the discharger. Waterbodies that still do not meet water quality standards after this additional evaluation, however, must be included on the 303(d) list of impaired waters. The 303(d) list includes the reason for impairment, which may be one or more point sources (like industrial or sewage discharges), or non-point sources (like abandoned mine lands or agricultural runoff).

"States or the U.S. Environmental Protection Agency (EPA) must determine the conditions that would return the water to the quality that meets water quality standards. As a follow-up to listing, the state or EPA must develop a Total Maximum Daily Load (TMDL) for each waterbody on the list. A TMDL identifies allowable pollutant loads to a waterbody from both point and non-point sources that will prevent a violation of water quality standards. A TMDL also includes a margin of safety to ensure protection of the water. If states do not develop TMDLs, EPA is required by regulation to do so.

"A TMDL is designed to reduce pollutant loads to impaired waters and enable these waters to meet water quality standards. Pennsylvania has committed to developing TMDLs for all impaired waterbodies and will use both traditional and new approaches to correct water quality problems.[8]

Within the Township, Pinchot Lake has been identified as "impaired" for use in support of aquatic life due to problems of accumulated excess phosphorous from urban ronoff/storm sewers, and agricultural/organic enrichment. Specifically seasonal algae blooms occur which deplete available oxygen. Between years 1999 and 2003, $220,000 of federal funding has been matched with $34,875 of local funding to implement lake restoration projects and watershed best management practices (BMPs). The following is a January 14, 2005 email received from Barbara Lathrop of the DEP's Clean Lakes Program/319 describing the current status of the Lake and activities underway to alleviate this problem:

> "The Pinchot Lake watershed in Warrington Twp, York County was studied under EPA's Clean Lakes Program in 1995. Problems in this 340 acre hypereutrophic lake included elevated nutrients, oxygen depletion, algal and aquatic weed problems, sewage leaks from the local lines, sediment from logging, and stormwater inputs from NPS (nonpoint) sources. In 36 years, the lake lost 13% of its original storage capacity. The TMDL was approved in April 2003. The TMDL addresses phosphorus reductions of 100.4 kg/yr., mostly from the watershed and NPS sources. Some of the phosphorus loading is from internal (lake sediment) and groundwater sources.
>
> "Pinchot Lake watershed facts:
> Watershed size: 17 sq mi

[8] http://www.dep.state.pa.us/dep/deputate/watermgt/wqp/wqstandards/303d-report.htm, March 26, 2003

Designated Use: WWF
Land use: forested (71%), ag (24%), wetlands and waterbodies (4%)

Algae problems of a typical hypereutrophic lake
http://resac.gis.umn.edu/water/regional_water_clarity/content/pro_home.htm

"Remedial Activities:
BMPs installed w/ funding from Chesapeake Bay Program, Growing Greener & the 319 NPS program (1994-2003):

- Pasture improvement & fencing, subsurface drain, spring development, riparian buffer plantings, stream stabilization, lake shore stabilization, stormwater control basin, roadside stormwater runoff control, aquatic weed harvester Total : ($162,304)

- Educational events: on-lot septic management workshops, Pinchot Lake Festivals (8 annual), watershed educational program (campground & festivals), timber harvesting workshop.
  (Purchase of an aquatic weed harvester was funded by the 319 Nonpoint Source Program in 2003).

"Water Quality Monitoring:
During the restoration phase, the lake was monitored by Aqua-Link, Inc through grants. DEP also sampled the lakes on various occasions. An aquatic macrophyte mapping was done in 2003. Post BMP Lake WQ Monitoring was done in 2004 by citizen monitors.

"What still needs to be done:

- Warrington Twp. needs to review/update or enact protective ordinances, such as riparian corridor/buffer zone ordinances, woodland conservation ordinance, stormwater ordinance, watershed management ordinance, environmental protection of sensitive areas ordinance, natural resource protection ordinance (protection of species identified as threatened or endangered/ PNDI listed-species. (DEP can provide model ordinances or copies of enacted ordinances).

- While most agricultural BMP's have been identified and implemented, the Township is undergoing rapid development; 3 large farms in the immediate Pinchot lake watershed have recently been sold and planned for subdivision into residential lots. Forest land has recently and continues to experience logging operations. Stormwater runoff is likely to increase and impact Beaver Creek streambanks with increased erosion. Identified erosional areas should be addressed and stabilized. Other yet unidentified areas should be addressed/assessed and prioritized for restoration. BMP implementation should include institutional practices,
  i.e. educational efforts to continually educate the residents in the watershed on yard care (fertilization, pet waste, composting), rain gardens (and other stormwater mitigation techniques), septic management, and general watershed stewardship.

- Within the Gifford Pinchot State Park boundaries itself, Rock Creek and its runoff tributaries need some stabilization work to mitigate trail (sediment) impacts. Storm runoff impacted zones (roadway areas and footpaths) throughout the Park need to be stabilized from eroding. An integrated pest management (IPM) type strategy (including boater education program) needs to be implemented to control the aquatic invasive Eurasian watermilfoil to improve fish habitat and to prevent the spread of the invasive to nearby waterbodies. Some of the internal loading of phosphorus from the lake bottom sediments might be removed via weed harvesting; records of tons removed each year need to be kept; the harvest should be composted and removed from the watershed. Other methods of removing the internal phosphorous should be investigated.

Eurasian Watermilfoil

Future Funding Sources: The 319 Nonpoint Source Program (NPS) prioritizes funding requests from public entities for restoration and implementation practices in watersheds with an approved TMDL. The Pinchot watershed is such an area. The NPS Program obtains grant requests through DEP's Growing Greener Program (www.dep.state.pa.us/growgreen/ . Project proposals are due in March of eachyear."

Conversations with Ms Lathrop suggest that projects to address these needed future needs would likely be funded and that the local group formed to affect changes to the Lake and its watershed needs to be re-energized into action. Local Officials should consider meeting with this group to encourage their continued effort with some urgency. Also Township Officials should consider applying rigorous BMPs associated with stormwater management within the Beaver Creek watershed which drains into Pinchot Lake. More information on this subject follows in Section E of this Chapter.

WETLANDS

Wetlands are areas that are regularly inundated or saturated long enough to produce the particular types of vegetation associated with ***swamps, bogs and marshes***. While there are several definitions of wetlands used by regulatory agencies, all definitions require the presence of hydrophytic plants (plants that grow in wet soils), hydric (wet and anaerobic) soils, and the presence of water at or near the surface at some part of the growing season.

Benefits of Wetlands

1. Provide food and habitats for an abundance of animal life.
2. Are breeding, spawning, feeding, cover, and nursery areas for fish.
3. Are important nesting, migrating and wintering areas for waterfowl.
4. Act as natural storage areas during floods and storms.
5. Act as groundwater recharge areas, particularly during droughts.
6. Purify ground and surface waters by filtering and assimilating pollutants.

Recently, much attention has been focused upon the importance of wetlands. All wetlands have value, although their value is highly variable. Wetlands support an abundance and diversity of life unrivaled by most types of environments. The many benefits wetlands provide are summarized in the above inset.

Wetlands within the Township have been identified from two sources. First the U.S. Department of the Interior's National Wetlands Inventory, is derived from high altitude

aerial photograph interpretation of surfacial features commonly associated with wetlands. This inventory tends to identify the larger wetland areas only. These include a combination of scattered palestrine, riverine and lacustrine wetlands. Palestrine wetlands are ponds and small lakes, riverine wetlands are associated with rivers, streams, runs, creeks, and brooks and lacustrine wetlands are associated with lakes.

Wetland Protection Measures

1. Modifications to road maintenance practices(e.g., salt and de-icing chemicals).
2. Homeowner education (e.g., application of yard chemicals).
3. Development setbacks.
4. Limitations on land uses.
5. Filter strips.
6. Environmental Impact Assessment.

Second, the latest Soil Survey completed for the County by the Natural Resources Conservation Service identifies about 6997 acres of hydric soils that can also indicate the presence of wetland areas. The following hydric soils within the Township have also been depicted with severe building and sewer constraints on the Soils & Geology Map contained earlier in this Chapter.

HYDRIC SOILS TABLE

HYDRIC SOILS CHARACTERISTICS OF WARRINGTON TOWNMSHIP

Soil Symbol	Soil Name	Slope	Agriculture Rating	Hydric	Severe Soil Limitations			
					On-lot Sewer	Dwelling	Road	Severe Limitations*
Bo	Bowmansville silt loam	0	3W	X	X	X	X	FL,W,FA,PS
CrA	Croton silt loam	0-3	4W	X	X	X	X	W,PS
CrB	Croton silt loam	3-8	4W	X	X	X	X	W,PS
Hc	Hatsboro silt loam	0	3W	X	X	X	X	FL,W,FA
Lc	Lamington silt loam	0	4W	X	X	X	X	W,FA,PS
WaA	Watchung silt loam	0-3	4W	X	X	X	X	W,FA,LS,PS
WaB	Watchung silt loam	3-8	6W	X	X	X	X	W,FA,LS,PS
WbB	Watchung silt loam extremely bouldery	0-8	7S	X	X	X	X	W,FA,LS,PS

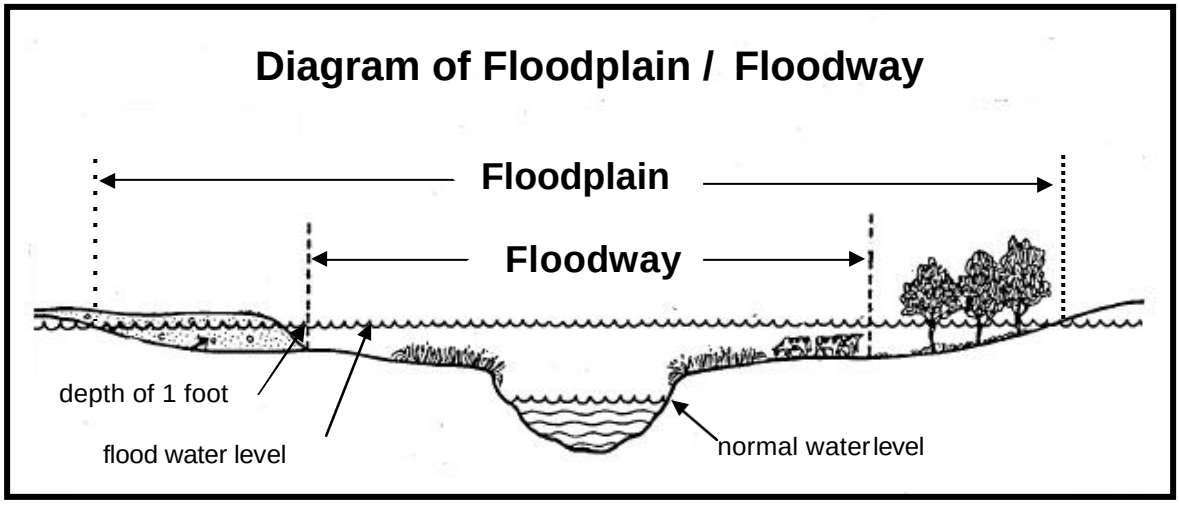
*DR–depth to rock / FA–frost action / FL–flooding / LS–low strength / PF-poor filter / PS – percs slowly / SL–slope / W -wetness

A variety of laws have been passed to protect wetlands. Infill and development in larger wetlands are now regulated by the U.S. Environmental Protection Agency and subject to both State and Federal permitting processes. Careful local planning, education, and the incorporation of protective standards into local subdivision and land development ordinances could extend further protection to the Township's smaller wetlands as well as to land areas immediately surrounding wetlands. ***Future planning should avoid development in areas with wetlands or hydric soils.***

FLOODPLAINS

A floodplain is an area of land adjoining a water source, such as a river or stream, that is subject periodically to partial or complete inundation by the water source. The floodplain consists of the ***floodway*** and the ***floodway fringe***. The floodway is the stream channel plus an additional area that must be kept free of encroachments to avoid an increase in flood heights. The floodway fringe is the remaining portion of the floodplain within which encroachments must be limited.

Flooding can result in the loss of life and property, health and safety hazards and significant public expenditures for flood protection and relief. Floodplains also often contain valuable prime farmlands and wildlife habitats. Floodplain protection safeguards the public health, safety and welfare, while protecting natural resource values.



Flood hazard areas within the Township have been identified by the Federal Emergency Management Agency (FEMA). Local governments which regulate development and fill within flood hazard areas qualify to participate in the Federal Flood Insurance Program. Flood hazard areas have been identified for the Township, which participates in the Federal Program.

Benefits of Floodplain Protection

1. Protection of life, health and safety.
2. Protection of property.
3. Protection against surface water pollution.
4. Protection against soil, crop and wildlife habitat loss.
5. Reduces/eliminates need for public expenditures.

Federal floodplain mapping denotes estimated 100 and 500-year floodplain boundaries, areas within which there is the probability that flooding will occur once in 100 and 500 years, respectively. These areas are identified on the *Natural Features Map*. The presence of alluvial soils (soils deposited by water) may also be used to identify additional areas subject to periodic inundation. The latest Soil Survey for the County identifies the following alluvial soil types for the Township and their respective characteristics:

ALLUVIAL SOILS TABLE

ALLUVIAL SOILS CHARACTERISTICS OF WARRINGTON TOWNMSHIP

Soil Symbol	Soil Name	Slope	Agriculture Rating	Hydric	Severe Soil Limitations			
					On-lot Sewer	Dwelling	Road	Severe Limitations*
Be	Bermudian silt loam	0	1		X	X	X	FL,LS,W,PF
Bo	Bowmansville silt loam	0	3W	X	X	X	X	FL,W,FA,PS
Hc	Hatsboro silt loam	0	3W	X	X	X	X	FL,W,FA
Rw	Rowland silt loam	0	2W		X		X	FL,FA,PS,W

*DR–depth to rock / FA–frost action / FL–flooding / LS–low strength / PF-poor filter / PS – percs slowly / SL–slope / W -wetness

The delineation of alluvial soils generally provides wider floodplains than those identified by FEMA; this is an option for increased protection against flooding. The Township's alluvial soils total some 1870 acres and have been depicted with severe building and/or sewer limitations on the Soils and Geology Map contained earlier in this Chapter.

Township Ordinance 94-3 regulates activities and improvements within the floodplain. This ordinance relies upon the study conducted in September 1982 by the Federal

Insurance Administration to identify flood-prone areas. Specifically, the ordinance establishes the 100 year floodplain as the regulatory floodplain; this is the minimum area necessary for the Township to be eligible for flood insurance protection. ***Local Officials could strengthen this ordinance by adding areas within the 500-year floodplain and alluvial soils within the regulatory floodplain.***

STORM WATER MANAGEMENT

One of the most frequently described planning problems is the impact from storm water runoff. As an area develops, the patterns, volume and velocities of storm water runoff are likely to change. Individual developments produce marginal impacts; however, these impacts produce major cumulative problems unless measures are used to protect the capacity of watersheds to discharge surface water in a timely manner and at a safe rate. ***Storm water runoff can and should be managed.*** The benefits of storm water management are summarized in the adjacent inset.

Benefits of Storm Water Management

1. Reduces off-site and downstream flooding.
2. Reduces soil erosion, sediment loading and habitat loss.
3. Protects surface water quality.
4. Improves groundwater recharge.

Recognizing the need to resolve serious problems associated with flooding the Pennsylvania General Assembly enacted Act 167, the Pennsylvania Stormwater Management Act. This Act changed the way local stormwater management occurred by applying a watershed-based, comprehensive program of Township stormwater management. Act 167 requires all counties within Pennsylvania to prepare and adopt stormwater management plans for each of its watersheds, as designated by the Pennsylvania Department of Environmental Protection (DEP). These plans are to be prepared in consultation with municipalities within the watershed, working through a Watershed Plan Advisory Committee. The plans are to contain stormwater controls to manage stormwater runoff from proposed subdivision and land development applications. Once adopted, local municipalities are required to implement stormwater management ordinances that rely upon selected management techniques within 6 months or risk the loss of future State funding far a variety of projects and activities.

Best Management Practices (BMPs) are techniques that manage stormwater from particular land uses in a manner that is more consistent with the natural characteristics of the resources of the watershed. BMPs are a broad series of land and water management strategies designed to minimize the adverse impacts from developments and other disruptive activities. BMPs provide varying levels of protection and are becoming more widely utilized within Pennsylvania.

BMPs can be “structural” or “non-structural”. Structural BMPs are measures that require the design and physical constructions of a facility to assist with reducing or eliminating a non-point source of pollution and control stormwater. Structural BMPs are most often applied to agricultural operations and stormwater management. Non-structural BMPs are approaches to planning, site design or regulations that positively affect water quality and reduce stormwater runoff. Nonstructural BMPs are generally implemented through the enactment of municipal ordinances that specify site design and construction standards and operational procedures and activities. The table on the following page lists BMPs for various land use settings.

BEST MANAGEMENT PRACTICES

Agricultural BMPs include requirements that adequately address soil erosion control measures, nutrient management and pest control. • Conservation management, tillage and contour farming techniques intended to limit disturbance and erosion. • Provisions for grass or filter strips intended to remove sediment or other non-point pollutants from runoff. • Providing stream fencing intended to keep livestock out of stream channels. • Establishing programs for pesticide management intended to reduce the off-site impacts or spraying or applying pesticides. • Developing a manure management program to reduce runoff of nutrients and pathogens to streams.	**Conservation BMPs** include requirements that adequately address soil erosion control measures and stabilization techniques. • Stabilize stream embankments by utilizing structural or natural techniques designed to minimize erosion. • Provisions for grass or filter strips intended to remove sediment from point or non-point pollutant sources. • Preserve natural resources and habitats. • Establish networks of forested riparian buffers. • Establish mandatory setback requirements from wetlands and floodplains. • Develop a public education program to provide information (seminars and literature) to the residents of the community on the importance of protecting our natural and hydrological resources.
Stormwater Management BMPs include requirements that adequately address surface drainage, groundwater recharge and soil erosion control measures. • Minimize the volume of stormwater runoff generated by minimizing impervious surfaces required to support development. • Promote effective groundwater recharge within all stormwater management facilities including detention ponds, swales and downspouts. • Protect receiving stream channels by routing outfall locations from detention basins through grass or filter strips intended to remove contaminants. • Protect adjacent land areas from direct stormwater discharge by establishing a minimum isolation distance to enhance stabilization and groundwater recharge. • Establish stormwater management and natural features easements. • Utilize pervious surfaces to promote groundwater recharge. • Establish networks of forested riparian buffers.	**Land Development BMPs** include requirements that adequately address design requirements and conservation management techniques. • Reduction of infrastructure required to adequately support subdivision and land development activity. • Develop effective requirements to minimize the environmental impacts resulting from the change in land use. • Promote groundwater recharge by establishing minimum standards to maintain a balanced water budget of what is required to support the needs of the development versus the amount if water that is lost as a result of the development. • Incorporate the use of non-structural stormwater management techniques into site landscaping to minimize stormwater runoff and maximize infiltration. • Establish networks of forested riparian buffers as part of the landscaping requirements. • Include incentives in municipal regulations to achieve site design that is sensitive to existing environmental, natural, scenic, historical and cultural resources.

Considering the relatively new use of BMPs, Warrington Township should review its stormwater management ordinance with its engineer and make necessary revisions. Once local regulations have been developed, the Township should engage a community planner to make attendant adjustments to its zoning and subdivision/land development ordinances that would act as an impediment to more effective stormwater management.

At the appropriate future time, local officials should also cooperate with the County in the preparation of its Act 167 Stormwater Management Plans and subsequent recommended revisions to local ordinances.

E. IMPORTANT PLANT AND WILDLIFE HABITATS

As an area is converted from its natural to a man-made state, the delicate balance of the local ecosystem is often disrupted. This imbalance degrades or strains the environment's ability to support varied forms of plant and animal species. Consequently, species become rare, threatened or endangered.

Benefits of Habitat Protection

1. Protection of plant and wildlife diversity.
2. Protection of threatened and endangered species.
3. Protection of woodlands and linear corridors.
4. Provision of passive recreation opportunities.

State and Federal agencies have become increasingly concerned over the protection of local natural habitats as a means of protecting wildlife diversity. The protection of these habitats can also provide other benefits, as summarized in the adjacent inset. For these reasons, all levels of government and other conservation-oriented groups have become involved in the protection of these habitats.

NATURAL AREAS & HABITATS

Information for this section was obtained from the York County Natural Areas Inventory (2004). The York County Natural Areas Inventory is a document compiled and written by the Pennsylvania Science Office of The Nature Conservancy. It contains information on the locations of rare, threatened, and endangered species and of the highest quality natural areas in the county.

Showy Skullcap – PA endangered plant species.

Accompanying each site description are general management recommendations that would help to ensure the protection and continued existence of these rare plants, animals and natural communities. The recommendations are based on the biological needs of these elements (species and communities). The recommendations are strictly those of The Nature Conservancy.

Implementation of the recommendations is up to the discretion of the landowners. However, cooperative efforts to protect the highest quality natural features through the development of site-specific management plans are greatly encouraged. Landowners working on management or site plans of specific areas described in this document are encouraged to contact the Pennsylvania Science Office of The Nature Conservancy for further information.[9]

Through its partnership in the Pennsylvania Natural Diversity Inventory, the Nature Conservancy uses some 800 sources of information to map, describe and disseminate facts about important natural features.

The inventory includes animals, plants, habitats, and natural

[9] York County Natural Areas Inventory, pg. v.

communities that are unique biological resources within the county. The end results provide a list of the most important biological sites, identify their living resources, and provide a map of their locations. Recommendations are included with the inventory on the management of the living resources present.

It is the policy of the PNDI not to release detailed site-specific information about significant natural features for general exposure to the public. This protects the feature from persons who become curious and attempt to locate and collect such features. Instead, PNDI provides generalized locations of known or historic natural features occurrences.

Using PNDI's criteria, it is unsurprising that the Township contains several important habitats. The following tabulates information about these sites that are keyed to their depiction on the Natural Features Map.

Important Natural Areas/Habitats within the Township
Source: York County Natural Areas Inventory (1996)

Site Name	Description/Notes	Management Strategies
Alpine Road site	A moderately sized but poor quality population of **hard-leaved goldenrod** a critically imperiled plant species within PA.	Upgrade State status from tentatively undetermined to PA endanagered.
Beaver Creek East	A small population of **tooth cup** occurs along alluvium of the Beaver Creek and is a rare plant species within PA. **Putteyroot** is found in the woods near the creek and is a rare plant species within PA.	Both species would be best preserved by leaving them undisturbed.
Beaver Creek Right-of-Way	**Hard-leaved goldenrod**, a critically imperiled plant species within PA, is expanding in the cleared powerline right-of-way. **Grass-leaved rush**, an imperiled plant species within PA, was observed here but a more thorough search is recommended by The Nature Conservancy.	No apparent threats.
Nells Hill Swamp	**The giant swallowtail**, an animal of special concern within PA, exists within a prickly ash shrub thicket of the floodplain forest. A marginal quality population of **shumard's oak**, a critically imperiled plant species, was observed to have sparse reproduction here. A poor quality population of **horse-gentian**, a critically imperiled plant species, was observed.	No apparent threats; however, additional surveys are recommended to determine the extent and habitats of these species.
Rock Ridge Woods	**Putteyroot**, a rare plant species within PA is found on a rocky south facing slope.	Nearby exotic species may overtake this habitat.

Important Natural Areas/Habitats within the Township Source: York County Natural Areas Inventory (1996)		
Site Name	**Description/Notes**	**Management Strategies**

Showy Skullcaps, a species thought to be extinct within Pennsylvania, discovered in Warrington Township.

Important Natural Areas/Habitats within the Township Source: York County Natural Areas Inventory (1996)		
Site Name	**Description/Notes**	**Management Strategies**
Straight Hill Site This site has been identified as one the York County's highest priority natural areas for habitat protection. Fortunately most of it falls within Pinchot State Park.	A moderate to high quality population of **cranefly orchid**, a PA-Rare plant species, is found growing in well-drained humusy soil of a partially open mixed hardwoods forest.	No specific threats are described.
	About 100 plants of **hard-leaved goldenrod**, a critically imperiled plant species within PA, were found in open areas.	Succession and subsequent shading is a potential threat. Some of the plants also occur close to the roadside so frequent mowing or spraying of herbicides are also potential threats
	A small population of **horse-gentian**, a critically imperiled plant species, and a moderate sized population of showy skullcap, a critically imperiled plant species within PA, occur near each other upon hydric soils in a mid-successional forest at the shaded toe of a gentle northwest facing slope.	No specific recommendations are offered.
	A poor quality population of **tooth-cup**, a rare plant species within PA, occurs in a wet forest opening that is a small depression and is periodically inundated by run-off from upslope.	No specific recommendations are offered.
	Giant swallowtail, which is dependent on prickly-ash as a food source, has been observed at Gifford Pinchot State Park on several occasions.	The primary threat to this species is the loss of prickly-ash.
	Henry's elfin, a rare animal species of special concern has been observed repeatedly.	Little is known about this species aside from its preference for clearings and wood edges.
	An unidentified **PA-endangered animal species** that has been sighted several times in the south end of Pinchot Park.	It prefers slow shallow rivulets found in marshy settings and is vulnerable to wetland alteration and destruction.
	Olive hairstreak is a rare animal species whose host plant is red cedar.	Dry, open areas with these shrubs are necessary habitat for this species. Additional surveys are recommended to more thoroughly assess this species and its habitat.
	Shumard's oak was identified growing throughout the Park. This plant species was typically found along streams and moist lower slopes.	Selective logging or thinning is probably beneficial to this species.
	A good to excellent quality population of **eastern coneflower** were also found. This sitewill be best protected by leaving it in its current condition.	These species occupy an area that had previously been pasture, and would benefit from annual mowing.

It is obvious that many of these important natural areas are the result of their public ownership and avoidance of development. Many of these habitats coincide with areas contained within the Pinchot State Park and the PA State Gamelands No. 242. Also they combine with other inventoried natural features to produce the pristine areas of the Township. Consequently, the Township has placed these areas within its Conservation Zone which prohibits future intensive development and widespread growth. However, rare and endangered plant and animal species must be preserved and protected from indiscriminate impact even in rural settings by using development review procedures intended to conserve habitats in which these species occur.

Natural Areas/Habitats Protection Measures

1. Development and vegetation removal setbacks.
2. Modifications to road maintenance (e.g., snow and ice removal; salt and de-icing chemicals).
3. Limitations on land use.
4. Homeowner education (e.g., application of yard chemicals/removing plants).
5. Environmental Impact Assessments.

A requirement for an Environmental Impact Assessment prior to any subdivision approval should be applied to areas within these natural habitats. These EIAs can be applied universally within rural areas or imposed as a special overlay zone within the designated areas. EIAs should require a thorough investigation of the extent of the habitat followed by the identification of potential adverse impacts as well as opportunities and mitigating measures that could protect these areas amid development. Applicants should be required to meet and investigate management strategies with representatives of The Nature Conservancy prior to approval by the Township.

WOODLANDS

The Townships woodlands have been depicted on the Existing Land Use Map contained in Chapter V of this Plan. In 1987, a land use inventory estimated that some 6,458 acres (27.2% of the Township) were in woodland cover and it is clear that some woodlands have been cleared and others developed. However, vast areas remain, particularly in the more rugged northern settings, and in and around the PA State Gamelands and Pinchot Park.

Benefits of Woodlands Protection

1. Slows erosion by stabilizing steep slopes and stream banks through extensive root systems.
2. Aids in storm water management and replenishment of aquifers by promoting groundwater recharge.
3. Aids in purifying groundwater by filtering runoff and reducing sediment wash caused by erosion.
4. Provides important wildlife habitat areas, particularly when large, unbroken areas of forest cover or linkages to other blocks of woodland can be maintained.
5. Offers excellent passive recreation opportunities, such as hiking, horseback riding, photography, hunting, and camping.
6. Helps reduce the level of air pollution by absorbing airborne pollutants and producing beneficial carbon dioxide.
7. Moderates climatic conditions by providing wind-breaks and shade from direct sunlight.

Recent amendments to the Pennsylvania Municipalities Planning Code (MPC) specifically enable local governments to protect significant woodland areas by preventing extensive development in those areas and/or engaging development review procedures that conserve these important natural features.

However, the MPC also requires every municipality to permit forestry uses by right in every zone within the Commonwealth. ***Therefore, the Township must make this required change within its Zoning Ordinance. Furthermore it is vital that the***

Township develop and adopt sound forestry management regulations that can protect the sensitivity of wooded areas and adjoining neighbors from the deleterious impacts of uncontrolled logging uses and operations. More on this subject and a model forestry ordinance can be found on in Chapter XI of this Plan.

Next, the concentrations of woodland deserve protection particularly in light of the Township's desire to protect its ground and surface waters. Reforestation and tree preservation requirements can require that a majority of existing trees in proposed subdivisions or land developments be maintained or replaced, except those whose removal is necessary for the proposed structures and required improvements.

Woodland Protection Measures

1. Tree removal setbacks adjacent to streams.
2. Tree removal limitations in steep-sloped areas and in and near natural habitat areas.
3. Maintenance of wildlife corridors.

The Township should consider the adoption of other protective measures for woodlands, such as limiting the removal of trees adjacent to streams, in steep sloped areas, and in or adjacent to identified natural habitat areas. In addition, developers as well as woodlot managers should be encouraged to maintain established wildlife corridors in the form of linkages to other wooded areas. ***Municipal officials should consider the adoption of zoning and subdivision and land development standards limiting the removal of trees in sensitive areas, and encouraging the preservation of wildlife corridors.***

PENNSYLVANIA STATE GAMELANDS

The Pennsylvania State Game Commission owns and operates State Gamelands No. 242 which contains 1516 acres and is located in the northwest corner of the Township and just extends into adjoining Carroll Township. The area straddles Old York Road and York Road South. These areas offer settings for public hunting of small and large game during designated hunting seasons as well as year-round hiking and nature enjoyment.

F. UNIQUE GEOLOGICAL FORMATIONS

As described in previous sections of this chapter, the geology of an area is largely responsible for its landform. Unique geologic formations and occurrences can produce scenic vistas and places of special interest, recreation, and scientific and educational value that deserve special consideration and protection. Following literary research regarding these special sites it was determined that Balanced Rock is located within the Township and depicted on the Natural Feature Map.

Balanced rock is located along the Boulder Point Trail in Pinchot State Park. This large boulder balances on two smaller ones and is a special example of spheroidal weathering. Chemical and mechanical weathering processes attacked the igneous rock and rounded it. The rock was first formed from molten magma and as it cooled, its volume shrank and shrinkage or cooling cracks were formed which aided in the rounding process.[10]

Also the Old Toboggan Run Rocks located in Gifford Pinchot Park are identified within the York County Comprehensive Plan as a unique geologic feature. This rock feature was produced by frost wedging that cracked and separated large boulders of diabase. The resulting split has enabled trees to grow in the cracks and created passageways to walk through. Because of the sites location within the State Park, no local protection strategies are necessary.

G. HISTORIC SITES AND DISTRICTS

Warrington Township, like much of southeastern Pennsylvania, is fortunate to possess a rich cultural heritage. Today this heritage is apparent from the many older individual buildings, structures and related settlements that are scattered throughout the Township. Local officials and residents recognize the value of conservation, rehabilitation, and adaptive reuse of these historic resources features as a means of providing a glimpse into the area's important past. Additionally, historic preservation can provide educational opportunities regarding historic lifestyles and architecture. Well-maintained historic areas create a sense of unique identity that stimulates civic pride and economic vitality, and can become a basis for tourism. To identify historic sites within the following report was provided by Historic York, Inc. as follows:

Historic York, Inc. surveyed the historic properties of Warrington Township as part of the Historic Sites Survey of York County, a program for the York County Planning Commission. A historic property is any pre-historic or historic building, district, object, site or structure. Historic buildings are resources created principally to shelter any form of human activity, such as barns, farmhouses, ironworks, meeting houses, office buildings, railroad stations, school buildings, taverns, and theaters. The survey identified historic buildings that were fifty years of age, and cataloged basic information relating to their historic and architectural characteristics. Typical information included date of construction, architectural style, predominate building materials, historic and current function, presence of outbuildings, and the primary resource's condition and integrity assessment. The inventory was conducted according to the guidelines set forth by the Pennsylvania Historical and Museum Commission (PHMC), Bureau for Historic Preservation (BHP) and the National Park Service. In all, the historic resources inventory identified 368 historic resources within the boundaries of Warrington Township. The Borough of Wellsville's 93 historic resources were inventoried during a later survey project.

Warrington Township was erected by the authority of the Lancaster County courts in 1744 from neighboring townships. Many of the township's earliest settlers were of English heritage, immigrating to the township from Lancashire, England. The township's name derives from an English town of a similar name. In 1783, Warrington Township, which geographically included Washington Township, had 173 houses and 11 mills. Many of its earliest extant historic resources retain characteristics of English design and

[10] Outstanding Geologic Features of Pennsylvania, PA DER, Bureau of Topgraphic & Geologic Survey, 1987, pg 411

architecture, although the examples of traditional Colonial German building types explain the presence of several eighteenth century residents of Pennsylvania German ancestry.

Of the 368 historic resources in Warrington Township, most of these were, and remain, residences and farms. Other functions include churches, schools, cemeteries, and bridges, among others like an orchard, post office, hotel, tannery, and sawmill. The most common building material for residences is frame. Other common building materials are stone, brick, log and to a lesser extent, cement. The majority of buildings reflect vernacular architectural forms rather than examples of architect-design styles. There are many houses that are Pennsylvania German Vernacular, Traditional, Bungalow, and Georgian. More rare architectural styles include three Gothic Revival buildings, one Carpenter Gothic styled building, and one Colonial Revival building. Most houses are in good or fair condition. The date of the earliest building is 1746 and the latest is 1945. The majority of historic barns in the township are frame Sweitzer barns. This barn form is a typical Pennsylvanian barn, with a rear bank ramp, cantilevered forebay and stone foundation.

There are several commercial buildings located within the township, including the Patton Inn and Trading Post (c. 1800). This two-and-a-half story stone linear building, located on Bull Road, southeast of Rock Ridge Road, is locally acknowledged to be one of the oldest buildings in the township as well as the first inn to be built this side of the Conewago Creek. A second brick hotel, constructed (c. 1812) is located in Rossville at the intersection of Old York and Carlisle Roads. There are also several remnants of several saw and gristmills in the township: the Mill House (1852) along Kunkel Mill Road remains from the Kunkel's Mill complex (the mill was destroyed in 1972), a small saw mill on Beaver Creek, and another sawmill along Cedar Drive.

There are several historic religious-related buildings located within the Township. The oldest is the National Register-listed Quaker Meeting House (1769). The Mt. Zion United Brethren Church is a Gothic Revival styled building, erected in 1854 and is now the Mt. Zion United Methodist Church. The Blue Ridge Bethel Church (1856), the Maytown Evangelist United Brethren Church (c. 1871), the Big Rock Church (1880), the Mt. Olivet Church of God (1883), Mt. Airy United Evangelist Church (1883), which is now Mt. Airy United Methodist Church, and St. Michael's Lutheran Church (1959) are located throughout the township and still retain their religious function. The Victory Church (1910) is currently vacant. The Pentecostal Church (1920) now operates as a day care center. There are three cemeteries within the township, one at the Warrington Meeting House, one associated with the Salem Evangelist Church Cemetery and a mid 19th century cemetery located along Alpine Road, east of Rosstown Road.

Ten historic schools were identified as part of the survey: Big Rock, Ziegler's, Wellsville, Mt. Zion, Elcock's, Alpine, Mt. Pleasant, Mt. Airy, Rossville, and Maytown. There were nine schools in Warrington Township and one in Wellsville Borough. The oldest school was built circa 1850 and today it is the Lion's Community Building. Another school was erected circa 1860 and is now a residential home. In 1870 two schools were built; Mt Zion School which is now vacant, and the Mt Airy School which is now residential. In 1880, there was a proliferation of schools created, including Benedicts School which is currently a residence, Alpine School which is now a church, and

Maytown School which now holds the Pinchot Area Jaycees. In 1920 the Rossville School was erected and it is now a township office.

Of the historic resources located in Warrington Township, only the Warrington Meeting House is individually listed to the National Register of Historic Places. The Warrington Meeting House, listed to the Register in 1975, is a one-story meeting house constructed of uncoursed fieldstone. It was listed under Criterion C in the area of architecture as an exceptional example of eighteenth century meeting house constructed by Quakers in the region. It is remarkably well preserved with many of its exterior and interior character-defining features intact. There are two other resources formally declared eligible to the National Register of Historic Places by the Bureau for Historic Preservation: Hibernia Plantation, 810 East Camping Area Road, and the George Philips House, 510 Poplar Road. John Nesbitt constructed Hibernia Plantation, a sizeable stone Georgian residence, in 1789. The George Philips House is a two-and-a-half story vernacular log residence, constructed c. 1795.

Warrington Township envelops one district listed to the National Register. Historic districts are a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development. This district is comprised within the Borough of Wellsville. The Wellsville Historic District was listed on the National Register of Historic Places in 1979. The 51 contributing buildings in the Wellsville Historic District are a mixture of commercial, educational, industrial, and residential functions. The town's significance lies in its intact nineteenth century streetscape, which is reflective of its role as a rural industrial village during the nineteenth and twentieth centuries. The Wellsville School and the Whip Factory are considered contributing buildings within the district.

PA Act 167 enables municipalities to adopt Historic Districts within which building alterations, demolitions and new developments are strictly regulated. However, an effective historic preservation program does not necessarily require a strict program of architectural control. Some municipalities are not ready for such a rigorous approach and have adopted more voluntary approaches.

Some designate historic sites and widely publicize their existence. Next, they adopt an "overlay zone" that requires a "waiting period," during which would-be developers and property owners are encouraged to meet with local or County historic preservation experts, before they substantially alter or demolish an historic site. Oftentimes, this meeting will give the experts a chance to present other suitable building options that are more consistent with the site's character and will enhance the property's value. In other instances, the waiting period gives the community the opportunity to devise other adaptive reuse options for buildings that are proposed for demolition. In either event, such worthwhile efforts require some commitment on the part of local municipalities to take the next step toward historic preservation.

Another intermediate approach to historic preservation is the Historic Conservation District. Often established as an overlay district, an Historic Conservation District is designed to preserve and enhance the character of a neighborhood or Township by encouraging infill development and new construction that respects the context of the existing built environment and its appearance. New construction and demolition are the activities regulated most frequently in conservation districts. The municipal zoning officer

usually handles administration.

The conservation district varies from the historic architecture review board district in that exterior change to existing buildings is usually not a regulated activity. A conservation district could be an alternative to a historic district, in the sense that, it does not focus primarily on the historic architecture and its character-defining features but rather the cultural significance of an area. The emphasis is to preserve the physical character of an area (i.e. the farmscapes or the Townships historic villages).

Local officials are encouraged to consider the benefits of the following voluntary approaches and gauge public reaction. The following list some of the actions that can better incorporate historic preservation within the Township.

Successful historic preservation involves more than a mere compilation of data. Rather, it should recognize the importance of its historic defining features and indicate how those features relate to the future by:

1. ***Establishing realistic goals to implement suitable preservation guidelines and standards. Realistic goals should be established that are adopted with considerable public scrutiny and support (make sure that goals are achievable);***

2. ***Identifying individual resources and districts based on the survey that could be eligible for the National Register of Historic Places and apply for listing in the Register;***

3. ***Adding regulations into the zoning ordinance which will help achieve historic preservation goals, like the review of demolitions; design guidelines for infill construction; Historic Overlay Zones; incentives for adaptive reuse, rather than demolition, etc.;***

4. ***Updating existing zoning regulations to resolve conflicts with historic preservation goals, like incompatible uses, excessive setbacks, required off-street parking, reduced lot coverage, etc.; and,***

5. ***Developing partnerships with community groups and organizations to facilitate a public education initiative about local history and the historic resources in the municipality.***[11]

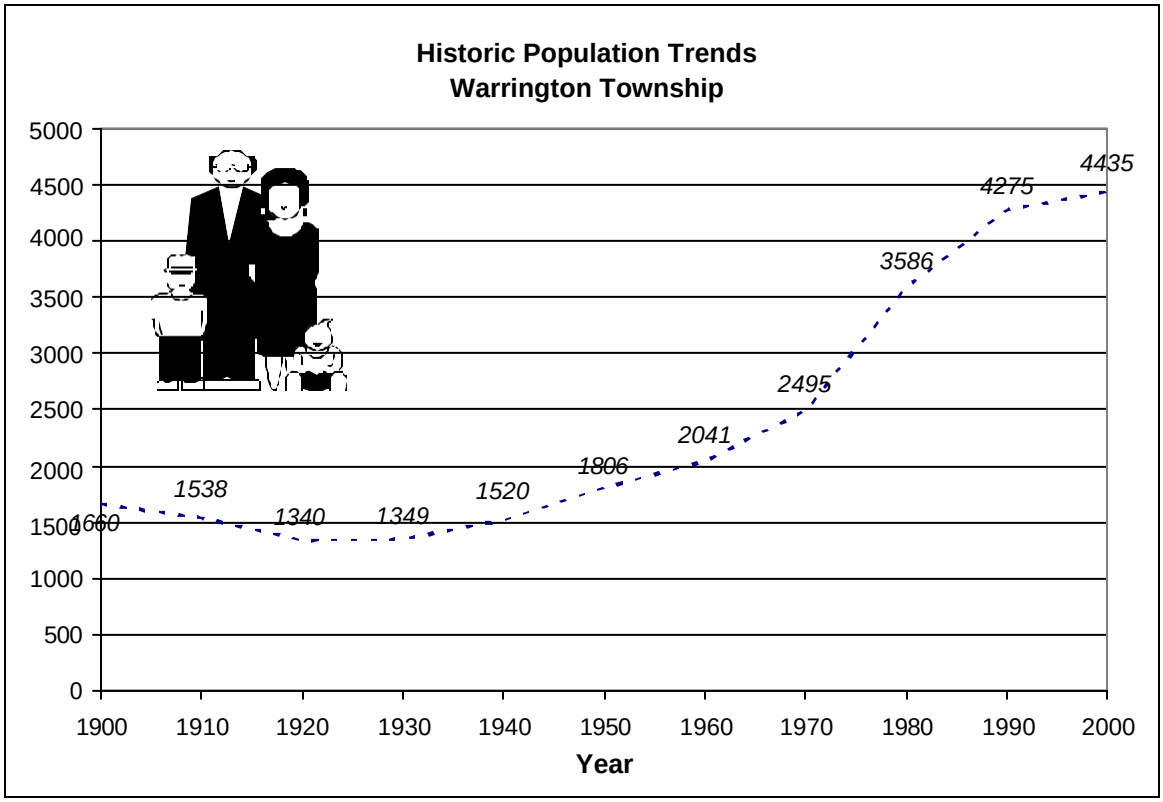
[11]Letter from Carol E. Wilson, Historic Preservation Specialist to Harry Roth

IV. Demographics

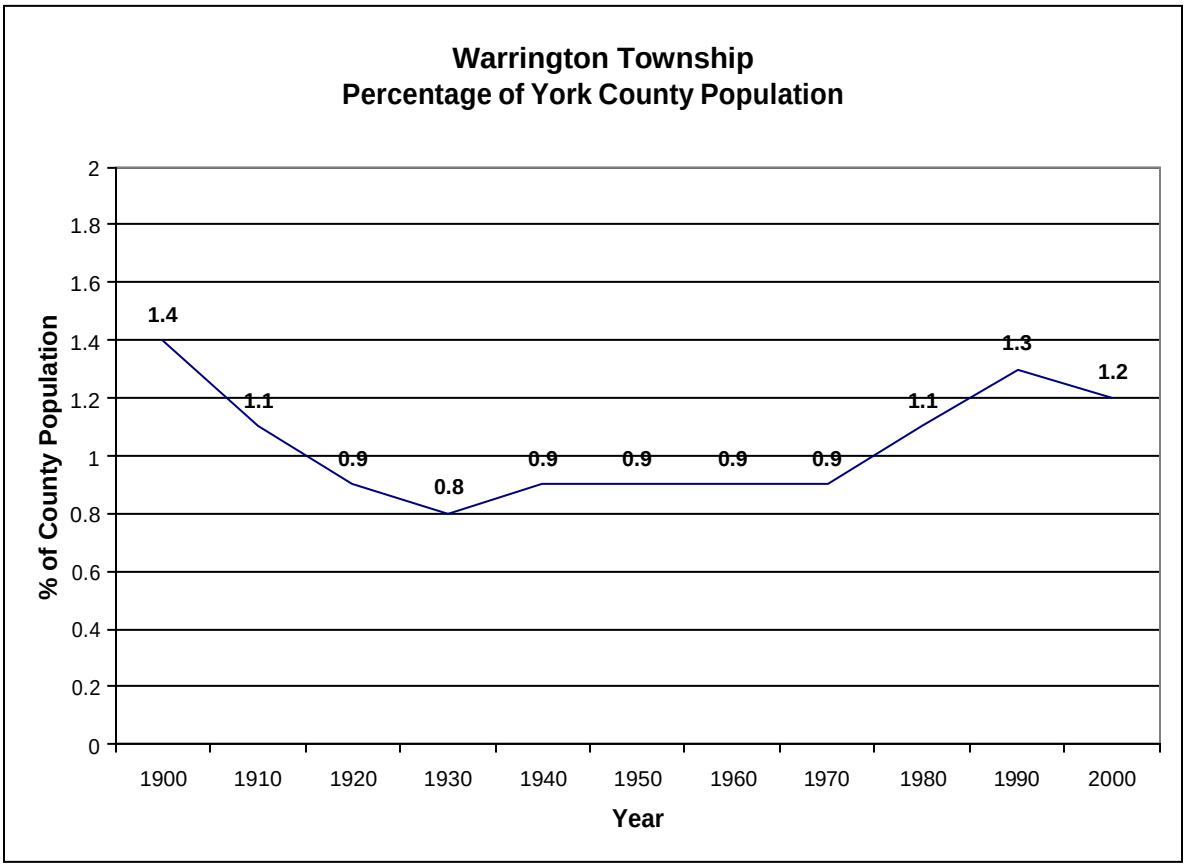
The allocation of municipal resources must consider the population to be served. Population, housing and economic analyses are a principal component of any comprehensive plan. Obviously, the overall size of a population is related to the amount of land, manpower and services to be provided. In addition, particular groups within the population have different needs. This section will present past, current and expected population statistics in order to determine the Township's needs.

A. Historic Population Growth

The historical growth pattern of an area provides insight as to the growth that might be expected in the future. The following table lists the amount of population growth that has occurred over the last 100 years within the Township.



From the above graph, several trends are visualized. First, the Township began the last century with a period of slight decline until about 1930. Then between 1930 and 1970 it grew slightly. However, after 1970 the Township experienced steady and moderate growth through the last Census in year 2000. In that period the Township's population nearly doubled. The 1970s brought the greatest growth with 1091 new persons added, while the 1990s posted only a gain of 160 persons.

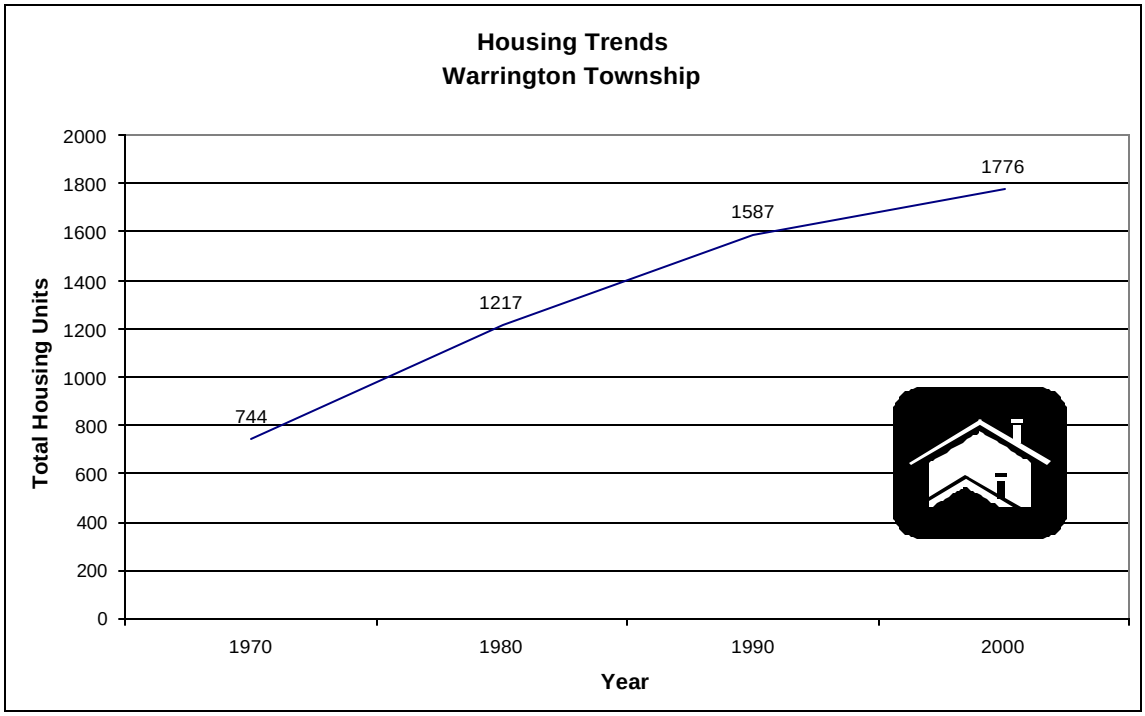


The Township's population decline early last Century caused the Township's proportion of the York County population to also decline. Then between 1930 and 1970 the Township maintained its proportion at about the same rate of 0.8 to 0.9 percent of all of York County. Beginning in 1970 the Township's growth began to increase its share of the County's total population.

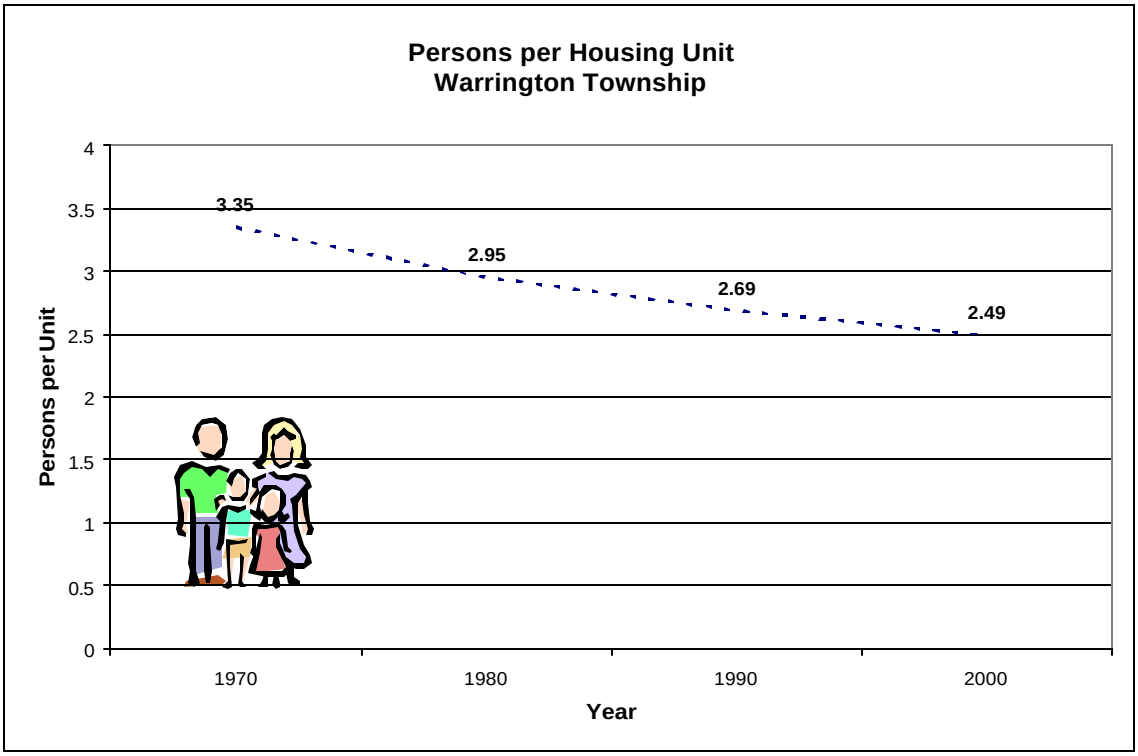
The Township achieved its highest proportion of population in York County since 1970 in 1990 when it nearly managed the same proportion as existed in the year 1900. However, the last decade's lower growth caused the Township's share of total county population to slightly decline. Obviously, both the Township and York County have grown considerably since 1970 and these trends suggest that it will continue to gain new residents. This trend is typical within the region as most rural and suburban townships share considerably within a County's population growth. Suffice it to say, Warrington Township will continue to experience the development pressures exerted throughout York County but to a lesser extent.

B. Historic Housing Growth

In addition to population growth, another important consideration when projecting how fast an area will grow relates to its number of housing units. The following graphs the number of housing units within The Township since 1970.



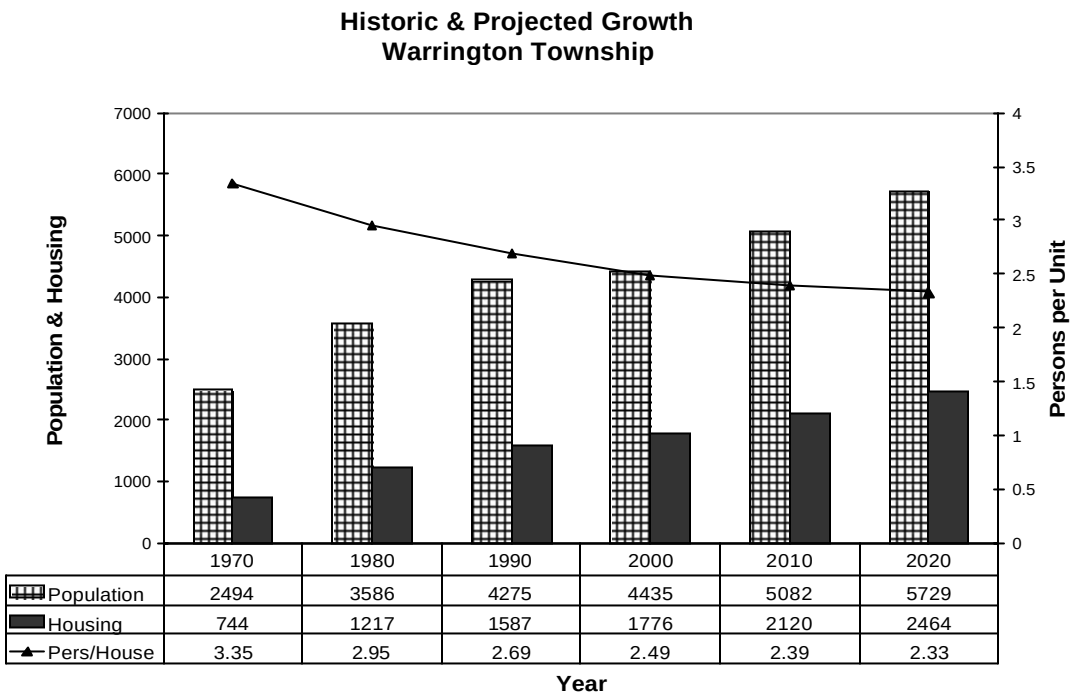
Like the Township's population which has increased steadily over the last half century, the number of housing units has increased over the same period. However, the rate of change for housing units is greater than that recorded for population. Between 1970 and 2000, the Township's population grew by 78 percent; however, its housing stock increased by 139 percent. This occurred because fewer people are living together, as family sizes have decreased and more people are living by themselves. This trend has also occurred throughout York County as a whole and throughout the nation for several decades.



C. Population & Housing Projections

Review of the population and housing trends for the Township over the last few decades reveals a very uniform and steady rate of population and housing growth. This suggests that an arithmetic or linear extrapolation should produce reliable predictions of future population increase if outside influences are not permitted to affect development within the Township. While this technique is considered one of the most basic of projection techniques, it also is one of the most powerful as it considers all of the factors that have affected past growth. For these reasons the linear projections for years 2010 through 2020 will be used to allocate the Township's resources through the balance of this Plan.

As can be seen in the following graph, a "natural" growth curve extends for both the population and housing bars between the historic rate experienced in the past through the projected growth to the year 2030. Similarly, the descending line depicting the reducing average household size also follows a "normal" curve since the large reduction experienced during the 1970s. The table below the graph depicts the net projected changes to population, housing and persons per housing units, for the Township through the year 2020.



	1970	1980	1990	2000	2010	2020
Population	2494	3586	4275	4435	5082	5729
Housing	744	1217	1587	1776	2120	2464
Pers/House	3.35	2.95	2.69	2.49	2.39	2.33

Projected Net Changes Per Decade		
Year	**2000 to 2010**	**2000 to 2020**
Population	647	1294
Housing	344	688
Persons/Unit	-0.10	-0.16

D. Socio-Economic Characteristics (2000)

Age Profile		
Age Group	**Warrington Township**	**York County**
0-5 yrs	231 (5.2%)	(6.1%)
5-9 yrs	289 (6.5%)	(7.1%)
10-14 yrs	334 (7.5%)	(7.3%)
15-19 yrs	297 (6.7%)	(6.6%)
20-24 yrs	196 (4.4%)	(5.1%)
25-64 yrs	2669 (60.2%)	(54.3%)
65+ yrs	419 (9.4%)	(13.5%)
Median Age	39.5 years	37.8 years
Comments: Overall, the Township population has a median age 1.7 years older than that of York County. The Township has proportionally fewer infants and elementary-age children, but slightly more middle and high-school age children than York County. It has fewer young adults but more middle-age adults. The Township has fewer seniors than does York County as a whole.		

Gender Profile		
Gender	**Warrington Township**	**York County**
Male	2212 (49.9%)	49.2%
Female	2223 (50.1%)	50.8%
Comments: T he Township has slightly more females than males but a closer mix than that found throughout the whole County..		

Racial Composition & Hispanic/Latino Origin		
Race	**Warrington Township**	**York County**
White	4,367 (98.5%)	(92.8%)
African American	10 (0.2%)	(3.7%)
Native American	5 (0.1%)	(0.2%)
Asian	19 (0.4%)	(0.9%)
Pacific Islander	0 (0%)	-
Other	3 (0.1%)	(1.4%)
Bi-racial	31 (0.7%)	(1.1%)
Hispanic/Latino	46 (1.0%)	(3.0%)
Comments: Overall the Township has less racial diversity than does York County. In total minorities comprise about 1.5 percent of the Township's population as com pared with 7.2 percent of the County's makeup. The Township has considerably more residents of Hispanic/Latino descent, outnumbering each of the other minorities but only one-third the proportion recorded throughout York County.		

Income				
Area	**Per Capita**	**Median Family**	**Median Household**	**Persons Below Poverty**
Warrington Township	$21,368	$51,941	$47,425	115 (2.6%)
York County	$21,086	$52,278	$45,268	(6.7%)

Comments: Per capita and median household incomes across the Township are slightly above the Countywide average. However, median family incomes are slightly below the County averages. Township officials should make sure that opportunities for affordable housing are provided within the Township so as not to exclude families and households with modest incomes. The Township has relatively less poverty than the whole County and considerable less than that across Pennsylvania which is about 11 percent. Special outreach opportunities and programs should be targeted to assist less fortunate individuals and local officials should be mindful of these limited incomes when planning for costly public infrastructure and services.

Education		
Area	**High School Diploma**	**4+ Year @ College**
Warrington Township	75.8%	15.7%
York County	80.7%	18.4%
Pennsylvania	81.9%	22.4%

Comments: Warrington Township has educational attainment rates considerably below the York County and State averages.

Employment Status & Commuting		
	Warrington Township	**York County**
Total Labor Force (16+ yrs.)	2,576 (73.2%)	(68.2%)
Employed	2,478 (70.5%)	(65.7%)
Unemployed	98 (2.8%)	(2.4%)
Carpooled	295 (12.1%)	(9.5%)
Public Transit	- (0%)	(0.6%)
Average Commute	27.4 mins.	23.9 mins.

Comments: The Township has a higher percentage of workers than does the County who are largely employed. Unemployment is slightly higher within the Township than throughout York County. Carpooling is relied upon more heavily than is typical throughout the County undoubtedly owing to the lack of public transport options. Average daily commutes are longer than throughout the County because of the Township's remote location. This suggests that planning policies should protect and promote local employment opportunities close-to-home.

Civilian Labor Force - All values are expressed as percentages of the overall labor force.		
Occupation	**Warrington Township**	**York County**
Agriculture, forestry, fishing, hunting, mining	2.1	1.1
Construction	9.2	7.2
Manufacturing	18.5	23.9
Wholesale trade	6.2	4.3
Retail trade	12.7	12.4
Transportation, warehousing, utilities	6.8	5.2
Information	2.9	2.3
Finances, insurance, real estate	5.2	5.3
Professional, scientific, management, waste	3.6	7.0
Educational, health, social services	15.3	16.7
Arts, entertainment, recreation, lodging, food	3.8	6.0
Other services	3.4	4.6
Public administration	10.4	4.0
Comments: Overall the Township exhibits a more balanced mixture of employment than York County as a whole. Nonetheless manufacturing, education, health and social services and retail trade are the three top employers within Warrington Township and in York County; however, more people are engaged in other activities within the Township than is typical in York County. Agriculture and other rural occupations are the smallest single economic sector offering employment to Warrington Township residents at a level almost twice the Countywide average. The Township has a slightly higher concentration of construction workers who tend to favor rural home sites where on-site storage of equipment and supplies can occur; this may suggest the need for rural occupation regulations. Other than these differences the Township needs to accommodate a wide range of commercial and industrial pursuits to match its balanced labor force.		

Housing & Household Characteristics		
Other Characteristics	**Warrington Township**	**York County**
Group Quarters	19 (0.4%)	(2.1%)
Family Households	1,329 (78.1%)	(71.2%)
Rental Units	257 (15.1%)	(23.9%)
Vacant Units	64 (3.6%)	(5.4%)
Comments: As expected the rural character of the Township does not lend itself to group quarter residences and the Township's percentage of population within group quarters is minimal. The Township has a higher percentage of family households than does York County. The Township has a lower number of rental housing units and vacant housing units, both about 2/3 the County-wide averages.		

Housing Costs		
Area	**Median Monthly Rental Costs**	**Median Owner-Occupied Housing Values**
Warrington Township	$499	$132,100
York County	$531	$110,500
Comments: Given the Township's remote location and rural character it is surprising that its owner-occupied housing stock comes at greater expense than other developed areas within York County. Its renter occupied monthly rents are slightly lower than the Countywide average; the Township appears to be adequately providing opportunities for affordable forms of housing.		

Housing Condition				
Area	**Units Lacking Complete Plumbing**	**Units Lacking Complete Kitchen**	**Built Pre-1940**	**Median No . of Rooms**
Warrington Township	0	7 (0.4%)	362 (20.5%)	6.0
York County	(0.4%)	(0.5%)	(24.0%)	6.1
Comments: The Township has a few reported substandard housing and about one in five of the Township's homes were constructed before 1940. This suggests the potential for an important historic preservation program to protect these valuable cultural resources.				

Housing Tenure & Vacancy				
Area	**Owner-occupied Units**	**Owner-occupied Vacancy Rate**	**Renter-occupied Units**	**Renter-occupied Vacancy Rate**
Warrington Township	1445 (84.9%)	1.0%	257 (15.1%)	5.2%
York County	(76.1%)	(1.5%)	(23.9%)	(7.4%)
Comments: Homeownership is very high within Warrington Township while the ratio of rental units is about 2/3 the County-wide average. Owner-occupied vacancy rates are very low in both the Township and York County. The Township's low number of rental units and its low vacancy rates suggest the need to ensure that the Township's zoning policies do not discriminate against low-moderate income forms of housing which tend to be rental units.				

Housing Type					
Area	**Single-family Detached**	**Single-family Attached**	**Two-family**	**Multiple - family**	**Mobile Home**
Warrington Township	1365 (77.4%)	30 (1.7%)	38 (2.2%)	36 (2.0%)	295 (16.7%)
York County	(63.2%)	(14.1%)	(4.5%)	(11.5%)	(6.7%)
Comments: As can be seen, the Township exhibits a significant preference towards single-family detached housing. This is not surprising given the Township's larger rural/suburban character when compared with the higher-density areas in urbanized areas of York County. Nonetheless, the Township must provide for its fair share of a wide range of housing types; therefore, future residential growth areas must seek to attract a more balanced mix of housing including attached and multiple family units. The Township also has a large surplus of mobile homes when compared with York County. It would appear that mobile homes are the preferred form of affordable housing within the Township and the Township should continue to accommodate mobile homes so as not to invite exclusionary zoning challenges.					

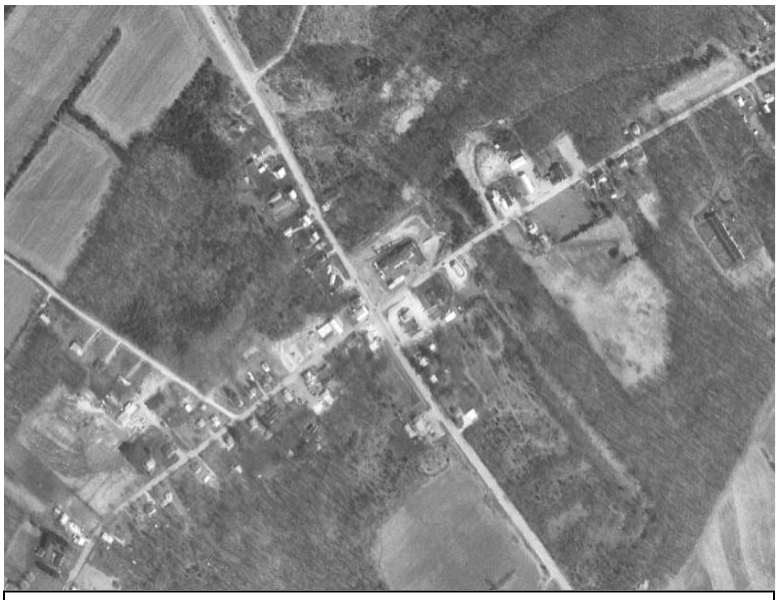
In order to avoid claims of exclusionary zoning practices and to reflect contemporary housing styles, it is recommended that the Township specifically plan to rely less upon single-family detached units in the future. In addition national housing trends suggest greater reliance on more dense/multi-family units and compact detached units. For these reasons it is recommended that the Township allocate future land use to meet the target growth in the following residential categories:

Target Projected New Housing Units by Structural Type					
Year	**Total**	**Target single-family detached**	**Target attached & duplex**	**Total multi-family**	**Mobile Homes**
2000	1776	1365 (77.4%)	68 (3.8%)	36 (2.0%)	295 (16.7%)
2000-2010	+344 = 2120	+ 119 = 1484 (70%)	+91 = 159 (7.5%)	+ 146 = 182 (8.6%)	+0=295 (13.9%)
2000-2020	+688 = 2464	+360 = 1725 (70%)	+ 117 = 185 (7.5%)	+ 210 = 246 (10%)	+13=308 (12.5%)

Methods to achieve this mix of future housing are presented in Chapter XI of this Plan.

V. Existing Land Use

For a land use plan to be practical, it must accurately inventory existing land uses and development characteristics. Then, with proper analysis, future land use schemes can reflect reality, and avoid the creation of nonconforming uses when implemented through zoning regulations. To determine existing land uses, three sources were consulted. First, the York County Planning Commission has prepared a land use GIS map coverage which relies upon recorded tax parcel information. Next, forest cover was derived from digital aerial photograph interpretation by the staff of the York County Planning Commission. This information was super-imposed over the tax parcel data so that underlying land use categories could still be identified.



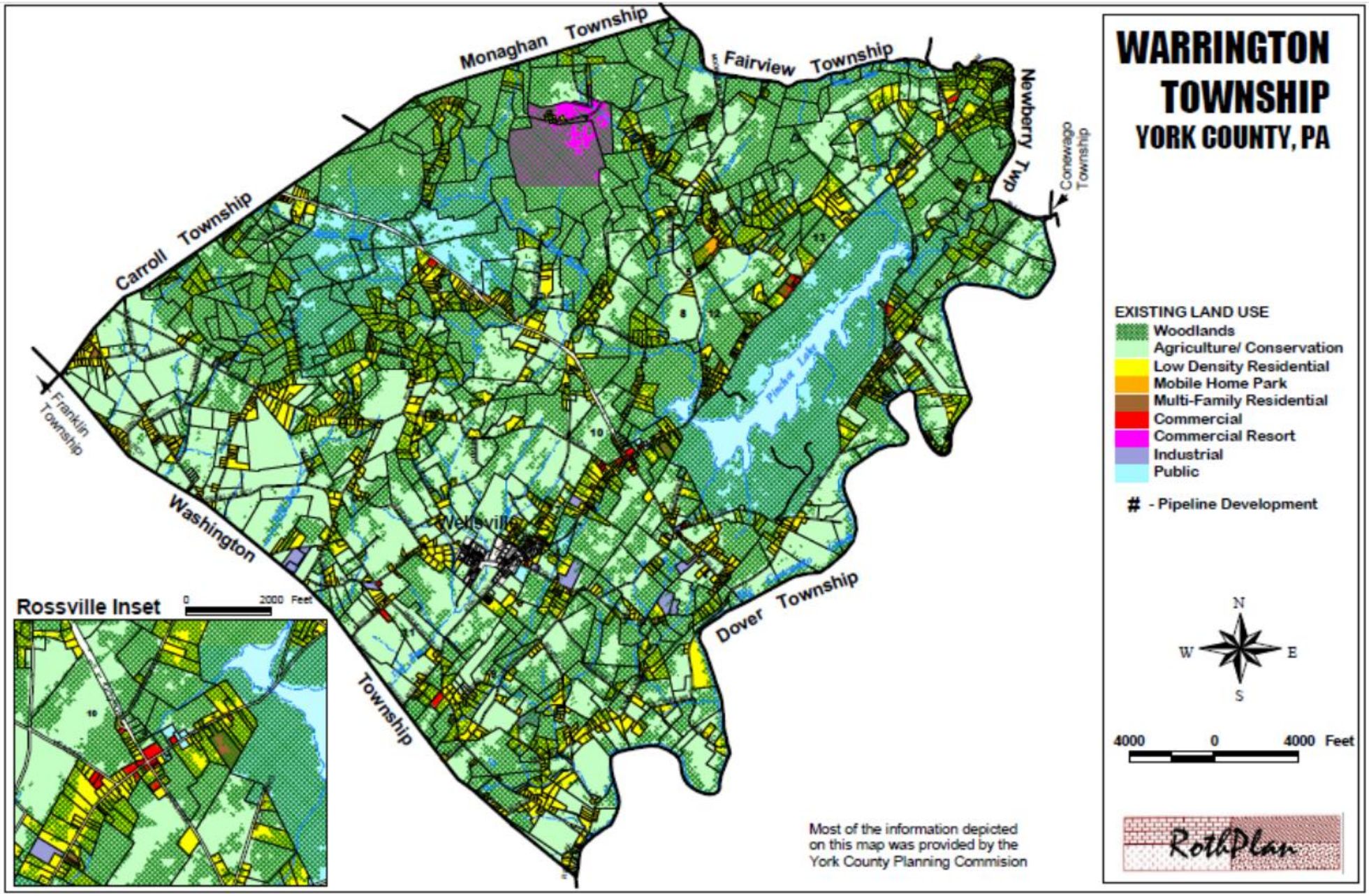
Aerial Photograph of the Village of Rossville

Finally, this GIS data was field verified via a windshield survey conducted in March, 2005. Overall the Township's land use pattern is very rural with small and scattered businesses. Residential uses vary widely by design and size but are mostly single-family detached dwellings. The Township's largest land uses are recreation-related and it is evident that these larger uses dominate the local economy and activities. The Village of Rossville appears to be a recently improved crossroad Village where the bulk of the Township's commercial services are confined. Individual land uses are depicted on the ***Existing Land Use Map.*** The following tabulates land area devoted to various existing land use categories as identified within the County's GIS data.

Existing Land Use Acreage byCategory

Category	Acres*	Percent of Total Land Area*
Agriculture/Conservation	34,903	81%
Low-Density Residential	4,387	10%
Mobile Home Park	33	0.07%
Multi-Family Residential	40	0.09%
Commercial	56.5	0.1
Commercial Resort	376	0.8%
Industrial	101	0.2%
Public/Semi	3318	7.7%

*Acreages and percentages are approximate


WARRINGTON TOWNSHIP
YORK COUNTY, PA
Monaghan Township
Fairview Township
Newberry Twp
Conewago Township
Carroll Township
Franklin Township
Washington Township
Dover Township
Wellsville
Rossville Inset
0
2000 Feet
EXISTING LAND USE
Woodlands
Agriculture/ Conservation
Low Density Residential
Mobile Home Park
Multi-Family Residential
Commercial
Commercial Resort
Industrial
Public
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Most of the information depicted on this map was provided by the York County Planning Commision
RothPlan

Agriculture/Conservation

This land use category is by far the largest single category of use within the Township. About 34,903 acres comprise this use or about 81 percent of the total land area. The manner that the County classifies land uses combines agricultural and conservation areas into this single category. However, the Existing Land Use Map generally enables differentiation between these two different settings by viewing the woodland overlay. In the past, settlers cleared fertile farmlands of wooded cover but let stand the forests of less fertile and steeply sloped soils. Consequently, the Township's large concentrations of woodland are generally considered for natural conservation while the fertile farmlands account for its agriculture.

In conservation settings, many of the lots in this area are uncharacteristically deep when compared with other residences; this suggests that these lots may be used to harvest firewood and for hunting cabins. Few of these areas exhibit the use of flag-lotting techniques with joint-use driveways. However, some of these lots are located away from any public road and appear land-locked; these lots would not be permitted under today's subdivision regulations.

By far the Township's largest concentration of farmland and farming operations are evident in the low-lying valley located northwest of Wellsville Borough. Here expansive views of gently-rolling farmlands dominate the landscape as depicted below.

Panoramic view of expansive farmlands straddling Spring Valley Road northwest of Wellsville.

This area seemingly contains the Township's only remaining contiguous acreage of farmlands that is not interrupted by adjoining rural residences. Given the early spring season when the windshield survey was conducted, it was impossible to identify the types of crops that are grown here; however, much pasturing was apparent and several livestock operations were observed although none appeared to be concentrated feeding animal operations (CAFOs).

Sheep farm along Bentzel Road

Horse farm along Pinetown Road

Some use of farm occupations occurs and these limited businesses are generally not depicted on the Existing Land Use Map but are considered to be normal accessory uses along with their related residences upon the larger farm parcels.

One farm appeared to be raising nursery and garden stock along the southwest side of Mount Zion Road as depicted in the adjoining photograph.

Large hillside devoted to the raising of nursery stock along Mount Zion Road.

Low-Density Residential

Large estate- type home with spacious lot and long driveway.

About 4,387 acres of land within the Township contain low-density residential uses; this represents about 10 percent of the total land area. The Township has a very rural pattern of low-density residential uses. Unlike many other rural areas, the Township has apparently been spared the widespread suburban pattern of development with identifiable neighborhoods. Instead, the Township's scattered residential pattern has a "classic" form that suggests a lower level of regulation and a less coordinated site planning process.

Most areas lack neighborhood-defining features (sidewalks, parks, grid streets, streetlights, entrance signs, and etc.) Also, specific lot designs vary widely without uniformity of setback, building size and height, length of driveway and building architecture. In turn, residents lack cohesive interests which helps the Township preserve its rural independent lifestyle.

Historic home located close to an older road that was not designed for today's vehicle speeds.

Most rural home sites are generally larger than one-acre and often have a deep driveway; however, at the crossroad villages and along the Township's major local roads, homes can be located close together and nearer the road. In short, development within the rural areas varies widely except within a very few of the more recent subdivisions that have more uniform layouts and appearances.

Ranch and bungalow style homes on old narrow lots just east of the Village of Rosstowm

The township has considerable scattered strip" roadside housing throughout its rural landscape. This rural housing also contains many home and rural occupations that provide for close-to-home employment opportunities. Generally, rural homes are well-kept aside from an occasional mini- junkyard and the outdoor storage associated

with a contractor's rural occupation. Many occupations have very attractive signs that reflect the Township's "countryside-culture." In addition, periodic sales of personal property are typical roadside activities that are often resisted in tightly-managed neighborhoods. However, within Warrington Township's rural landscape, these are normal activities that appear to be tolerated and welcomed.

Because of the Township's proximity to its nearby recreation opportunities, many residents have boats, yachts, trailers and recreation vehicles. Elsewhere, the parking and storage of these possessions often poses safety and compatibility problems for suburban neighborhoods and are strictly regulated. Within rural Warrington Township, again residents expect such behavior and uses which reduce the cost of ownership and make access convenient for a "quick-trip" to the woods or the lake.

Most of the roads throughout these areas have paved surfaces, but several roads have rugged dirt surfaces that are finding increasing acceptance by municipalities who seek to defend their rural character. Some rural Townships are reclaiming these roads from the State and returning their surface as a means of providing an inducement to community growth and development. Sidewalks and curbs are not used in the Township.

As the Existing Land Use Map depicts, many of the Township's rural residences are located upon lands that are also reflected within the Woodlands category. The Township's steep slopes provide prime locations for terraced streets that weave up a hill and offer spectacular scenic views of the valleys below. These settings are most often sensitive because of their slope and thin soil cover. They offer opportunity for contiguous forests and wildlife habitats.

Some foresighted homeowners have preserved their wooded settings and even designed their buildings with complimentary architectural features that blend into the background. The adjoining photograph illustrates a home that is well-integrated within its woodland setting. If one looks very closely, another large "A" frame house can be seen in the background that is very unobtrusive to the natural surroundings. ***The Township should promote these sensitivities to offer new residents full benefit of these valuable natural features.***

Mobile Home Parks

Sanderson Drive Mobile Home Park

Although the County GIS data does not specifically identify mobile home parks, these unique uses require special attention. Four mobile home parks can be found within the Township on about 33 acres . These sites differ from mobile homes that are located on separate lots as they are considered single family detached residences. The largest is along Sanderson Drive just off of Mount Airy Road with 19 dwelling units, located in the northcentral portion of the Township. A second mobile home park is located in the extreme northeast corner of the Township between Bull Road and Stony Run. The third nine-unit mobile home park is located at the intersection of Old York and Honey Roads. The fourth eight-unit mobile home park fronts on Big Rock Road in the southeast corner of the Township. The following lists the design standards of the Township's largest mobile home park:

"TYPICAL" DESIGN CHARACTERISTICS OF MOBILE HOME PARK							
Location	**Min. Rd. width**	**Min. Lot Width**	**Front Setback**	**Side Setback**	**Rear Setback**	***Parking Location***	***Sidewalks***
Sanderson Drive	12 ft.	35 ft.	25 ft.	5/5 ft.	10 ft.	Front pads	none

Multi-Family Residential

Warrington Townhouses

Four multi-family dwelling units sites are located within the Township on about 40 acres. This category includes a wide range of possible dwelling unit types (e.g. conversion apartments, duplexes, townhouses, garden apartments, quadraplexes and high-rise buildings.) The largest is the Warrington Townshuses located on the south side of Rosstown Road just east of the Village. This site contains one 2½-story building with 24 back-to-back townhouses units, each with an integrated garage. The development sits well back off of the road and has a nice wooded setting that counteracts its relatively high density and buffers surrounding properties. This novel design responds well to the Township's rural character and offers affordable housing.

In addition, two other different sites have very similar designs to a pair of quadraplex dwelling units. The first is located along Bull Road while the second fronts on Mount Airy Road. Both of these sites have wooded settings, although the actual area of development has been cleared. Again this is a novel design for a rural setting and the limited scale of each site reduces its conflict with the overall rural setting. Scattered site high-density housing is a proven land use planning technique to minimize impact while accommodating legally-mandated housing opportunities for all income levels. This approach brings the added benefit of reducing environmental impact in areas that rely upon natural systems of water supply and sewage disposal.

Quadraplex located Along Bull Road

Quadraplex located Along Mount Airy Road

A third multi-family site is located just northwest of the intersection of Carlisle and Cabin Hollow Roads in the extreme western reaches of the Township. Here is a "L-shaped" 1½-story battery of four townhouses with front yard parking lots. Unlike the previously-described multi-family sites, this one sets amid a small grouping of residences at this intersection. However, again its limited scale reduces its impact and improves its compatibility. ***Based upon, the Township's ability to successfully integrate several small-scale multi-family dwelling unit developments within its rural context, it is recommended that a similar policy be applied to future land uses. Scattered site high-density housing makes sense within Warrington Township!***

1½-Story Ranch Style Townhouses located along Carlisle Road in western Warrington Township.

Commercial

About 57 acres within the Region are devoted to commercial use; this represents over 1/10 of 1% of the total land area. Clearly most of the Township's commercial development is oriented towards several attractions and roads. It is important to note that the Ski-Roundtop Resort is not described within this category but will be described separately following this section.

Rossville Plaza anchors the Township's greatest concentration of commerce in a small strip shopping center.

The largest concentration of commerce occurs in the Village of Rossville. The Rossville Plaza provides for local conveniences to nearby residents and those visiting the Township's various attractions. This contemporarily-designed strip shopping center features a drive-thru bank branch, beauty salon, fast-food restaurant, and conveniences market with fuel pump islands. It has coordinated vehicular access, off-street parking and loading, dumpsters, site lighting and signage. The site also has modern landscape islands that separate the parking lots from the adjoining road. ***This site exhibits the best commercial design among all of the Township's commercial land uses and should be used as a model to pattern regulations governing future commercial developments.***

Another small strip shopping center is directly across Rosstown Road from the Roseville Plaza.

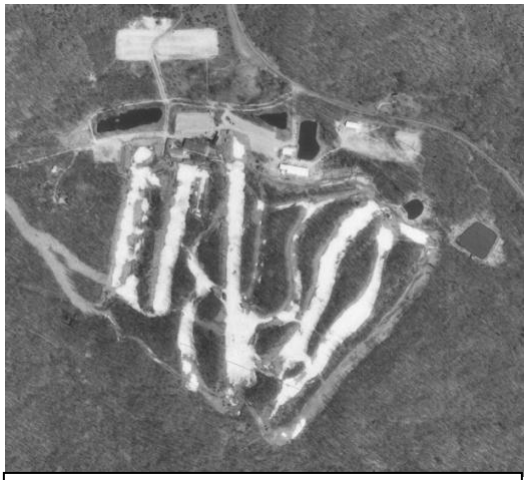
Directly across Rosstown Road is another strip commercial center anchored by the Rossville Beer Distributor. This center appears to be undergoing renovation and supplements the Rossville Plaza with a beverage distributor, post office, smoking supplies shop and a family restaurant. This site also includes some site coordination but lacks the visual appeal due to a lack of improved landscaping; however, the site offers important amenity within the Township.

In addition to the above two larger strip centers the Village of Rossville has a small office building, vacant motorcycle garage, taxidermist, hair salon, auto body shop and craft barn all of which are separate freestanding uses.

Outside of the Village of Rossville is another small node of commerce located across from the Gifford Pinchot State Park Office at the intersection of Rosstown and Mount Airy Roads. Here is a commercial garage, bait shop and small campground. These sites lack contemporary design standards.

Two separate ice cream shops can be found on roads directly north and south of the State Park. Elsewhere throughout the Township are about a dozen different freestanding businesses, including several auto repair garages like the Wentz's Garage pictured in the adjoining photo. Generally, these sites also lack basic design features which improve function, safety and appearance. ***It would appear that many of these uses are considered to be nonconforming uses under current zoning laws; this policy should be continued for these scattered sites and gradual improvements should be required as sites adjust and grow.***

Commercial Resort



Aerial photo of Ski Roundtop Resort

Like the Gifford Pinchot State Park and the PA State Gamelands, Ski Roundtop is a major recreation attraction within Warrington Township. It attracts people from all over southcentral Pennsylvania, particularly during the winter months. The same businesses that cater to visitors of the State parks during the summer serve skiers over the winter.

Ski Roundtop makes full advantage of the Township's highest elevation with the same name (Roundtop) that can be seen from afar. This 376-acre resort is privately owned and operated. It offers 15 trails for downhill skiing and snowboarding with a maximum vertical drop of 600 feet. The facility's 11 lifts can transport

11,800 skiers per hour up the hill and all trails can be supplied with man-made snow.

The site also offers snow-tubing runs, a ropes course and two outdoor paintball courses that are enclosed by a fine mesh fencing. Its lodges include a food court, arcade, locker rooms, rental offices, classrooms and a ski shop. The facility's peak use hours are from 8:00 am to 10:00 pm during the winter months with nighttime lighting of the slopes. The site has large off-street parking lots including regular shuttle bus service from the more remote lots to the main lodge area. The site offers no lodging for guests but appears to have resident quarters for employees. ***The resort has much needed directional signing located off of the site at key road intersections; this should be permitted to continue despite contemporary zoning practices that prohibit off-site signs, except billboards.***

Industrial

Stonehedge Snacks plant located south of Rosstown

About 101 acres of land are devoted to industrial use or about 0.2 percent of the Township's total land area. These 12 sites are scattered throughout the Township with most located within about one mile of the Borough of Wellsville. A few of these sites have contemporary designs and features like the Stonehedge Snacks site located along Carlisle Road south of Rossville. Another good example includes the Kampel Enterprises, Inc. Sheet Metal Division site located along the Township's western boundary fronting Harmony Grove Road.

Kampel Enterprises, Inc. along Carlisle Road

Several large auto salvage yards are located along Ziegler Road in addition to other smaller "mini-junkyards" which dot the Township's rural landscape. Other inventoried industries include a butcher shop, machine shop, kitchen shop, cabinet maker, landscape design contractor, building contractor, and outdoor carnival equipment storage yard.

Like with the Township's widely scattered commercial uses, the Township should continue to regulate these freestanding industries as nonconforming uses. In so doing, these sites can be improved with better design as adjustments and expansions are proposed. Conversely, should these uses fail, they can revert back to a more compatible use given their respective settings.

It is important to note that limited rural and farm occupations that were observed to be accessory to a principal form or rural residence were not included within this land use category. Instead, these accessory businesses were classified with the principal land use (e.g. farm or residence).

Public / Semi-Public

Within the Region public and nonprofit uses account for the third largest land use category. Twenty-eight different parcels comprise 3,318 acres. Two of these uses greatly overshadow the scattered smaller churches, schools, post office, Township office and garage, Warrington Meeting House and electric substations.

First, the Pennsylvania State Game Commission owns and operates State Gamelands No. 242 which contains 1516 acres and is located in the northwest corner of the Township and just extends into adjoining Carroll Township. The area straddles Old York Road and South York Road. These areas offer settings for public hunting of small and large game during designated hunting seasons as well as year-round hiking and nature enjoyment. A public shooting ranges was observed along the east side of Old York Road about 100 feet south of the Township's northern border.

Panoramic view of the 340-acre Pinchot Lake within Gifford Pinchot State Park.

Second, the Gifford Pinchot State Park is located in the southeastern reaches of the Township just east of the Village of Rossville. This 2,238 acre park consists of a reverted farm with wooded hill sides and the 340-acre Pinchot Lake. This park features:

- 340 individual campsites;
- Organized group camping;
- 10 year-round rental cabins;
- Seasonal interpretive/educational programs;
- Picnicking (over 1000 tables, 4 rental pavilions, BBQ grills, rest rooms, fountains, and food concessions);

Quaker Race Day Use Area with:

- Large swimming beach (summer only);
- Fishing & boating and boat rentals;
- Horseback riding;
- Horseshoe pits, volleyball, softball;
- Hunting, archery, trapping & dog training

Conewago Day Use Area

- Picnicking
- Fishing & boating
- Disc golf
- Horseshoe pits

Warrington Meeting House

Clearly, many of the businesses located within close proximity to this park benefit from the large volumes of park users as they commute to and from the site.

Other identified public and quasi-public uses include various churches, the Wellsville Elementary School, post office, cemeteries, electric substations, the Valley Grange, a cell tower, Township Office and garage, undeveloped Township park and the Warrington Meeting House.

Pipeline Developments

In planning for future land uses, and calculating acreage needed to accommodate projected growth, it is important to know the location and types of developments within the Township that have been approved for development, but have not yet been fully developed. This information will also ensure that future planned uses are consistent or compatible with those already approved for construction. The following lists, by municipality, that development which has been submitted for approval and not yet constructed:

PIPELINE DEVELOPMENT PROJECTS		
Development Name	**Map No.***	**Uses Yet To Be Built**
Winding Brook	1	4 single-family dwellings
Whispering Waters	2	4 single-family dwellings
Brussese	3	Auto repair garage
Rossville Car Wash	4	Car wash
Kimberly Meadows	5	3 single-family dwellings
Robson Woods	6	3 single-family dwellings
Merle Shank	7	4 single-family dwellings
Shadow Creek	8	31 single-family dwellings
Friendship Estates	9	14 single-family dwellings
Savannah Heights	10	200 single-family dwellings
Linda Bailey Farm	11	?
Destephano/Myers	12	?
LB Smith	13	?

*The above map numbers are depicted on their respective properties on the Existing Land Use.

VI. Adjacent & Regional Planning

The preparation of any comprehensive plan must always consider and, if possible, complement the planning policies in effect in adjoining communities. The highest level of consideration could include a cooperative planning effort of several adjoining municipalities, such as that of a Regional Comprehensive Plan. At a minimum such effort should seek to coordinate land use activities across municipal boundaries to assure compatibility and function. This Chapter presents this analysis and findings of general consistency with the stated planning policies of York County for the Township.

A. PLANNING IN ADJACENT MUNICIPALITIES

The Adjacent and Regional Planning Map, on the next page, depicts the planned land uses in municipalities that adjoin the Township. As can be seen, many adjoining areas also recognize the rural/natural features of the Township. Likewise, the existing land uses that abut the Township in other Townships are also very rural in character. The Future Land Use Plan reflects these rural conditions with similar designations contained within Warrington Township. Planned residential uses abutting the Borough of Wellsville are also consistent with the existing and planned uses contained within the Borough. The following is a brief summary of those land uses planned for each municipality within York County bordering the Township.

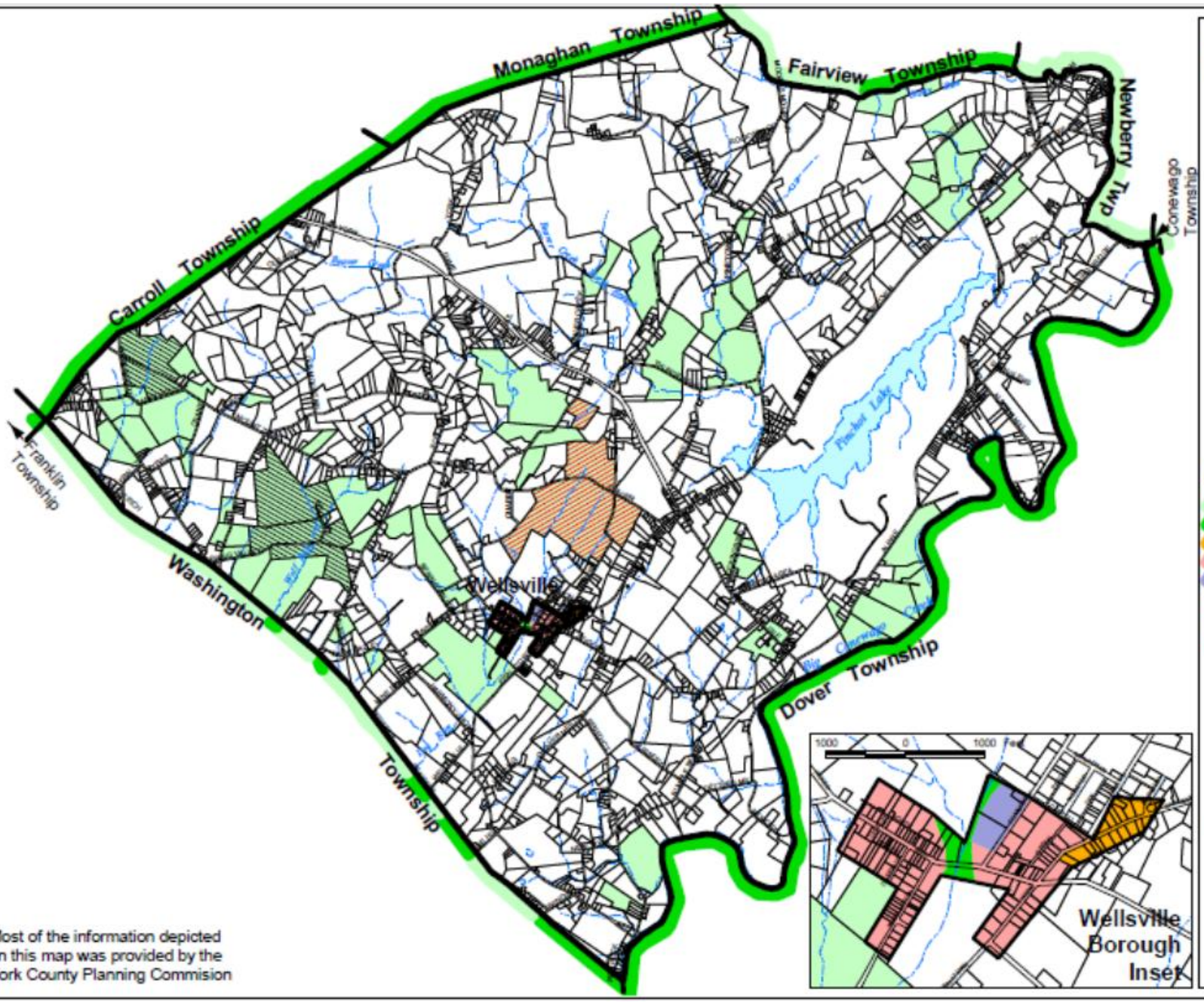
Carroll Township – Adjoining the Township to the northwest is Carroll Township. The Township's Comprehensive Plan was adopted in September 21, 2004 as prepared by Township representatives with the assistance from Community Planning Consultants, Inc. The Future Land Use Map of the Plan depicts the boundary along Warrington Township as suited for Rural Conservation uses. This category contemplates agricultural uses, open space and conservation areas as the predominate setting. This category also permits low-density housing at 1 unit per 2 acres and accessory businesses. This area does not contemplate any extension of public utilities.

Monaghan Township – Adjoining the Township along the northern border just east of Carroll Township is Monaghan Township. The Monaghan Township Comprehensive Plan, adopted in 2000 and was prepared by local officials with assistance from Herbert Rowland and Grubic, Inc. The entire common length is depicted within the Conservation land use category which forms the periphery of Monaghan's north, east and southern borders. This category intends to protect sensitive environmental features from urban sprawl by using clustering and lot averaging zoning techniques. Also, the Plan suggests the protection of streamside buffers.

Fairview Township – Also adjoining the northern edge of the Township is Fairview Township. The Fairview Township Comprehensive Plan was adopted in 1993 and was prepared by local officials with assistance from Herbert Rowland and Grubic, Inc. The western half of the common boundary between the twos Township has area planned for Agricultural use acknowledging the presence of large working farms. This category recommends that the Township apply transferable development rights to preserve these farms. The eastern half of Fairview Township's common border is planned for Conservation uses. This category acknowledges a variety of natural and cultural features and refers to management strategies for their protection contained throughout the Plan's text. It is noted that a specific symbol for a Recreation and Open Space use is depicted on the north side of Pinetown Road a short distance from Warrington Township; although, no specific description of this symbol is offered within the Plan.

WARRINGTON TOWNSHIP
YORK COUNTY, PA

ADJACENT PLANNING



ADJACENT PLANNING
- Agriculture - Rural
- Conservation - Environmental
- Residential
- Village Center
- Industrial

AGRICULTURAL PRESERVATION
- Ag Security Area
- ALPB Easement
- FNLT Easement

N W E S

4000 0 4000 Feet

RothPlan

Most of the information depicted on this map was provided by the York County Planning Commision

Newberry Township – Adjoining the northeast corner of the Township is Newberry Township. The Newberry Township Comprehensive Plan adopted in June of 2004 and was prepared by local officials with assistance from Rettew Associates, Inc. Here the Future Land Use Plan depicts the underlying land use to consist of Rural Resources. The Plan suggests a mixture of detached dwellings, rural occupations, agriculture and related uses, all at rural densities with on-lot utilities. In addition, the Environmental Protection Overlay Map depicts various locations of steep slopes and floodplains that abut Warrington Township that should be protected.

Conewago Township – Adjoining an eastern tip of Warrington Township a Bull Road is a tangent point in Conewago Township. The Conewago Township Comprehensive Plan, adopted in August 1994, was prepared by Township representatives with the assistance from York County Planning Commission. The small common boundary with Warrington Township is depicted as Agriculture. This designation is described as reflecting existing farms more than the presence of prime farmlands but continues the Township's agricultural heritage. This category contemplates an occasional detached dwelling amid expansive farming activities.

Dover Township – The long southeastern edge of the Township adjoins Dover Township. The Dover Township Comprehensive Plan Addendum, adopted in August, 1994, was prepared by Township representatives with the assistance from Buchart Horn, Inc. The entire common boundary with Warrington is identified as planned for Conservation use. This designation is intended to conserve open spaces and protect water supply sources, woodlands, natural habitats and steep slopes. This category comprises the northwest quarter of Dover Township. A small village is also reflected in Mount Royal but the bulk of the Township's considerable planned development is located around Dover Borough particularly on its east side.

Washington Township – The Township's long southwestern border abuts Washington Township. The Washington Township Comprehensive Plan was prepared by local officials with assistance from the York County Planning Commission. The common boundary with Warrington is identified as a combination of larger stretches of Rural Residential with intervening nodes of Woodlands. The Plan recommends a flexible program of citing of scattered rural housing amid a natural setting and the clustering of small neighborhoods where conditions can support required utilities. The Plan suggests that the development of prime farmlands occur only as a last resort. Local commercial uses will follow the neighborhoods but larger businesses and industry needs will be met by nearby municipalities.

Wellsville Borough – The Borough is completely surrounded by Warrington Township. The Borough's plan was adopted in June 1986 and was prepared with assistance from the York County Planning Commission. Large areas of the Borough are shown in the Village Center District which is to accommodate village-scale mixed uses (e.g. residential, commercial and industrial). Larger-lot residences are shown on the east end of town and a Conservation area follows Doe Run's floodplain. Finally a node of Industrial is depicted in the north central area of the Borough to concentrate future industries in a central location.

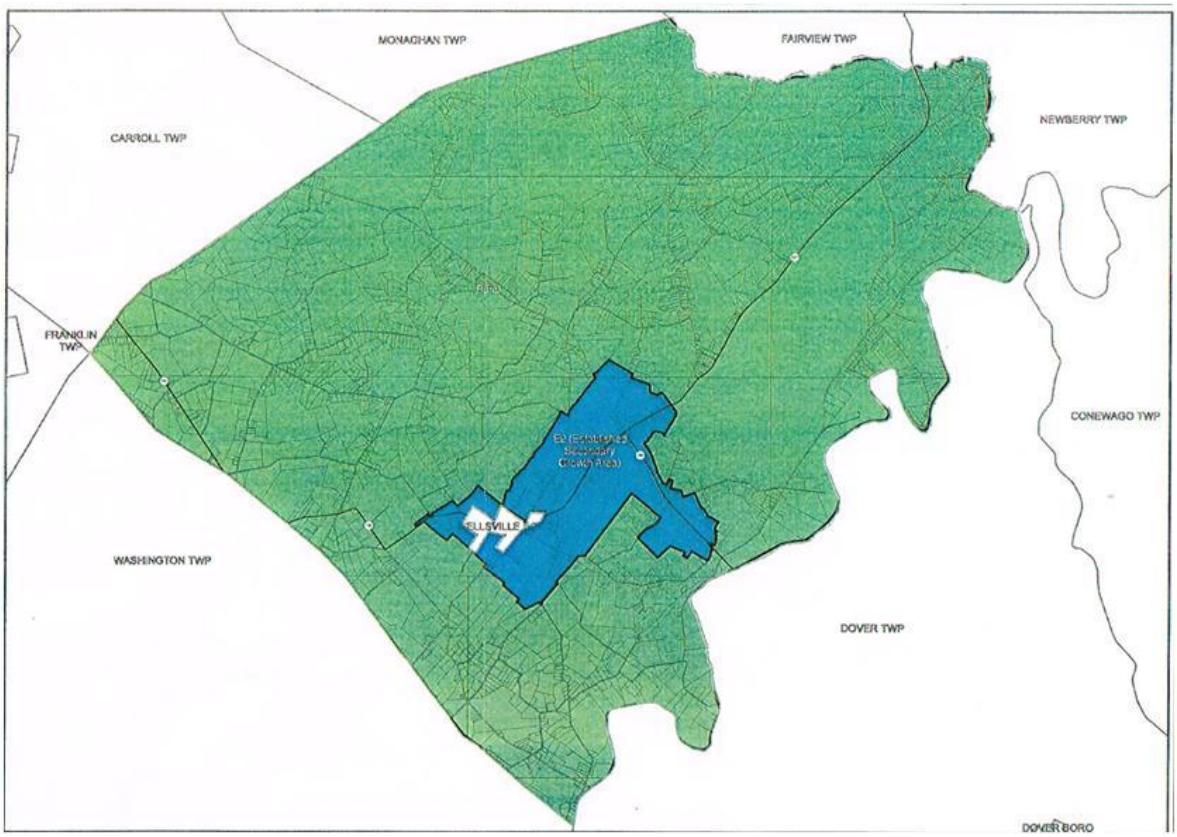
B. YORK COUNTY COMPREHENSIVE PLAN

The *York County Comprehensive Plan*, adopted in June of 1992, includes a Growth Management Plan that has been repeatedly updated, the latest of which occurred on October 27, 2004. The Growth Management Plan sets forth County policies and mapping reflecting desired future growth and development. The Plan's stated goals are as follows:

- ***To protect and preserve important natural resources.***
- ***To facilitate coordinated planning at all levels of government.***
- ***To direct growth and development to appropriate locations.***

The York County Growth Management Plan encourages development to occur within primary, secondary and future growth areas in order to preserve important natural resources, maintain traditional urban/rural distinctions, and encourage efficiency in the provision of public services and facilities. Growth is specifically encouraged as infill within existing utility service areas.

The Plan identifies growth areas within which the bulk of the County's growth is to be directed. Several adjoining municipalities include such growth areas (e.g. Franklin, Carroll, Fairview, Newberry, Conewago and Dover Townships). Warrington Township has identified a Secondary Growth Area which includes the Village Commercial, Village Residential and Residential zones with the remainder of the Township is categorized as a Rural Area and is intended to include resource lands, villages and agricultural lands.



Resource lands are those landscapes that are characterized by agricultural productivity, environmental sensitivity and value, scenic character and/or public ownership or use. Gifford Pinchot State Park and the PA State Gamelands No. 242 are specifically identified resource lands within the Growth Management Plan; however, the Township is rich with other features that also qualify under this category.

The Plan calls for the Township to undertake a "Municipal Consulting Program" to devise planning programs and policies that will efficiently manage limited growth into identified Villages according to population projections, then implement measures to protect and preserve outlying farmlands, conservation areas and parks and gamelands.

This Comprehensive Plan is precisely the first step contemplated by the County to accomplish compliance with the County's growth management policies.

C. PENNSYLVANIA AGRICULTURAL SECURITY AREA[1]

Act 43 of the Commonwealth of Pennsylvania was passed in 1981 to allow municipalities to establish **Agricultural Security Areas** (ASA) to promote more permanent and viable farming operations over the long run by strengthening the farming community's sense of security in land use and right to farm. Individual landowners petition the Township to create an ASA. Each parcel must be at least 10 acres in size and the entire ASA must be at least 250 acres. By establishing an ASA, farmers who want to farm benefit as follows:

1. The Township Supervisors agree to support agriculture by not passing local ordinances which restrict normal farming operations or structures;

2. The condemnation of farmland by a government in the agricultural security area must first be approved by the State Agricultural Lands Condemnation Approval Board to determine if alternative sites are available for condemnation;

3. The farmland preservation options offered by the York County Agricultural Lands Preservation Board are available to qualified farm owners in an agricultural security area. For example, only a farm owner in an agricultural security area may be eligible to receive cash for permanently preserving the farm with a conservation easement; and,

4. Hazardous waste and low -level radioactive waste disposal areas cannot be sited.

Each landowner decides if they want to participate in the program. The farms that make up the 250-acre minimum do not have to be adjacent to one another and do not have to be in the same Township. The agricultural security area does not stop development nor restrict farmers in any way; only Township zoning laws regulate how much and where land can be developed.

Today Warrington Township farmers have joined the Township's ASA with 5410 acres among 98 parcels as shown on the *Adjacent Planning Map.* As of March, 2004, there was a total of 164,378 acres recorded in Agricultural Security Areas throughout York County.

D. PA AGRICULTURAL EASEMENT PURCHASE PROGRAM[2]

The **York County Agricultural Land Preservation Board** (ALPB) has been in operation since 1990. This Board is the organization empowered to administer an agricultural conservation easement program as outlined in Pennsylvania Act 149 of 1988. The purpose of this Act is to protect viable agricultural lands by acquiring agricultural easements which prevent the development or improvement of the land for any purpose other than agricultural production. The program is further designed to:

[1] Most of the following information was taken from the draft York County Agricultural Preservation Plan, August, 2004, pgs 16-17.

[2] Most of the following information was taken from the draft York County Agricultural Preservation Plan, August, 2004, pgs 16-17.

1. Encourage landowners to make a long-term commitment to agriculture by offering them financial incentives and security of land use;

2. Protect normal farming operations in agricultural security areas from non-farmland uses that may render farming impractical;

3. Protect farming operations from complaints of public nuisance against normal farming operations;

4. Assure conservation of viable agricultural lands in order to protect the agricultural economy;

5. Provide compensation to landowners in exchange for their relinquishment of the right to develop their private property; and,

6. Maximize agricultural easement purchase funds and protect the investment of taxpayers in agricultural conservation easements.

To implement the program the Preservation Board accepts applications from interested farm owners, ranks the applications according to a point system, and after the farms are appraised, buys as many easements as funding permits. The purchase price to be paid for an agricultural easement will be the difference between the appraised market value and the appraised farm value.

Factors the program considers in the review of potential farms for conservation easement purchase include the development pressures in the area; the suitability of the farmland tract for development because of soil capabilities, location, and configuration; any pre-existing restrictions against development; and the location in an agricultural area as identified in the York County Comprehensive Plan. To date, the York County Agricultural Land Preservation Board has preserved 113 farms totaling 25,658 acres. Six of these farms are located within Warrington Township with a combined 428 acres.

E. PRIVATE AGRICULTURAL EASEMENT PROGRAMS[3]

In addition to the State-sponsored farmland preservation easement program within York County described above, the **Farm & Natural Lands Trust** (FNLT) is a private non-profit corporation that typically does not purchase easements. Rather the FNLT provides the opportunity for property owners to secure a charitable deduction for the difference in the fair market value of the land before granting of the easement, and its value after granting the easement. To date, the Trust has protected over 5,250 acres through the acceptance of conservation easements throughout York County including 368 acres within Warrington Township among 4 parcels.

All areas subject to some form of Agricultural Preservation are depicted on the *Adjacent Planning Map.*

[3] Most of the following information was taken from the draft York County Agricultural Preservation Plan, August, 2004, pgs 16-17.

VII. Public Facilities

A. Schools

A high quality education is a widely-held objective for most of our society. Historically, school districts have forecast short-term future demands for school facilities, enabling them to program additional building expansion, construction, consolidations, and closures to meet forecasted demands. School district planning can have a direct effect on, as well as be affected by, the land use activities within an area. For instance, new or expanded schools may generate increased nearby residential development, and school closures may contribute to the de-population of communities. At the same time, long-range municipal land use planning may designate new growth areas at some distance from existing or planned school fac ilities. All of these issues underlie the importance of coordinating school district and municipal comprehensive planning processes to assure that existing and future schools and planned community growth occur hand-in-hand.

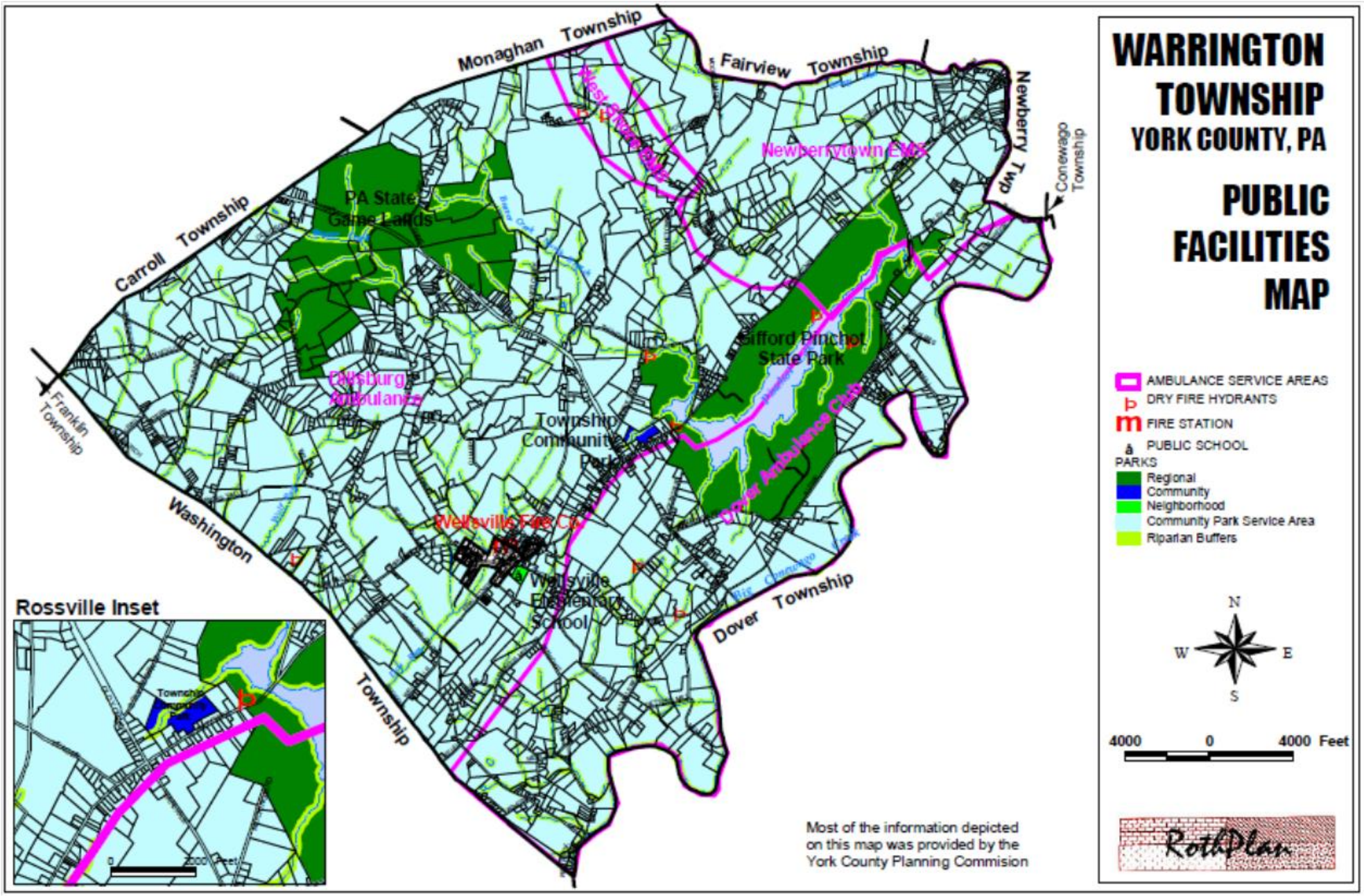
The Warrington Township is served by the Northern York County School District. The Northern York County School District also serves Carroll, Franklin and Monaghan Townships and Dillsburg, Franklintown and Wellsville Boroughs. The District is governed by a nine-member School Board. Each Board member serves a 4-year term. The following is the District's contact information:

Northern York County School District
149 South Baltimore Dillsburg, PA. 17019
Phone - 717-432-8691
Website - http://www.northernpolarbears.com

Presently, the School District employs the following grade format:

Public School Grade Format	
Elementary School	K-5
Middle School	6-8
High School	9-12

The following tabulates conditions at each of the School District's six school sites:


WARRINGTON TOWNSHIP
YORK COUNTY, PA
PUBLIC FACILITIES MAP
AMBULANCE SERVICE AREAS
DRY FIRE HYDRANTS
FIRE STATION
PUBLIC SCHOOL
PARKS
Regional
Community
Neighborhood
Community Park Service Area
Riparian Buffers
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4000
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4000 Feet
Monaghan Township
Fairview Township
Newberry Twp
Conewago Township
Carroll Township
Franklin Township
Washington Township
Dover Township
PA State Game Lands
Newberrytown EMS
Gifford Pinchot State Park
Dillsburg Ambulance
Dover Ambulance Club
Wellsville Fire Co
Township Community Park
Wellsville Elementary School
Rossville Inset
Most of the information depicted on this map was provided by the York County Planning Commision
RothPlan

Summary of Northern York County School District Facilities						
School Name	**Year Built**	**Renovation Dates**	**Rated Condition**	**Grades Housed**	**Rated Capacity**	**2004-2005 Enrollment**
Dillsburg Elementary	1978	NA	Very Good	K-5	422	410
Northern Elementary	1962	1985	Very Good	K-5	290	296
South Mountain Elementary	1999	NA	Excellent	K-5	550	431
Wellsville Elementary	1962	1985	Very Good	K-5	236	190
Northern Middle School	1970	2002	Very Good	6–8	800	793
Northern High School	2002	NA	Excellent	9–12	1200	1,101

Source: School District

Although the Wellsville Elementary School is the only of the District's elementary schools located within Warrington Township, elementary-aged students the Township are bused to the Dillsburg and Northern Elementary Schools as well. All of the District's elementary schools are rated as in "very-good" to "excellent" condition by District Officials. In addition, District Officials indicate that each school site has room for growth and that significant growth is forecast over the next decade. Presently the District is adding seven classrooms and a gymnasium to the Northern Elementary School. In all the four elementary schools had a 2004-2005 enrollment of 1327 students. District Officials do not foresee an immediate need to expand or enlarge elementary school capacity.

The Northern York County School District Middle and High Schools (and the Northern Elementary School) are located along Baltimore Street just south of the Borough of Dillsburg in Carroll Township. The Middle School was originally constructed as the High School in 1970 and was renovated and converted to the Middle School in 2002. This school serves grade 6 through 8, and had a 2004-2005 enrollment of 793. District officials rate this facility as in "very good" condition with no room to expand if necessary.

Alongside the Middle School is the High School. The High School houses grades 9-12 and was recently constructed in 2002. This school serves grade 9 through 12, and had a 2004-2005 enrollment of 1,101. District officials rate this facility as in "excellent" condition with room to expand if necessary. No specific changes to the Middle or High School are foreseeable.

In addition to the "typical" primary and secondary educational offerings, the District offers a "continuum of special services" and about 50 high-school students attend the Cum berland Perry Vocational Technical School which offers about 20 different programs.

The District produces a long range plan every six years. The population projections provided in Chapter 4 suggest that Warrington Township will add about 650 new residents each decade through year 2020. Because, the initiation of school expansion is a major project that often takes years to undertake, ***it is recommended that the School District closely monitor growth within the District so as to proactively plan for facility expansion well in advance of actual demand for space. The School District could benefit from an improved process of residential development review. By learning of proposed developments early, the District can better prepare for needed school expansion and bus routing. Warrington Township should revise its subdivision and land development application requirements so that adequate and timely notification to the School District is assured. Similarly, the School District should allocate manpower and resources so as to properly respond to such applications and provide meaningful feedback to the municipalities.***

Finally, the District offers many interscholastic programs for its students and adult education programs. Because of the relative lack of such facilities within the Township, its residents are highly dependent upon the District for such facilities, programs and services. Township Officials should fully understand this dependence and look for opportunities to cooperate with the District in the delivery of this service and maintenance of its facilities. ***More on this subject follows in the next Section of this Chapter.***

B. Parks and Recreation

The planning for both passive and active recreation opportunities is an important component of any comprehensive planning effort. Recreation planning seeks to determine the level of demand for recreation facilities and programs, and suitable locations for parks. Finally, certain widely-used procedures for the acquisition of parklands via dedication/fee- in-lieu thereof subdivision requirements are only legally defensible if they seek to implement legitimate and logical recreation goals and objectives.

One of the planning goals of this Plan that specifically relates to recreation states:

Aside from the Township's recently acquired community park, continue to rely upon the abundant recreation facilities and programs offered at the Pinchot State Park and the School District.

Local officials have begun a process to create a Township Community Park. Over the past few years the Township has received a grant from the acquire and develop this community park located adjoining the Township Office. More discussion on this park is presented later in this Chapter.

Recreation planners analyze the level of park service available to a particular area based upon various park types and the intended population to be served. Typically, these evaluations are based upon prescribed standards for park size per 1,000 persons being served and also for predetermined service radii. The National Recreation and Park Association (NRPA) is widely recognized as a source for such standards for various park types.

First, ***regional parks*** generally contain 200± acres and are typically located within a one hour driving time from the population being served. These parks are generally located throughout a large metropolitan region, and can accommodate a wide variety of recreational activities. Often, these parks are owned and operated by the County, State and Federal government, and in the Case of Pennsylvania, many State Game Lands are included in this category. Regional parks usually have a natural orientation with hiking, cam ping, and picnicking facilities. Other "activity-oriented" facilities, as well as significant historic or archaeological resources, might also be included.

Warrington Township contains one of the largest such regional parks within York County. First, the Pennsylvania State Game Commission owns and operates State Gamelands No. 242 which contains 1516 acres and is located in the northwest corner of the Township and just extends into adjoining Carroll Township. The area straddles Old York Road and York Road South. These areas offer settings for public hunting of small and large game during designated hunting seasons as well as year-round hiking and nature enjoyment. A public shooting ranges is located along the east side of Old York Road about 100 feet south of the Township's northern border.

Panoramic view of the 340-acre Pinchot Lake within Gifford Pinchot State Park.

Second, the Gifford Pinchot State Park is located in the southeastern reaches of the Township just east of the Village of Rossville. This 2,238 acre park consists of a reverted farm with wooded hill sides and the 340-acre Pinchot Lake. This park features:

- 340 individual campsites;
- Organized group camping;
- 10 year-round rental cabins;
- Seasonal interpretive/educational programs;
- Picnicking (over 1000 tables, 4 rental pavilions, BBQ grills, rest rooms, fountains, and food concessions);

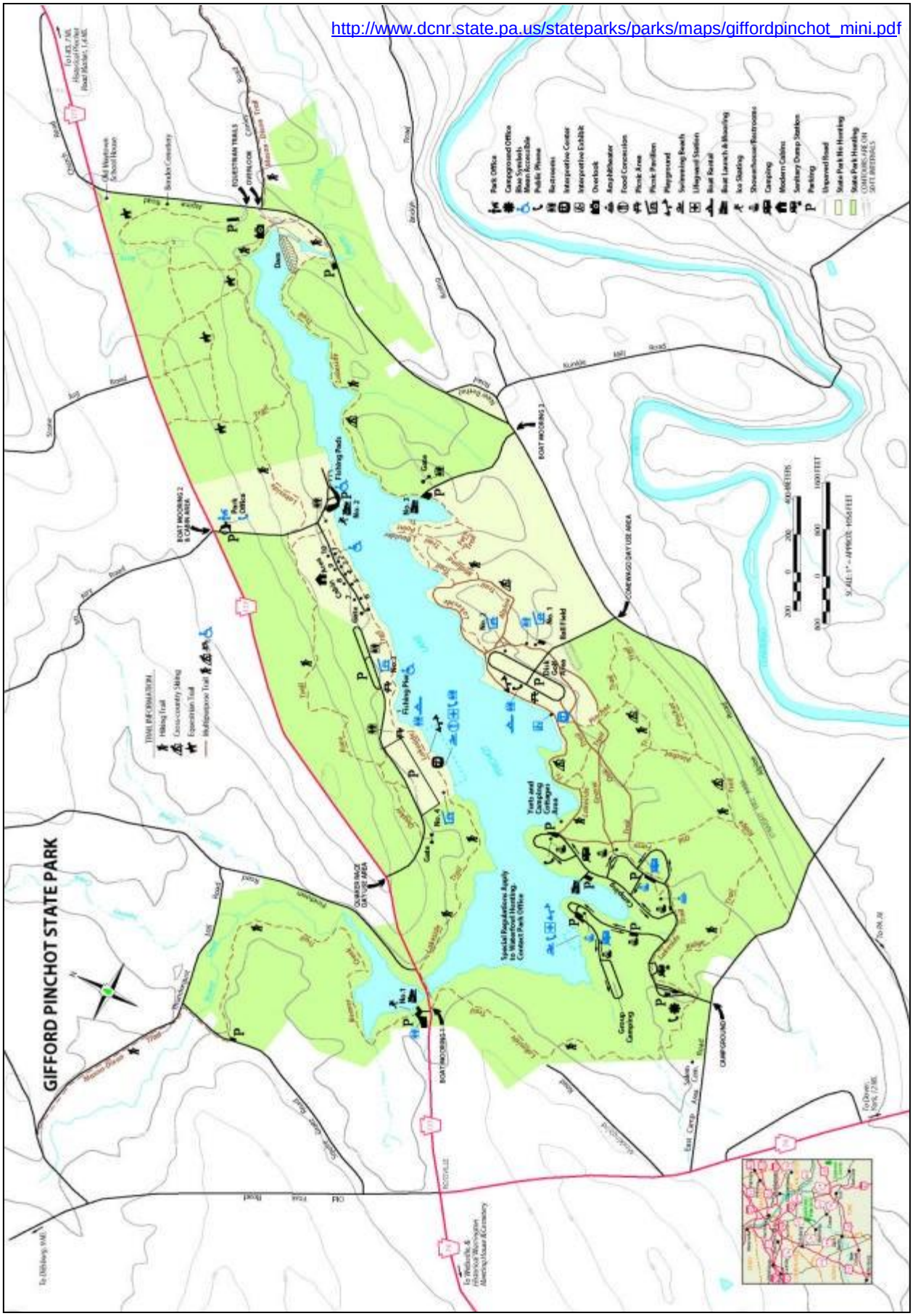
Quaker Race Day Use Area with:

- Large swimming beach (summer only);
- Fishing & boating and boat rentals;
- Horseback riding;
- Horseshoe pits, volleyball, softball;
- Hunting, archery, trapping & dog training

Conewago Day Use Area

- Picnicking
- Fishing & boating
- Disc golf
- Horseshoe pits

The following maps the various facilities at this regional park:


http://www.dcnr.state.pa.us/stateparks/parks/maps/giffordpinchot_mini.pdf
GIFFORD PINCHOT STATE PARK

Because the size and cost usually associated with regional parks transcend the responsibilities of local government, this Plan does not recommend any specific actions associated with the acquisition and development of more regional parks. ***However, Township Officials should make sure that the Future Land Use and Zoning Maps provide for these important regional parks amid settings that protect their integrity and offer suitable levels of improvement for related services.***

Community parks generally contain 20± acres and are intended to serve a population within a 2 mile-service radius. They should be sized at the rate of 5 to 8 acres for 1,000 persons served. These parks generally involve a high level of improvement with multiple sets of athletic fields and courts. Sometimes swimming pools and indoor recreation centers are situated on these community-wide parks. Larger school sites (usually middle, and high schools) have the facilities to qualify as community-based parks, and represent valuable recreation resources that can significantly enhance the level of recreation services offered to a given area. The Northern York County Middle and High School campus located straddling Baltimore Street just south of the Borough of Dillsburg provide resources for the residents of Warrington Township. These sites' improvements are tabulated on the following page.

It is important to note that these School District sites serve all of the municipalities within the School District. Furthermore, their location is well beyond the recommended 2-mile service radius for all but a small section of the northwest corner of Warrington Township. Nonetheless, this campus has until recently, been the only community park available to Township residents.

In October, 1999 the Township purchased the 21.7-acre property adjoining the Township Office with a matching grant from the Commonwealth of PA Keystone Recreation, Park and Conservation Fund. Since then the Township has engaged a local landscape architect to develop a suitable Master Plan for the property with input from Township Officials and residents. This process is finished with a copy of the Final Master Plan depicted on page 72.

It is expected that this new park will offer Township residents local park facilities (e.g. pavilions, trails, sand volleyball, dog runs, bird blinds, rest rooms and parking). Sources of funding would be future state grants and mandatory dedication fees collected under the Township's Subdivision and Land Development Ordinance. In addition, the Township would identify potential park improvement projects for local volunteer groups (i.e. Eagle Scout projects and etc.).

Using a 5 acre per 1000 population standard, this 20-acre park will serve up to 4000 residents. In 2000, the Township's population was 4435 and it is expected to grow to 5729 by the year 2020. ***Therefore, the Township should seek to acquire and develop an additional nine acres of community parkland by the year 2020 to comply with the minimum NRPA recommended standards. However, in the short run the Township should focus its effort on improving its current undeveloped 20-acre community park.***

FACILITIES INVENTORY

BACKGROUND	SITE NAME	NYCSD High & Middle School	Warrington Community Park	Wellsville E.S.
	OWNERSHIP & MAINTENANCE	School District	Township	School District
	SITE TYPE	Community	Community	Neighborhood
	SITE CONDITION	Very Good - Excellent	Undeveloped	Very Good
	TOTAL ACREAGE (DEVELOPED)	NA	20 ac.	NA
PLAYGROUNDS	Swing Sets			X
	Sliding Boards			X
	Climbing Equipment			X
	Merry Go-Rounds			
	Seesaws			X
	Rocking Toys			X
	Big Toys			
FIELDS & COURTS	Baseball/Softball Fields	X		
	Soccer/Hockey Fields	X		X
	Football Fields	X		
	Basketball Courts (hoops)	2		X
	Tennis Courts	X		
	Volleyball Courts			
	Bleachers	X		
	Track	X		
	Media Booth			
INDOOR	Gymnasium	2		
	Swimming Pool	1		
	Weight Room	1		
	Wrestling Room	1		
	Multi-purpose room			1
	Music Room	2		
	Library	2		1
	Auditorium (Seats)	2 (1670)		
	Computer Lab	7		1
	Industrial Arts Shop	6		
SUPPORT	Parking Spaces	X		X
	Rest Rooms	X		X
	Water Fountains	X		X
	Picnic Pavilion			X
	Snack Bar	X		
	Waste Receptacles	X		X
	Bike Rack			X
	Trails	X		
	Signs	X		X


Warrington Township Park
Master Plan
York County, Pennsylvania
August 2005
OVERLOOK
SCOUT CAMP AREA
BIRD BLIND
STONE DUST TRAIL
BOARDWALK LOOP TRAIL
HORSESHOE PITS AND VOLLEYBALL COURT
RESTROOM/PAVILION/ STORAGE BUILDING
TOT LOT AND YOUTH PLAYGROUND
ENVIRONMENTAL EDUCATION SIGNS
40'x60' PAVILION
DROP-OFF AND PARKING AREAS (26 SPACES)
TRAIL CONNECTION FOR SHARED PARKING
MAINTAINED OPEN LAWN AREA
BITUMINOUS LOOP TRAIL
ROSSTOWN ROAD S.R. 177
BOARDWALK LOOP TRAIL
BUFFER/SCREEN AT MAINTENANCE YARD WITH FENCING AND GATED ENTRY
OBSERVATION DECK AND WEDDING GAZEBO
STONE DUST TRAIL
BIRD BLIND
GRATZ ROAD T-906
OLD YORK ROAD S.R. 4026
NORTH

Neighborhood parks are generally between 1 and 20 acres in size and meant to serve a population of 2,000 to 10,000. The recommended service area for these parks is a one-quarter to one-half mile radius. As implied by the name, these parks are intended to provide close-to-home areas for limited athletic activities, playgrounds, and passive pursuits. The NRPA recommends that 1 to 2 acres of publicly-owned land be devoted to neighborhood parks for each 1,000 residents.

Today the Township has selected not to offer neighborhood parks based upon its rural character and the demands associated with the maintenance of scattered park sites. However, as the Township grows, resident may begin to demand more localized park sites. At such time as demand warrants, the Township should undertake an update to this Chapter to reflect needed neighborhood parks. Until then, the Township should focus its efforts on developing and enlarging the community park.

Linear parks and greenways are also gaining in popularity throughout the nation as less and less open space remains within developing areas. These parks can take many forms from abandoned railroad beds to utility transmission lines and riparian buffers along creeks. Warrington Township has conditions that would seem to promote the opportunity for linear parks.

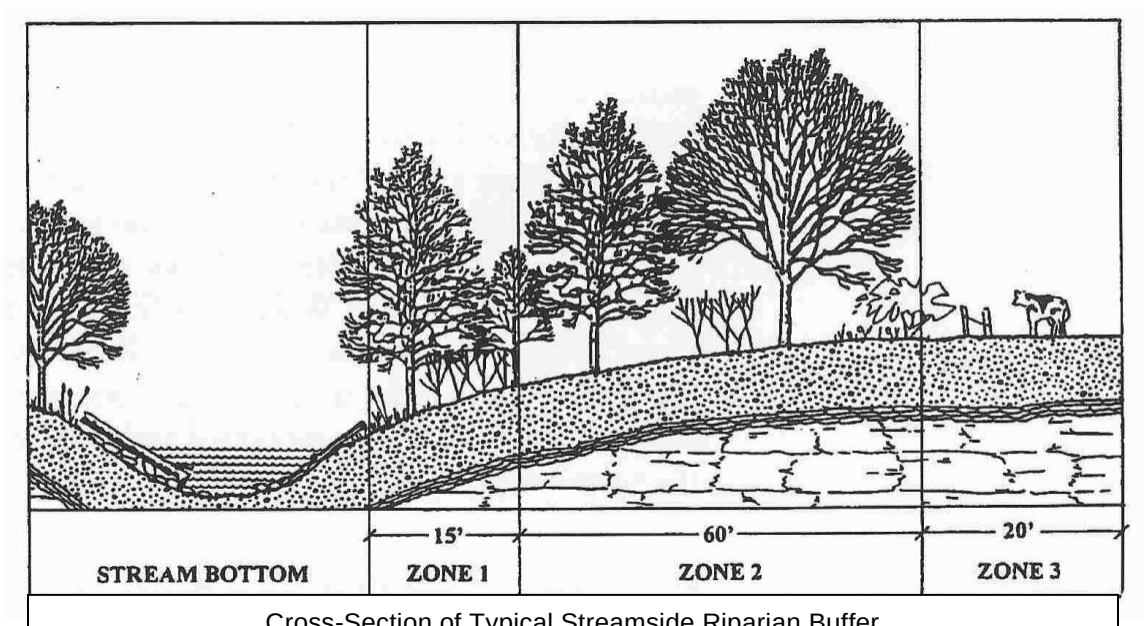
First the Township has considerable open space which, by design, tends to keep linear park potential intact as compared with a landscape that is undergoing conversion for development.

Photo of creek with and without a riparian buffer through farmland.
Source: York County Planning Commission.

Next, the Township has several important and high quality streams that, with proper attention, can offer tremendous environmental, recreational and educational value. These natural corridors represent the best opportunities for greenways that can significantly improve surface water quality. At the same location these buffers also offer "habitat highways" where local wildlife can find refuge and food amid agricultural and development settings.

For these reasons, all of the linear park opportunities have been plotted on the Public Facilities Map. But, the plotting of a potential greenway on a map is only a beginning point to a lengthy and potentially difficult process that ends in development and use. Many pitfalls can "derail" this process and prevent project completion. Nonetheless, these greenways have become one of society's popular priorities and therefore local officials should mount a coordinated multi-prong approach to protecting these areas.

Studies conducted by the U.S. Forest Service suggest that riparian buffers extend to include a 95-foot wide radius from the streambanks. This width is determined by the USDA Department of Forestry, based upon the climatic conditions. Essentially, riparian buffers comprise three distinct zones, as depicted below. The following will describe where to establish, and how to plant and maintain each of these three zones:



Cross-Section of Typical Streamside Riparian Buffer

Zone 1 is the landward area located between the streambank edge under typical flow conditions, and the largest width of any of the following:

- fifteen (15) feet, as measured directly perpendicular from the streambank edge;
- the 100-year floodplain;
- any adjoining identified wetlands; and/or,
- any adjoining area characterized by slopes exceeding twenty-five percent (25%).

This Zone must include mature canopy trees and a ground cover of warm season grasses. New tree plantings should be selected, arranged and managed to accelerate canopy growth, and offer native species habitat and food supply. New grass plantings should be selected and managed to filter-out pollutants and offer habitat. All vegetation within this Zone must thrive in wet conditions. Zone 1 requires little maintenance. As trees mature, die and decay, it is important that such natural debris be allowed to decompose within the stream. This will provide important food and habitat for beneficial microorganisms, fish and amphibians. Streamside grasses should similarly be allowed to seasonally flourish and recede. Manmade activities should be very limited and confined to perpendicular passages from Zone 2. Intensively-used locations should be fitted with raised walkways and reinforced embankments. Streamside cleanup of junk and manmade debris is permitted. No animal watering and crossing locations are permitted, unless they are reinforced.

Zone 2 begins at the inland edge of the above-described Zone 1 and extends at least sixty (60) feet inland therefrom. This Zone must also include mature canopy trees generally three

rows deep, and a natural undercover. New tree plantings should be selected that grow rapidly, so as to intercept passing nutrients. Such trees should also be arranged and managed to accelerate canopy growth, and offer native species habitat and food supply. Successive undercover plants should also be allowed to "evolve" with the canopy of this Zone. This Zone requires the most attention, but not for some time after initial planting. Here, the objective is to develop a stable and broad canopy of tree cover. The trees within Zone 2 are fast-growing and, therefore, consume many nutrients. The regular pruning and trimming of these trees will increase their nutrient consumption, but should not jeopardize the important overhead canopy of shade. The natural undercover should be undisturbed, except for periodic litter cleanup. Pedestrian paths can weave through Zone 2, but should be provided to prevent compacted soils and root damage.

Zone 3 begins at the inland edge of the above-described Zone 2, and extends at least fifteen (15) feet inland therefrom. Where a pasture is proposed just beyond the above-described Zone 2, no Zone 3 is required. This Zone should be planted with warm season grasses that are allowed to mature naturally without mowing. The tall grasses ensure that overland storm water flows do not "channel" into Zone 2. New grass plantings should be selected and managed to enable controlled grazing or haying, so long as the grasses are not reduced to a point where they are no longer able to effectively disperse the surface water flows. This Zone also requires little maintenance. Long summer grasses should be allowed to flourish and recede with the seasons. Grazing and haying is permitted, so long as the residual grass length is sufficient to disperse overland storm water flows into Zone 2 and avoid channelization.

Buffer Use and Maintenance - Streamside buffers must be generally undisturbed. Mature trees and long grasses absorb more nutrients than do manicured plants. Similarly, the more extensive root systems retain passing sediments. These characteristics reduce pollution and yield abundant food and habitat for wildlife. The temptation to "over-maintain" the streamside must be overcome.

Local officials should educate landowners and developers of the importance of riparian buffers, and the Township's intent to provide for them. Newsletter articles should be used occasionally to introduce these concepts, and then to feature successful implementation examples as they occur. A sample riparian buffer ordiance is contained in Chapter X (Future Land Use) of this Plan and should be adopted.

But zoning regulations alone will not get this job done, as most land uses don't require zoning approval to continue to operate. In these areas, other options exist. First, the USDA Natural Resources and Conservation Service offers its Conservation Reserve Enhancement Program (CREP). This program is limited within York County to applications for riparian buffers for another 5000 acres. ***Essentially landowners adjoining streams are offered annual rental payments for installation and proper management of streamside buffers. The program is proposed to continue for 10-15 years. In addition to the rental payments, landowners are eligible for 100% cost share reimbursement for installation of suitable vegetation within these buffers.***

"The average cost of the conservation reserve program nationwide is about $43 per acre per year. However the actual amount farmers will be paid to participate in CREP is highly variable, since it is

largely related to local land rental rates. ***[Within York County these payments average $127 per acre per year.]*** *The methodology for determining the total amount to be paid to farmers considers the following: base rental rate, cost of installation of conservation practices, annual maintenance costs and any special incentives. The base rental rate is the average dry land cash rental rate based on the three predominant soil types of the land. The Department of Agriculture maintains this information on a county by county basis for the entire country. The Federal government will pay for up to 50 percent of the cost of installing the conservation practices on the land (e.g. planting trees and grass). The Federal government will also pay a nominal annual maintenance fee (generally $5 per acre). Finally, the Federal government may make special one-time or annual incentive payments to encourage participation in the program. For example, the Federal government pays a 20 percent annual bonus above the rental payment for certain high priority practices such as installation of filter strips and riparian buffers. States and other program participants may provide other funding to further encourage participation in the program.[1]"*

Township officials should mount a campaign to inform local landowners who abut these creeks. Program experts should be invited to explain the benefits of these programs. Information about this program is available from Farm Services Agency (717) 755-2966.

Many of the success stories surrounding riparian buffers within Central Pennsylvania have been the results of dedicated volunteers from conservation and sporting groups. Another powerful ally are the Region's youth. Environmental studies classes can develop pilot riparian buffers at visible school and park locations; these focused successes enable the benefits of these buffers to be experienced first-hand by the general public. ***The Township should encourage the School District to develop and regularly offer a streamside riparian buffer workshop as part of its curriculum, for students to learn "first-hand" about how man can co-exist with nature. Local and School District officials should cooperate on a number of these pilot projects at visible locations (i.e. Township Community Park). Then, as successes mount, they should be featured in local newsletter and media articles that widen awareness and attention about their use and benefits.*** Such projects represent excellent candidates for Growing Greener grants from the State. Once momentum is achieved, other civic groups are likely to get involved.

The Township should also require the installation of riparian buffers for uses that have a potential for generation of surface water pollution as part of its zoning approval process. Intensive livestock operations and waste-related facilities are obvious choices but farm and rural occupations could also benefit from such protection.

Mandatory Dedication (or fee-in-lieu thereof) of Recreation Land - Mandatory dedication of parkland has become a standard technique for local park systems to keep pace with growth since it was enabled by the Pennsylvania Municipalities Planning Code in the late 1980s. The Township has yet to apply this technique. However, given the previously-described need to develop its community park, the Township should consider use of this technique to generate revenues for this purpose.

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[1] *http://www.fsa.usda.gov/dafp/cepd/crepqnas.htm*

Given changing demographics, land values and parkland needs it is important for municipalities to periodically calculate mandatory dedication standards and their related fees -in- lieu-thereof. The following will provide a basis for such calculations at this time.

The NRPA's recommended minimum standards for community parkland is 5 acres per 1000 population. To derive a per unit or per lot standard, the 1,000 population is divided by the average household size (year 2000) reported as follows:

1000 population divided by 2.49 persons per unit equals 401 dwelling units divided by 5 acres equals 543 square feet per dwelling unit.

If raw land is all that was needed to provide for local parks, then the preceding required park acres per dwelling unit would enable the Township to collect parkland that would keep pace with its projected growth. A community park is more than raw land; it requires a high level of infrastructure and improvement. Generally, the value of these improvements costs about as much as the value of the parkland itself. Therefore, it is recommended that the Township double the preceding acreage figure to derive needed mandatory dedication standards to effectively meet expected demand for a developed community park. Therefore, each unit should be required to dedicate 1086 square feet (0.025 ac.) of land for park purposes.

As an alternative to parkland dedication, municipalities can accept a fee-in-lieu of parkland dedication. This approach can only be used in those instances where the developer and municipality agree on the amount of the fee-in-lieu. In addition, such funds cannot be used merely to maintain existing facilities, but must be used to:

1. purchase new parkland;
2. purchase new equipment for new or existing parks; and/or,
3. make improvements to existing parks that will serve existing residents and those of the proposed development.

According to requirements within the Municipalities Planning Code, amounts of the fees-in-lieu should be derived from the following approach:

An appraiser should be retained by the municipality to analyze recent real estate transactions and derive estimates of fair market value. Such estimates can be based upon all properties within the municipality, or on a neighborhood basis. It is important that the appraiser be informed of the development features (e.g., utilities, zoning, curbs, sidewalks, etc.) common to such lands, so that accurate real estate comparisons can be identified. Once these estimates are derived, they should be periodically updated to reflect the ever-changing value of land.

When disputes between the developer and municipality occur, both the developer and municipality should select an appraiser who, in turn, should jointly select a third appraiser. This third appraiser should then determine the fair market value of the land.

Funds collected under this approach must be used to provide for recreation facilities that are accessible to residents of the proposed development. In determining accessibility to the park, local officials should be guided by the respective park service areas as listed in this Plan. In this instance the Township intends that its community park serves the entire Township; therefore, so long as the funds are spent for suitable purposes (e.g. land acquisition, equipment and improvements) they would comply with the State law.

To estimate the value of fees-in-lieu of parkland dedication an average value of $46,000 per acre will be used (based upon recent real estate transactions) to account for the value of improved residentially-zoned land within the Township. The following lists estimated values for fees -in-lieu of parkland dedication per dwelling unit.

Suggested Mandatory Parkland Dedication/Fees-In-Lieu Standards	
Required Park Acres per Dwelling Unit	**Fee-In-Lieu of Parkland**
.025 acres (1086 sq. ft.)	$1150 per unit

By applying these above figures to the Township's projected growth as described in Chapter IV, the following dedicated acres and/or fees-in-lieu can be collected to meet increasing park demand generated by growth:

Projected Dedicated Parklands or Fees-In-Lieu-Thereof 2000 to 2010			
Time Period	**Projected New Dwellings**	**Projected Dedicated Parklands**	**Projected Fees-In-Lieu of Parkland Dedication**
2000-2010	344	8.6 acres	$395,600
2000-2020	688	17.2 acres	$791,200

As can be seen, the value of mandatory dedication/fee-in-lieu-thereof standards is almost $800,000 across the Township through the year 2020, which unless implemented will have to be generated through other means. For this reason, it is vital that the Township adopt m andatory dedication standards within its Subdivision and Land Development Ordinance.

C. Police Protection

Police protection is an obvious public service benefiting residents and businesses. The traditional role of the police involves three functions: law enforcement, order maintenance, and community service. Law enforcement involves the application of legal sanctions, usually arrest, to persons who injure or deprive others of life or property. Order maintenance involves the handling of disputes, or of behavior that threatens to produce disputes. The third aspect of the police function, and the one most likely to occupy the major portion of an officer's time, varies from community to community according to tradition and local ordinances. These activities include such tasks as traffic control, rescue operations, animal control, and ambulance and first-aid services.

Police protection within the Warrington Township is currently provided by the PA State Police. In addition, all emergency police calls are dispatched through the York County "911" program. The following information was obtained from Lieutenant Pat Gebhardt via survey and follow-up telephone contact.

The Pennsylvania State Police patrols 17 municipalities in York County. Presently the York station houses 55 full-time officers, 14 full-time detectives and 1 office help; however, manpower needs are assessed annually by the Pennsylvania State Police, Bureau of Research and Development, using a complex equation that considers demographics, geography, crime patterns, statistics and other factors.

The Lieutenant describes the York station, located at 110 North Street, York, PA 17403 as a "good" facility. In addition, the Lieutenant believes that the Department has ample resources (vehicles, computers, radios, equipment, and etc.) to serve and protect its patrol areas.

Recent PA State Police Activity Within Warrington Township			
Year	**No. of Total Responses**	**Traffic Accident Responses**	**Serious Offenses**
2002	663	85	Not Available
2003	678	75	
2004	642	87	

Finally, Lieutenant Gebhardt indicates that there are "no problems" with coordination of emergency service providers operating within the Township and that no improvement is necessary. He believes that the State Police have the necessary manpower and resources to adequately serve the Township's needs. He believes that the rural area has minor property-related crimes and traffic-related incidents that comprise the bulk of their assistance to the Township. He also opines that the State Police will commit the resources to adequately serve the Township in the future.

For the time being and the foreseeable future, Warrington Township is a rural place with low incident rates and few serious crimes. Police protection is one of the most costly public services that is usually reserved for municipalities that are under going rapid transformation and become inundated with a new breed of crimes. ***For these reasons it is recommended that the Township continue to rely upon patrol from the PA State Police and that periodic input be furnished to the Department for acute patrol needs.***

However, in the distant future this may change. As a rural area develops, local officials find themselves torn between retaining low levels of taxation, and providing for increasing levels of public facilities and services that are usually expected by the "newcomers." This often pits long-time residents of the community who want things to remain as they were against

new residents who move from more urbanized locations, and are often surprised and disappointed by the relative lack of public services. At some point, the new residents usually outnumber the existing inhabitants and the political winds change. At that time, new officials are elected on platforms of better delivery of more services, and real ill-will within the community develops.

Local officials need to know and understand these pressures if they are to persevere through the transition. The question is not **if** better services and higher taxes result, but **when**! Fortunately, State programs exist to assist municipalities with these difficult studies and decisions and offer independent expert advice. Some of these programs are free, while others are offered in the form of peer-to-peer grants. In any event, these programs and grants can provide invaluable assistance to the open-minded elected official who is trying to "cut through" all of the local politics and emotion. ***For this reason, it is suggested that at such time as popular public sentiment shifts towards a higher level of police protection, the Township should partner with one or more of its neighboring municipalities to participate in a PA Department of Community & Economic Development (DCED) regional police feasibility study.***

D. Fire Protection and Ambulance Service

Fire protection is a basic public safety service that is important to the Township. Obviously, fire protection is intended to minimize the loss of life and property due to fire and related hazards. The level of fire protection a community offers also affects the rate which area residents and business owners must pay for fire insurance. One fire company has first-call responsibilities within the Warrington Township and other adjoining municipalities. In addition to being responsible for their primary service areas, this company provides reciprocal, mutual-aid assistance to other surrounding fire companies as needed. Mutual- aid assistance enables neighboring fire departments to supplement manpower and equipment, and thereby respond more effectively to multiple or major calls.

Ambulance service is an obvious lifesaving benefit. Emergency ambulance service involves the pick-up of patients at the scene of an accident or other medical emergency, and their transport to local medical care facilities for treatment. Ambulance service can also involve routine transport, which is the transport of patients from one medical facility to another, or to their home. Four different ambulance companies serve the Township.

The tables on the following two pages summarize fire protection and ambulance services within the Township, respectively.

Summary Characteristics of Fire / EMS Companies Serving Warrington Township						
Company		**Dillsburg Ambulance**	**Dover Amb. Club Inc.**	**Newberrytown EMS**	**West Shore EMS**	**Wellsville Fire Co.**
First Call Service Areas (see *Public Facilities Map*)		Dillsburg, Franklintown & Wellsville Boros. / Carroll, Franklin, Monroe, Warrington & Washington Twps.	Dover Boro, Dover Twp & portions of Conewago & Warrington Twps.	Newberry Twp.	**ALS** – Cumberland, Perry, Northern York, Northern Franklin portions of Adams & Juniata Cos. **BLS** – Wormleysburg, Lemoyne, Mechanicsburg, Monaghan, Monroe & U. Allen Twps.	Wellsville Borough & Warrington & part of Washington Twps.
Mutual-Aid Service Areas		Dover, Huntigton, Latimore, Monroe, Warrington, & Washington Twps & York Springs Boro	Conewago, Manchester, Warrington, Washington & West York	Goldsborough & York Haven Boros & Conewago, Fairview and Warrington Twps.	Upon dispatch	Dillsburg, Dover, Franklintown & Lewisbury Boros. / Carroll, Conewago, Dover, Fairview, Franklin, Monaghan & Newberry Twps.
Station Locations (see *Public Facilities Map*)		109 S. Baltimore St. Dillsburg Borough	40 East Canal Street Dover Borough	2145 York Haven Rd. Etters, PA 17319	13 stations across the Region	95 Community Street Wellsville Borough
Adequacy of Station?		Adequate now; will need larger facility in future.	Adequate	Unknown	Looking to improve Chambersburg Station	Adequate now but may need to house a fire engine in future.
Average No. of Personnel		1 full-time volunteer 2 part-time volunteers 6 full-time paid 22 part-time paid	5 part-time volunteers 6 full-time paid 17 part-time paid	8 full-time paid 3 part-time	124 full-time paid 97 Part time paid	20 full-time volunteers 4 Fire Police
Adequacy of Personnel?		None listed	None listed	Lack of volunteers	Shortage of ALS providers	Critical shortages during the day, dwindling manpower relative to calls
1st Due Calls ALS / BLS 2002-2004	**2002**	1001	1235	859	ALS – 14,034 / BLS – 3,194	156
	2003	1047	1327	939	ALS – 14,309 / BLS – 3,047	110
	2004	1119	1324	852	ALS – 15,481 / BLS – 3,288	117
Mutual-Aid Calls Routine Transports 2002-2004	**2002**	4	NA	0	20,149	49
	2003	1	NA	0	18,506	71
	2004	0	NA	0	18,865	68
Average Emergency Response Time*		1-3 mins	2 mins	1-2 mins	ALS – 10 mins / BLS - 5.3 mins	5-7 mins
Major Equipment		• 1998 Braun Ambulance (replacing this year) • 2002 PL Ambulance • Need to add another vehicle	• 2003 Marque Ambulance • 2002 Braun Ambulance • 1997 Braun • Vehicles replaced @ 100K mi.	• 2 BLS units • 1992 Mobile Medic 9 needs replaced in 1-2 yrs)	• 15 Ambulances • 14 Wheelchair vans • 14 ALS Squads • 6 Micros • Owns maintenance facility	• Engine 1500 pump/1000 tank • Engine 1250 pump/1000 tank • Rescue 1500 pump/500 tank • Tanker 500 pump/1934 tank • Brush Hi Pressure pump/150 tank
Major Problems?		• Address identification	• Paying qualified personnel • Maintaining equipment • Coordinating response	• Manpower shortage • Volunteer shortage	• Duplication of service, reimbursement, recruitment & retention	• More personnel & dry hydrants

FUTURE VOLUNTEER MANPOWER

Across the nation, fire and ambulance companies are experiencing declining numbers of volunteers. This is particularly true of “younger volunteers” who will become the next generation of emergency service providers. However, given the projected growth within the County, future demands will rise and more manpower will be needed. Nationally, volunteerism in general, is declining. The National Volunteer Fire Council reported that the number of volunteer firefighters dropped 12% since its record high in 1983. And, despite President Bush's call to public service after "9/11", the downward trend continues. This often forces mutual-aid responses from distant companies; this strategy may work in the short term, but will eventually overburden volunteers who will get frustrated and quit. The more you demand of a volunteer, the less you are likely to receive! Declining manpower response is most problematic during the day when many volunteers work outside of their first-due response area.

Presently, 1 fire company serves Warrington Township with 20 full-time volunteers, and 4 volunteer fire police. A 1999 study conducted by the Pennsylvania Fire and Emergency Services Institute showed that most fire companies have between 11 and 20 active members. Consequently, the Warrington Township’s average of 20 full-time members per company suggests that volunteerism is strong. Nonetheless, local fire officials have observed a decline in new membership and know that difficult times lie ahead. Furthermore, in light of the terrorist attacks committed against the United States on September 11, 2001, many experts argue that the capacity to respond to local emergency crises needs to be expanded. Fortunately, many citizens within our society have begun to acknowledge the important and life-saving roles volunteer firefighters, EMTs and local police officers provide.

While volunteerism is strong today, the following is a list of possible strategies that could be used should manpower decline. To enlist more volunteer firefighters/EMTs, particularly during the daytime, it is recommended that the Township initiate a regional effort with its neighboring municipalities to create a new Emergency Services Alliance (ESA). The ESA should consist of local officials (say, one from each municipality), the fire chiefs from each fire company and the ambulance chiefs from each ambulance company. The Alliance should seek to

ensure that the following possible sources of daytime and other volunteers are put in place:

1. ***Recruit firefighters/EMTs who live within the Region and work for businesses located here;***

2. ***Recruit firefighters/EMTs who live outside of the Region, but work for businesses located here;***

3. ***Establish policies with local governments and businesses that enable their employees to respond to daytime emergencies;***

4. ***Identify local volunteer firefighters/EMTs who may work for York County, and establish policies for their release from work duties to respond to daytime emergencies within the Township;***

5. ***Design ongoing recruitment strategies for new resident volunteers and retention strategies for existing volunteers; and,***

6. ***Explore the offering of a "junior" firefighting curriculum within the School District as a means of developing interest and expertise among potential future volunteers.***

Prior to actual recruiting, the Alliance should complete the following evaluation process:

1. ***Determine the need by local fire/ambulance chiefs for more volunteers from any of the preceding sources within their respective companies;***

2. ***Establish policies within the Region's fire and ambulance companies that allow for nonresidents to become members of their respective companies;***

3. ***Identify those local and nonresident volunteers who work for companies within the Region who could potentially respond to daytime emergency calls;***

4. ***Determine the level of competence of potential volunteers and/or training needed to "run" with local companies;***

5. ***Establish ongoing working agreements with local businesses for the release of volunteer firefighters/EMTs during daytime emergencies;***

6. ***Require the potential "daytime" employee volunteer firefighter/EMTs to become an official member of the respective fire/ambulance company, so that they can be covered by the municipality's workmen's compensation insurance policy; and,***

7. ***Establish an ongoing mechanism that periodically reinitializes the recruitment process.***

Today, emergency services often involve specialized equipment and training. The Township's fire and ambulance companies already have an informal means of efficiently using the specialized skills and expertise of existing volunteers across the Township. ***The Emergency Services Alliance should also formalize a program to deliver specialized training to ensure a wide and uniform coverage of specialized skills and expertise throughout the Township***. In addition, the PA DCED's Shared Municipal Services Program offers matching grants for any two or more municipalities who jointly perform local government functions. Such grants have been awarded to fund paid administrators to over see the preceding recruitment and training activities. ***The municipalities of the ESA could benefit from the same type of position to carry out these same duties, as discussed in this section of the Plan.***

FUTURE FUND-RAISING

Like a lack of manpower, local volunteer fire and ambulance companies are plagued by rising costs associated with the need to purchase equipment and supplies. A 2001 study conducted by the Pennsylvania Fire and Emergency Services Institute provided information about the costs saved by the Commonwealth's volunteer fire companies. Essentially, they assumed that, in the absence of volunteer fire companies, paid companies would require:

"Typical Costs Associated with Fire Protection "
• One fire company serves each 10,000 population; • Each company requires 20 full-time paid firefighters; • Each firefighter would be paid $55,000, including benefits; • Each company would have an average annual operating budget of $50,000; • The cost of protective clothing/gear for each firefighter would total $5,688; • Each company would average 4 emergency vehicles at a cost of $275,000 per vehicle.

Using these assumptions, the Warrington Township would incur the following costs:

"Estimated Costs of Providing Fire Protection Within Warrington Township "
• Warrington Township's population of 4435 would require 0.44 fire companies; • $484,000 annual salaries of 8.8 paid firefighters; • $22,000 annual operating expenses of 0.44 fire companies; • $50,054 cost of protective clothing/gear; and, • $484,000 cost of emergency vehicles.

The following tabulates the amounts contributed by the Township to its respective fire and ambulance companies in year 2003:

Township Contributions to Local Fire Company	
Agency	**2004 Contribution**
Wellsville Fire Co.	$16,000

A comparison of the Township's 2004 contribution to the local volunteer fire companies of $16,000 is about 3.2 percent of the annual expenses needed to man and operate a paid equivalent complement of fire companies. ***In order to offset the difference contributed by the Township and the financial value of local volunteer efforts, each of the Township's 1776 households would need to pay about $285 per year to cover operating expenses.*** These figures do not even consider the capital costs associated with protective clothing/gear and emergency vehicles that would substantially increase monies needed. Also keep in mind that this analysis only relates to fire protection; volunteer ambulance services also provides for considerable cost savings. Undeniably, local volunteers have made, and continue to make, huge contributions to the safety and financial well-being of the Township and adjoining region. It is vital that their efforts continue!

Local officials and volunteers are aware of these difficulties. Yet, in many cases, an area's long-time residents usually financially support local fire and ambulance companies at an appropriate level. They have been historically educated about the value of local volunteer efforts. However, as the Region has grown and will continue to do so, many new residents have moved here from other, more urban, locations where paid fire-fighting and ambulance services are normal. These new residents are unaware of their reliance upon, and the plight of, local volunteer companies. Therefore, ***the Region should cultivate awareness among the newly-arrived residents of the need for their financial and manpower support to sustain volunteer firefighting and ambulance services.***

To accomplish this awareness, the local fire and ambulance chiefs should work with local municipalities on a regular and ongoing basis to mount an educational and media campaign. Such campaign should exceed the traditional general campaign that merely includes statements like the following:

- *"Local volunteer fire and ambulance campaigns depend entirely upon your donations";*
- *"Not a single tax dollar is used by local volunteer fire and ambulance companies."*

The new campaign could be more of an "in-your-face" effort that presents specific findings and presents hard, "credible" facts about the cost of delivering these services and the foreseeable equipment needs of the various companies. It could explain the benefits of new equipment and what it can mean to the Region. It could also portray the competent plans of the local companies in their attempts to ensure an adequate level of protection in the near and long-range future. Schedules for equipment replacements and upgrades could be accompanied with target financial goals to which the public can respond. Citizens should gain an

understanding that local companies really need this equipment, and that they are not just "after" the newest and shiniest truck on themarket.

To demonstrate these facts, the Region could (through the above-described Alliance) apply to the PA DCED for the preparation of a technical review, as part of its Shared Municipal Service Program, at no cost to the Region. This will require the preparation of a "Single Application for Assistance," a copy of which can be found online at www.esa.dced.state.pa.us***. The PA DCED will examine the adequacy of the Region's equipment to provide adequate service. Then, the results of these impartial and objective analyses should be used to program needed equipment purchases, and justify funding requests and pledge drives in the ongoing media and educational campaign. In addition, the results of the analysis can be used as justification for additional application to the PA DCED for 50/50 matching grants for other equipment needs, like communications and dry-hydrant programs.***

Other related facts that should be emphasized to the public include:

- Local volunteer fire and ambulance companies are responding to ever-increasing numbers of calls based upon the Region's growth with actual figures presented; and,
- Local volunteer fire and ambulance companies are responding to a wider variety of types of calls and that the amount of time spent per incident is also increasing.

As a byproduct of this campaign, the municipalities could annually, publicly present the names of those businesses and individuals who contribute to the various companies. This will publicly recognize those who offered support, and potentially impose peer pressure to others who have not contributed to these important efforts. In addition, some volunteer ambulance companies have begun to affix advertising logos on the sides of their vehicles for private sponsors who contribute substantial sums each year.

Even though local volunteer firefighters are described as strong-willed, determined and fiercely independent, most agree that difficult times lie ahead. Therefore, as a long-term strategy, ***local volunteer fire companies and municipal officials could begin to explore the partial and gradual use of other funding mechanisms (e.g., billing for responses, fire tax, etc.), so that these measures can be phased-in, in support of local volunteer efforts, rather than allowing for complete failure of the volunteer system which would then be replaced by a completely-paid force.***

Other issues raised by local fire and ambulance companies that could improve emergency service to the Region include:

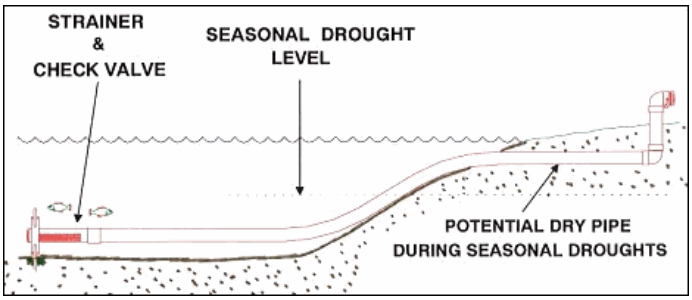
DRIVEWAY DESIGN AND ADDRESSING - ***As a means of improving emergency access and response, the Township should adopt minimum driveway design standards that facilitate adequate emergency access and resist efforts to waive or vary from these safety-related standards. In addition, such design standards should be applied to driveways that serve barns. Such standards should require:***

- A minimum 10 foot-wide improved (paved or stone surface) cartway for single-use driveways and 16 feet for joint-use driveways;
- An improved (paved or stone surface) apron connection with the public or private street that extends at least 25 feet off-of the road cartway and has a slope of no more than 8 percent;
- A minimum 12-foot high clear vertical path along the driveway between the road and all structures that is free of vegetation and other obstruction;
- A maximum driveway length of 600 feet for single–use driveways and 1000 feet for joint-use driveways; and,
- Posting of reflective road address number signs at all driveway entrances or turn-outs along joint-use driveways. On paved driveways reflective paint can be used upon the driveway apron to portray the street address number as an alternative to reflective sign posting.

In addition, the County's improving GIS mapping database can provide each fire and ambulance company with emergency response mapping that clearly depicts every property and its address. As this database continues to evolve in the coming years, such maps can depict actual driveway and structure locations and aerial photographs. This can greatly assist in emergency response in rural areas that are difficult to negotiate at street level.

DRY HYDRANT INSTALLATION – ***The Fire Chief expressed the need for better sources of water for firefighting within the rural areas of the Township. Dry hydrants are permanently mounted pipes that are located at local sources of water (ponds and streams) that firefighters can readily access during times of emergency. Typically these hydrants are located alongside an improved public street about 10 feet away from the cartway. They appear as 5" PVC pipes extending out of the ground with suitable tap fittings. From here the pipes travel underground into the water source where strainers are used to keep them clear of debris and silt. Installation of these hydrants costs about $750 to $1000 and can be less if volunteer or Township excavating can be used.***

Warrington Township has begun a campaign to install these dry hydrant and the Public Facilities Map identifies the location of existing and planned installations.



Easements from private property owners need to be negotiated and recorded so that future conveyances of the property preserve the water access. Prior to installation into streams, permits are required from the

York County Conservation District. Installation into ponds does not require a permit. The installation of these hydrants can affect a reduction in homeowner insurance rates.

The following lists information about a program to assist in the installation of dry fire hydrants located at http://cgis.hbg.psu.edu/CapRCD/noframes/projects.htm.

> *The Pennsylvania RC&D Rural Community Fire Protection Program focuses on developing and strengthening the partnership between County Emergency Management Agencies, County Fire Fighters Associations and Resource Conservation and Development (RC&D) Councils throughout the state. A strong effort will be made to include project level planning with local partnerships resulting in a reduction of wildfire threat within specific communities and regions. This project has been funded through a Hazard Mitigation Federal Assistance Grant from the US Forest Service, including state agency coordination with the PA DCNR Bureau of Forestry.*
>
> *Phase I of the project provides that each of the 9 PA RC&D Councils receive 42 dry hydrant units to install within counties in their areas, with local level coordination. Project coordination, site selection and design assistance will be provided by the Natural Resource Conservation Service (NRCS) staff, County Conservation District staff, and Capital RC&D staff. Hydrants will be designed and installed according to NRCS Standards and Specifications.*

Essentially this project has received applications from seven counties within this Region to determine the feasibility of dry hydrant installation. If eligible, an applicant can receive a "kit" which includes the head unit, strainer and sign along with up to $300 for installation of the hydrant; this assumes that the applicant (e.g. municipality, fire company, landowner, etc.) will provide $500 of in kind services (material and labor) for the project. According to Susan Parry, Program Coordinator, the RC&D is reviewing applications that have been received to determine their eligibility; she expects that some of these applications will not qualify which will then "free-up" monies for new applications. Ms. Parry was given the Township's contact information so that she could follow-up to get the Township's application underway. In addition, she indicated that funding has been provided by Adams Electric as a partnership with RC&D to assist areas within their service area; Ms Parry will also contact them about the Township's need for dry fire hydrants.

Phase 2 of their project seeks to map locations of all fire hydrants and sources of water for firefighting purposes. The Township should share this information with RC&D for existing installations and as new ones occur.

All questions and completed applications should be directed to the RC&D office.

Capital RC&D Council, Inc.
108-109 Church Hall, Penn State Harrisburg
777 West Harrisburg Pike
Middletown, PA 17057
Phone: (717) 948-6633
Fax: (717) 948-6306
Web: www.capitalrcd.org

E. Township Government

This section provides a description of the Township's government structure and function. The role of local officials, boards, commissions, authorities, committees, and staff are set forth to provide an understanding of the hierarchy of local decision-making, input into these decisions, and the role of citizen involvement.

Warrington Township Municipal Building

Office Address
3345 Rosstown Road, Wellsville, PA 17365

Office Phone Number
(717) 432-9082

Office Fax Number
(717) 432-7238

Office Hours
Mon. thru Fri. 8:00 AM to 4:00 PM.

Description of Office and Facilities: The current municipal building is located on the north side of PA Route 177 in the Village of Rossville. It contains 4 rooms with a total floor area of 1789 square feet. All rooms are ADA compliant The meeting room contains 896 square feet and can seat 40 to 50 occupants. A common office area has 580 square feet and another office has 121 square feet. The file room contains 192 square feet.

Municipal Staff: Staff currently consists of six paid employees as follows:

- Full-time Manager;
- Full-time Zoning, building and code enforcement officer;
- Full-time Road Foreman;
- 2 full-time road crew; and,
- Full-time administrative assistant.

Board of Supervisors: the Board of Supervisors is the elected governing body of the Township. The 5-member Board meets in the Municipal Building on the first and third Wednesday of the month, at 7:00 p.m. Each supervisor serves a 6-year term.

Planning Commission: Members are appointed for 5-year terms. The 5 members meet in the Municipal Building on the fourth Wednesday of the month, at 7:00 p.m.

Zoning Hearing Board: The 5 members are appointed for 5-year terms and meet the third Tuesday of the month, as needed.

Agricultural Security Area Advisory Committee - This 5-member board meets on an as needed basis but at least once during the required 7-year review cycle.

Recreation Committee – This group of volunteers have been meeting monthly with a local design consultant to propose an initial design for the development of the Township Community Park. While the Board of Supervisors has not officially recognized this Committee with any authority; they have nevertheless assisted in this capacity. The group meets the first Monday of each month at the Township Office.

VIII. Utilities

A. SEWER SERVICE

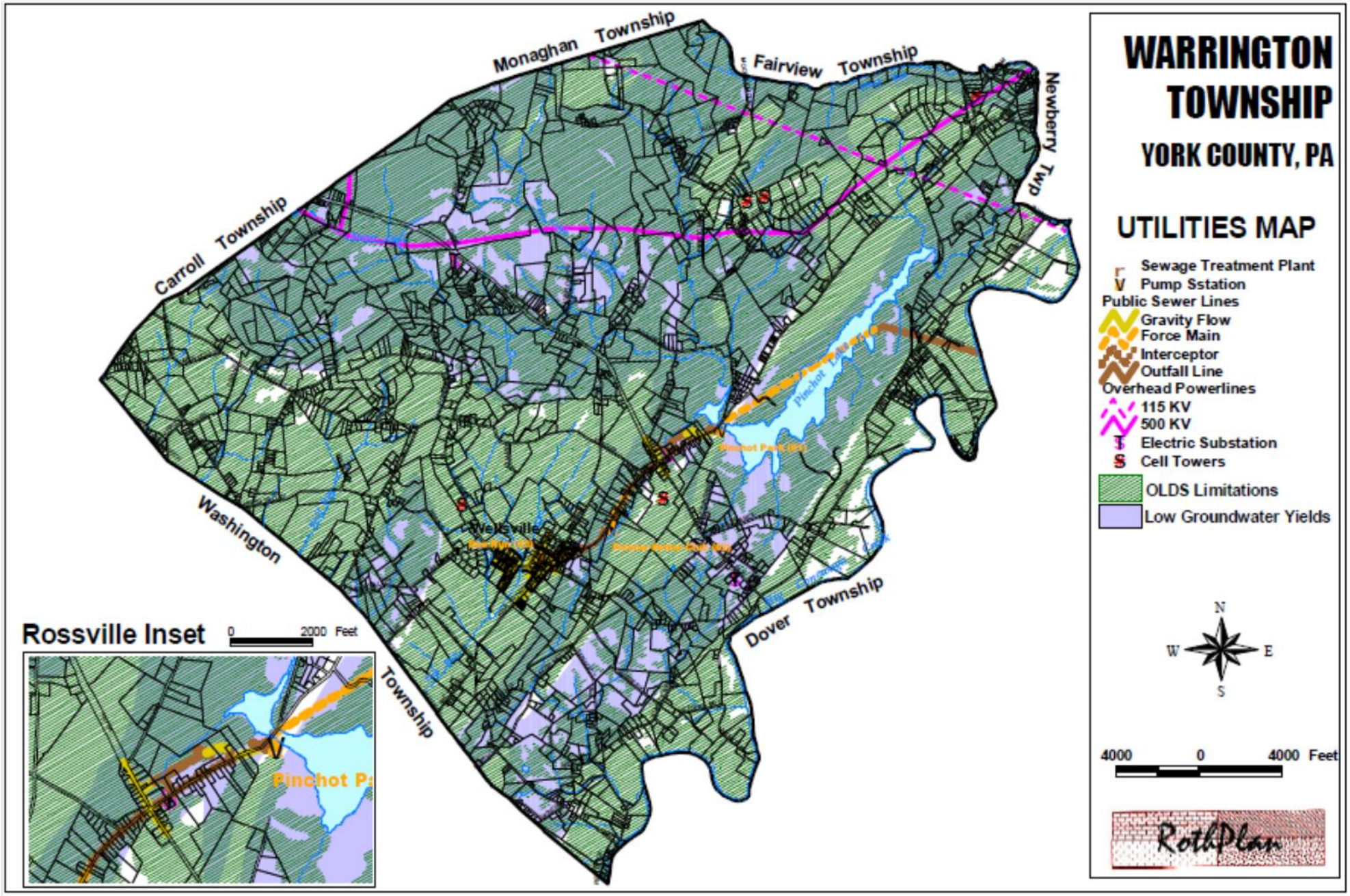
The Borough of Wellsville Municipal Authority (WMA) provides public sewer service to portions of Warrington Township just beyond the Borough boundaries and along Rosstown Road between the Borough and Gifford Pinchot State Park. Originally incorporated in 1973 the Authority currently has seven members, three of whom are from Warrington Township. In 1975, the Commonwealth and the Borough entered into an agreement to serve residents from the Borough and Warrington Township with public sewer to be treated at the sewage treatment facility located in Gifford Pinchot State Park. The PA Department of Conservation and Natural Resources owns and operates the treatment facility. The WMA operates under a 1975 Comprehensive Water Quality Plan and the Borough's 1983 Official Comprehensive Plan.

Under an April 2, 1975 agreement, the WMA is permitted to convey up to 70,000 gallons per day (gpd) for treatment at the plant. Of this , Warrington Township is allocated 21,000 gpd under separate agreement on July 21, 1976. The treatment plant utilizes primary and secondary treatment processes and has a rated capacity of 210, 000 gpd. Township Officials believe that 70,000 gpd are used by the park, the Borough and Township combined and reserved as excess treatment capacity to manage overflow conditions, respectively. The plant is located within the park and has an underground outfall line that extends and directly discharges to the Conewago Creek in the northeast corner of the Township.

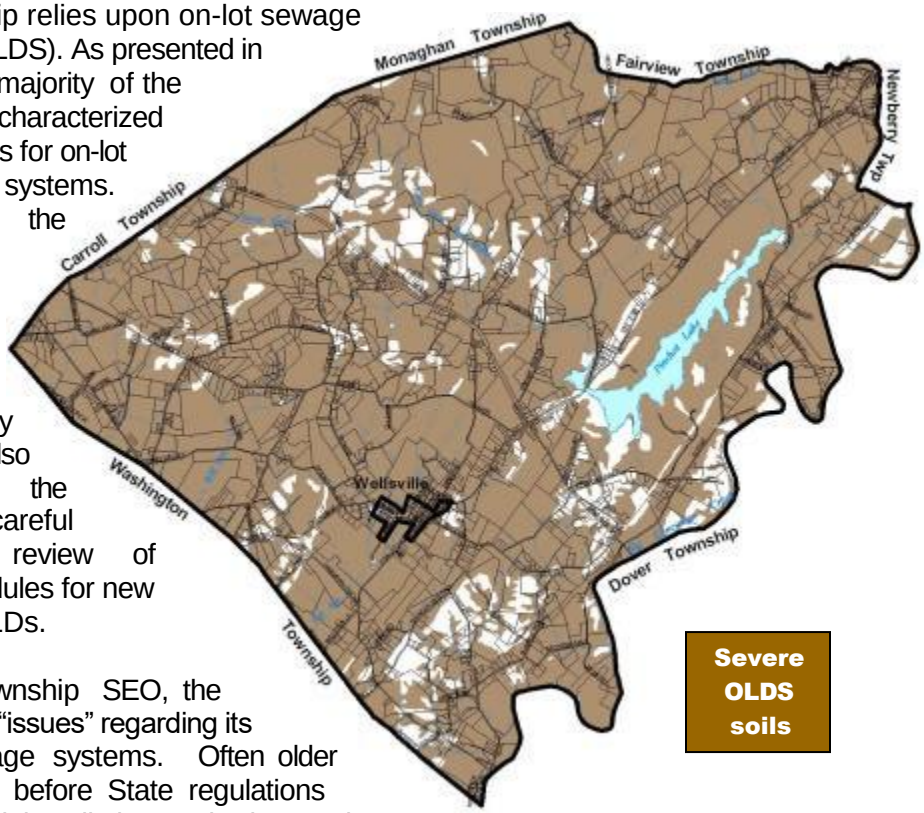
The sewage system lines originate in the north end of Wellsville Borough and extend some 4½ miles to the northeast to the treatment plant on the south side of Pinchot Lake. In all, the system is comprised of approximately 7 miles of conveyance lines with 115 manholes and 3 submersible pump stations. According to WMA staff, the lines suffer from inflow and infiltration problems that it is continuously remedying via system rehabilitation. Two of the three pump stations were upgraded in 2003 and the third is currently under update.

According to WMA staff, each equivalent dwelling unit has generated about 189 gpd over the last year. Present flows through the system are estimated to be as follows:

Sewage Flows of the Wellsville Municipal Authority		
Land Use Type	**No. of Customers**	**Approximate Total Effluent (gpd)**
Residential	251	62,800
Commercial	33	5,900
Industrial	1 (Pennex)	9,200
Public/Institutional	0	0
Total	**285**	**77,900**


WARRINGTON TOWNSHIP
YORK COUNTY, PA
UTILITIES MAP
Sewage Treatment Plant
Pump Sstation
Public Sewer Lines
Gravity Flow
Force Main
Interceptor
Outfall Line
Overhead Powerlines
115 KV
500 KV
Electric Substation
Cell Towers
OLDS Limitations
Low Groundwater Yields
N
W
E
S
4000
0
4000 Feet
RothPlan
Monaghan Township
Fairview Township
Newberry Twp
Carroll Township
Washington Township
Dover Township
Wellsville
Pinchot Park
Rossville Inset
0
2000 Feet

<u>On Lot Sewage Disposal Systems</u> - Given its rural character, most of the Township relies upon on-lot sewage disposal systems (OLDS). As presented in Chapter 3, the vast majority of the Township's soils are characterized with severe limitations for on-lot sewage disposal systems. This reinforces the Township's contention that permitted residential densities should be limited at very rural levels. It also suggests that the Township exercise careful scrutiny in the review of proposed sewer modules for new uses to rely upon OLDs.



According to the Township SEO, the Township has minor "issues" regarding its existing on-lot sewage systems. Often older OLDs were installed before State regulations governing design and installation methods were in place. Consequently, these older systems tend to fail over time and the sewage rises to the land surface. These malfunctions occur occasionally within the Township and on-site remedial actions are usually successful in correcting these problems.

On-lot disposal systems, if constructed and maintained properly, can provide a reliable and efficient means of wastewater treatment in rural and suburban areas where population density is low. However, where such systems are improperly installed or not maintained, contamination of on-site water supplies can result. The goals of this plan emphasize protection of the Township's rural character therefore, it is critical that the Township strengthen requirements to ensure their long-term use and effectiveness.

Therefore, it is recommended that the Township adopt and implement an OLDS management program. Such a program would require the routine maintenance of systems to include the regular "pumping-out" of subsurface septic tanks . Specifically residents would be required to submit receipts from licensed "pumpers" periodically or be subject to penalty and fines. Often landowners must pump-out their septic tanks at least once every four years.

1. ***All future use of on-lot and/or community sewer systems should be carefully scrutinized regarding potential effects on groundwater quality; this would be accomplished through the preliminary hydrogeologic study requirements of the PA DEP module review process.***

2. ***For future growth that relies upon on-lot disposal techniques, it is recommended that zoning policies provide for a minimum lot size of one acre. This dimension generally provides sufficient lot area for one on-lot disposal system and another, should the initial system fail. This may require that the Township allow the enlargement of lot size, beyond specified maximums, to avoid an unacceptable level of nitrate-nitrogen in adjoining groundwater to be determined through the DEP sewer module review process. As an alternative, the Township could enable the use of a sewage effluent dispersal easement on adjoining undeveloped properties.***

3. ***It is also advised that each lot be required to specifically test for, and reserve, an on-site location for the second drain field as part of its sewage permit compliance. Such alternate drain field should then be protected from all grading and construction activities, in the event it is activated due to malfunction of the initial system.***

4. ***Finally all landowners should comply with Township's recommended On-lot Sewage Disposal System Management Ordinance that will require periodic pumping-out of the subsurface septic tanks.***

B. WATER

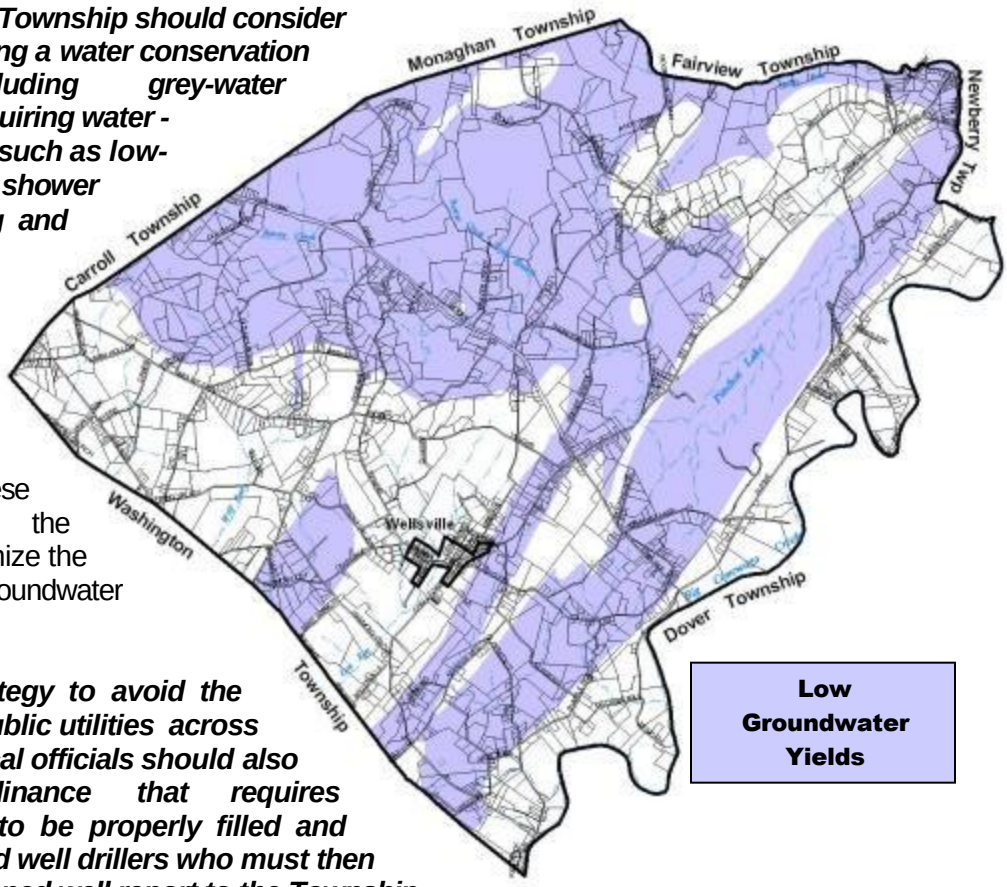
Aside from a self-contained water system that originates and only serves various uses upon the Pinchot State Park, Warrington Township relies exclusively upon on-lot wells for domestic water supply. As reported in the Natural and Cultural Features Chapter (Chapter 3) geology is also a primary determinant of groundwater quality and quantity. Groundwater is surface water that has seeped into and is contained by underground geological formations called aquifers. Water stored in aquifers is sometimes released to the surface through springs or can be pumped to the surface through wells. Groundwater aquifers are part of an interconnected network that includes surface waters, such as streams, ponds, wetlands, and lakes. Aquifers regulate the levels and flow rates of these surface waters by collecting and retaining water reaching the ground and gradually releasing it during dry periods. Mining activities can affect groundwater volumes but are required by State law to replace and/or restore affected water supplies. Commercial agriculture can also affect water supply sources.

A typical household with three family members requires an average flow of 0.2 to 0.4 gpm with a peak rate of use ranging between 3 and 5 gpm. The Township's geologic formations record median yields of 5 to 66 gpm. Specifically, about half of the Township is underlain by the Diabase formation which records a low median well yield of 5 gpm; therefore, the Township will likely encounter individual wells that will run short of groundwater supply, particularly during the drier seasons. This condition suggests that the Township limit overall density in rural areas based upon limited water supply.

While this formation has marginal groundwater yield for peak domestic use, it offers adequate yields for average domestic use, particularly where on-site storage is provided. However, it is possible that, in the future with additional development, isolated areas may have insufficient water yields to meet average domestic needs, even with storage. ***The Township should scrutinize the availability of***

groundwater for domestic use prior to the creation of new dwelling lots as part of its initial subdivision and land development review process. This will avoid the situation whereby the Township approves of a new development and is confronted with the need to extend remedial public water supply when it is later determined that insufficient water yields are available to serve the already approved and constructed homes. ***The Township may wish to consider the adoption of a well-drilling ordinance to require the drilling of wells prior to the subdivision of lots in low-yield areas of the Township.***

Furthermore, the Township should consider promoting/requiring a water conservation program, including grey-water recycling, and requiring water - saving plumbing, such as low-flow toilets and shower heads, in existing and potential developments. Such a program could be pursued through a Township newsletter. These steps enable the Township to maximize the use of its limited groundwater supplies.



As part of the strategy to avoid the need to extend public utilities across the Township, local officials should also adopt an ordinance that requires abandoned wells to be properly filled and sealed by licensed well drillers who must then submit an abandoned well report to the Township within 30 days of well abandonment. This will help to avoid contamination of susceptible groundwaters and ensure public safety against persons becoming trapped in open wells.

The Gettysburg and Heidelsburg Membergeologic formations offer higher yields and the opportunity to develop a public or commercial water source. However, local geologic characteristics that provide for abundant groundwater yield present the opportunity for its contamination. ***Therefore, should a public or commercial water source be developed here, it should be accompanied with a suitable wellhead or springhead protection program.*** Wellhead and springhead protection is a particularly sound investment because protection is more effective and less expensive than cleaning a contaminated groundwater source, which may cost 30-40 times more than initial protection. More information on this subject is located in Chapter 3 of this Plan.

Should local officials determine the need to develop a public water supply system that would serve or originate within the Township it should restrict its location to one of these higher -yield geologic formations. Furthermore, the Township should restrict

the location of public/commercial water withdrawal, processing, storage and distribution to within close proximity of its planned residential and commercial/industrial growth areas.

Aside from elevated nitrate levels that are common throughout agricultural areas of York County and easily resolved through primary treatment, the Township is unaware of any water quality issues that would prevent a continued rural development pattern or the creation of small village clusters with community based water systems.

C. SOLID WASTE DISPOSAL

The York County Board of Commissioners established the York County Solid Waste Authority in 1971 to assure the adequate and proper disposal of all municipal solid waste generated in York County. To address this challenge, the Authority developed a Comprehensive Integrated Municipal Waste Management Plan. Early on, the County recognized the need to emphasize waste reduction, reuse and recycling in its overall approach to waste management. In 1985, the original plan was updated to enable it to keep pace with the growing needs of the County and advances in waste management technology.

To meet the County's waste management needs, the Authority purchased a parcel of land in Hopewell Township that became the site of the York County Sanitary Landfill. In August of 1974, the Pennsylvania Department of Environmental Protection permitted portions of the 306-acre site and operations began in November 1974.

In 1979, the Authority began to consider investigating alternative waste disposal options for the County. In 1983, concerns about groundwater impacts at the landfill prompted the Authority to initiate remediation techniques to ensure safe operation. This action, coupled with the desire to use the best available waste management technology, intensified the Authority's direction to pursue viable alternate methods of waste disposal.

After analyzing the needs of York County and carefully investigating methods of waste disposal, the Authority selected waste-to-energy technology — a proven environmentally sound and economically equitable method of waste management.

Plans for a waste-to-energy facility that could accommodate York County's waste for at least 25 years were initiated. In 1987, construction of the Resource Recovery Center began at the Blackbridge Road site in Manchester Township. In October of 1989, the Center began processing York County waste and generating electricity.

While plans for the Resource Recovery Center were reaching fruition, another plan was about to begin. The passing of Act 101 (Pennsylvania's Municipal Waste Planning, Recycling and Waste Reduction Act) in 1988 created a new law impacting solid waste management. Thus, the Authority began working in tandem with a Municipal Waste Advisory Committee (MWAC) to update the County's 1985 waste management plan. The MWAC is comprised of individuals

representing all classes of municipalities, citizen's organizations, industry, private solid waste businesses, and the recycling industry. This two-year effort resulted in a blueprint for the management of municipal waste through the year 2015.

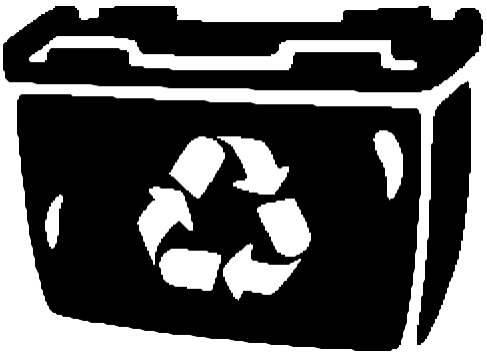
Because the Authority strives to serve the best interests of the citizens of York County, community representation is part of our major planning processes. The MWAC is responsible for reviewing the Authority's implementation of the York County Municipal Waste Management Plan. This includes providing input and reviewing various tasks and studies being developed by the Authority.

Recycling is another important aspect of the Authority's activities. Helping municipalities establish curbside and drop-off center recycling programs is a key focus of the Specialty Wastes/Programs Division. Other programs such as low-cost compost bins, an electronics recycling program, household hazardous waste collection programs and Christmas tree recycling further serve to decrease the County's waste stream.

The Authority and its activities are self-supported from revenue generated through the sale of electricity from the Resource Recovery Center and customer disposal fees. The Authority's annual operating budget is approximately $39 million with electric revenues making up approximately 41 percent of the budget. No York County tax dollars are used to fund the Authority. Additional funding for various projects is obtained through grant monies available from the state. This self-sufficiency enables the Authority to contain the cost of waste management in York County.

Throughout its history, the Authority has accomplished its objectives through the efforts of a small staff and a committed volunteer board. Today, the Authority employs 22 people in four divisions: the Engineering/Operations Division, the Administrative Division, the Specialty Wastes/Programs Division, and the Community Services Division.

A nine-member volunteer board is appointed by the County Commissioners and participates actively in devoting countless hours to forwarding the goals of the Authority. The Authority holds a public meeting the third Wednesday of each month at 6:30PM at its Management Center, 2700 Blackbridge Road, Manchester Township. The public is invited to attend to learn more about Authority activities or to provide comment.[1]



Under Chapter 15 of the PA Municipal Waste Planning, Recycling and Waste Reduction Act, Municipalities with a population of at least 5000 and a density exceeding 300 persons per square mile are required to "establish and implement a source-separation and collection program for recyclable materials. Such determinations are based upon the most recent decennial census conducted by the US Census Bureau. Warrington Township is projected to achieve a total population of 5729 by the year 2020 but with an overall density of about 159 persons per square mile and therefore is not required to establish and implement a recycling collection program. Nonetheless, the Township adopted the Warrington Township Municipal Solid Waste and Recycling Ordinance which became effective on August 15, 1993. This ordinance provides for the voluntary source-separation and curbside collection of Township-designated recyclable materials including

[1] http://www.ycswa.org/aboutus/index.htm

glass, paper, plastic containers, cans, food waste, corrugated and other cardboard, newspaper, magazines or high-grade office paper.

D. OTHER UTILITIES

Several major overhead electrical powerlines pass through the Township. The rights -of-way (R.O.W.) associated with these utilities have distinct implications for future land use. These utility lines have been delineated on the Utilities Map. While there has been a deliberate attempt to map and describe the extent of these R.O.W.'s, as well as present the guidelines and restrictions regarding development on or around them, this analysis should not be used as a replacement for direct contact with field representatives from the various utility companies. Potential land developers and residents living near these R.O.W.'s should use the PA One Call System at (800) 242-1776 to contact representatives of the various utility companies in regard to any proposed projects that may involve any utility facilities. The following briefly describes those utility companies' R.O.W.'s.

Metropolitan-Edison Company (Source - William Strause, Manager, Transmission Engineering, 215/921-6344).

The Metropolitan-Edison Company maintains four different electric overhead transmission lines. These lines run across the southern and southeastern portions of the Township. The following lists the name of each line, its right-of-way width, and its voltage:

Right-of-Way - Line	Width	Voltage
Middletown Junction - Collins - Cly - Newberry - Round Top	120'	115,000
Jackson - Cly	150'	230,000
Juniata - Three Mile Island	150'	500,000
Middletown Junction - Smith Street	100'	115,000

There are two (2) Metropolitan Edison Electric Power transmission substations located within Warrington Township. The largest of the two (2) substations is located just south of the State Game Lands near the intersection of York and Poplar Roads. The other is located in Rossville just southeast of the intersection of Carlisle Road and Rosstown Roads. A third electric power transmission substation, which is owned by the Adams Electric Cooperative, is located on the southwest side of Carlisle Road opposite Big Rock Road.

Finally, given the Township's relative high elevations and rural setting, it is a logical location for local cellular phone towers; five such towers are located throughout the Township as depicted on the Utilities Map. Several of these towers include co-located antennas for multiple phone carriers. ***The Township should promote the use of co-located antenna towers so that a fewer number of towers are required to offer blanket coverage.***

IX. Transportation

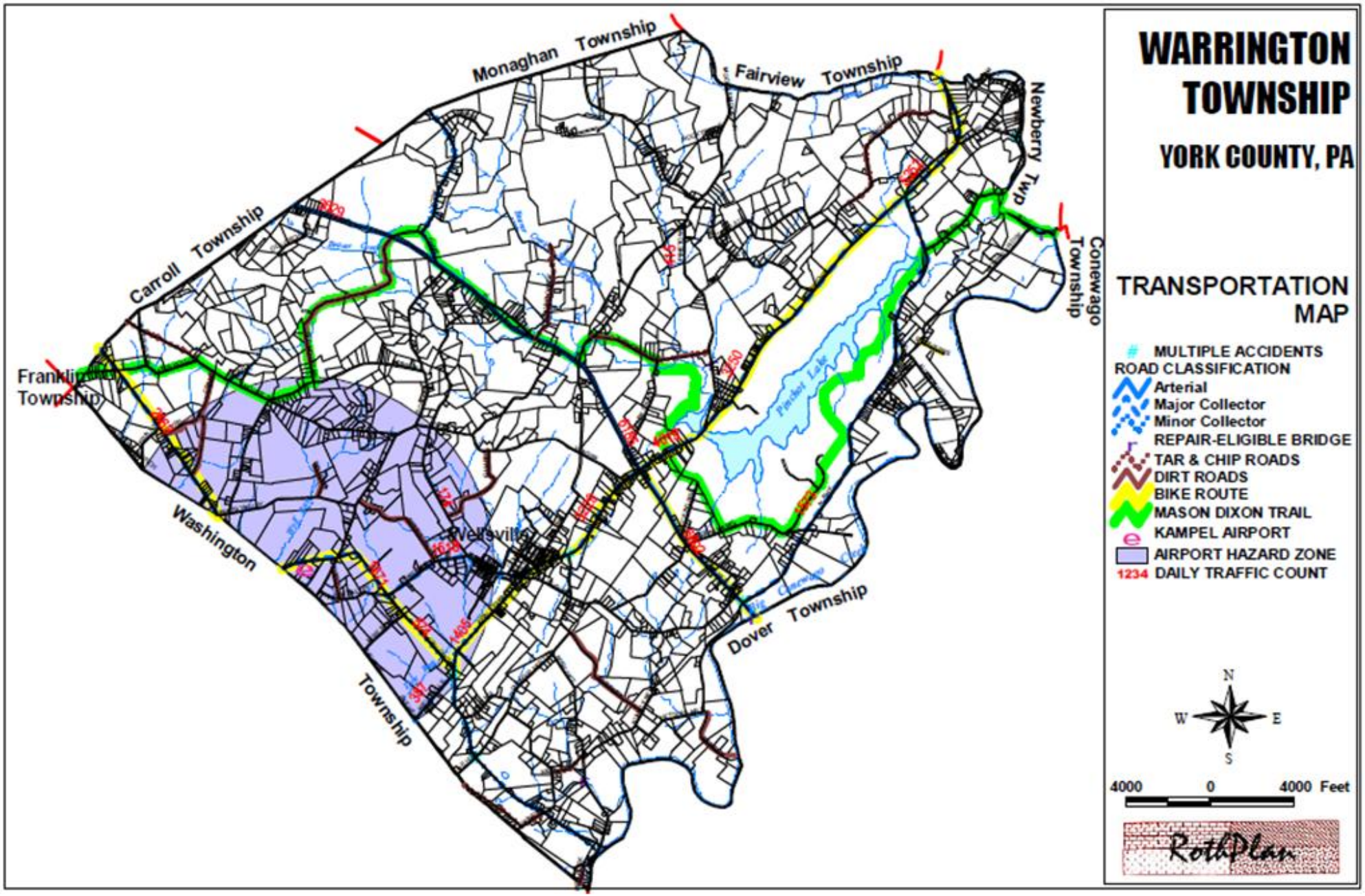
Mobility has become one of the most sought-after qualities of life of this century. The widespread use and development of automobiles, trucks and their road networks have enabled motorists to travel independently with great flexibility as to origins and destinations. Only recently, with increased congestion, has society begun to realize that the extensive use of the automobile may, in fact, be threatening both mobility and safety. This realization has led to efforts to better understand the relationship between transportation planning and land use planning, and has created renewed interest in alternative modes of transport.

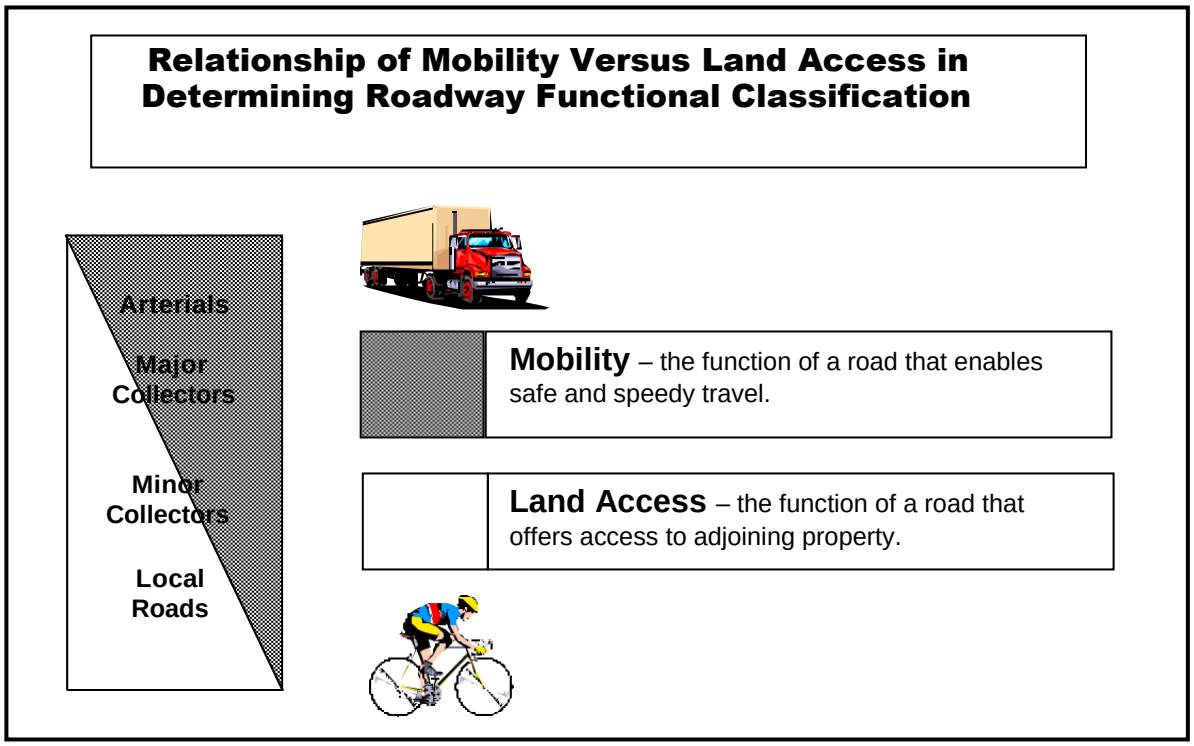
First, this chapter will inventory the Township's transportation system, beginning by categorizing roadway functional classifications, as determined by the York County Planning Commission, describing roadway design standards, and presenting available traffic volume data and accident locations according to PADOT records. A brief discussion of regional traffic impacts is followed by a description of alternative modes of transportation, railway access and aviation. All of this data is then analyzed and applied to the Township's development objectives and other available plan information to form the basis for the chapter's recommendations on future transportation needs, land use scenarios and implementation strategies. Such information should also be useful in reviewing traffic studies associated with proposed developments.

A. ROADWAY CLASSIFICATIONS AND DESIGN STANDARDS

Functional classification of roadways refers to a system by which roads are described in terms of their utility. Theoretically, roads provide for two separate functions. First, roads provide for mobility—the ability to go from one place to the next. Second, roads provide a measure of access to adjoining properties. Transportation experts use these two roadway characteristics to determine a road's functional classification.

Roads that provide for greater mobility provide for reduced land access, and vice versa. This important relationship should always be considered when allocating future land uses along existing or planned roads. The following diagram illustrates four road types: arterials, major collectors, minor collectors and locals. These road types can be further subdivided into any number of different categories, depending upon the complexity of the roadway network. However, for the purpose of this study, the Township's roadway network can be described as consisting of arterials, major collectors, minor collectors, and local roads. The roads within the Township are classified and identified on the ***Transportation Map***.


WARRINGTON TOWNSHIP
YORK COUNTY, PA
TRANSPORTATION MAP
MULTIPLE ACCIDENTS
ROAD CLASSIFICATION
Arterial
Major Collector
Minor Collector
REPAIR-ELIGIBLE BRIDGE
TAR & CHIP ROADS
DIRT ROADS
BIKE ROUTE
MASON DIXON TRAIL
KAMPEL AIRPORT
AIRPORT HAZARD ZONE
1234 DAILY TRAFFIC COUNT
N
W
E
S
4000
0
4000 Feet
RothPlan
Monaghan Township
Fairview Township
Newberry Twp
Conewago Township
Carroll Township
Franklin Township
Washington Township
Dover Township
Wellsville
Pinchot Lake



ARTERIALS

Arterials are intended to provide for a greater degree of mobility than land access. Hence, individual driveway intersections with arterials should occur infrequently. Rural minor ar- terials generally convey between 3,000 and 6,000 average daily trips (ADT) for distances greater than one mile. Arterials often connect urban centers with outlying communities and employment or shopping centers. Consequently, arterials are often primary mass transit routes that connect with "downtown" areas of nearby communities. The following sets forth design standards associated with rural minor arterial roads:

MINIMUM ARTERIAL ROAD DESIGN STANDARDS*			
No. of Lanes and Width	Shoulders and Width	Right-of-Way Width	Design Speed (mph)
2 x 12 ft.	2 x 8 ft.	80 ft.	40
* Adapted from the YCPC Long Range Transportation Plan			

Within Warrington Township, Carlisle and Old York Roads function as rural minor arterials. Although these roads have two names, they form one continuous route between the City of York to the south and the west shore of the Harrisburg metropolitan area to the north. Carlisle Road (PA Route 74) veers west at Rossville through Wellsville while Old York Road (LR 4026) continues northward through the central portion of the Township; both routes eventually converge in the Borough of Dillsburg.

ARTERIAL ROADWAY CHARACTERISTICS					
Road Name / No.	No. Lanes	Cartway Width	Shoulder Width L/R	2002 ADT	MPH
Carlisle Road / SR0074	2	20-24 ft.	3-7 / 3-7 ft.	6692	35-55
Old York Road / SR4026	2	24 ft.	10/10 ft.	3629-6185	55

Based upon a comparison of recommended road design standards and existing conditions the Township should pursue:

- the widening of the cartway by one foot for each lane of Carlisle Road from Rossville south to the Township border. This segment records the highest traffic volume within the Township; and,
- shoulders along all roads to eight feet on each side.

MAJOR COLLECTORS

Major collectors within rural settings provide for medium length travel distances (generally less than one mile) and convey between 800 and 3,000 ADT. Major collectors also provide land access to major land uses such as regional shopping centers, large industrial parks, major subdivisions, and community-wide schools and recreation facilities. Major collectors primarily serve motorists between local streets and community-wide activity centers or arterial roads. The following sets forth design standards for major collector roads:

MINIMUM MAJOR COLLECTOR ROAD DESIGN STANDARDS*			
No. of Lanes and Width	Shoulders and Width	Right-of-Way Width	Design Speed (mph)
2 x 11 ft.	2 x 8 ft.	60 ft.	40
* Adapted from the YCPC Long Range Transportation Plan			

The following table summarizes the characteristics of the Township's major collector roadways:

MAJOR COLLECTOR ROADWAY CHARACTERISTICS					
Road Name / No.	No. Lanes	Cartway Width	Shoulder Width L/R	2002 ADT	MPH
Rosstown Road / SR0177	2	20-24 ft.	4-8 / 4-10 ft.	3250-5252	35-55
Carlisle Road / SR0074	2	20-24 ft.	3-7 / 3-7 ft.	1518-3229	35-55
Alpine Road / SR4019	2	22 ft.	2-3 / 2-3 ft.	1573	45

Based upon a comparison of recommended road design standards and existing conditions the Township should pursue:

- the widening of the cartway by one foot for each lane of Carlisle Road along the western boundary of the Township;
- the widening of the cartway by one foot for each lane of Rosstown Road from Carlisle Road to the entrance of Pinchot State Park; and,
- shoulders along all roads to eight feet on each side.

MINOR COLLECTORS

Minor collectors within rural settings provide for equal amounts of mobility and land access and convey between 800 and 3,000 ADT. These streets can serve as the main circulation roads within large residential neighborhoods. Trip lengths tend to be shorter in "developed" neighborhoods, like that of a borough, due to the presence of nearby destinations or higher order roads. However, within the rural areas like Warrington Township these roads extend greater distances.

The following lists design standards for minor collector roads:

MINIMUM MINOR COLLECTOR ROAD DESIGN STANDARDS*			
No. of Lanes and Width	**Shoulders and Width**	**Right-of-Way Width**	**Design Speed (mph)**
2 x 11 ft.	2 x 8 ft.	60 ft.	30
* Adapted from the YCPC Long Range Transportation Plan			

The following table summarizes the characteristics of the Township's minor collector roadways:

MINOR COLLECTOR ROADWAY CHARACTERISTICS					
Road Name / No.	**No. Lanes**	**Cartway Width**	**Shoulder Width L/R**	**2002 ADT**	**MPH**
Kralltown Road / T-866	2	20 ft.	3 / 3 ft.	1405	45
Wellsville Road / SR4012	2	20 ft.	3 / 3 ft.	387	45
South York Road / SR4035	2	18 ft.	2 / 2 ft.	NA	45
Harmony Grove Rd / SR4014	2	16-20 ft.	3-4 / 3-4 ft.	574	45

Based upon a comparison of recommended road design standards and existing conditions the Township should pursue:

- the widening of the cartway by one foot for each lane of Kralltown Road;
- the widening of the cartway by one foot for each lane of Wellsville Road;
- the widening of the cartway by two feet for each lane of York Road;
- the widening of the cartway by three feet for each lane of Harmony Grove Road from Carlisle Road south to Winding Road;

- the widening of the cartway by one foot for each lane of Harmony Grove Road from Winding Road south to the Township boundary; and,
- shoulders along all roads to eight feet on each side.

Many of the Township's important roads are not constructed in compliance with minimum design standards. While travel lanes are usually within 1-3 feet of the recommended widths, the shoulders need widened by as much as 12 feet on both sides. Most of these "major" roads are State Roads and therefore, would require improvement by PennDOT. Local officials should act with patience to get these deficiencies corrected over time. Certainly not all of these improvements will occur at the same time but the Township should "chip-away" at these needs as funding permits. Roads with higher traffic volumes should be given priority status in this process. The following table prioritizes needed cartway and shoulder improvements based upon reported average daily traffic volumes:

RECOMMENDED IMPROVEMENTS TO ROADS			
Road Name / Route No.	**Est. ADT (2002)**	**Needed Cartway Widening (ft.)**	**Needed Shoulder Widening L/R (ft.)**
Minor Arterial Roads			
Carlisle Road / SR0074	6692	0-4 ft.	1-5 / 1-5 ft.
Major Collector Roads			
Rosstown Road / SR0177	3250-5252	0-2 ft.	0-4 / 0-4 ft.
Carlisle Road / SR0074	1518-3229	0-2 ft.	1-5 / 1-5 ft.
Alpine Road / SR4019	1573	0	5-6 / 5-6 ft.
Minor Collector Roads			
Kralltown Road / SR4012	1405	2 ft.	5 / 5 ft.
Harmony Grove Rd / SR4014	574	2-6 ft.	4-5 / 4-5 ft.
Wellsville Road / SR4012	387	2 ft.	5 / 5 ft.
South York Road / SR4035	NA	4 ft.	6 / 6 ft.

In addition, as new developments are proposed along these highways, developers should be required to provide improvements to the existing roads that bring them in-line with suitable design standards.

As important as road design is land use access. As discussed earlier in this Chapter, an effective conveyor of traffic cannot provide for unlimited land access. Each driveway or roadway intersection introduces conflicting traffic movements that reduce a road's ability to convey traffic quickly and safely. ***Therefore, new connections to the arterial and collector road system should be minimized to avoid unnecessary driveway and road cuts. Within the rural areas of the Township the limited density will keep the number of driveways low. However, in residential and commercial areas, local officials must enforce strict policies that will minimize such connections to ensure efficient traffic flow. Zoning and subdivision/land development regulations can***

limit permitted driveway cuts, require wider lots, and provide for incentives and design flexibility that encourage adjoining properties to share vehicular access among other things (e.g., parking, loading, signage, storm water control, etc.). For access on State roads, local officials should persuade PennDOT officials to limit highway access to the minimum required.

LOCAL ROADS

Local roads are intended to provide immediate access to adjoining land uses. These roads are generally short and narrow, and comprise the bulk of road area within the Township. Local roads are intended to only provide for transportation within a particular neighborhood, or to one of the other road types already described. The following describes the suggested design standards for local streets:

MINIMUM LOCAL ROAD DESIGN STANDARDS*				
On-Street Parking	**Cartway Width**	**Shoulders and Width**	**Right-of-Way Width**	**Design Speed (mph)**
None	20 ft.	2 x 6 ft.	50 ft.	20
36 ft. of pavement, including parking lanes			50 ft.	20
* Adapted from the YCPC Long Range Transportation Plan				

All of the Township's roads that are not classified as collectors are considered local roads.

Warrington Township is unique. Past actions of residents and local officials have combined to create an "oasis" of rural countryside that is located amid developing York County. The York County Comprehensive Plan acknowledges this unique character by recommending that Warrington Township focus limited growth into compact villages and devise strategies for the preservation of farmlands, conservation lands, parks and gamelands.

Accordingly, the Township's projected future growth is limited and can easily be served by the residual capacity of the Township's local road system. However, growth occurring outside of Warrington Township generates traffic that passes through the Township daily. The driving habits of daily commuters threaten the rural character of Warrington Township. Excessive vehicle speeds, beyond posted speed limits and upon un-posted roads contribute to frequent traffic accidents as reported earlier. This also threatens slow-moving farm vehicles on the road and those users who engage in recreational activities upon the road and roadside.

Often society's response to such conditions involves the improvement of heavily-traveled roads by widening travel lanes and shoulders, straightening curves, and leveling the road surface. Accordingly, the carrying capacity of such roads increases along with vehicle speeds. This, in turn, induces community growth as traffic flow through the community is eased. Both of these consequences are contrary to the goals of this plan. Local officials believe that road improvements to increase road capacity would only serve the development occurring in adjoining municipalities and invite unwanted traffic flow through Warrington Township. Local officials intend to keep roadway design and posted speeds

consistent with the Township's rural context and attendant recreational use.

They intend to redirect their efforts in a manner that is more consistent with the Township's goal to preserve its rural character. They understand the need to work with County and State programs to improve the Township's arterial and collector road system so that convenient and safe "regional" traffic flow can occur through the Township. However, local officials believe that its local roads have sufficient unused capacity to meet the minimal traffic that would be generated by the Township's projected growth. Therefore, the Township will focus upon local road improvements that:

1. Divert ever-increasing high speed traffic that passes though the Township on a regular basis;
2. Enhance the safety of residents and motorists on the road;
3. Provide for the safe and convenient movement of farm equipment and vehicles;
4. Provide for the safe use of roads and roadsides by residents engaging in recreational activities (cycling, walking, horseback-riding, horse-training, etc.);
5. Implement traffic calming measures: and,
6. Contribute to the Township's rural character.

About 7.8 miles of road within the Township have semi or unimproved surfaces. These roads are located throughout the Township and most often only travel a short distance (less than 2 miles). Some roads have a tar and chip surface that, according to local staff, will last up to three years before breaking down into a gravel condition. Other roads have a dirt surface. One proposed road surfacing project on West Springs Valley Road has met opposition from neighbors who want to retain the road's dirt surface.

Some municipalities have begun to "take-back" and regrind paved surfaces to restore conditions that inhibit commuter "short-cut" travel and reduce vehicle speeds. While this approach is rather novel within York County, it is gaining acceptance elsewhere in more rural areas of the nation.

A recent study conducted in rural southeast Michigan determined that gravel road capacity ranges from about 200 to 1000 vehicles per day based upon the characteristics of the road (surface type, width, drainage, shoulders and alignment). A standard traffic generation rate of about 10 vehicle trips per day per dwelling unit means that areas served by gravel roads should have relatively low densities, if gravel road capacities are not to be surpassed. This study concluded that the best gravel road can only accommodate 1 dwelling unit per each 6.67 acres, while the worst gravel road capacity was only 1 dwelling unit per 32 acres.[1]

These findings are consistent with the Township's goal to preserve its rural character and prevent undue inducement of suburban sprawl. However, Township Officials should heed the warnings that "unimproved" roads require relatively low densities for lands within the road's service area. ***Local Officials should carefully consider a campaign of road-take back and resurfacing with a gravel surface as a means of improving compatibility and safety while avoiding an inducement to community growth that would exceed its local infrastructure and public service capacity.***

B. TRAFFIC SAFETY

In addition to reducing congestion, traffic safety is another important consideration in the scheduling of roadway improvements. High accident locations result from factors such as inadequate road design, insufficient sight distance, improper relationship between land use and road classification, improper speed limits, and driver frustration/error. This section describes traffic accident statistics within the Township to gain a general understanding of their location and severity. This will help to ensure a proper relationship between land use and access.

The Pennsylvania Department of Transportation, Center for Highway Safety, provided accident data for the period between 1999 and 2001. This three-year period provides the most recent reportable accident data available. A reportable accident is one in which an injury or fatality occurs, or at least one of the vehicles involved requires towing from the scene. The locations of the majority of accidents discussed on the following pages have been plotted on the *Transportation Map*.

Specific accident locations are ranked by frequency for the Township. These specific locations are ranked and reported in two categories. First, accidents that occurred at specific intersections at two or more roads are identified and ranked. Second, accidents that occurred along one road between two roads, or mid-block accidents, are enumerated and ranked. Mid-block accidents also include accidents that occurred along public roads at an intersection with a driveway.

[1] *The Crunch of Development Along Gravel Roads*, Michele Manning, AICP and Mark A. Wyckoff, FAICP. American Planning Association, February, 2004, pg. 2.

The adjoining table ranks those intersections that recorded two or more reportable traffic accidents between 1999 and 2001.

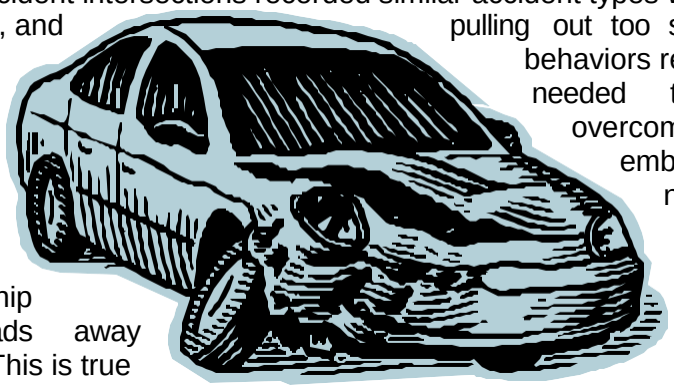
INTERSECTION ACCIDENTS (1999-2001)		
Rank	**Intersection**	**Total No. of Accidents**
1	Rosstown & Alpine Roads	3
1	Wellsville & Harmony Grove Roads	3
2	Carlisle & Quaker Meeting Roads	2
2	Harmony Grove & Pine Hill Roads	2
2	Bull & Rock Ridge Roads	2
2	Carlisle & Alpine Roads	2

Between 1999 and 2001 the Township recorded 27 total reportable traffic accidents at road intersections. The worst accident intersections were located at two separate locations.

First is the intersection of Rosstown and Alpine Roads. Here, two rear-end collisions occurred when drivers failed to yield to vehicles turning left from Rosstown Road onto Alpine Road and third involved a two car collision where a vehicle crossing Rosstown Road was struck by another traveling west along Rosstown Road. These accidents produced two moderate and two minor injuries.

The second "highest-accident" intersection occurs at Wellsville and Harmony Grove Roads. Two of these accidents involved only one vehicle either hitting a ditch or embankment. The third involved a two vehicle crash where a vehicle traveling north on Harmony Grove Road struck another traveling west on Wellsville Road. These accidents produced one moderate and two minor injuries.

Other multiple accident intersections recorded similar accident types with drivers failing to stop, speeding, and pulling out too soon. Many times these risky behaviors resulted in accidents where the driver needed to take evasive movements or overcompensated and hit a fence, tree or embankment. While it is important to note these intersection-based accidents, the larger traffic safety problem within the Township occurs along the Township's roads away from intersections. This is true of most rural municipalities that have relatively few intersections when compared with overall road lengths.



MID-BLOCK ACCIDENTS

The adjoining table ranks the mid-block locations with at least one reportable accident per year between 1999 and 2001. Overall mid-block accidents account for 108 of the 135 total traffic accidents recorded within the Township from 1999 to 2001 or 80 percent. This ratio of more frequent mid-block accidents versus intersection accidents is a byproduct of the Township's rural road system with fewer intersections and longer vehicle travel distances. Generally roads with the highest traffic volumes have a correspondingly high frequency of mid-block traffic accidents. Therefore, it is expected that the Township's arterial roads recorded the highest mid-block accidents.

MID-BLOCK ACCIDENTS (1999-2001)

Rank	Road Name	Road Number	Total No. of Accidents
1	Carlisle Road	SR0074	27
2	Old York Road	SR4026	12
3	Rosstown Road	SR0177	9
4	Zeigler Road	T-904	7
5	Wellsville Road	SR4012	6
5	Roundtop Road	T-910	6
6	Alpine Road	SR4019	4
7	Detters Mill Road	T-843	3
7	Lisburn Road	T-908	3

ACCIDENT TYPES, SEVERITY & FACTORS (1999-2001)

Accident Type	
Non-collision	6
Rear-end	14
Head-on	9
Backing-up	0
Angle	13
Sideswipe	2
Hit fixed object	80
Hit pedestrian	1
All others	10
Unknown	0
Total Accidents	135
Accident Severity	
Fatal	1
Major injury	1
Moderate injury	28
Minor injury	44
Unknown injury	3
Total with injury	77
Accident Location	
Intersection	27
Mid-block	108
Probable Factors	
Too Fast	54
Wrong Side	31
Slippery road	23
Speeding	21
Overcompensation	20
Deer	14
Drinking	13
Other Distraction	10
Tailgating	10
Improper turn	7
Didn't stop	7
Adverse weather	6
Other factors	13

The adjoining table lists reportable accident types and severity within the Township. The Township recorded 135 total reportable traffic accidents between 1999-2001. A strong majority of such accidents involved vehicles swerving off of the road and hitting a fixed object due to excessive speeds or to evade another oncoming vehicle. More than half of all accidents produce injury while less than one percent produce severe injury. Fortunately, about 76 percent of the Township's total accidents produce no or minor injuries. Moderate injuries result in 20% of all accidents. One fatal head-on traffic accident occurred along Old York Road resulting in two fatalities.

Sundays record the highest number of accidents; nearly double those recorded on Mondays and Saturdays. January has the greatest accident frequency, more than double the monthly average and almost six times that occurring during the month of April. Year 2001 had the most accidents followed by 1999 then 2000. Accidents were generally split between daylight and darkness. Adverse weather conditions were reported during only 24 percent of accident occurrences. 2:00 and 7:00 PM had the greatest accident frequency at 2.5 to 3 times the hourly average; 4:00 AM had the lowest frequency at about ¼ the average The three most noted probable factors for accidents include driving too fast, on the wrong side and slippery pavement.

C. REGIONAL TRAFFIC PATTERNS

Analyses of the average daily traffic volumes (ADT) for the Township's roads provide some insight into the Township's role as a destination and/or thoroughfare.

First, clearly the Carlisle Road / Old York Roads corridor conveys the greatest traffic to and through the Township. The average daily traffic volumes along this corridor are in the upper reaches of an arterial road's intended capacity (6000 ADT) according to York County's standards. Furthermore, traffic volumes along this corridor have increased between 1995 and 2002 by:

- 21% south of Rossville to the Township boundary;
- 53% just north of Rossville; and,
- 15% at the Township's northern boundary.

This suggests that, not only has growth within the Township created more traffic, but growth beyond the Township is causing through traffic along this corridor. About 3000 vehicle trips per day originate within the Township that use this road while another 3600± commute through the Township. As growth and its traffic continues may suggest a re-designation to a higher functional classification (urban arterial) along with the need to upgrade roadway design according to that classification's minimum standards, to safely accommodate the higher traffic volumes.

Similarly, Rosstown Road serves as an important conveyor of local and through traffic. This major collector road has also experienced a considerable increase in traffic, particularly on the eastern edge of the Township where a 47% increase has occurred since 1995. More modest increases of 9% and 13% are noted in the Village of Rossville and at the State Park entrance, respectively. Interestingly, Alpine Road has experienced a slight decline (3%) in traffic between 1995 and 2002; these trips may have been diverted onto Rosstown Road.

By contrast, the eastern half of the Township has experienced declines in average daily traffic volumes as follows:

- -15% along Carlisle Road between Rosstown and Wellsville Borough;
- -44% along PA Route 74 in Wellsville Borough;
- -37% along PA Route 74 northwest of Wellsville Borough;
- -40% along Kralltown Road;
- -17% along Harmony Grove Road south of PA Route 74; and,
- -9% along Wellsville Road west to the Township line.

These factors suggest that the Township apply greater priority to needed road improvements along the Carlisle Road / Old York Roads corridor and along Rosstown Road. This is not to suggest that remedial traffic improvements should not be undertaken with priority wherever they occur, but that capacity-increasing road improvements are needed, along these more heavily traveled roads.

D. PROGRAMMED TRANSPORTATION IMPROVEMENTS

York County's Long Range Transportation Plan contains the 12-Year Program and is developed under the PA Transportation Act of 1970. The 12-Year Program suggests the County's major capital highway, bridge, transit, air, rail and transportation-related projects to be implemented by PENNDOT. The 12-Year Program is divided into three 4-year periods according to priority and funding availability. The 12-Year Program is updated every two years and involves participation by PENNDOT, the York County Planning Commission (YCPC), the York Area Metropolitan Planning Organization (YAMPO), the York County Transportation Coalition (YCTC), municipalities, other entities and the public. Following deliberation with the State Transportation Commission, the YCTC submits its Transportation Improvement Program (TIP), the first four-years of the 12-Year Program.

The TIP development process begins with the staff of the York County Planning Commission with guidance form PENNDOT. The State, County and local municipalities submit requests for projects that are evaluated by the YCPC under a variety of related factors, and then ranked with projects already listed on the TIP. The TIP is forwarded to the YCTC and then onto the YAMPO for concurrence. PENNDOT and the YCPC then attach proper funding to each project and PENNDOT prioritizes each project across the State. This final TIP then is forwarded to the Federal Highway Administration and Federal Transit Administration if federal funding is to be used. Presently, the Township would only be responsible for the submission of projects relating to the improvement of Township-owned bridges as this process will not fund Township-road maintenance projects and the State would be required to submit maintenance project for State roads.

The current York County Long Range Transportation Plan and the more immediate Transportation Improvement Program include no projects within Warrington Township. According to County staff this is somewhat expected as transportation improvement projects are often related to those that would increase traffic carrying capacity needed in high growth areas. Given, Warrington Township's rural character, roadway capacity increases would be inefficient and could act to induce unwanted sprawl. In addition, many municipalities forego the submission of municipally-owned bridge repairs because of the long delays and their attendant cost increases associated with navigating the County review process.

Although there are no projects planned within Warrington Township, improvements are planned to facilitate truck maneuvering between Old York Road and US Route 15 in Dillsburg. These projects are prerequisite to the rerouting of PA Route 74 onto Old York Road north of the Village of Rossville to the Township boundary. In addition, the County has undertaken a bridge condition analysis and identified four bridges that would be eligible for federal funding as depicted on the Transportation Map. The following lists foreseeable road projects to be undertaken by the Township:

Programmed/Planned Road Improvements Projects			
Road Name	**Proposed Project Description[2]**	**Begin Date**	**Cost / funding source**
Nursery Road	Tar & chip, needs major repairs and resurfacing.	2005	$50,000 / liquid fuels
Thundergust Mill Rd.	Widening & resurfacing	Unknow	Developer & liquid fuels
Barrens Valley Road	Culvert replacement	2005	General fund
Conley Road	Widening & resurfacing	Unknown	Unknown
E. Springs Valley Rd	Widen & surface	Unknown	Unknown, neighbors object

E. RAILROAD ACCESS

There are no railroad lines within the Township.

F. PEDESTRIAN AND BICYCLE MOBILITY

The **Mason Dixon Trail** follows a winding northwest to southeast alignment along public roads and through the State Gamelands and Gifford Pinchot State Park. The trail is depicted on the Transportation Map. "The 190-mile long Mason-Dixon Trail starts at Whiskey Springs, on the Appalachian Trail, in Cumberland County, PA and heads east towards the Susquehanna River, passing through Pinchot State Park en route. The trail then follows the west bank of the Susquehanna south to Havre de Grace in Maryland. Across the river, the trail continues east, passes through Elk Neck State Forest, then on to Iron Hill Park in Delaware, north along the Christina River and White Clay Creek to the White Clay Creek Preserve. The trail then heads northeast to its eastern terminus at Chadds Ford, PA on the banks of the Brandywine River."[2]

Some municipalities make overland alignments of important trails a development priority. As new developments occur, landowners are requested to set-aside alignments for the trail away from the road. The use of an Official Map can support such efforts. The Township may wish to consider this approach.

The York County Comprehensive Bikeway Plan identifies potential bike routes throughout the County. Within Warrington Township a potential Commuter/Recreation corridor follows Carlisle Road north from York City into the Village of Rossville. A second potential Commuter/Recreation corridor follows Carlisle Road from Dillsburg Borough south into the Township then onto Harmony Grove and Kralltown

[2] http://www.angelfire.com/pa2/yorkhikingclub/mdts.html

Roads; then the route again follows Carlisle Road into the Village of Rossville where it joins Rosstown Road eastward to the Township line. Both bike routes are depicted upon the Transportation Map.

"The AASHTO guide is the industry standard for bicycle facility design issues. For roadways with no curb and gutter, the minimum width of a bike lane should be 1.2 m (4 feet).... A width of 1.5 m (5 feet) or greater is preferable and additional widths are desirable where substantial truck traffic is present, or where motor vehicle speeds exceed 80 km/h (50 mph)." [3]

The Township should lobby the County Planning Commission and PA DOT's Maintenance Manger to widen road shoulders to allow for a bicycle path along the cartway with proper striping of bike lanes and signange. Should this action exceed the scope of a "maintenance task" then the Township should apply for the project under PA DOT's Betterment Program as part of the County's Transportation Improvement Program. This would create an inviting environment that would encourage use of alternatives to the automobile. This bike alignment is also consistent with the possible re-routing of PA Route 74 following Old York Road north of the Village of Rossville as it would eliminate traffic along the designated bike route.

However, rural settings also present valuable opportunities for bicycling. Many of the "less-traveled" roads offer terrific settings for rural cycling. In addition, some of the recommended shoulder widenings presented earlier in this Chapter would facilitate improved cyclist safety.

G. MASS TRANSIT

There is no fixed route bus service into Warrington Township. A Park & Ride lot is located in nearby Dillsburg Borough from which the Capital Area Transit offers service into Harrisburg. Rabbittransit of the York County Transportation Authority offers its paratransit (door-to-door) service throughout York County for qualified riders. Riders must pre-register with Rabbittransit and fees range between $1.00 for seniors to $19.00 for the general public depending upon travel length and destination.

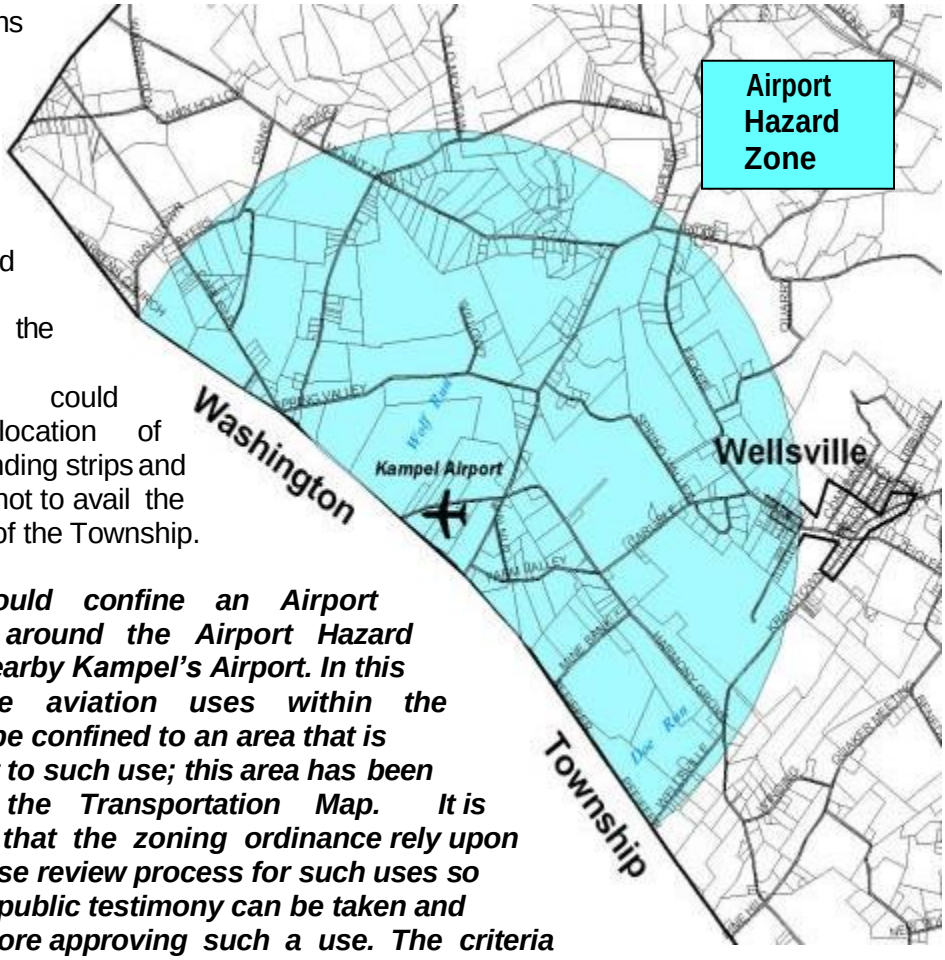
H. AIRPORT SAFETY

The Kampel Airport is located on the west side of Carlisle Road at the intersection with Ridge Road along the Township's western boundary. According to the Commonwealth of Pennsylvania Airport Directory, this facility includes a 100 by 2370-foot grass runway. The site is attended 8:30 AM to 4:30 PM on weekdays and 8:30 AM to Noon on Saturdays. The facility offers fuel, tie-down and hangar rentals, rest rooms, telephone and a lounge. There are no commercial airlines that operate at this facility and this is a visual landing runway with no navigational aids.

[3] http://www.bikelib.org/roads/aashto.htm

Section 307 of the Township Zoning Ordinance specifically regulates the height of structures and vegetation so as to protect the Airport Hazard Zone according to prescribed standards and methods. The Airport Hazard Zone is depicted upon the Transportation Map.

The Township might also wish to use the existence of this facility to support a zoning approach that would limit airport construction within the Township. Often rural residents object to airports over concerns that noise from an aircraft taking-off and landing adversely affects nearby residents and livestock. Accordingly, the Township Supervisors could restrict the location of airports, new landing strips and helipads so as not to avail the expansive area of the Township.



Instead, it could confine an Airport Overlay Zone around the Airport Hazard Zone for the nearby Kampel's Airport. In this manner future aviation uses within the Township will be confined to an area that is already subject to such use; this area has been depicted on the Transportation Map. It is recommended that the zoning ordinance rely upon a conditional use review process for such uses so that additional public testimony can be taken and considered before approving such a use. The criteria for this conditional use should be developed to ensure that the facility is located and operated to minimize adverse impact to nearby residents and farmers.

X. Future Land Use

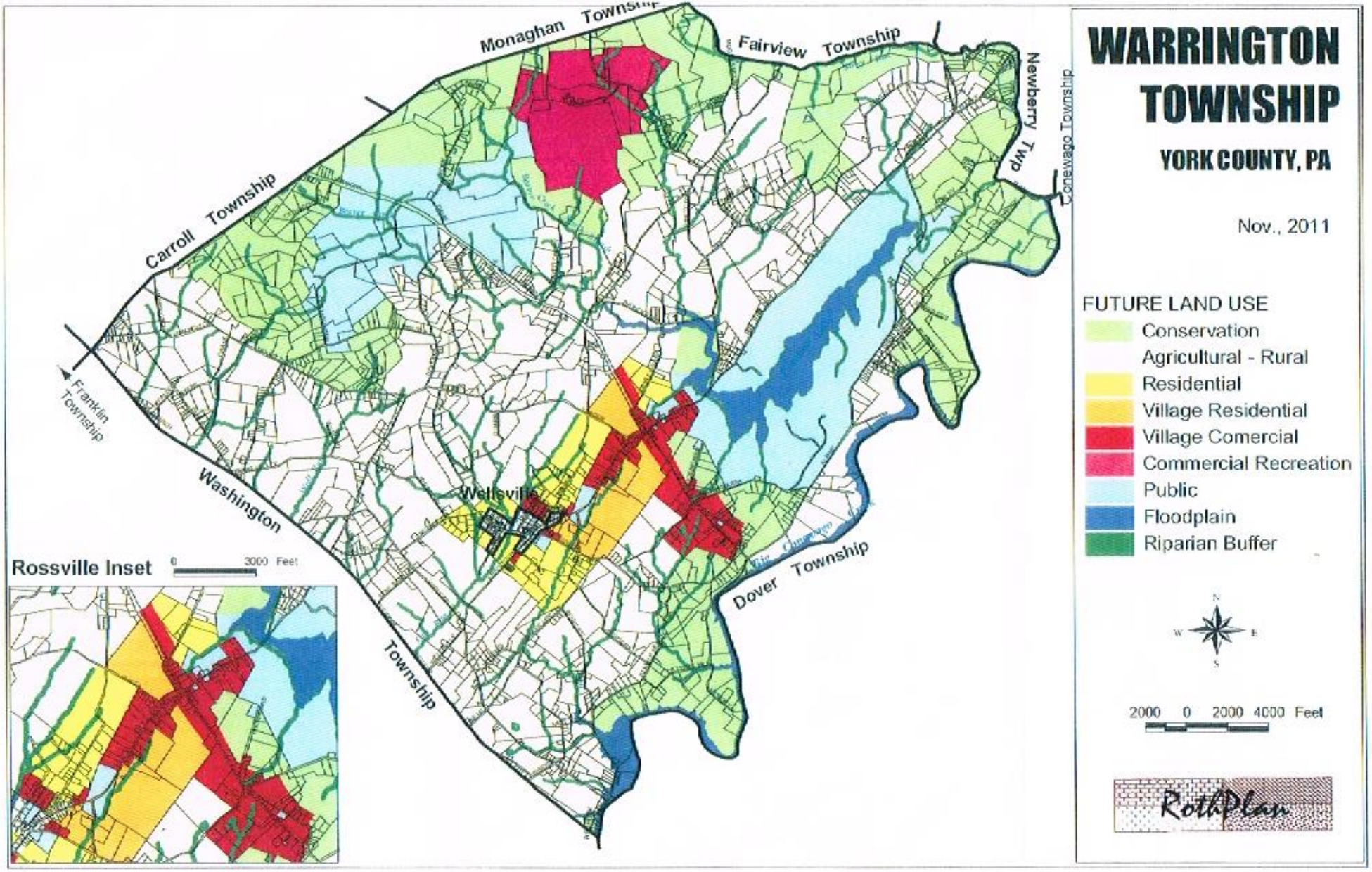
One element important to the comprehensive planning process is the charting of appropriate future land uses and growth areas. This effort embodies all of the background information collected regarding natural features, public facilities and utilities, existing land use, population studies, and traffic patterns. Then, these resources are allocated in a manner that responds to the Township's desires, as expressed in the Community Planning Goals in Chapter II. ***What results is a future land use map that should be used to adjust zoning boundaries, and help properly locate future municipal investments, so as to maximize their efficiency. This chapter should be used in conjunction with the Future Land Use Map.***

The preparation of the Future Land Use Map was accomplished according to several "ground rules"; an understanding of these "ground rules" will lead to a better understanding of the Plan's recommendations.

First, this Plan is designed to address future conditions until the year 2020. Accordingly, future growth areas have been generally located and sized to accommodate the growth that is projected during this time frame. This results in a "staged" future land use scheme that (1) reduces the conversion of productive farmlands and sensitive natural features, (2) confines development areas so that public improvements and services can be provided efficiently to a compact area, and (3) predominately focuses infill development around existing settlements. ***The benefits of this approach are significant, but require that the Township commit to the Plan's updating on or before the year 2020.***

Second, a great deal of emphasis was placed on existing land uses in developed areas. In some limited cases, existing development types were recommended for change to another land use category to enhance compatibility. In rare instances, existing uses were not reflected to suggest the need for change within that given locale toward which regulatory efforts can strive. Similarly, isolated land uses within the rural landscape are not identified unless they are large enough in scale to represent Township-wide consequence. This helps to convey the Plan's overall approach towards targeted growth in designated growth areas and conservation of outlying natural features and farms. Furthermore, this document deals with future land use on a property-by-property basis; however, in rural settings individual home sites are not reflected as they are considered a part of the rural landscape. Overall, this emphasis on existing land use will keep the Plan practical and should make it more useful to local officials in their evaluation of future land use decisions.

This Chapter presents recommended land use categories that are meant to specifically guide subsequent zoning policies. These categories correspond to those depicted on the Future Land Use Map.


WARRINGTON TOWNSHIP
YORK COUNTY, PA
Nov., 2011
FUTURE LAND USE
Conservation
Agricultural - Rural
Residential
Village Residential
Village Comercial
Commercial Recreation
Public
Floodplain
Riparian Buffer
2000 0 2000 4000 Feet
Monaghan Township
Fairview Township
Newberry Twp
Conewago Township
Carroll Township
Franklin Township
Washington Township
Dover Township
Wellsville
Rossville Inset
0 3000 Feet
RothPlan

A. CONSERVATION (C) ZONE

Warrington Township is blessed with considerable natural diversity and environmental integrity. Large areas of natural habitats, State Parklands and Gamelands, and woodlands are the dominant natural features within the Township. Smaller pockets of steep slopes, unique geologic formations, floodplains, and wetlands share the landscape. These sensitive environmental features offer scenic beauty and passive recreation opportunities that are foremost in the minds of many local officials and residents. ***The Conservation Zone seeks to protect these important and sensitive features.*** Here the permitted uses and base densities should preserve rural character and new uses and developments should reflect the limited carrying capacity of the landscape and an absence of public utilities and facilities. Beyond the base Zone, other specific measures are important in preserving the Township's rural character and lifestyle.

The current zoning regulations applied to this Zone require a minimum lot size of three acres and local officials consider this standard to be practical and effective given the relative inability to find smaller lots that can be served by on-lot sewers. In addition the Township employs a maximum land clearing standard that limits disturbance to one acre for each three acres of lot area. This innovative technique will help to maintain this Zone's important forest cover which provides many environmental, recreational and quality-of-life benefits. ***It is recommended that the land clearing provision be amended to reference a specific point in time (presumably the effective date of the ordinance) so that landowner cannot circumvent this requirement by simply subdividing new lots from the parent tract.***

Next, the locations of various conservation features have been depicted on the Natural Features Map contained within Chapter III of this Plan. Similarly, the Soils and Geology Map (also within Chapter III) depicts soils with severe development constraints for buildings and on-lot sewers. All of these features form the basis for the assignment of the Conservation Zone. In addition, they offer some general perspective on the presence of conditions with a given locale. However, the specific location and extent of these features will require more detailed refinement and analysis during preliminary plan review of the subdivision process.

Consequently, applicable subdivision and land development regulations should require the preparation of an environmental impact report as a prerequisite to subdivision of new lots. This report should require an applicant to identify important natural features on the site and keep proposed development activities away or manage impacts within acceptable levels. Prospective developers should be required to demonstrate that their proposed use engaged a proper site planning process to identify, protect and maintain important natural features during and after site construction. This will require considerable work on the part of an applicant and the Township but will ensure that proposed developments are designed to respect the Township's many valuable natural features.

Uses within this area will rely upon on-lot sewage disposal systems (OLDSs). On-lot disposal systems, if constructed and maintained properly, can provide a reliable and efficient means of wastewater treatment in rural areas where population density is low. However, where such systems are improperly installed or not maintained, contamination of on-site water supplies can result.

Therefore, it is recommended that the Township adopt and implement an OLDS management program. Such a program would require the routine maintenance of systems to include the "pumping-out" of subsurface septic tanks on a 4-year cycle. Specifically residents would be required to submit receipts from licensed "pumpers" once every four years or be subject to penalty and fines. This practice is gaining acceptance across the State as DEP reviews newer Official Sewage Plans. More importantly, it makes good sense. The extension of public sewers across the countryside is an expensive proposition that usually falls to local government when malfunctioning systems occur. An OLDs management program is preventive maintenance that avoids costly public investments that only serve a few residents. This should be an important component of any updates and / or new Act 537 Plans, as they occur.

Along the same lines, new proposed developments should be required to provide for a primary disposal site and another replacement disposal site to be approved by the Township SEO. Furthermore, the Township Zoning Ordinance should also require that any permit issued for a new use that would rely upon a new OLDS, specifically depict and protect the alternate disposal site from disturbance. The Utilities Chapter of the Plan, presented evidence that much of the Township is underlain with geologic conditions that produce limited groundwater yields. Therefore, the Township should require demonstration of an adequate supply of potable water prior to the approval of any new dwellings within this Zone. Some municipalities have begun to require such proof prior to preliminary plan approval or issuance of a building permit.

Next, the use of accessory businesses should be permitted within the Conservation Zone to offer close-to-home employment and promote local rural-based tourism. Home occupations should be confined to uses that can be adequately conducted from within the dwelling unit itself with limited non-resident employees; these uses can be permitted by right. Rural occupations expand on the home occupation concept and enable other more intensive uses that can make efficient use of rural outbuildings and outdoor storage. Here impacts of noise, light, traffic, dust, hours, screening and odor should be scrutinized prior to approval to ensure that adjoining properties are not adversely affected. The Township should also pay keen attention to the disposal of wastes so as to protect the environmental integrity of this Zone.

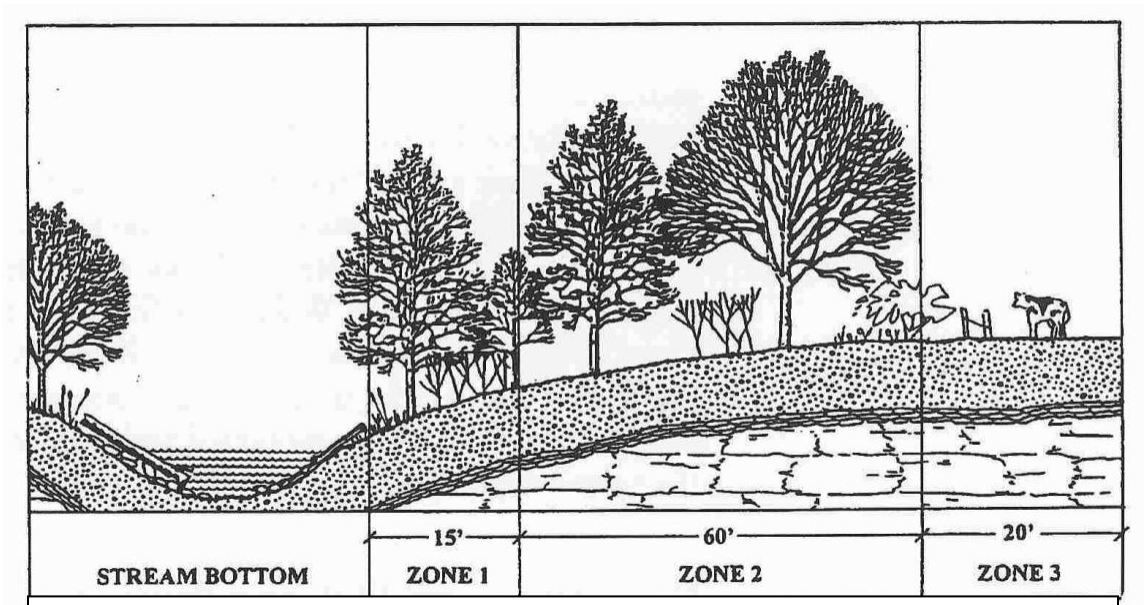
Since this Zone contains the largest areas of woodland, specific requirements should be imposed upon forestry and logging operations in accordance with recent changes to the Municipalities Planning Code. Such regulations should ensure that a suitable logging plan complies with required conservation laws and practices. A recent amendment to the MPC requires that forestry uses be permitted by

right within every zone of every municipality within the Commonwealth. Since forestry uses typically occur within conservation settings this discussion is presented here; however***, the Township must permit forestry uses in each of its zones.*** At about the same time, the Pennsylvania State Township Association of Supervisors (PSATS), Pennsylvania State University (PSU) and PA Department of Conservation and Natural Resources (PA DCNR) prepared a model ordinance to help regulate and monitor forestry operations. ***A slightly altered copy of this model ordinance is contained on the following page which should continue to be applied throughout the Township.***

In addition to the Conservation Zone depicted on the Future Land Use Map, FEMA Floodplains, US Department of Interior Wetlands and Riparian Buffers have been overlain upon the Township. While protection of floodplains and wetlands are widely accepted land use management techniques, recent awareness of diminishing surface water quality suggests the need for more protection for surface water. Since the Township is keenly interested in improving water quality within the Pinchot Lake drainage area, this too is an important local topic.

Photo of a riparian buffer through farmland.
Source: York County Planning Commission.

Studies conducted by the U.S. Forest Service demonstrate that 60-to-95-foot wide riparian buffers offer real advantages in the removal of harmful nutrients and sediment from storm water before it enters the stream. These same riparian buffers can increase the food supply and create interconnected natural systems of movement for local wildlife. Riparian buffers are areas adjoining streams where naturally successive vegetation is provided and protected. More information about this subject can be found on pages 73-76, and a model ordinance is contained on page 119 of this Chapter. ***Local officials should adopt Riparian Buffer Overlay regulations and apply them throughout the Township.***



Cross-Section of Typical Streamside Riparian Buffer

Model Regulations for Forestry Uses

1. In accordance with State law, forestry uses are permitted by right in every zone, subject to the following standards:

2. **Logging Plan Requirements** - Every landowner on whose land timber harvesting is to occur shall obtain a zoning permit, as required by this Ordinance. In addition to the zoning permit requirements listed elsewhere in this Ordinance, the applicant shall prepare and submit a written logging plan in the form specified below. No timber harvesting shall occur until a zoning permit has been issued. The provisions of the permit shall be followed throughout the operation. The logging plan shall be available at the harvest site at all times during the operation, and shall be provided to the Zoning Officer upon request. The landowner and the forestry operator shall be jointly and severally responsible for complying with the terms of the logging plan and the zoning permit.
   1. **Minimum Requirements** - As a minimum, the logging plan shall include the following:
      A. Design, construction, maintenance and retirement of the access system, including haul roads, skid roads, skid trails, and landings.
      B. Design, construction and maintenance of water control measures and structures, such as culverts, broad-based dips, filter strips, and water bars.
      C. Design, construction and maintenance of stream and wetland crossings.
      D. The general location of the proposed operation in relation to municipal and State highways, including any accesses to those highways.
   2. **Map** - Each logging plan shall include a sketch map or drawing containing the following information:
      A. Site location and boundaries, including both the boundaries of the property on which the timber harvest will take place, and the boundaries of the proposed harvest area within that property.
      B. Significant topographic features related to potential environmental problems.
      C. Location of all earth disturbance activities, such as roads, landings and water control measures and structures.
      D. Location of all crossings of waters of the Commonwealth.
      E. The general location of the proposed operation to municipal and State highways, including any accesses to those highways.
   3. **Compliance With State Law** - The logging plan shall address and comply with the requirements of all applicable State regulations, including, but not limited to, the following:
      A. Erosion and sedimentation control regulations contained in Title 25 Pennsylvania Code, Chapter 102, promulgated pursuant to The Clean Streams Law (35 P.S. §691.1. et seq.).
      B. Stream crossing and wetlands protection regulations contained in Title 25 Pennsylvania Code, Chapter 105, promulgated pursuant to the Dam Safety and Encroachments Act (32 P.S. §693.1 et seq.).
   4. **Relationships of State Laws, Regulations and Permits to the Logging Plan** - Any permits required by State laws and regulations shall be attached to and become part of the logging plan. An erosion and sedimentation pollution control plan that satisfies the requirements of Title 25 Pennsylvania Code, Chapter 102, shall also satisfy the requirements for the logging plan and associated map specified in Sections 2.1. and 2.2., provided that all information required by these sections is included or attached.

3. **Required Forest Practices** - The following requirements shall apply to all timber harvesting operations:
   1. Felling or skidding on, or across, any public road is prohibited without the express written consent of the Municipality, or the Pennsylvania Department of Transportation, whichever is responsible for maintenance of the thoroughfare.
   2. No tree tops or slash shall be left within twenty -five (25) feet of any public road, or private roadway providing access to adjoining residential property.
   3. All tree tops and slash between twenty -five (25) and fifty (50) feet from a public roadway, or private roadway providing access to adjoining residential property, or within fifty (50) feet of adjoining residential property, shall be lopped to a maximum height of four (4) feet above the ground.
   4. No tree tops or slash shall be left on, or across, the boundary of any property adjoining the operation without the consent of the owner thereof.
   5. Litter resulting from a timber harvesting operation shall be removed from the site before it is vacated by the forestry operator.

4. **Responsibility for Road Maintenance and Repair; Road Bonding** – Pursuant to Title 75 of the Pennsylvania Consolidated Statutes, Chapter 49; and Title 67 Pennsylvania Code, Chapter 189, the landowner and the forestry operator shall be responsible for repairing any damage to Municipality roads caused by traffic associated with the timber harvesting operation, to the extent the damage is in excess of that caused by normal traffic, and shall be required to furnish a bond to guarantee the repair of such potential damages, as calculated by the Municipality Engineer.

Model Regulations for Riparian Buffers

As required within this Ordinance, and as guidance to any other landowner that voluntarily proposes, streamside buffers shall be provided in accordance with the following standards:

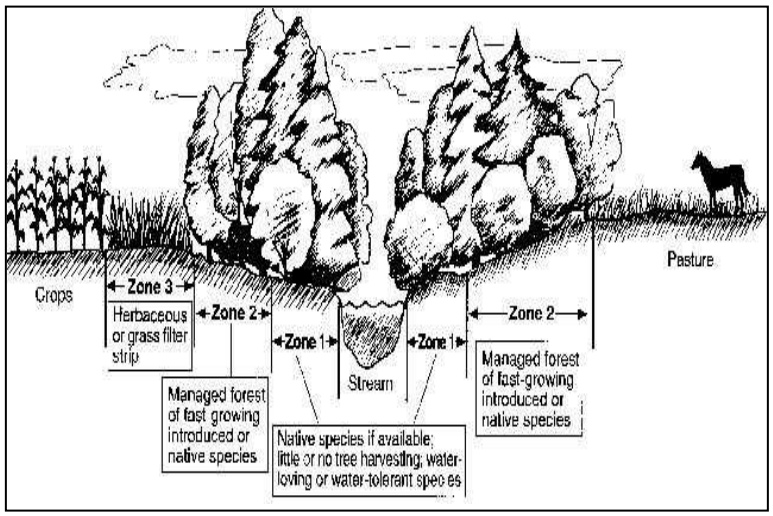
Buffer delineation – The applicant must submit a scaled site plan that clearly depicts the streamside buffer comprised of the following three separate Zones:

Zone 1 – The landward area located between the streambank edge under typical flow conditions and the largest combined width of all of the following:

- fifteen (15) feet as measured directly perpendicular from the streambank edge;
- the 100 year floodplain;
- any adjoining identified wetlands; and/or,
- any adjoining area characterized by slopes exceeding twenty -five percent (25%).

Zone 2 – The area beginning at the inland edge of the above-described Zone 1 and extending at least sixty (60) feet inland therefrom; and,

Zone 3 - The area beginning at the inland edge of the above-described Zone 2 and extending at least fifteen (15) feet inland therefrom. Where a pasture is proposed just beyond the above-described Zone 2, no Zone 3 is required;



Buffer plantings – Each of the respective Zones of the streamside buffer shall include vegetation that already exists or will be planted and maintained by the applicant that satisfies the following design objectives. The applicant shall submit expert evidence that the existing and/or proposed vegetation satisfies such objectives:

Zone 1 – This Zone must include mature canopy trees and a ground cover of warm season grasses. New tree plantings should be selected, arranged and managed to accelerate canopy growth, and offer native species habitat and food supply. New grass plantings should be selected and managed to filter-out pollutants and offer habitat. All vegetation within this Zone must thrive in wet conditions;

Zone 2 - This Zone must include mature canopy trees generally three rows deep and a natural undercover. New tree plantings should be selected that are rapid growing so as to intercept passing nutrients. Such trees should also be arranged and managed to accelerate canopy growth, and offer native species habitat and food supply. Successive undercover plants should also be allowed to "evolve" with the canopy of this Zone;

Zone 3 – This Zone should be planted with warm season grasses that are allowed to mature naturally without mowing. The tall grasses ensure that overland storm water flows do not "channel" into Zone 2. New grass plantings should be selected and managed to enable controlled grazing or haying so long as the grasses are not reduced to a point where they are no longer able to effectively disperse the surface water flows.

Buffer use and maintenance – Streamside buffers must be generally undisturbed. Mature trees and long grasses absorb more nutrients than do manicured plants. Similarly the more extensive root systems retain passing sediments. These characteristics reduce pollution and yield abundant food and habitat for wildlife. The temptation to "over-maintain" the streamside must be overcome. The following lists required maintenance activities for each Zone and the applicant must present a working plan that demonstrates compliance with such activities and practices:

Zone 1 – This Zone compels requires little maintenance. As trees mature, die and decay it is important that such natural debris be allowed to decompose within the stream. This will provide important food and habitat for beneficial microorganisms, fish and amphibious animals. Streamside grasses should similarly be allowed to seasonally flourish and recede. Man-made activities should be very limited and confined to perpendicular passages from Zone 2. Intensive-used locations should be fitted with raised walkways and reinforced embankments. Streamside cleanup of junk and manmade debris is permitted. No animal watering and crossing locations are permitted.

Zone 2 – This Zone requires the most attention but not for some time after initial planting. Here the objective is to develop a stable and broad canopy of tree cover. The trees within Zone 2 are fast-growing and therefore consume many nutrients. The regular pruning and trimming of these trees will increase their nutrient consumption, but should not jeopardize the important overhead canopy of shade. The natural undercover should be undisturbed except for periodic litter cleanup. Pedestrian paths can weave through Zone 2 but should be provided with raised walkways to prevent compacted soils and root damage.

Zone 3 – This Zone also requires little maintenance. Long summer grasses should be allowed to flourish and recede with the seasons. Grazing and haying is permitted so long as the residual grass length is sufficient to disperse overland storm water flows into Zone 2 and avoid channelization.

B. AGRICULTURAL RURAL (AR) ZONE

Throughout history, agriculture has played a primary role within Pennsylvania, York County and Warrington Township. Today, this is still true as evidenced by the generous area in agricultural use identified in Chapter V (Existing Land Use) of this Plan. As the Soils and Geology Map contained within Chapter II (Natural & Cultural Features) of this Plan reveals, the Township also contains considerable prime agricultural soils and agricultural soils of statewide importance.

These prime farmlands are found throughout the low-lying areas of Township and have a characteristically flat to rolling fertile landform. This area also contains the highest concentration of farms that are restricted by Agricultural and Conservation Easements and are part of the designated Agricultural Security Areas as documented in Chapter VI (Adjacent & Regional Planning).

The Agricultural – Rural Zone acknowledges these rural areas with higher concentrations of farming. Like in the Conservation Zone, the permitted uses and base densities should preserve rural character and new uses and developments should reflect the limited carrying capacity of the landscape and an absence of public utilities and facilities. In many ways this Zone should encompass many of the same characteristics of the Conservation Zone (e.g. liberal accessory uses, OLDS management, riparian buffers, and environmental impact statements). However, preference should be afforded to normal farming operations over other pursuits and uses.

The current zoning regulations applied to this Zone require a minimum lot size of sixty-thousand square feet and again local officials consider this standard to be practical and effective given the relative inability to find smaller lots that can be served by on-lot sewers. The Township should apply the same OLDS management strategies as are described earlier for the Conservation Zone so as to avoid the need to extend remedial public sewers in the future through this farming landscape.

Traditionally, farming has involved the growing of crops for sale or for consumption by animals on the farm with the subsequent marketing of either meat or milk. Thus, the viability of the farming operation was tied to the productivity of the land. Recent years have seen the advent of concentrated animal feeding operations (CAFOS). These involve the concentration of large numbers of cows, hogs or poultry on a single tract of land with imported feed. Because the food these animals eat rarely grows on the tract of land

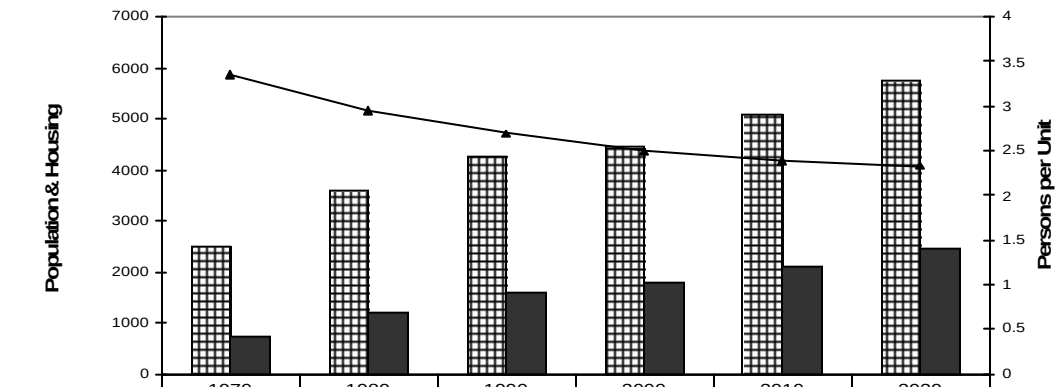
where they are housed, very high animal concentrations can be achieved. These highly concentrated operations often create acute odor impacts on neighboring residents. These odors can arise from the animals themselves, but more often from their waste products, both at the site where they are produced and/or where they are land-applied. ***Strict zoning regulations are needed to insure that these operations, should they come into the area, will not adversely affect their immediate neighbors, or the community at large.***

Farm occupations (e.g. accessory businesses, auxiliary enterprises, etc.) should be encouraged to financially assist active farming operations and can be conducted in barns. Here local residents from the site and its neighborhood can engage in non-farm activities provided the impacts are contained upon the site and the operator continues to farm. ***In all cases, the applicant should demonstrate safe means of waste disposal that does not threaten the environment.***

Beyond the "accessory occupations" described above that are associated with another principal use, some rural communities also permit freestanding farm-related businesses as principal uses. These are usually tied to offering some service or goods used by local farmers with up-set size limitations so that proper local scale is achieved. Farm equipment dealers, seed and fertilizer distributors, blacksmiths and buggy shops, dry goods stores are examples of suitable farm-related businesses. This approach has been particularly useful in meeting local plain-sect farmers needs who are less mobile and can benefit from convenient and safe access to nearby businesses.

C. RESIDENTIAL ZONES

Chapter IV (Demographics) of this Plan analyzed population and housing trends within the Township and using past trends projected population and housing growth as depicted below. Then, the net projected population and housing growth is summarized in the table on the following page:



	1970	1980	1990	2000	2010	2020
Population	2494	3586	4275	4435	5082	5729
Housing	744	1217	1587	1776	2120	2464
Pers/House	3.35	2.95	2.69	2.49	2.39	2.33

Projected Net Changes Per Decade		
Year	**2000 to 2010**	**2000 to 2020**
Population	647	1294
Housing	344	688
Persons/Unit	-0.10	-0.16

Based upon the preceding projections, the Township will need to accommodate at least 688 new dwelling units between the years 2000 and 2020.

Most of the Township's residences are located within the previously described expansive Conservation and Agricultural-Rural Zones. These homes are often part of larger farms and other separate lots. It is obvious that this form of housing has been popular within this rural township. Clearly, the development potential in these large Zones (roughly 30,000+ acres) will provide sufficient opportunity for low-density residential growth. Although the Township has provided for ample residential growth within these Zones, municipalities are legally bound to provide for a range of housing types. The Conservation and Agricultural – Rural Zones are not planned to accommodate higher-density housing types with public utilities.

In order to avoid claims of exclusionary zoning practices and to reflect contemporary housing styles, it is recommended that the Township specifically plan to rely less upon single-family detached units in the future. In addition, national housing trends suggest greater reliance on more dense/multi-family units and compact detached units. For these reasons, it is recommended that the Township allocate future land use to meet the target growth in the following residential categories:

Target Projected New Housing Units by Structural Type					
Year	**Total**	**Target single-family detached**	**Target attached & duplex**	**Total multi-family**	**Mobile Homes**
2000	1776	1365 (77.4%)	68 (3.8%)	36 (2.0%)	295 (16.7%)
2000-2010	+344 = 2120	+ 119 = 1484 (70%)	+91 = 159 (7.5%)	+ 146 = 182 (8.6%)	+0=295 (13.9%)
2000-2020	+688 = 2464	+360 = 1725 (70%)	+ 117 = 185 (7.5%)	+ 210 = 246 (10%)	+13=308 (12.5%)

From the preceding table it is suggested that the Township needs to provide for a minimum of 360 new single family detached homes and 13 mobile homes; the expansive area of the Township's Conservation and Agricultural – Rural Zones offer ample opportunity to accommodate the Township's planned low density residential growth. In addition the Residential Zone will also accommodate single family detached dwellings around the Borough of Wellsville and the Village of Rossville

Conversely, a total of 327 duplexes, townhouses and/or multiple family dwellings must be accommodated within the Township's residential zones. To meet this need, local officials wish to establish the Village Residential Zone that will host a wide range of housing types and densities. All higher densities will require the use of public utilities.

The following table lists data about the Residential and Village Residential Zones depicted on the Future Land Use Plan including measurements of land area and potential developments based upon permitted densities.

Planned Residential Growth				
Land Use Category	**Planned Acreage[1]**	**Area (75%) devoted to development features[2]**	**Base Density Units/acre**	**Total Potential Planned Units**
Residential	346	260	2	520
Village Residential	146	110	5	550

[1]These acreages do not reflect areas already developed.
[2]These figures reduce the area for development to reflect:

- the considerable areas of significant development constraint that exist throughout the Township; and,
- the features within developments that cannot be devoted to actual residential use (e.g. roads, utility easements, parks and etc.)
- the "Right-to-Travel" doctrine which requires that municipalities provide for some choice in personal mobility and residency.

As can be seen the total number of potential high-density housing units (1070) represents about 175 percent of the total number of projected dwelling units and the 550 permitted within the Village Residential Zone will accommodate nearly one and one-half times the target number of projected high-density housing units. In addition, many of the properties that already contain existing dwellings within the Village Residential Zone (that were not counted in determining development potential) could be further subdivided for higher density uses. Given these conditions, local officials can resist residential rezoning claims based upon allegations that insufficient lands have been designated for growth.

Within the **Residential Zone**, single family detached dwellings will be the predominate use. Because of the limitations on the use of public utilities and the uncertainty as to when these utilities may become available, base permitted densities should require a minimum lot size of one acre. The routine maintenance of any installed OLDs should be required until public sewers are available. In addition, the Township may wish to develop and adopt a capped sewer ordinance to ensure that landowners install the necessary improvement on their building site to connect with eventual public sewers.

Densities should be increased to two units per acre with the use of public sewers and duplex units should be permitted with the use of both public sewer and public water. The following presents suitable design standards for the Residential Zone:

SUGGESTED DESIGN STANDARDS FOR THE RESIDENTIAL ZONE						
Housing Types	**Min. Lot Size (sq. ft.)**	**Min. Lot Width**	**Front setback**	**Side setbacks[2]**	**Rear setback [2]**	**Maximum Permitted Height**
SFD, no public utilities	43,560	125 ft.	40 ft.	15 ft. each	25 ft.	35 ft.
SFD, public water	43,560	125 ft.	40 ft.	15 ft. each	25 ft.	35 ft.
SFD, public sewer	20,000	100 ft.	40 ft.	10 ft. each	25 ft.	35 ft.
SFD, public sewer & water	20,000	100 ft.	40 ft.	10 ft. each	25 ft.	35 ft.
Duplex with public sewer & water	20,000[1]	100 ft./unit	40 ft.	40 ft. one side	50 ft.	35 ft.

Within the **Village Residential Zone**, the use of higher-density housing will be dependent upon the availability of public utilities. As presented in Chapter VIII (Utilities), the Township's only public sewer lines follow the road that the Village Residential Zone straddles. Based upon the varying use of public utilities, the following presents suitable design standards for the Village Residential Zone; however, maximum permitted density should be limited to 5 units per acre:

SUGGESTED DESIGN STANDARDS FOR THE VILLAGE RESIDENTIAL ZONE						
Housing Types	**Min. Lot Size (sq. ft.)**	**Min. Lot Width**	**Front setback**	**Side setbacks[2]**	**Rear setback [2]**	**Maximum Permitted Height**
SFD, no public utilities	43,560	125 ft.	40 ft.	15 ft. each	25 ft.	35 ft.
SFD, public water	43,560	125 ft.	40 ft.	15 ft. each	25 ft.	35 ft.
SFD, public sewer	20,000	100 ft.	40 ft.	10 ft. each	25 ft.	35 ft.
SFD, public sewer & water	10,000	80 ft.	40 ft.	10 ft. each	25 ft.	35 ft.
Duplex with public sewer & water	5,000[1]	40 ft./unit	40 ft.	10 ft. one side	25 ft.	35 ft.
Townhouse with public sewer & water	1,800[1]	20 ft./unit	40 ft.	15 end units	25 ft.	35 ft.
Multi-family dwellings with public sewer & water	87,120[1]	200 ft.	40 ft.	30 ft. each	25 ft.	35 ft.

[1] Maximum density of 5 dwelling units per acre.

[2] A buffer setback should also be applied when the VR Zone adjoins the A-R Zone to protect the rural character of adjoining property.

Actual lot configurations vary with some properties containing smaller setbacks than those presented. ***Hence the Township could include language within the Village Residential Zone that specifically varies required setbacks (particularly in front***

yards) to reflect those found on the same block. This will ensure compatibility on a block-by-block basis.

To accommodate logical change in these neighborhoods, zoning policies for detached dwellings should align with the preceding minimum design standards. This will enable residents to undertake projects that are consistent and compatible with nearby uses, without the need for variance and/or special exception applications and hearings. This will ease municipal workload and increase public acceptance of municipal practices and policies.

The bulk of undeveloped area within the Village Residential Zone directly adjoins numerous existing homes that front Carlisle and Rosstown Roads between Wellsville and Rossville. In addition, many of the existing homes located within this Zone were built upon large lots that could be further subdivided to retro-fit new high density housing. The addition of new units amid existing neighborhoods can create specific impacts upon adjoining properties regarding vehicular access and off-street parking that deserve special attention.

Warrington Townhouses, a fine example of clustered high-density housing amid a wooded setting.

To ensure a proper orientation of new high-density housing types (duplexes, townhouses and multi-family dwellings) amid the surrounding rural landscape and existing neighborhoods, it is recommended that the Township require a cluster housing plan to be approved via the conditional use review process. This technique affords the Township a deliberate and public review to ensure that such housing is properly sited within the context of its natural features and will offer optimal buffering from nearby rural and/or existing residential uses. ***Incentives can be used to reflect a traditional village configuration with historic building designs. Furthermore, the Township should look for opportunities for adjoining property owners to cooperate in accommodating coordinated developments with shared access and parking.***

The outside edges of the Village Residential Zone adjoin the Agricultural - Rural Zone. Therefore, local officials should seek to buffer future high-density residences from the impacts associated with any adjoining farming operations around the site's periphery. Fortunately, the inherent flexibility associated with high-density housing offers ample land area to separate proposed dwellings from adjoining farming operations. This should be a principal design consideration when reviewing a high-density cluster housing plan.

The conditional use review process involves a public hearing where neighbors can offer input about the specific plan and how it would affect them. In turn, all parties can reach a more-informed decision that considers varied perspectives. ***The conditional use process also affords the Township to impose reasonable conditions of approval*** that go beyond the zoning regulations when local officials believe that the proposed use presents the potential for particular impact at the proposed location.

An issue that is commonly problematic within high-density neighborhoods relates to

accessory uses. Accessory uses are structures or activities that are incidental to the primary use of a property. For example, a residential accessory structure could include a detached garage, swimming pool or freestanding satellite dish antenna. Similarly, a residential accessory activity could be a yard sale, the storage of a boat or trailer, or the repair of personal automobiles.

The impacts of accessory uses are more easily absorbed in rural areas where lot-to-lot separation is greater. Within the tightly-knit Village Residential Zone such separation is impossible and neighbors are more easily affected by another's activities and actions. ***It is recommended that applicable residential accessory land use regulations be strengthened within the Village Residential Zone; however, not to the point that they violate recently adopted amendments to the Municipalities Planning Code which authorizes widespread use of "home-based businesses."***

Last, the Village Residential Zone adjoins the Township's Village Commercial Zone and has a central location. Consequently, these neighborhoods should include other nonresidential uses that contribute to their central and nodal roles within the Township and its small-town character. ***These uses should be specifically accommodated. Civic uses, churches, schools, parks and playgrounds and limited day care facilities should all be permitted as they provide important services within these established neighborhoods.***

D. VILLAGE COMMERCIAL ZONE

Within the Warrington Township is planned one centralized Village Commercial Zone. This zone is located at the crossroad intersection within the Village of Rossville and extends north and south therefrom. Here exists the greatest concentration of retail goods and services that serve the Township's residents and visitors. The local scale of the current uses seems fitting to this rural community with a surprising level of variety and site design. Several coordinated sites contain small-scale shopping centers, featuring a drive-thru bank branch, beauty salon, fast-food restaurant, conveniences market with fuel pump islands, beverage distributor, post office, smoking supplies shop and a family restaurant. Other freestanding uses include a small office building, vacant motorcycle garage, taxidermist, hair salon, auto body shop and craft barn.

Rossville Plaza anchors the Township's greatest concentration of commerce with desirable coordinated access, parking, signage, and landscape design features.

The Rossville Plaza provides for local conveniences with a contemporary design strip shopping center with coordinated vehicular access, off-street parking and loading,

dumpsters, site lighting and signage. The site also has modern landscape islands that separate the parking lots from the adjoining road. ***This site exhibits the best commercial design among all of the Township's commercial land uses and should be used as a model to pattern regulations governing future commercial developments.***

This Zone is intended to offer principal commercial and limited industrial activities that are tied to a local market as opposed to more limited accessory businesses that can be conducted throughout the larger Conservation Zone. This centralized location affords geographic access to the Township's only public sewer system which is a vital prerequisite for urban land uses like commerce and industry.

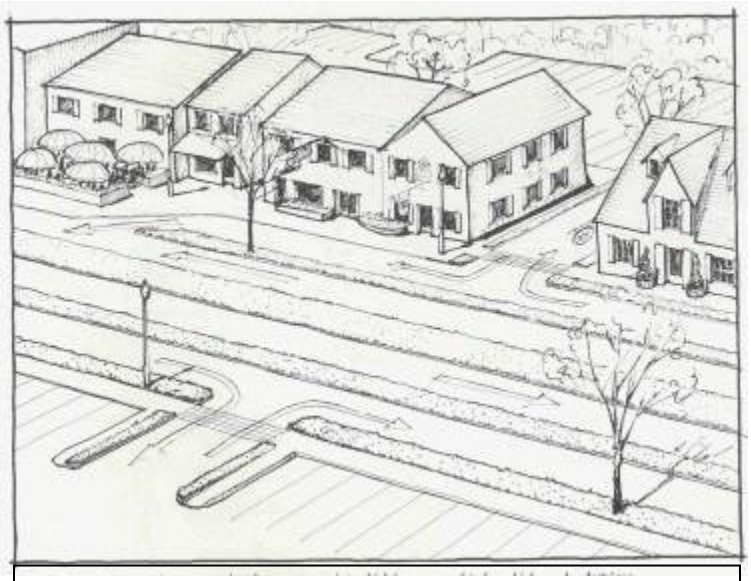
Like with the Village Residential Zone, the use of public or community utility systems would increase the development potential by increasing permitted lot coverage. Therefore, the Township should apply a sliding scale of minimum lot area and maximum permitted lot coverage based upon such the use of utilities. In all about 175 acres of undeveloped land have been located within the Village Commercial Zone.

Assuming:

- a total lot coverage of 55%;
- a 10% reduction in usable area for non-development features;
- a 2:1 ratio of off-street parking area to building area; and,
- a parking/loading size of 300 square feet per space (includes driveways & aisles);

the unused development potential within this Zone could produce over 1,000,000 square feet of retail floor space with over 5,500 new parking spaces. Fortunately the shallow and strip configuration of this Zone will preclude the introduction of large scale shopping centers and big-box stores, both of which would disrupt the small-town character of the Township. This Zone includes several vacant, under-utilized and residential properties that could be adapted or redeveloped for business use that increases development potential.

Uses permitted here should reflect a local orientation and integrate within the setting without great adverse impact. Uses should remain small and emphasize providing local daily needs to nearby rural residents. Convenience stores, restaurants and taverns, bed and breakfasts, offices, automobile filling stations with minor repair, card, book, magazine, newspaper, music, and video shops, barber and beauty salons, photographic, art and dance studios, tailors, laundromats



Coordinated village-style commerce with shared features and access.
Source: Chester County Planning Commission

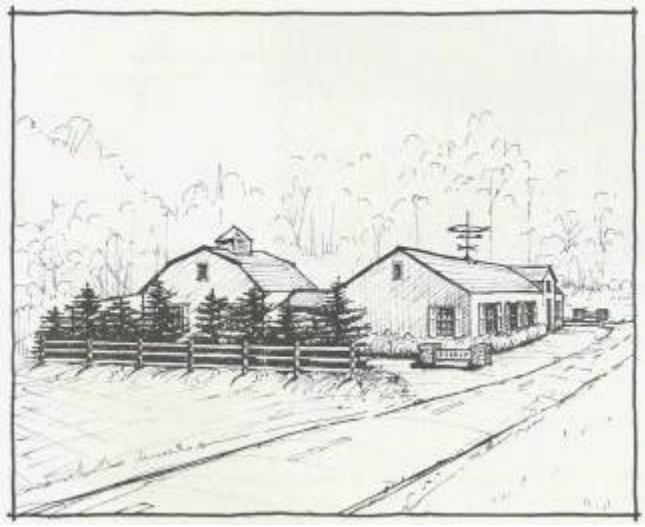
and dry cleaning drop-off stations, flower shops, jewelry, watch and small appliance sales and various civic uses like churches, cemeteries and post offices are all appropriate. ***Zoning should allow for small, start-up business and light industry as permitted uses.***

But as the Township's sole location for commerce and industry, this Zone must accommodate a wide range of commercial and industrial uses. To properly evaluate more intensive uses, the Township should engage either special exception or conditional use review procedures. Zoning regulations should clearly differentiate between local uses permitted by right compared with other uses that require special review at public hearings. Then specific criteria should be applied to the more intensive uses to ensure their proper function and appearance within this setting. ***By requiring a conditional use review, local officials realize the following benefits:***

1. require the developer to fully explain the nature of the proposed uses;
2. give local citizens the opportunity to express support or concern over the use;
3. application of specific criteria aimed at minimizing adverse impact to the community and adjoining properties;
4. provide the Township time to engage professional review assistance of the use and its expected impacts; and,
5. allow local officials to attach reasonable conditions of approval to mitigate any negative effects of the use.

Beyond the uses allowed, the design of a business can dramatically affect its compatibility within its surroundings. ***Zoning regulations imposed in this Zone should:***

1. ***Limit overall retail size per store so to not exceed its local orientation, nor provide an incentive for the demolition of existing historic buildings in favor of more modern commercial building styles;***
2. ***Encourage the development of multi-shop arcades particularly within buildings reflecting local village architectural styles. Demolition of historic buildings should be discouraged;***
3. ***Limit sign sizes and orientations to reflect their local purpose yet offer ready identification;***
4. ***Promote shared use of access drives, and off-street parking and loading spaces. Off-street loading spaces should be screened from the roads and adjoining properties.;***
5. ***Prohibit outdoor storage in most cases but, if allowed, require effective screening from adjoining roads and residences(exclusive of outdoor sales);***
6. ***Require front yard landscape strips along the road. These strips will help to define road/site travel lanes and soften the appearance of the***



A small berm and row of evergreens is an effective screen for a small industry.

roadside and offer shade for pedestrians. A minimum 10-foot wide landscape strip should be required, along with ornamental shade trees and sidewalks.

7. ***Require on-site lighting of buildings and surrounding areas should employ hooded or screened fixtures that confine glare to the site, and security lighting should be directed toward the building, rather than the area around it. Lighting levels should be established to enable the detection of suspicious movement, rather than the recognition of definitive detail.***
8. ***Require public address systems used in external areas to be designed to keep audible impact at ambient levels.***

E. COMMERCIAL RECREATION ZONE

Commercial Recreation Zone – The Ski Roundtop Resort presents unique regulatory issues that should be managed specifically given the site's location amid an important local habitat, woodlands, wetlands and soils with severe development and on-lot sewer constraints. While the existing use must be accommodated, the Township should engage a conditional use review procedure and apply specific criteria to the proposed use to ensure that the:

1. proposed uses and improvements are properly located in relation to the site's important natural features;
2. proposed activities are conducted in a manner that presents minimal impact on the site's natural features and its rural context; and,
3. the preceding reviews associated with expansion/conversion activities do not impose a review procedure so burdensome as to jeopardize continued operations and use of the site.

Many times this type of use requires a two-step approval process where detailed conditional use scrutiny is applied to an applicant's concept plan. The concept plan outlines the proposed uses of the site and a disturbance envelope on the site. Specific impact reports eg. noise, light, traffic, water demands, waste disposal and etc.) are required and expert testimony of operational procedures are officially presented on the legal record. Once these overall impacts are determined and adequately managed to the satisfaction of the municipality, the concept plan is approved. Then subsequent alterations on the site that conform with the concept plan can be authorized, by right, subject to needed land development approvals. This enables this type of use to make periodic on-site adjustments without the need to re-initialize the lengthy and public conditional use review procedure. ***The Township should create a new Commercial Recreation Zone with conditional use criteria that respond to the unique needs/impacts of the existing ski resort.***

F. PUBLIC

Chapter V (Existing Land Use) lists the Township's public uses. These uses have been depicted as they exist to assist in user orientation of the Future Land Use Map. Since zoning regulations that would limit uses to ones of a public nature would be considered confiscatory, it is not recommended that the municipalities adopt public use zones. ***Rather, these public uses should be permitted within their respective zones as they occur throughout the Township and are depicted on the Future Land Use Map.***

Warrington Meeting House

G. LAND PRESERVATION THROUGH ZONING (2022 UPDATE)

The 2006 Warrington Township Official Comprehensive Plan included a brief analysis of prime farmlands that contains two opposing statements: "Prime farm soils and soils of Statewide importance should be protected from conversion to other uses through appropriate planning and zoning" and "the Township believes that the remaining farmlands do not offer sufficient mass to warrant effective agricultural zoning that would severely limit rural residential development." Fifteen years later, attitudes have changed, and the Township is now undertaking a second look at this land use planning position. As the 2006 Plan noted, approximately two-thirds of the Township's soil resources – more than 16,000 acres – are categorized as either prime agricultural soils of either Class I or II or as soils of Statewide importance (Class III). A recent map analysis by the York County Planning Commission shows in great clarity, the wide distribution and abundance of these soils throughout the Township and especially within the Rural Agricultural (RA) zone. It is evident there was a clear effort on the Township's part to draw its current zoning map boundaries, particularly those separating the RA zone and the Conservation (C) zone, based on the location of these soils. (See Plates 1 and 2 attached)

The significance of agriculture to the Township and its importance to its residents can be assessed via an examination of property participation in three farm-related programs: the County Clean and Green program, the Township's Agricultural Security Area, and the placement of land within a conservation easement through either the County Agricultural Conservation Easement program or similar programs operated by various private, non-profit organizations.

Plate 3 attached hereto identifies properties currently participating in York County's Clean and Green Program. The program was established as part of the 1974 Farmland and Forest Land Assessment Act. It encourages land preservation by taxation according to land use rather than market value. In return for reduced tax rates, owners sign restrictive covenants agreeing to continue to use the land as is and dramatically limit any development during their participation.

To qualify for the program, applicants must demonstrate varying degrees of – among other factors - use, agricultural commodity production, acreage, anticipated annual gross income from production, public availability for recreation/scenic beauty, and/or annual tree growth. Minor subdivisions are permitted for participants including one 2-acre residential lot annually

but totaling no greater than 10% of the tract area or 10 acres, whichever is less. Participants may leave the program; however, to discourage such exits, upon removal the affected property is subject to roll-back taxes of up to seven years plus interest. As Plate 3 illustrates, Clean and Green program participation is high in Warrington Township and widespread throughout its boundaries, regardless of municipal zoning designations. This demonstrates the importance of the Program to the people and to the ongoing economic sustainability of the farming industry. It is also an indicator of the continued production potential of Warrington Township's valuable agricultural resources.

Plate 4 attached hereto identifies the current boundaries of the Township's Agricultural Security Area (ASA). This a voluntary participation program with no attached development restrictions, which originates from Pennsylvania Act 43, also known as the "Agricultural Security Area Law." Local municipalities may establish an ASA with 250 acres or more, owned by one or more persons, of lands used for the production of crops, livestock and livestock products. ASAs are to be reviewed every seven years by the municipality's ASA advisory committee. While participation in the ASA doesn't protect land from being developed, it provides other protections which are attractive to the farming industry. ASA participation prevents local government from imposing regulations that unreasonably restrict farm operations and farm structures. It also protects farm operations from public nuisance complaints and limits the ability of government to condemn land for projects. From an environmental standpoint, it also prohibits the siting of hazardous waste treatment or storage facilities. Participation in the ASA is a prerequisite for any property applying to the County's Agricultural Conservation Easement program. The 2006 Comprehensive Plan identified 98 ASA participating parcels totaling 5,410 acres. Warrington Township staff have confirmed that these numbers were not accurate and the correct figures for 2021 are 77 parcels with a total of 4,007 acres (or 17% of the Township's total land area). The ASA program is a greater indicator of long-term commitment to agriculture than the Clean and Green program as the benefits extend beyond simple economics.

Conservation easements currently established in Warrington Township are illustrated on the attached Plate 5. Easements are currently available for purchase or donation in York County through the County's Agricultural Easement Program, overseen by the County's Agricultural Land Preservation Board, or through private non-profit organizations such as the Farm & Natural Lands Trust of York County, the North American Land Trust, and the Heritage Conservancy. The process to secure a conservation easement for a property, especially when the applicant is seeking a purchase rather than a donation, can be competitive involving ranking, reviewing, and scoring for factors such as soils classification, land productivity, likelihood of conversion to non-agricultural use, pre-existing development restrictions, rural location, and demonstration of best management practices.

To date, 14 Warrington Township properties have successfully established conservation easements on a total of 1,313 acres. Other properties within the Township have recently sought similar easements but have not been successful. One of the determining factors that contributes to this lack of easement success is the inability to score points due to Warrington Township's lack of strong agricultural preservation zoning controls. In August of 1998, Warrington Township amended its zoning ordinance to eliminate the sliding scale method of development restrictions. The sliding scale method employed a formula to determine the maximum number of lots permitted for subdivision based on the acreage of any property. At the time, this method was viewed by the Township as overly burdensome to the property owner in contrast to any perceived community benefit.

When discussing land preservation efforts in Warrington Township, it must also be recognized that a significant portion of the Township is de facto preserved due to other circumstances. 3,873 acres (another 17% of the Township's total acreage) are controlled by the Township or by he State via State Gamelands No. 242 or Gifford Pinchot State Park.

Based on the preceding data, Warrington Township recognizes it is blessed with an abundance of prime farmland, a desirable open and rural environment, and a strong agricultural community. Such a wealth of resources is also in most cases nonrenewable and, therefore, deserving of consideration for additional land use and development protections. Our analysis will now turn to an examination of the existing C and RA zones to determine an appropriate method for identifying those properties on which the Township could successfully employ agricultural preservation zoning techniques to ensure their community benefits will continue to be available for future generations while also still allowing a reasonable option for limited development. From a development perspective, Warrington Township is already hampered to a great degree due to its lack of available centralized water and sanitary sewer facilities. For the foreseeable future, developers must rely on individual wells and on-lot sewage disposal systems unless a significant investment is made to design, permit, construct, operate and maintain a private system of such utilities. The lack of public utilities can also be a deterrent to certain agricultural preservation efforts as the possibilities for smaller lots and clustering in a smaller area are absent.

Primary considerations for a potential Township zoning system to promote greater levels of agricultural preservation include 1) location with respect to current zoning districts, 2) presence of prime agricultural land, and 3) functional size of the property for agricultural use. Plates 1 and 2 have previously been discussed and illustrate the C and RA zone geographic limits and the location of Class I, II, and III soils. Plate 6 is now introduced to illustrate those properties in the C zone that are 25 acres or greater and 50 acres or greater. It also illustrates properties in the RA zone that are 12 acres or greater as well as 25 acres or greater and 50 acres or greater. When combined with the current minimum lot size subdivision requirements for the C (3 acres) and RA (60,000 square feet) zones, this data evolves into the concept of an Agricultural Preservation Overlay Zone.

As proposed here, the Agricultural Preservation Overlay Zone would be applicable to properties in the C and RA zones only. Affected properties in both zones would have to include a certain minimum acreage (30 acres for the C zone and 12 acres for the RA zone) and a minimum 25% of its total lot area as prime agricultural land (Class I, II and III soils). If applicable to the overlay, the subdivision or land development of an affected parcel would be limited by a percentage-based scale. The percentage-based scale technique is perceived as a more fair and less complex system than the previously utilized pre-1998 sliding scale method. A percentage of the original acreage of the property would be the maximum area allowed for development (20% for the C zone and 25% for the RA zone). The existing minimum lot size requirements would continue to be used for both zones and allow the smallest affected parcels to develop at least one additional dwelling unit; but, regardless of the number of proposed lots, in no case would development be allowed to exceed the maximum resulting acreage. A critical element of this technique involves requiring development to be located on portions of the property which offer the least potential for agricultural productivity. Such lands would exhibit characteristics such as poor soils, rock outcroppings, shallow depth to rock, swamps, heavily wooded areas, and steep slopes.

Plate 7 attached hereto illustrates those parcels that are likely to be subject to the described Agricultural Preservation Overlay Zone in both the C and RA zones considering their current acreages and their onsite soils.

For reference, the C zone includes a total of 581 total parcels of land. Six of these parcels are 100 acres or greater in area (1%). 21 are 50 acres or greater (3.6%). 38 are 30 acres or greater (6.5%) while 46 are 25 acres or greater (7.9%).

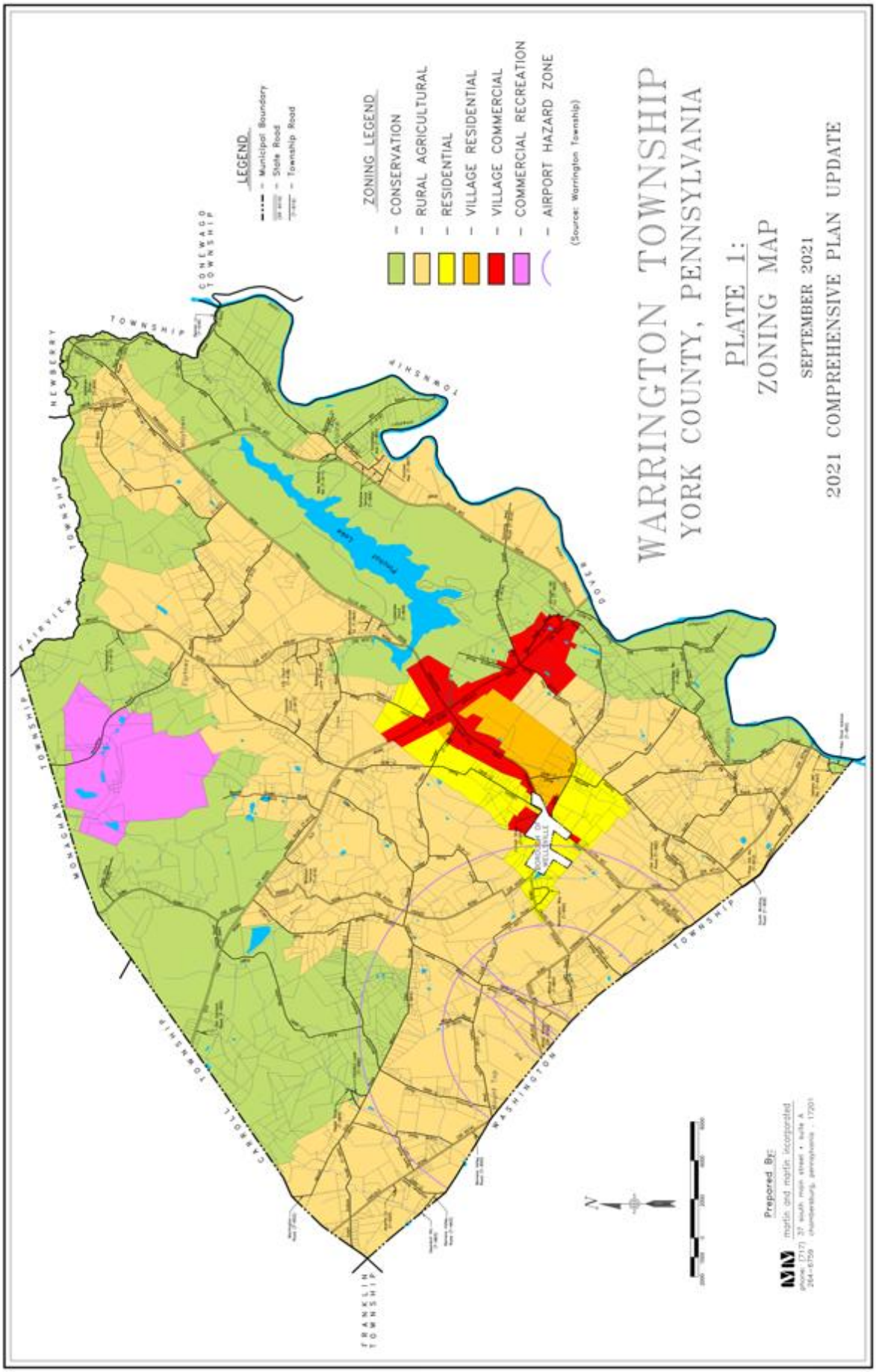
Alternatively, in the RA zone there are 1,286 total parcels of land. Fifteen of these parcels are 100 acres or greater in area (1.2%). 46 are 50 acres or greater (3.6%). 85 are 25 acres or greater (6.6%). 179 are 12 acres or greater (13.9%). From an alternate perspective of acreage, as opposed to number of parcels, there are a total of 10,675 acres of land currently zoned RA. 100-acre or greater parcels account for 19.8% of the total area. Parcels 50 acres or greater account for 40.9%. Parcels of 25 acres or greater account for 53.1%. And, finally, parcels of 12 acres or greater total 68.5% of the total lands currently zoned RA in Warrington Township.

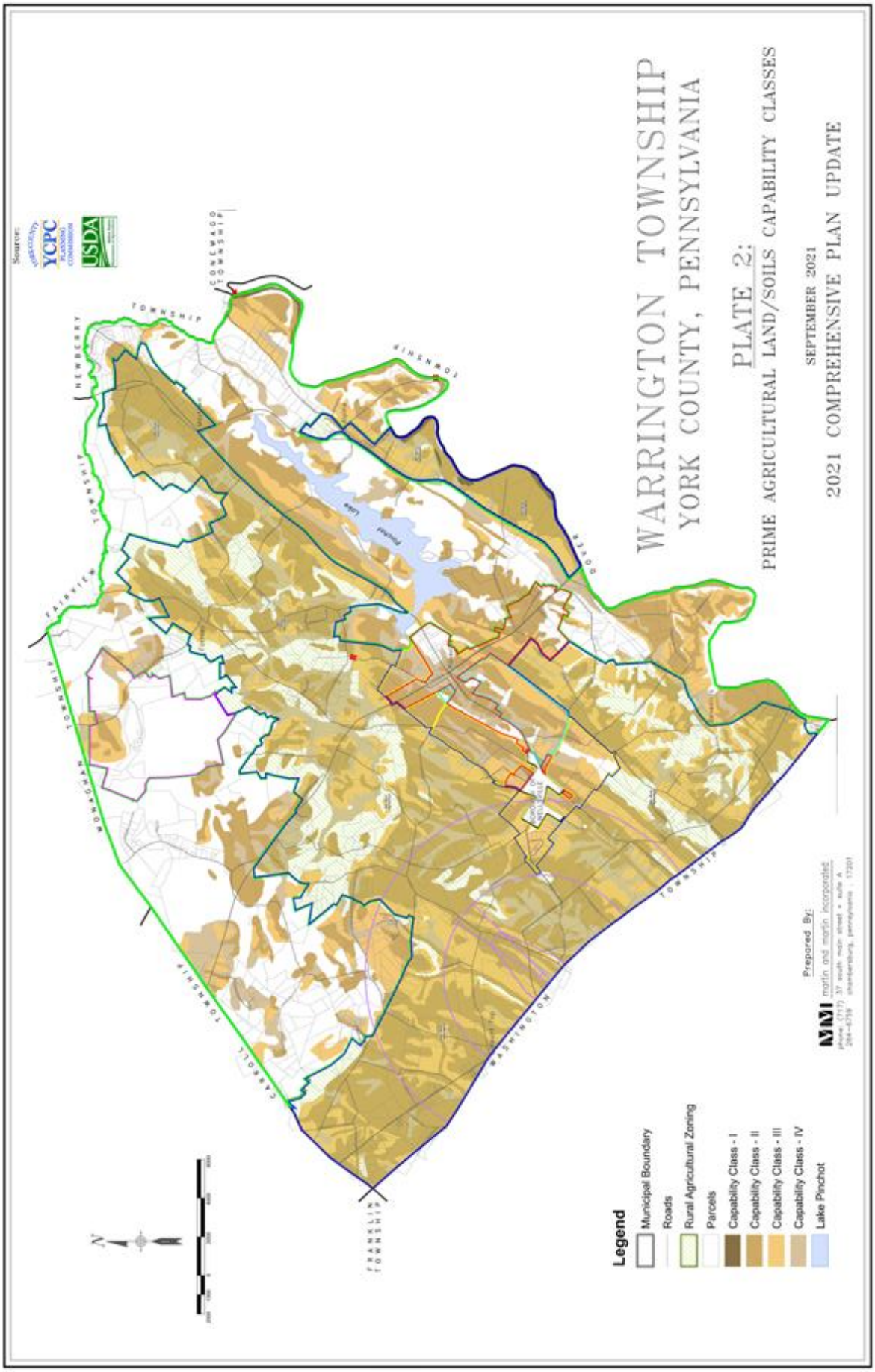
While the majority of the affected 12+ acre parcels in the RA zone include at least 25% prime agricultural land, only approximately 13 of the affected 30+ acre parcels include the minimum percentage of Class I, II and III soils. Most of these C zone properties are located along the Township's eastern boundary with the Conewago Creek.

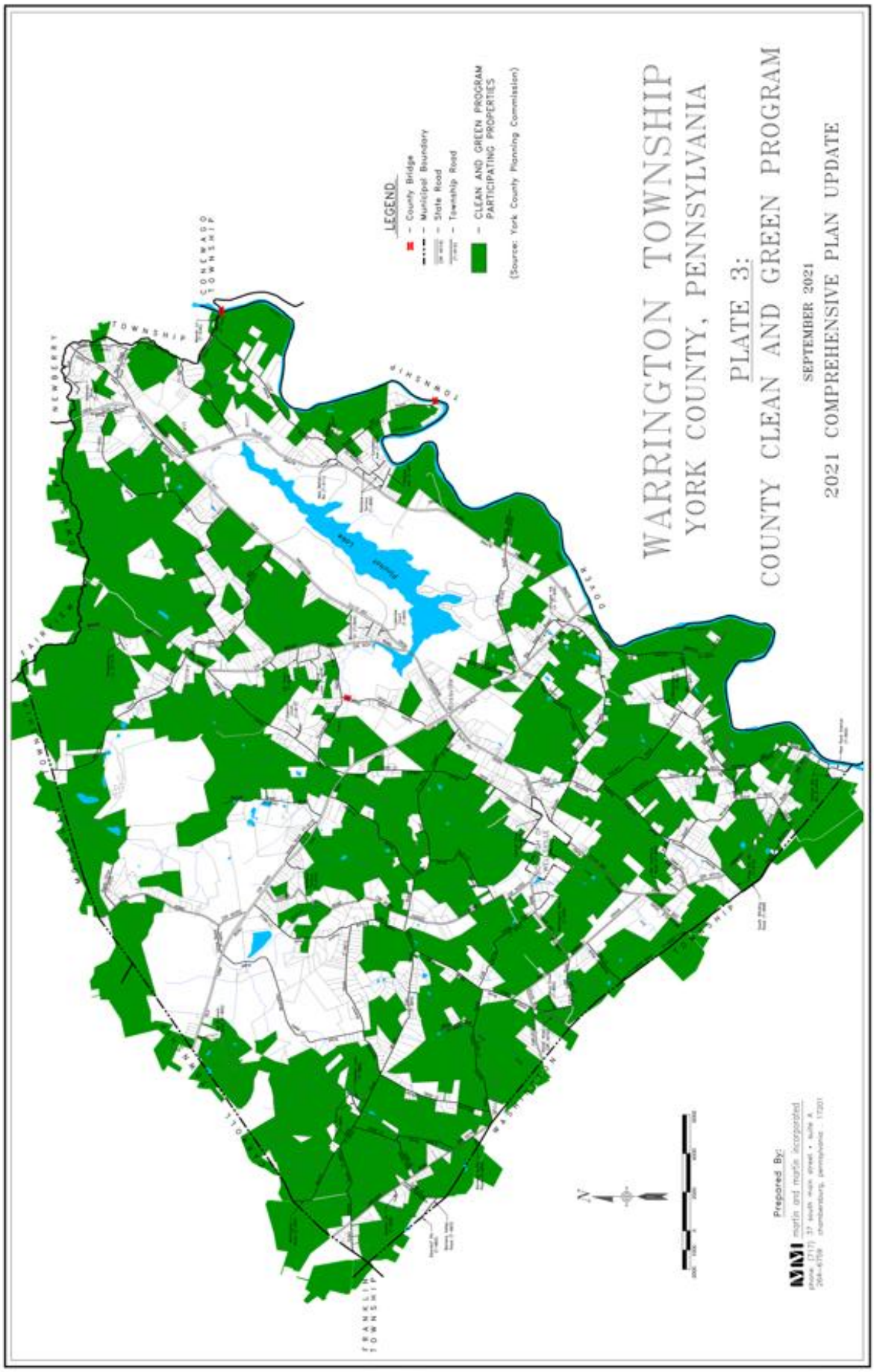
Introducing such a zoning program and its resulting impact on land preservation for agriculture within Warrington Township should prove significant in the coming years. As the Township's current method of large lot zoning has not proven to be effective in the challenge of agricultural land preservation it has also offered no quantifiable land use support to local farmers competing within the County's Conservation Easement program. By instituting the overlay techniques introduced above, the Township will effectively diminish the primary threat to sustainable farmland: the subdivision of working farms of a viable acreage into smaller residential development tracts. Such a loss of valuable agricultural land is incredibly difficult, if not impossible, to recapture. The proposed Warrington Township Agricultural Preservation Overlay Zone, if crafted and administered properly and allowed sufficient time to produce results, will accomplish three major elements of any successful land preservation program: 1) control the number of new dwelling units, 2) limit the acreage of land subdivided for speculative purposes, and 3) assure that new construction is relegated to lands with the least potential for farm production. A well-designed agricultural preservation zoning program will help stabilize the agricultural community's prospects for success, insulate the Township's farmlands from further separation and encroachment of incompatible uses, and demonstrate irrefutable support and municipal recognition for farming as a valuable, ongoing community resource.

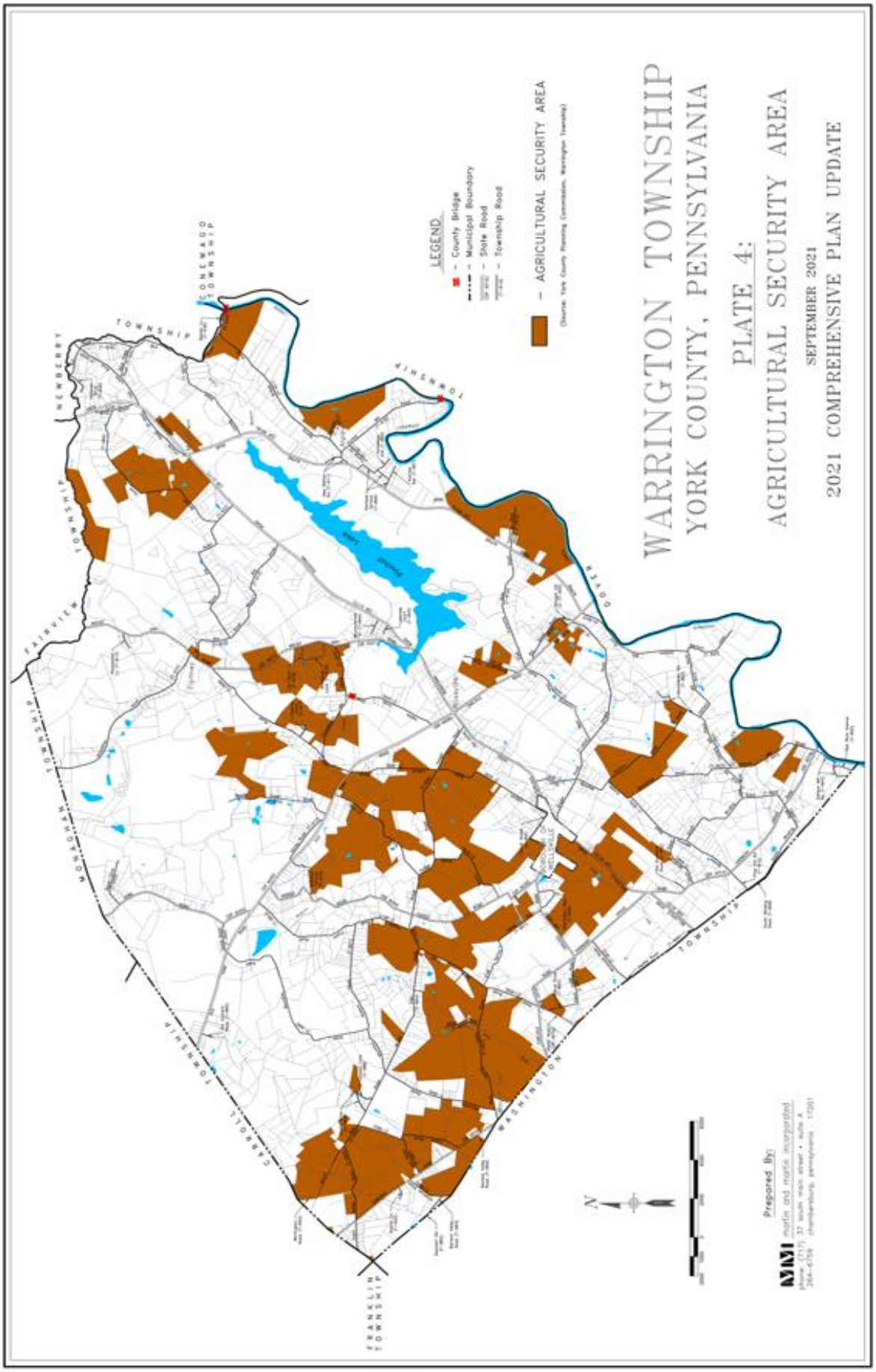
EXHIBITS

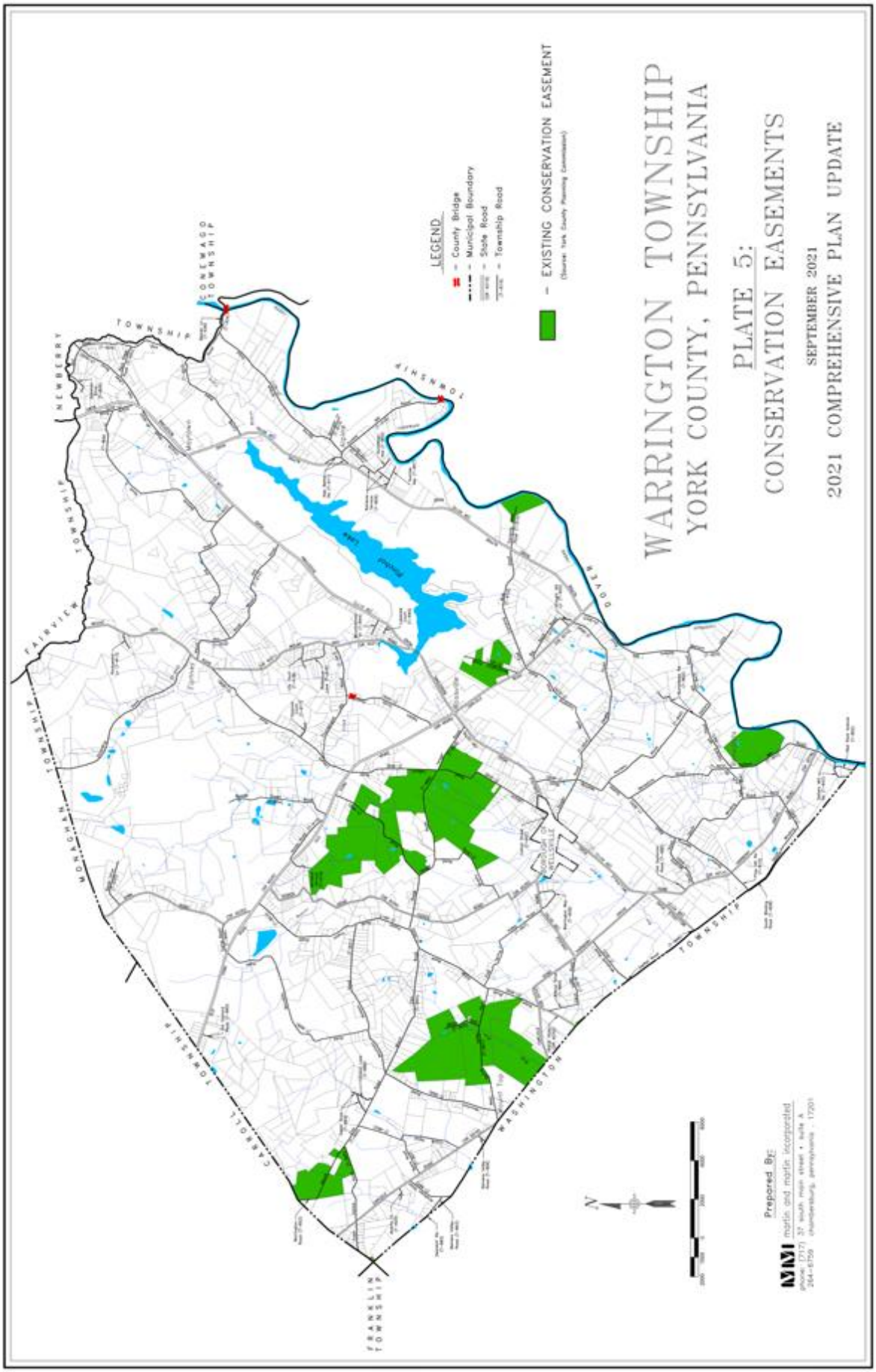
Plate 1 – Zoning Map
Plate 2 – Prime Agricultural Land / Soils Capability Classes
Plate 3 – County Clean and Green Program
Plate 4 – Agricultural Security Area
Plate 5 – Conservation Easements
Plate 6 – Significant Property Acreages
Plate 7 – Proposed Agricultural Preservation Zoning Overlay

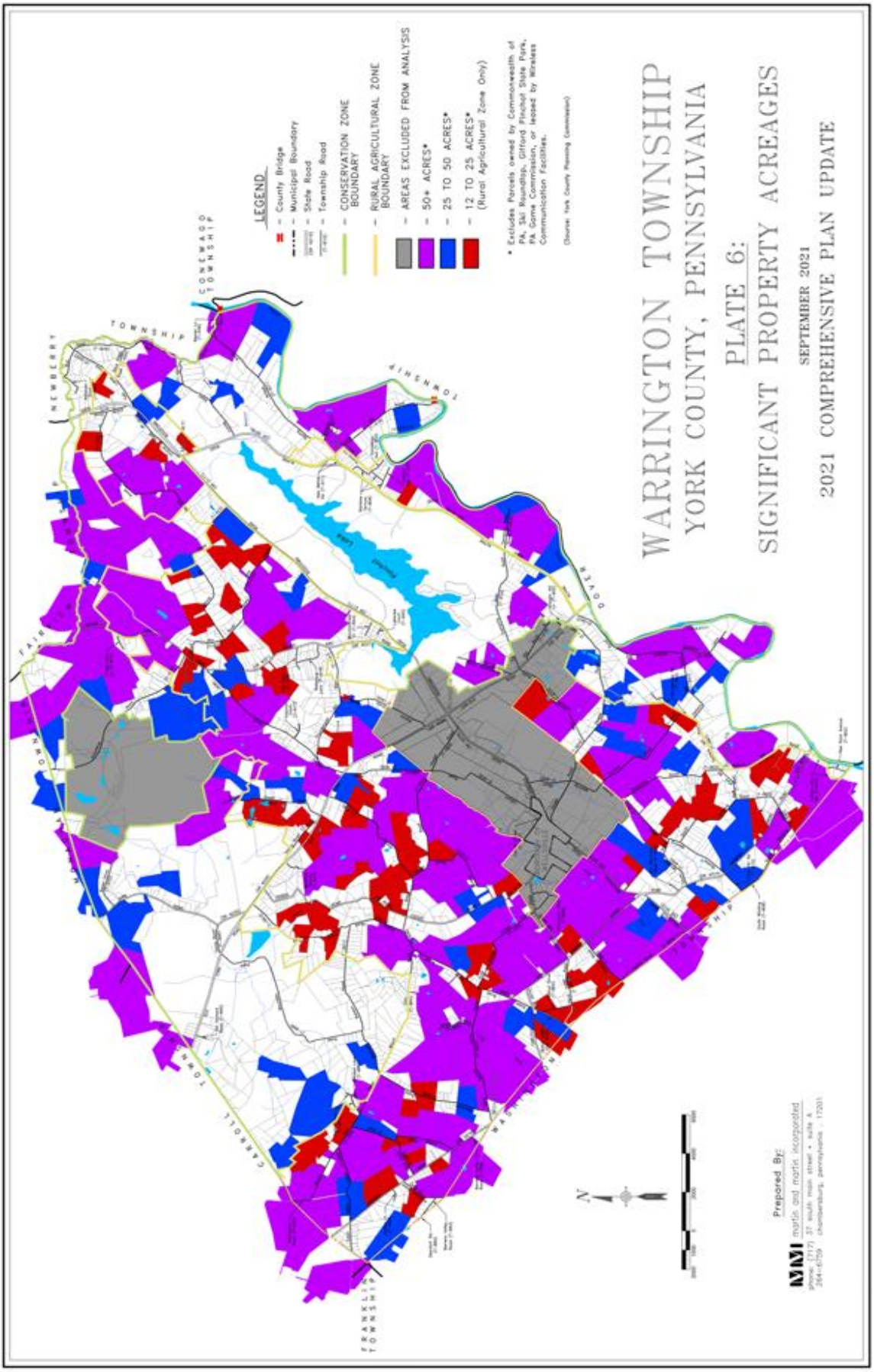

WARRINGTON TOWNSHIP
YORK COUNTY, PENNSYLVANIA
PLATE 1:
ZONING MAP
SEPTEMBER 2021
2021 COMPREHENSIVE PLAN UPDATE
ZONING LEGEND
CONSERVATION
RURAL AGRICULTURAL
RESIDENTIAL
VILLAGE RESIDENTIAL
VILLAGE COMMERCIAL
COMMERCIAL RECREATION
AIRPORT HAZARD ZONE
(Source: Warrington Township)
LEGEND
Municipal Boundary
State Road
Township Road
CONEWAGO TOWNSHIP
NEWBERRY TOWNSHIP
FAIRVIEW TOWNSHIP
MONAGHAN TOWNSHIP
CARROLL TOWNSHIP
FRANKLIN TOWNSHIP
WASHINGTON TOWNSHIP
BOWER
Prepared By:
martin and martin incorporated

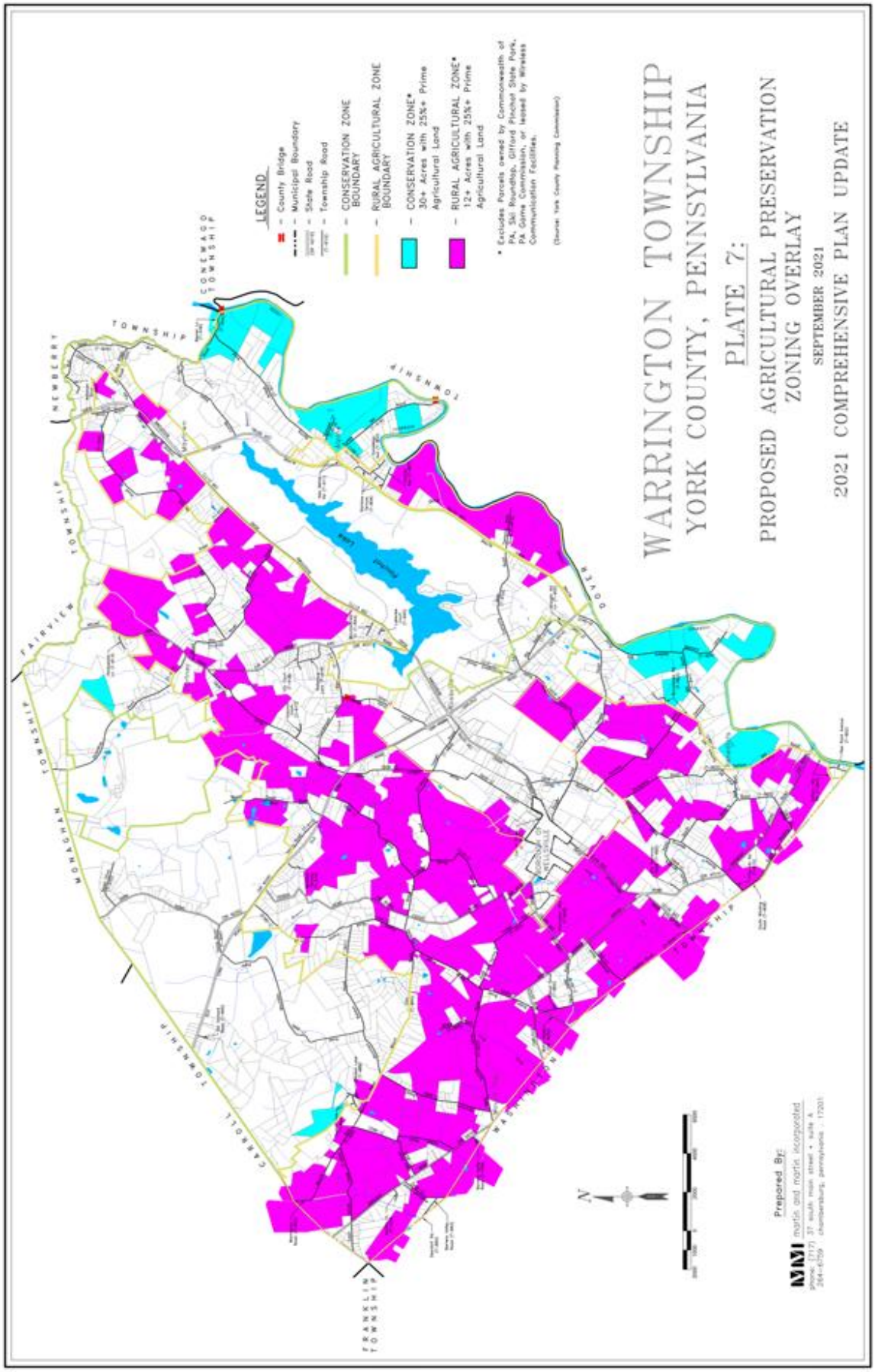

WARRINGTON TOWNSHIP
YORK COUNTY, PENNSYLVANIA
PLATE 2:
PRIME AGRICULTURAL LAND/SOILS CAPABILITY CLASSES
SEPTEMBER 2021
2021 COMPREHENSIVE PLAN UPDATE
Source:
YCPC
USDA
Prepared By:
Legend
Municipal Boundary
Roads
Rural Agricultural Zoning
Parcels
Capability Class - I
Capability Class - II
Capability Class - III
Capability Class - IV
Lake Pinchot
FRANKLIN TOWNSHIP
CARROLL TOWNSHIP
WASHINGTON TOWNSHIP
NEWBERRY TOWNSHIP
CONEWAGO TOWNSHIP
FAIRVIEW TOWNSHIP
COPPY
N


WARRINGTON TOWNSHIP
YORK COUNTY, PENNSYLVANIA
PLATE 3:
COUNTY CLEAN AND GREEN PROGRAM
SEPTEMBER 2021
2021 COMPREHENSIVE PLAN UPDATE
LEGEND
County Bridge
Municipal Boundary
State Road
Township Road
CLEAN AND GREEN PROGRAM PARTICIPATING PROPERTIES
(Source: York County Planning Commission)
NEWBERRY TOWNSHIP
CONEWAGO TOWNSHIP
FRANKLIN TOWNSHIP
Prepared By:
MMI
martin and martin incorporated


WARRINGTON TOWNSHIP
YORK COUNTY, PENNSYLVANIA
PLATE 4:
AGRICULTURAL SECURITY AREA
SEPTEMBER 2021
2021 COMPREHENSIVE PLAN UPDATE
LEGEND
County Bridge
Municipal Boundary
State Road
Township Road
AGRICULTURAL SECURITY AREA
(Source: York County Planning Commission, Warrington Township)
CONEWAGO TOWNSHIP
NEWBERRY TOWNSHIP
FAIRVIEW TOWNSHIP
MONAGHAN TOWNSHIP
CARROLL TOWNSHIP
FRANKLIN TOWNSHIP
WASHINGTON TOWNSHIP
DOVER TOWNSHIP
Prepared By:
MMI


WARRINGTON TOWNSHIP
YORK COUNTY, PENNSYLVANIA
PLATE 5:
CONSERVATION EASEMENTS
SEPTEMBER 2021
2021 COMPREHENSIVE PLAN UPDATE
LEGEND
County Bridge
Municipal Boundary
State Road
Township Road
EXISTING CONSERVATION EASEMENT
(Source: York County Planning Commission)
Prepared By:
martin and martin incorporated
37 south main street • suite a
chambersburg, pennsylvania • 17201
NEWBERRY TOWNSHIP
FAIRVIEW TOWNSHIP
MONAGHAN TOWNSHIP
CONEWAGO TOWNSHIP
DOVER TOWNSHIP
WASHINGTON TOWNSHIP
CARROLL TOWNSHIP
FRANKLIN TOWNSHIP
Pinchot Lake
N


WARRINGTON TOWNSHIP
YORK COUNTY, PENNSYLVANIA
PLATE 6:
SIGNIFICANT PROPERTY ACREAGES
SEPTEMBER 2021
2021 COMPREHENSIVE PLAN UPDATE
LEGEND
County Bridge
Municipal Boundary
State Road
Township Road
CONSERVATION ZONE BOUNDARY
RURAL AGRICULTURAL ZONE BOUNDARY
AREAS EXCLUDED FROM ANALYSIS
50+ ACRES*
25 TO 50 ACRES*
12 TO 25 ACRES* (Rural Agricultural Zone Only)
* Excludes Parcels owned by Commonwealth of PA, Ski Roundtop, Gifford Pinchot State Park, PA Game Commission, or leased by Wireless Communication Facilities.
(Source: York County Planning Commission)
NEWBERRY TOWNSHIP
CONEWAGO TOWNSHIP
FAIR VIEW TOWNSHIP
DOVER TOWNSHIP
CARROLL TOWNSHIP
FRANKLIN TOWNSHIP
WARRINGTON TOWNSHIP
N
Prepared By:
MMI north and north incorporated
phone: (717) 37 south main street • suite A
264-6759 chambersburg, pennsylvania 17201


WARRINGTON TOWNSHIP
YORK COUNTY, PENNSYLVANIA
PLATE 7:
PROPOSED AGRICULTURAL PRESERVATION ZONING OVERLAY
SEPTEMBER 2021
2021 COMPREHENSIVE PLAN UPDATE
LEGEND
County Bridge
Municipal Boundary
State Road
Township Road
CONSERVATION ZONE BOUNDARY
RURAL AGRICULTURAL ZONE BOUNDARY
CONSERVATION ZONE* 30+ Acres with 25%+ Prime Agricultural Land
RURAL AGRICULTURAL ZONE* 12+ Acres with 25%+ Prime Agricultural Land
* Excludes Parcels owned by Commonwealth of PA, Ski Roundtop, Gifford Pinchot State Park, PA Game Commission, or leased by Wireless Communication Facilities.
(Source: York County Planning Commission)
CONEWAGO TOWNSHIP
NEWBERRY TOWNSHIP
FAIRVIEW TOWNSHIP
MONAGHAN TOWNSHIP
CARROLL TOWNSHIP
FRANKLIN TOWNSHIP
DOVER TOWNSHIP
WARRINGTON TOWNSHIP
N
Prepared By:
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264-6759 chambersburg, pennsylvania 17201

XI. Implementation

"Rural Living through Progressive Action"

The development of this Plan has been an ambitious and educational process. Goals have been deliberately set high and many specific recommendations have been made. But this is just the beginning. The Plan outlines a grand strategy, but action and dogged determination will be necessary if the Plan's goals are to be achieved. This final Chapter will provide a list of tasks that must be undertaken to optimally influence the Township's future.

This strategy will require adjustment to incorporate the Township's various municipal planning tools, including its Zoning Ordinance, Subdivision and Land Development Ordinance and other plans and ordinances. It will also rely substantially on meeting and coordinating with the School District, adjacent municipalities, and public service providers and civic organizations on various planning-related issues.

To operationalize this implementation strategy, the table on the following pages identifies the various tasks to implement, the party or parties responsible for their implementation, and the time line by which the task should initiate. Along with the task, a page number reference appears to direct local officials to the location within the Plan that lists the specific recommendations and supporting analysis. Tasks are chronologically grouped by topic as analyzed within the Plan.

Tasks recommended for immediate action are those that are urgent or can be easily undertaken now. Those that listed for short-term implementation should begin within the next two years or when opportunities arise for earlier initiation. Finally, those tasks slated for long-term implementation may require significant further analysis and additional resources in order to implement them. Ongoing tasks are also noted.

The completion of tasks should be spread out over a several-year period so as not to overwhelm local resources and manpower. If at any time, Township officials determine that certain tasks need attention sooner or beneficial opportunities arise, such tasks should initiate before other priority tasks.

Recommended task:	Responsible Parties	Time-frame	Plan reference (pgs)
1. It is important for all persons involved and/or interested in the future of the Warrington Township to read and understand this Plan. Local decision-makers should keep the Plan handy when evaluating future development proposals, service adjustments or public investments.	Local staff, & officials	ongoing	3
Recommendations related to the protection of Natural & Cultural Features. (Chapter III)			
2. At such time as a public water supply may be developed, implement a well-head protection plan.	Board of Supervisors.	Long-term & ongoing	12-15 & 93
3. Prime farm soils and soils of Statewide importance should be protected from conversion to other uses through appropriate planning and zoning.	Planning Commission & Board of Supervisors.	Ongoing	18
4. Future planning should avoid intensive development in areas with severe soil constraints or be accompanied by strict siting standards in local zoning or subdivision and land development ordinances (SLDO) to protect their vulnerable characteristics.	Planning Commission & Board of Supervisors	Ongoing	19-20
5. Investigate the quality of water within the Township's rural wooded settings to determine if they quality as protected waters under State law. Should any segments gain protected status, adopt specific practices and policies to protect such waters	Board of Supervisors.	Long-term & ongoing	21-22
6. The Township Zoning Ordinance should be adjusted to require the reporting of waste handling techniques in rural areas and associated with large-scale industries, concentrated feeding animal operations (CAFOs) and/or other uses that generate large waste volumes or hazardous wastes.	Planning Commission & Board of Supervisors.	Urgent	23
7. Local Officials should meet with the local watershed group to suggest projects to improve surface water quality within the Beaver Creek watershed.	Planning Commission & Board of Supervisors.	Urgent	23-26
8. Apply rigorous BMPs associated with stormwater management within the Beaver Creek watershed.	Planning Commission & Board of Supervisors.	Urgent & ongoing	23-26
9. Avoid planning future development within wetlands.	Planning Commission & Board of Supervisors.	Ongoing	26-27
10. Strengthen floodplain regulations to include the 500 year floodplain and alluvial soils.	Planning Commission & Board of Supervisors.	Urgent	27-29
11. Review the stormwater management ordinance with its engineer and make necessary revisions to incorporate the use of BMPs.	Engineer, Planning Commission & Board of Supervisors.	Short-term	29 - 31

Recommended task:	Responsible Parties	Time-frame	Plan reference (pgs)
12. At the appropriate future time, local officials should cooperate with the County in the preparation of its Act 167 Stormwater Management Plans and subsequent recommended revisions to local ordinances.	Engineer, Planning Commission & Board of Supervisors.	Long-term	31
13. Require the preparation of an Environmental Impact Assessment prior to the approval of any new developments or subdivisions within identified natural areas or habitats	Planning Commission & Board of Supervisors.	Urgent	31-35
14. Adopt forestry management regulations.	Planning Commission & Board of Supervisors.	Urgent	35-36
15. Adopt zoning and subdivision and land development standards limiting the removal of trees in sensitive areas, and encouraging the preservation of wildlife corridors.	Planning Commission & Board of Supervisors.	Short-term	35-36
16. Consider the benefits of a local voluntary historic preservation program.	Planning Commission & Board of Supervisors.	Long-term	37-40
Recommendations related to Demographics. (Chapter IV)			
17. Provide for a target mix of housing types to offer greater housing diversity within the Township.	Planning Commission & Board of Supervisors.	Urgent & ongoing	49
Recommendations related to the delivery of Public Facilities. (Chapter VII)			
18. Closely monitor growth within the Township so as to proactively plan for facility expansion well in advance of actual demand for space.	School District	Ongoing	68
21. Improve the process of residential development review and allocate manpower and resources so as to properly respond to such applications and provide meaningful feedback to the municipalities.	School District	Short-term & ongoing	68
22. Revise subdivision and land development application requirements so that adequate and timely notification to the School District is assured.	Planning Commission & Board of Supervisors.	Short-term & ongoing	68
23. Fully cooperate with the School District and contribute resources to the entire parks and recreations system.	Planning Commission, Board of Supervisors & School District	ongoing	68
24. Ensure that the Future Land Use and Zoning Maps provide for regional parks amid settings that protect their integrity and offer suitable levels of improvement for related services.	Planning Commission & Board of Supervisors	ongoing	69-71
25. Focus its effort on improving its current undeveloped 20-acre community park	Board of Supervisors.	Short-term	71
26. acquire and develop an additional nine acres of community parkland by the year 2020	Board of Supervisors.	Long-term	71

Recommended task:	Responsible Parties	Time-frame	Plan reference (pgs)
27. Educate landowners and developers of the importance of riparian buffers, and the Township's intent to provide for them..	Planning Commission & Board of Supervisors.	ongoing	75-77
28. Recommend that the School District develop and regularly offer a streamside riparian buffer workshop as part of its curriculum.	Planning Commission & Board of Supervisors.	Short-term & ongoing	77
29. Require the installation of riparian buffers for uses that have a potential for generation of surface water pollution as part of its zoning approval process.	Planning Commission & Board of Supervisors.	Short term & ongoing	77
30. Adopt mandatory dedication standards within its Subdivision and Land Development Ordinance.	Planning Commission & Board of Supervisors.	Urgent	77-79
31. Use moneys collected using the mandatory dedication of parkland to support the development the Township's community park.	Board of Supervisors	Ongoing	77-79
32. Continue to rely upon patrol from the PA State Police with periodic input be furnished to the Department for acute patrol needs.	Board of Supervisors	Ongoing	79-80
33. At such time as popular public sentiment shifts towards a higher level of police protection, partner with one or more of its neighboring municipalities to participate in a PA Department of Community & Economic Development (DCED) Regional police feasibility study.	Board of Supervisors	Long term	80-81
34. Cooperate with local emergency service providers to enhance strategies for volunteer recruitment, specialized training, education of residents for their financial and manpower support, exploration of "other" funding mechanisms, adoption of uniform driveway design standards that provide for adequate emergency vehicle access, installation of dry hydrants and provision of detailed GIS mapping to each emergency service provider.	Board of Supervisors, Municipal Officials from the neighboring townships & key personnel from local fire & ambulance companies.	Long term	81-89
Recommendations related to the delivery of Utilities. (Chapter VIII)			
35. Direct growth into areas with public sewer.	Planning Commission & Board of Supervisors	Ongoing	91

Recommended task:	Responsible Parties	Time-frame	Plan reference (pgs)
36. Add a new Section to the Township Zoning Ordinance relating to the use of on-lot sewage disposal systems that should: • Require new uses to test for and reserve two disposal areas (primary and alternate) for sewage on the site to be approved by the SEO; • Permanently protect the reserve disposal site from disturbance until activated; • Allow the enlargement of lot size, beyond specified maximums by conditional use, to avoid an unacceptable level of nitrate-nitrogen in adjoining groundwater to be determined through the DEP sewer module review process; • Enable the use of a sewage effluent dispersal easement, by conditional use in-lieu of enlarged lot area as described above; and, • Require compliance with the Township's recommended On-lot Sewage Disposal System Management Ordinance. • Require properties with on-lot sewers to contain at least one acre to accommodate a primary and replacement disposal site and to identify and protect such alternate disposal site as part of the permit approval process.	Planning Commission & Board of Supervisors	Urgent & ongoing	92-93
37. Scrutinize the availability of groundwater for domestic use prior to the creation of new dwelling lots as part of its initial subdivision and land development review process.	Board of Supervisors	Ongoing	93-95
38. Consider the adoption of a well-drilling ordinance to require the drilling of wells prior to the subdivision of lots in low-yield areas of the Township.	Board of Supervisors	Urgent	93-95
39. Promote water conservation, including grey-water recycling, and water-saving plumbing	Board of Supervisors	Ongoing	93-95
40. Adopt an ordinance that requires abandoned wells to be properly filled and sealed by licensed well drillers.	Board of Supervisors	Urgent & ongoing	93-95
41. Restrict the location of any public or commercial water source to one of these higher-yield geologic formations and within close proximity of its planned residential and commercial/industrial growth areas	Planning Commission & Board of Supervisors	Long - term	93-95
42. Continue to cooperate with the York County Solid Waste Authority and participate in the voluntary curbside recycling program.	Board of Supervisors	Ongoing	95-96
43. Make use of PA One-Call system with respect to use and developments proposed along the Township's overhead and underground utility rights-of-way.	Residents & developers	Ongoing	97
44. Promote the use of co-located cell towers through zoning incentives.	Board of Supervisors	Urgent	97
Recommendations related to the delivery of Transportation (Chapter IX)			
45. Act with patience to get State-owned roadway design deficiencies corrected with priority given to roads with higher traffic volumes.	Board of Supervisors & road foreman	Ongoing	102
46. Require new developments to improve adjoining road frontages in compliance with required design standards.	Board of Supervisors & road foreman	Ongoing	102
47. Reduce and discourage the number of driveway cuts along the Township's arterial collector roads.	Board of Supervisors	Ongoing	102
48. Encourage joint access with shared parking and loading among adjoining uses.	Board of Supervisors	Urgent & ongoing	102

Recommended task:	Responsible Parties	Time-frame	Plan reference (pgs)
49. Consider a campaign of road-take back and resurfacing with a gravel surface as a means of improving compatibility and safety while avoiding an inducement to community growth.	Board of Supervisors & road foreman	ongoing	105
50. Oversee completion of various local road projects.	Board of Supervisors & road foreman	Short term	109
51. Monitor the County & State's efforts to improve truck traffic access onto US Route 15 from Old York Road which will then reroute PA Route 74.	Board of Supervisors & road foreman	Ongoing	109
52. Seek Federal funding from the County to improve four eligible bridge improvement projects.	Board of Supervisors & road foreman	Short-term	109
53. Consider efforts to promote an overland alignment of the Mason Dixon Trail.	Planning Commission & Board of Supervisors	Long term	110
54. Lobby the County Planning Commission and PA DOT's Maintenance Manger to widen road shoulders to allow for a bicycle path along the County's designated bike routes.	Board of Supervisors	Long term	110-111
55. Apply an Airport Overlay Zone near the Kampel Airport to confine local aviation-based uses and regulate structural height.	Planning Commission & Board of Supervisors	Short term	111- 112
Recommendations related to Future Land Use. (Chapter X)			
56. Adjust the zoning boundaries of the Official Zoning Map in accordance with those depicted on the Future Land Use Map of this Plan.	Planning Commission & Board of Supervisors	Urgent	113
57. Commit to updating the Comprehensive Plan by the year 2020.	Planning Commission & Board of Supervisors	Long-term	113
58. Revise the current Conservation Zone as depicted on the Future Land Use Map to: ▪ Protect valuable natural features in compliance with Section 604 of the Municipalities Planning Code; ▪ Apply a "hands-off" and "by-right" regulatory approach to typical rural use and activities; ▪ Include liberal accessory use regulations that specifically include farm occupations, roadside stands and other rural pursuits, provided that these uses have little impact and that adequate provision is made for the safe disposal of wastes; ▪ Employ an effective OLDs management system; ▪ Regulate forestry and logging operations in accordance with applicable conservation requirements and practices; and, ▪ Include riparian buffer regulations.	Planning Commission & Board of Supervisors	Urgent	114-118

Recommended task:	Responsible Parties	Time-frame	Plan reference (pgs)
59. Revise the current Agricultural – Rural Zone as depicted on the Future Land Use Map to: ▪ Protect and preserves prime agricultural soils in compliance with Section 604 of the Municipalities Planning Code; ▪ Applies a "hands-off" and "by-right" regulatory approach to typical rural use and activities; ▪ Includes liberal accessory use regulations that specifically include farm occupations, roadside stands and other rural pursuits, provided that these uses have little impact and that adequate provision is made for the safe disposal of wastes; ▪ Uses separate provisions of concentrated animal feeding operations (CAFOs) that ensure proper siting, operation and disposal of wastes; ▪ Employ an effective OLDs management system; ▪ Includes riparian buffer regulations; and, ▪ Applies airport safety height restrictions imposed to protect the Airport Safety Zone associated with the Kampel Airport.	Planning Commission & Board of Supervisors	Urgent	119-120
60. Revise the current Residential Zone as depicted on the Future Land Use Map to: ▪ permits single family detached dwellings; ▪ consider the use of a capped sewer ordinance; and, • limit the use of duplexes only when both public sewer and public water are available.	Planning Commission & Board of Supervisors	Urgent	120-123
61. Create a new Village Residential Zone as depicted on the Future Land Use Map that: ▪ permits a target mixture of housing types, • reflects existing design standards; • promotes traditional village styles; • buffers adjoining important natural features, • strengthens accessory use requirements, • reflects historic character, and, • features community and civic uses.	Planning Commission & Board of Supervisors	Urgent	123-125
62. Create a new Village Commercial Zone as depicted on the Future Land Use Map that: • Limits overall retail size per store so to not exceed its local orientation; • Encourage the development of multi-shop arcades; • Limit sign sizes and orientations; • Promote shared use of access drives, and off-street parking and loading spaces; • Manages outdoor storage with screening; • Require front yard landscape strips; • Requires shielded on-site lighting of buildings; • Limits the level of public address systems; • Requires conditional use review of large scale or intensive uses.	Planning Commission & Board of Supervisors	Urgent	125-128
63. Create a new Commercial Recreation Zone with two-stage conditional use criteria that respond to the unique needs/impacts of the existing ski resort.	Planning Commission & Board of Supervisors	Urgent	128

Recommended task:	Responsible Parties	Time-frame	Plan reference (pgs)
64. Continue to permit nonprofit uses within their respective zones as they occur throughout the Township and are depicted on the Future Land Use Map.	Planning Commission & Board of Supervisors	Ongoing	129
Recommendations related to Implementation (Chapter XI)			
65. Conduct a formal review of the Plan at least every ten years in accordance with the Municipalities Planning Code.	Planning Commission & Board of Supervisors	Ongoing	147
66. Evaluate the Plan's effectiveness and performance against the current "issues of the day" to determine if adjustments or updates are warranted.	Planning Commission	Annually	147
67. Monitor the planning programs of nearby communities for the possibility of undertaking a future Regional comprehensive planning process.	Planning Commission & Board of Supervisors	Ongoing	147

The preceding table plots an ambitious list of recommended activities. These tasks are vital if the Township is to optimally manage its growth and development and to plan and implement its "vision" for the future. The completion of many of these tasks should result in an improved quality of life within the Township.

Municipal officials are responsible to monitor and evaluate the implementation strategy aimed at achieving the locally-expressed objectives and resultant recommendations set forth in this Plan. ***It is recommended that the Township Planning Commission schedule a regular evaluation of the Plan's effectiveness and performance against the current "issues of the day" on an annual basis to determine if adjustments or updates are warranted. Also the Municipalities Planning Code now requires municipalities to formally review their plans at least once every ten years to determine consistency between local plans, ordinances and County plans; therefore, it is likely that the status of this Plan will be under greater scrutiny than in the past.***

One of the most important advancements in community planning to occur within the recent past involves the Regional allocation of land use. The PA Municipalities Planning Code (MPC) has two applicable sections that enable this technique:

1. Section 811-A. of the MPC specifically authorizes a Regional allocation of land use when a Regional plan is adopted and implemented through a joint zoning ordinance of the participating municipalities. It states:

   *"**Area of Jurisdiction for Challenges.** In any challenge to the validity of the joint municipal zoning ordinance, the court shall consider the validity of the ordinance as it applies to the entire area of its jurisdiction as enacted and shall not limit its consideration to any single constituent municipality."*

2. Section 916.1.(h) of the MPC specifically authorizes a Regional allocation of land use when a Regional plan is adopted and individual zoning ordinances generally implement the Plan. It states:

"Where municipalities have adopted a multi-municipal comprehensive plan pursuant to Article XI but have not adopted a joint municipal ordinance pursuant to Article VIII-A and all municipalities participating in the multi-municipal comprehensive plan have adopted and are administering zoning ordinances generally consistent with the provisions of the multi-municipal comprehensive plan, and a challenge is brought to the validity of a zoning ordinance of a participating municipality involving a proposed use, then the zoning hearing board or governing body, as the case may be, shall consider the availability of uses under zoning ordinances within the municipalities participating in the multi-municipal comprehensive plan within a reasonable geographic area and shall not limit its consideration to the application of the zoning ordinance on the municipality whose zoning ordinance is being challenged."

While this Comprehensive Plan has been accomplished separately, ***local officials should monitor the planning programs of nearby communities for the possibility of undertaking a future Regional comprehensive planning process.*** This could enable a Regional allocation of all land uses, rather than requiring the Township to provide for all land uses, as is the case in this Plan.

Cooperation among all administrative bodies and levels of government is an essential component to a streamlined and successful implementation strategy. The continued use of public participation is also a very important duty of municipal officials. If, for some reason, the recommendations of this Plan do not appear to address the, then, current conditions, municipal officials should not hesitate to amend portions of this Plan or any other policy to rectify those deficiencies.

This Plan holds a wealth of information that can be easily accessed and understood. Its implementation will help residents, businesses and visitors know the Plan is vital, and that the future of the Township is deliberate, and the result of considerable analysis and public scrutiny.

WARRINGTON TOWNSHIP
RESOLUTION NO. 2022-06

WHEREAS, the Warrington Township Planning Commission forwarded to the Warrington Township Board of Supervisors revisions to the Township Comprehensive Plan for consideration of adoption and enactment; and

WHEREAS, the newly proposed Township Comprehensive Plan has been prepared in accordance with the Pennsylvania Municipalities Planning Code, Act 247, as amended, and has been transmitted by the Warrington Township Planning Commission to the Board of Supervisors; and

WHEREAS, the Warrington Township Board of Supervisors held a duly advertised public hearing on September 21, 2022, pursuant to the requirements of the Pennsylvania Municipalities Planning Code, Act 247, as amended.

NOW, THEREFORE, the proposed new Township Comprehensive Plan is hereby enacted and ordained by the Board of Supervisors of Warrington Township this 21st day of September, 2022.

ATTEST:

Renee Robison

Renee Robison, Secretary

BOARD OF SUPERVISORS OF
WARRINGTON TOWNSHIP

BY Jason A Weaver

Jason Weaver, Chairperson

Zachary Fickes, Vice-Chairperson

John Dockery, Supervisor

Edward Mattos, Supervisor

Michael Saylor, Supervisor