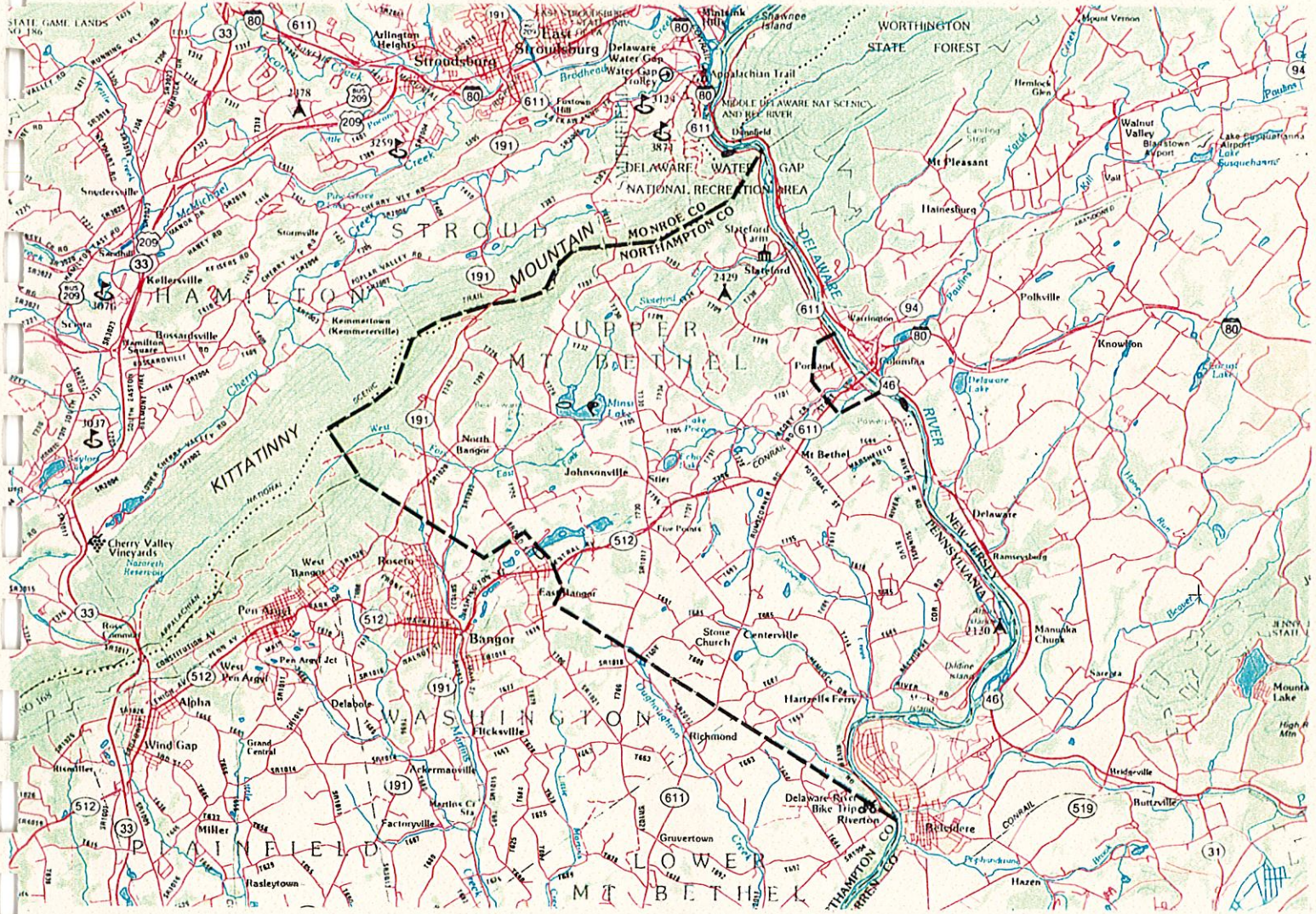


COMPREHENSIVE PLAN

2000 - 2020

UPPER MOUNT BETHEL TOWNSHIP NORTHAMPTON COUNTY, PA



PREPARED BY:
THE WAETZMAN PLANNING GROUP (MAY, 1994)
UPDATED AND REVISED (APRIL, 2001) BY:
MICHAEL CABOT ASSOCIATES, INC.

OFFICIALLY ADOPTED ON JULY 9, 2001

PREFACE
UPPER MOUNT BETHEL TOWNSHIP
COMPREHENSIVE PLAN

This Plan, originally dated May 12, 1994, was prepared by the Waetzman Planning Group, retained in 1992 by the Upper Mount Bethel Township Supervisors.

The Plan was reviewed by the Township and the Lehigh Valley Planning Commission (LVPC), including numerous meetings and discussions with the public and the Township Planning Commission for a period of over five years, but agreement could not be reached on all elements of the Plan.

It was not until February, 1999 that the Township retained the firm of Michael Cabot Associates, Inc., Community Planners to review the Plan, meet with the Supervisors, Planning Commission, the Township Environmental Advisory Council (EAC), LVPC, and the public to discuss elements of the Plan.

The new planning process continued into the year 2000, with a temporary delay due to the election of a new Board of Supervisors at the end of 1999. Progress was made in the development of a new Conceptual Land Use Plan and in other aspects of the Plan including densities of development and other activities to ensure maintenance of the retention of the rural character of the Township and the preservation of farmland and open space. Planning also included proposals for commercial, industrial, and other land uses to meet the future needs of the Township.

In July, 2000, the Supervisors retained an additional consultant, Princeton Hydro, LLC, an environmental consulting firm with academic training and experience in environmental planning, aquatic and wetland ecology, fishery biology, environmental risk analysis, hydrology, and stormwater engineering. That firm reviewed elements of the Plan and made recommendations in their area of expertise. Many meetings with the Township officials and the public took place and provided valuable insight.

The Plan was selectively updated by the Waetzman Group in 1994 and a completed update and revisions were completed in January, 2001 by Michael Cabot Associates, Inc. After meetings and review from the public, the Township Supervisors and the Township Planning Commission, and the EAC, a final draft for review purposes was completed in April, 2001.

It has been quite an experience and after receipt of comments from the LVPC and the adjoining municipalities, the Plan can be finalized, and we are looking forward to early adoption Township in the near future.

Michael Cabot, AICP
July 9, 2001

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Editorial Note: This Plan has been underway since early 1992. Most of the background information/data was collected early in the Plan preparation process. It has been only selectively updated to include that information which has a bearing on the conclusions and/or recommendations of this Plan. Any other information should still be considered current for purposes of this document.

At the time of printing preliminary Census Data on population and race for the Year 2000 had just become available. Other Census Data had not yet been released.

INTRODUCTION

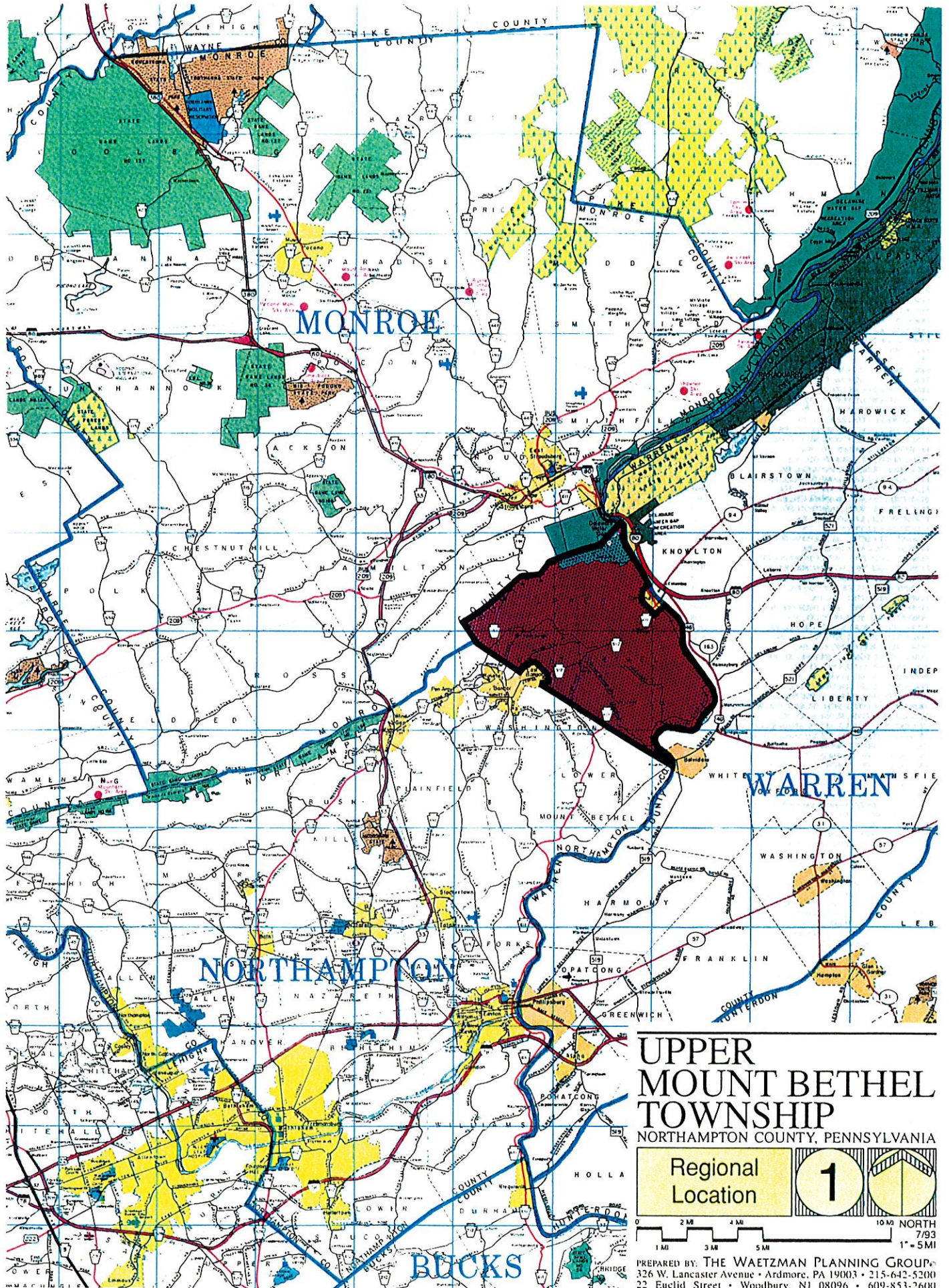
A comprehensive plan functions as a guide for the growth of a community, for its development policies and ordinances, and serves as the principal municipal long-range planning tool. Comprehensive Plans are provided for under the Pennsylvania Municipalities Planning Code (P.L. 805, "Act 247"), which states that any municipality may prepare and adopt such a plan after a recommendation by the planning agency (Upper Mount Bethel Planning Commission), and following a public hearing(s) held by the governing body (Township Board of Supervisors). The Planning Code requires certain elements to be included in any comprehensive plan, including statement of goals and objectives, land use and housing plans, a circulation plan, a community facilities plan, a statement on the interrelationships between the various plan elements and with surrounding communities, and a discussion of implementation strategies.

Recent years have seen significant changes in the Township which have created a need for a new comprehensive plan. One key change has been the influx of new residents that commute to the New York/New Jersey metropolitan area. Population within the Township grew by 86% between 1960 and 1990 (from 2,944 people in 1960 to 5,476 persons in 1990).

The preliminary Census Data for the Year 2000 indicates that Upper Mount Bethel Township's population is now at 6,063 people with significant new growth projected for the future. These new residents will need housing to accommodate them. The type and location of new residential development is therefore a focus for this Plan.

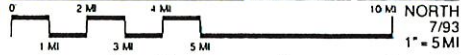
Most importantly, the Plan must ensure the protection of those desirable qualities which exist in the Township, namely the preservation of open space and the protection of the attractive environmental qualities and unique natural diversity features which make the Township such an outstanding community in which to live.

Growth and change can be positive or detrimental, depending on how well it is planned and managed. The comprehensive plan contained in this document has been created to help ensure positive results, for residential and employment opportunities, to preserve and protect community resources, and to provide current and future residents with adequate community services.



**UPPER
MOUNT BETHEL
TOWNSHIP**
NORTHAMPTON COUNTY, PENNSYLVANIA

Regional Location **1**



PREPARED BY: THE WAETZMAN PLANNING GROUP
326 W. Lancaster Avenue • Ardmore, PA 19003 • 215-642-5200
22 Euclid Street • Woodbury, NJ 08096 • 609-853-2600

REGIONAL LOCATION

Upper Mount Bethel was established as a Township in 1787. Located in the northeast corner of Northampton County, it comprises a total of 44.5 square miles.

The Delaware River forms the Township's eastern border with New Jersey. To the southwest are the Borough of East Bangor and Washington Township. Monroe County lies to the north and west of the Township. (See Map 1 for the Township's location)

Although no major highways travel through the Township, Interstate 80 does pass by the northern border and it is easily accessible via the Portland-Columbia Toll Bridge. The Township is also served by three State Routes; PA SR 191, SR 512 and SR 611.

Upper Mount Bethel is rural in character but it is close to several large population centers. New York City is just over a one hour drive via I-80, as are major cities in New Jersey such as Paterson, Newark and Jersey City. Philadelphia is also less than a two hour drive from the Township, and the Lehigh Valley is less than an hour drive away. This proximity to large population and commercial areas makes Upper Mount Bethel a very desirable area for the large numbers of new residents moving into Eastern Pennsylvania.

THE TOWNSHIP'S CHARACTER

Upper Mount Bethel Township has always been a rural community. Residential homes and farmlands dot the countryside and the Village of Mount Bethel forms the residential, cultural and economic heart of the Township. There are also other smaller villages located throughout the Township, but the rural character of the area remains the predominant and valued feature for most of the residents.

Development pressures are now being experienced within the Township, and throughout all of eastern Pennsylvania as well, and are expected to increase in the coming years. Improvements to major highways in the area, population growth, and increased in-migration have been the trend and will be continuing. These factors have resulted in individuals and families moving into Upper Mount Bethel as they seek out idyllic, rural settings in which to live and raise their families.

These development pressures have compelled the Township Supervisors to look at their existing plans and policies to see if they are adequate. The result is that the Township Supervisors are updating the Comprehensive Plan, Zoning Ordinance and Subdivision and Land Development Ordinance as well as working on an Act 537 Sewage Facilities Plan. These documents will be used as the Township's tools for guiding growth and development.

I. BACKGROUND STUDIES

The Background Studies represent the culmination of extensive research and information gathered from a number of resources. These resources include local citizens, Township leaders, previous reports, and new studies conducted during the process of developing this Comprehensive Plan. Specifically, the background studies review the Township's natural features, existing land use, the land use pattern, demographic characteristics of the Township's population, transportation facilities, community facilities, historic resources, fiscal conditions and trends, economic characteristics and trends; and the prospects for future growth.

NATURAL FEATURES

INTRODUCTION

Upper Mount Bethel Township is quite fortunate. The Township is surrounded by a variety of outstanding and diverse natural resources. The list of natural amenities is extensive and includes steeply sloping limestone outcrops, meadows, wetlands, fertile soils, pastures, forests, rivers, streams, and significant flora and fauna.

The importance of the Township's natural resources should not be underestimated. A community with a balance of natural and man-made features is a healthy and stimulating environment. Natural resources provide the citizens of and visitors to Upper Mount Bethel Township with a variety of recreational activities and memorable aesthetic experiences.

Preserved natural areas provide nesting, resting, and breeding habitat for common as well as rare, threatened, or endangered fauna. There are also economic amenities associated with preserved natural areas. Preserved natural resources often go hand-in-hand with sustainable businesses related to the tourist and recreation industries. In addition, homes and businesses adjacent to natural areas are often more marketable than those lacking natural amenities.

TRADITIONAL AND UPDATED NATURAL RESOURCE PROTECTION STRATEGIES

Municipal comprehensive plans have historically contained a natural features component and associated protection plan containing information about the presence of natural features and protection tools for their preservation. Traditionally, information about natural features were placed in human use, human safety, and economic return (cost:benefit) contexts. For instance, a traditional comprehensive plan described natural features that presented site development constraints (e.g, steep slopes, standing water, periodic flooding). The narrative in traditional plans listed the associated hazards and potential safety concerns related to developing a site with environmental constraints. Background information addressed environmental conditions present on site, the relationship of their

presence to development constraints, and the economic cost of developing a site containing environmental constraints.

In the past, the most protective federal, state, and local regulations primarily addressed the protection of human health and safety. Therefore, the goals, objectives, and environmental management tools recommended in traditional plans suggested preservation of natural resources to protect human health, human safety, property, and economic investments. Consequently, the environmental components of the municipal comprehensive plan and the resource protection articles in zoning ordinances indirectly protected the biological and ecological significance of natural resources.

As an example, steeply sloping land exceeding 25% slope is traditionally listed as a natural feature worthy of protection. The logic provided was that developing land on excessive slopes was unsafe, created safety problems, and impeded cost-effective construction. Environmental repercussions to developing upon steep slopes (e.g., damage to hillside habitat, soil erosion, sedimentation, increased stormwater runoff, and nonpoint source pollution) was usually not included in traditional comprehensive plans. The one-hundred year floodplain is another example of a traditionally-listed and protected natural feature. One-hundred year flood plains in historical plans and ordinances were primarily protected to address the safety concerns associated with building homes in areas that are periodically flooded. The ecological significance (e.g. riparian wetland habitat, resource corridors amenities) of flood plains is usually not discussed in traditional comprehensive plans.

Fortunately, the definition of natural resources has evolved to include the ecological significance of our natural resources. The Natural Resource Component of Municipal Comprehensive Plans now contain the location and worthwhile information on natural habitats (e.g., woodlands, grasslands, rivers, wetlands), protected flora and fauna, geologic features, migratory routes, and scenic vistas. Comprehensive plans now contain goals, objectives, and recommendations to protect significant resources from land development patterns that negatively affect natural resources. The following component of the Upper Mount Bethel Township Comprehensive Plan contains information and land management recommendations to protect our natural resources.

SIGNIFICANT NATURAL FEATURES IN UPPER MOUNT BETHEL TOWNSHIP

Upper Mt. Bethel Township contains significant natural features that are worthy of protection. These features include outstanding geologic features, critical wildlife habitats, rare plant communities, and threatened or endangered species (flora and fauna).

The recently completed Lehigh and Northampton Counties Natural Areas Inventory (Lehigh Valley Planning Commission & the Nature Conservancy, 1999) contains a comprehensive and scientifically sound listing of the region's most outstanding floral, fauna, and geologic features. Outstanding features are further categorized as

sites of statewide and sites of local significance. Of the forty-four (44) sites of statewide importance listed in Northampton County, Upper Mount Bethel Township contains twenty (20) sites. They are listed below and are also noted on the Natural Features Inventory Map (See Map following page 7).

- | | |
|-------------------------------|-----------------------------------|
| ◆ Arrow Island | ◆ Lohman Wetlands |
| ◆ Bear Swamp | ◆ Minsi Lake Vernal Pools |
| ◆ Delaware River Water Gap | ◆ Mount Bethel Fens |
| ◆ East Bangor Wetland Complex | ◆ Mount Jackson Limestone Outcrop |
| ◆ East Johnsville Swamp | ◆ Polly Acres Swamp |
| ◆ Five Points Wetland | ◆ Portland Power Plant Site |
| ◆ Fox Gap Pond | ◆ Raesly Woods |
| ◆ Getz Swamp | ◆ School Road Swamp |
| ◆ Lake Poco | ◆ Totts Gap |
| ◆ Little Offset Swamp | ◆ Totts Gap Swamp |
| ◆ Lohman Swamp | |

The significance of each site is explained in detail in the Lehigh and Northampton Counties Natural Areas Inventory. It is important to note that the list is not only based upon the existence of individual, threatened or endangered species, but upon the critical habitats needed for species survival. The importance of the natural resources present in the areas noted above are explored in the following section.

SIGNIFICANT NATURAL RESOURCES IN UPPER MOUNT BETHEL TOWNSHIP

Water Resources - The majority of the sites listed in the Lehigh and Northampton Natural Areas Inventory are freshwater wetlands. The majority of freshwater wetlands in the Township are classified as Palustrine. Palustrine wetlands are nontidal wetlands dominated by trees, shrubs, persistent emergent plants, emergent mosses or lichens (Mitsch & Gosselink, 1986). Wetlands provide a variety of important functions; they cleanse polluted waters, prevent floods, protect shorelines, recharge groundwater, and provide habitat for a variety of flora and fauna.

The Township is also home to the Mt. Bethel Fen complex. A fen is an open wetland system often covered by grasses, sedges, or reeds. According to a recently completed study, the Mt. Bethel Fen complex has been recognized since the turn of the century as a botanical wonder, and harbors an unusual plant community found only in eastern Pennsylvania and New Jersey (Fanok, The Nature Conservancy, 2000). The fen contains 20 rare and endangered species including 15 rare plants, 3 rare animals, and 2 rare mosses. The Nature Conservancy now owns and manages 42 acres of core fen habitat, however the fen is reliant upon surface and groundwater recharge from surrounding land areas. Therefore, land in fen recharge areas as well as recharge areas feeding other municipal wetlands should also be protected. The Mt. Bethel Fen, wetland habitats of statewide importance, and wetlands from the National Wetlands Inventory (NHI) are noted on Map 2, following page 7.

One-hundred year flood plain areas are also illustrated on Map 2. Map 2 depicts "Zone A" 100-year flood plain areas based on the Flood Insurance maps produced by the Federal Emergency Management Agency (FEMA). Zone A, 100-year flood plains are those areas along rivers, lakes, shorelines, and other bodies of water, which are subject to flooding once every 100 years. The base flood elevation of these areas have not been determined. In Upper Mount Bethel Township, 100-year flood plains are found all along the Delaware River and its' tributaries including Jacoby, Allegheny, and Slateford Creeks.

Development is limited in one-hundred year flood plain areas to protect homeowners from flood damage. However, flood plains are also important ecologically as they are considered riparian wetlands. Riparian wetlands contain species from both aquatic and terrestrial systems and serve as a linear corridor for animals seeking refuge, habitat, and migratory routes. Recent open space preservation efforts have attempted to buffer rivers and streams from homes and businesses. This particular conservation tool is also a management technique used to conserve ecologically diverse greenway areas and to provide linear greenway parks for passive (e.g., hiking, nature study) recreational use.

Significant surface water resources (e.g., rivers, tributaries, ponds, vernal pools, and lakes) are located throughout Upper Mount Bethel Township. The Delaware River and its forested greenway buffer is considered an exceptional natural feature. The Township is fortunate to have the Delaware Water Gap along its northeastern border, and the Delaware River flowing along the Township's entire eastern border. The Delaware River is a major corridor for avian and mammal migration. The Delaware River is fed by the following rivers and river tributaries in Upper Mt. Bethel Township including: The Jacoby Creek, The Allegheny Creek, Slateford Creek, and East and West Forks of the Martins Creek (See Natural Features Inventory Map following page 7).

Groundwater resources are important from a human consumption as well as an ecological stand point. The quality and the quantity of groundwater resources in the Township varies according to the aquifer source. Recharge aquifer formations include glacial, limestone (Allentown and Beekmantown) and slate aquifers (Martinsburg) (See Geological Resources Map, following page 7).

Providing a safe, reliable water supply for citizens (see community facilities inventory component, page 25) is as important as maintaining groundwater recharge sources to our wetland and surface water sources. For instance, significant plant and animal species are dependent upon the Mount Bethel Fen complex. The Fen system, in turn, is reliant upon groundwater recharge from unconfined and confined aquifers surrounding and underlying the fen complex. There is also a relationship between groundwater and surface water resources in the Township, and the amount of water in our streams and lakes are influenced by groundwater recharge as well as precipitation.

Steep Slopes, Carbonate Geology, and Soil Resources - Steeply sloping areas in the Township pose land development, soil erosion, and water quality problems

(e.g., stormwater runoff & sediment loads). The minimum lot size, lot density, and land development, and sewage facilities requirements are therefore regulated in the Township Zoning and Subdivision/Land Development Ordinances. Steep slopes (exceeding 15%) are found along the Delaware River. Since steeply sloping areas are usually left untouched, they are scenic and often contain valuable habitat for flora and fauna. The steepest slopes in the Township are found in the Delaware Water gap, at Kittatiny and Blue Mountains, and along the Delaware River tributaries.

Carbonate geologic formations (limestone or dolomite) are produced by carbonate sedimentation in areas that were once regions containing shallow seawater. Carbonate areas are environmentally sensitive and also have associated construction hazards. Hazards are associated with the formation of sinkholes, or land depressions caused by the dissolution and collapse of underground caverns in carbonate formations. Examples of confirmed hazards include property damage, fatalities, and roadway and utility damage. There are also groundwater pollution hazards associated with sinkhole formation as they provide natural conduits to groundwater resources. Therefore, land development upon carbonate formations creates the potential for groundwater pollution (e.g., untreated sewage, storm water, fertilizers, pesticides). The majority of Portland Borough, and the central part of Upper Mount Bethel southwest of Portland Borough is a carbonate geologic formation (See Geological Resources Map, following page 7).

Soils have been cultivated for crop production for over five-thousand years. They are therefore traditionally viewed in relation to yield. In terms of land development, soils are judged based on their ability to treat sewage (See Septic Suitability Map, following page 29) and drain storm water. Soil particles may also be viewed as a pollutant, because highly erodible soils and chemicals attached to individual soil particles are transferred in storm water from the land and into our waterways. However, soil has the ability to improve our environment by filtering substances from water, decomposing organic pollutants, and nurturing our plant and animal life. Soil Associations present in Upper Mount Bethel Township include: Laidig-Stony, Buchanin-Ladig-Andover, Swarstswood-Wurtsboro-Chippewa, Berks-Bedington-Comply, Berks-Weikert, and Conotton-Redhook-Urban Associations.

Woodland Resources - Wooded areas provide shade, habitat, erosion control, groundwater recharge, and many other amenities. Approximately 54% of the Township is under woodland cover. The heaviest concentration of woodland areas are located in the western and northwestern areas of the Township (e.g., Kittitiny Mountain, Blue Mountain, and the Delaware River Water Gap. In the eastern portion of the Township, wooded areas are smaller in size, more scattered, and often follow surface water courses. Woodland resources are illustrated on Map 5, following page 7.

It is important to note that conservation management plans containing goals and recommendations to preserve significant species and features must also devote time and effort to protecting the resources (land, air, and water) supporting the species inhabiting these significant natural areas.

AREAS OF STATEWIDE SIGNIFICANCE

MAP #2

LEGEND

MAPPING LEGEND KEY

- PHYSIOGRAPHIC PROVENANCE BOUNDARY
- LIMIT OF GLACIATION (5000 YEAR)
- PRIMARY ROADS
- TOWNSHIP BOUNDARY
- ISLANDS
- CADASTRAL BOUNDARIES

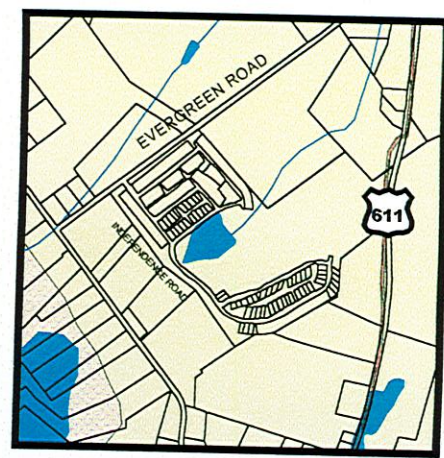
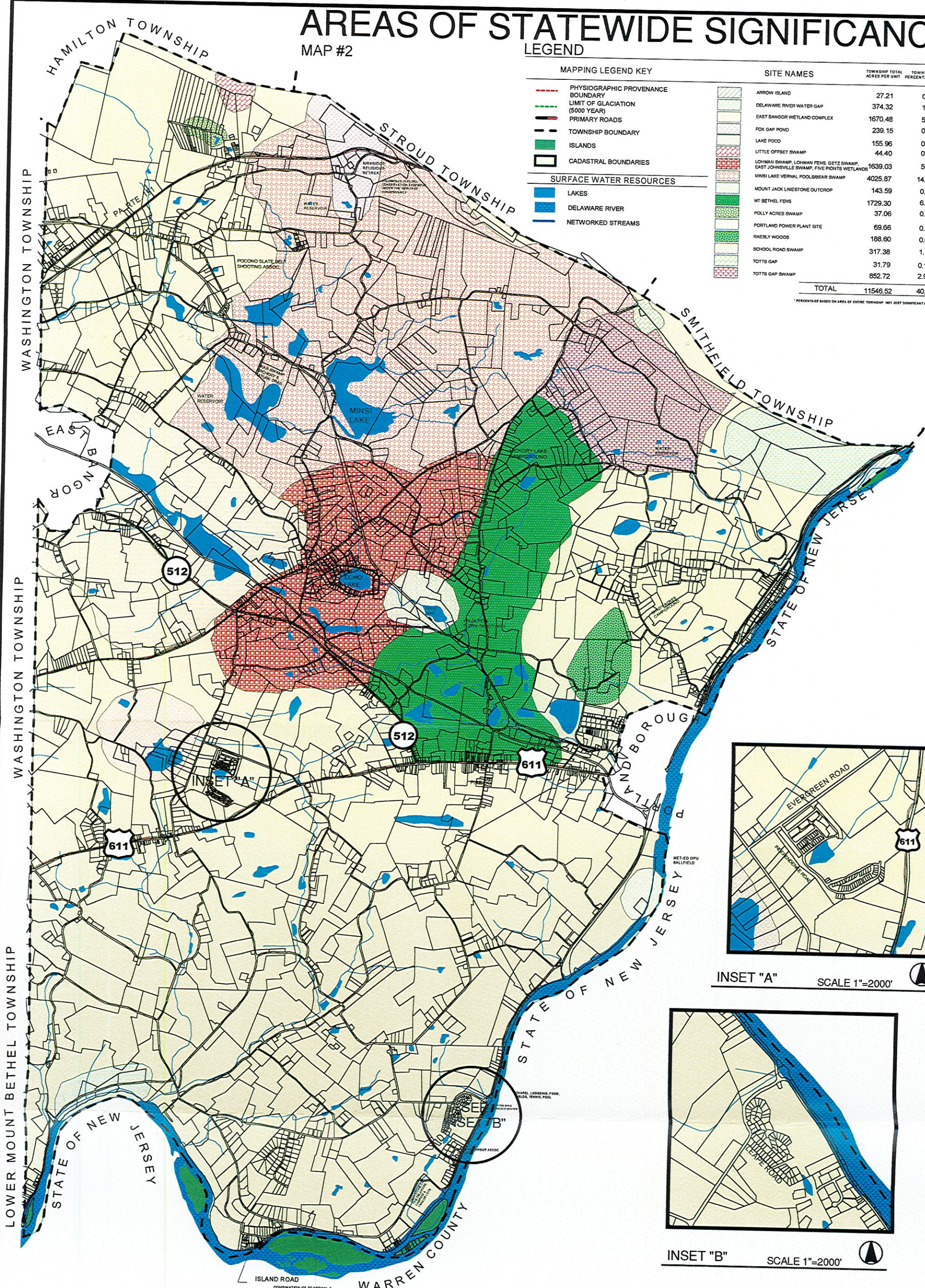
SURFACE WATER RESOURCES

- LAKES
- DELAWARE RIVER
- NETWORKED STREAMS

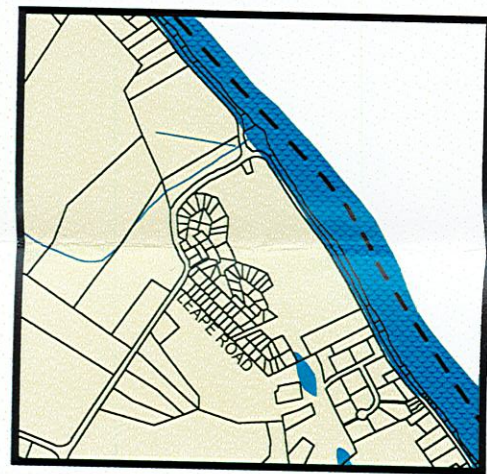
SITE NAMES

SITE NAMES	TOWNSHIP TOTAL ACRES PER UNIT	TOWNSHIP TOT. PERCENTAGE PER
ARROW ISLAND	27.21	0.10
DELAWARE RIVER WATER GAP	374.32	1.31
EAST BANGOR WETLAND COMPLEX	1670.48	5.85
FOX GAP POND	239.15	0.84
LAKE POOD	155.96	0.55
LITTLE OFFSET SWAMP	44.40	0.16
LOHMAN SWAMP, LOHMAN FENS, GETZ SWAMP, EAST JOHNSTOWN SWAMP, FIVE POINTS WETLANDS	1639.03	5.74
MINI LAKE VERNAL POOLS/BEAR SWAMP	4025.87	14.11
MOUNT JACK LIMESTONE OUTCROP	143.59	0.50
MT BETHEL FENS	1729.30	6.06
POLLY ACRES SWAMP	37.06	0.13
PORTLAND POWER PLANT SITE	69.66	0.24
RAEY'S WOODS	188.60	0.66
SCHOOL ROAD SWAMP	317.38	1.11
TOTTS GAP	31.79	0.11
TOTTS GAP SWAMP	852.72	2.99
TOTAL	11546.52	40.46

PERCENTAGE BASED ON AREA OF ENTIRE TOWNSHIP. NOT JUST SIGNIFICANT AREAS.



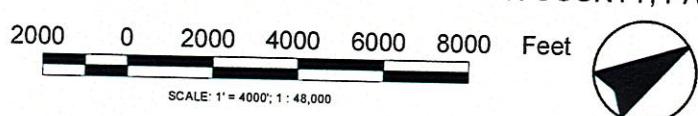
INSET "A" SCALE 1"=2000'



INSET "B" SCALE 1"=2000'

PH PRINCETON HYDRO, LLC. PROPOSED ZONING COVERAGES DIGITIZED AND CONVERTED TO G.I.S. BY PRINCETON HYDRO, LLC., JULY 2000

- NOTES:
- (a) INFORMATION DEPICTED HEREIN IS LIMITED TO THE ACCURACY OF THE ORIGINAL DATA SOURCES.
 - (b) MAP PROJECTION: UNIVERSAL TRANSVERSE MERCATOR (UTM), METERS, NGVD 1927.
- SOURCES:
- (a) PENN STATE, PASDA, DATA ACCESS WEB SITE.
 - (b) PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, GEOLOGY OF NORTHAMPTON COUNTY.
 - (c) TOWNSHIP OF UPPER MOUNT BETHEL, HISTORIC PAPER MAPPING.



UPPER MOUNT BETHEL TOWNSHIP
NORTHAMPTON COUNTY, PA

MAP #3 GEOLOGY PLAN

LEGEND

MAPPING LEGEND KEY

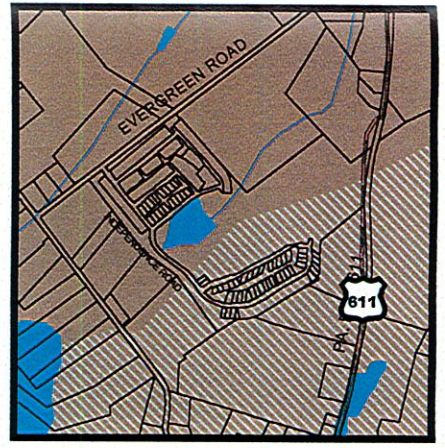
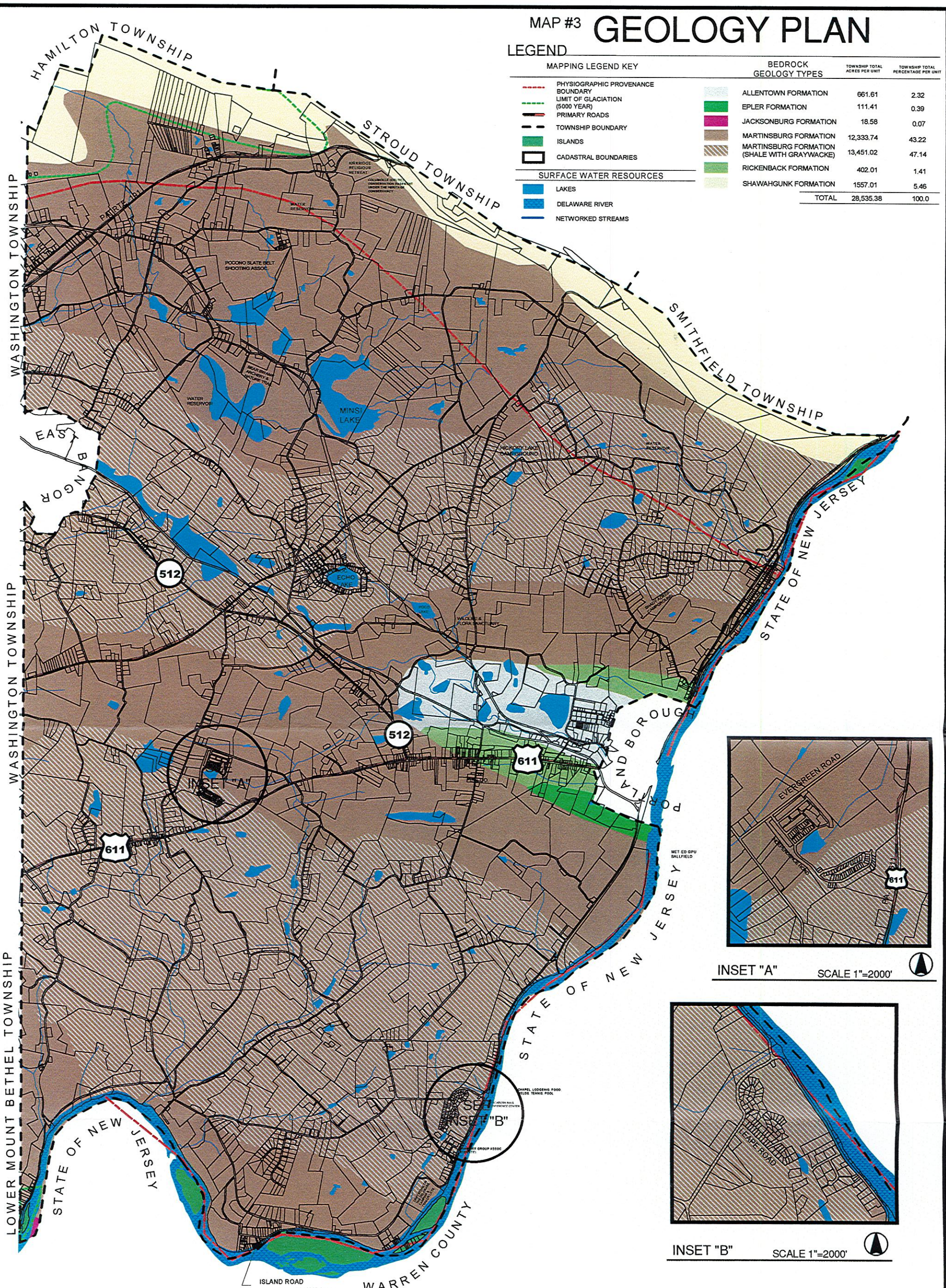
- PHYSIOGRAPHIC PROVENANCE BOUNDARY
- LIMIT OF GLACIATION (5000 YEAR)
- PRIMARY ROADS
- TOWNSHIP BOUNDARY
- ISLANDS
- CADASTRAL BOUNDARIES

SURFACE WATER RESOURCES

- LAKES
- DELAWARE RIVER
- NETWORKED STREAMS

BEDROCK GEOLOGY TYPES

BEDROCK GEOLOGY TYPES	TOWNSHIP TOTAL ACRES PER UNIT	TOWNSHIP TOTAL PERCENTAGE PER UNIT
ALLENTOWN FORMATION	661.61	2.32
EPLER FORMATION	111.41	0.39
JACKSONBURG FORMATION	18.58	0.07
MARTINSBURG FORMATION	12,333.74	43.22
MARTINSBURG FORMATION (SHALE WITH GRAYWACKE)	13,451.02	47.14
RICKENBACK FORMATION	402.01	1.41
SHAWAHGUNK FORMATION	1557.01	5.46
TOTAL	28,535.38	100.0



INSET "A" SCALE 1"=2000'



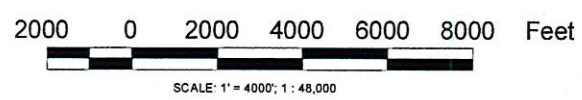
INSET "B" SCALE 1"=2000'

PH PRINCETON HYDRO, LLC.

PROPOSED ZONING COVERAGES DIGITIZED AND CONVERTED TO G.I.S. BY PRINCETON HYDRO, LLC., JULY 2000

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 (b) MAP PROJECTION: UNIVERSAL TRANSVERSE MERCATOR (UTM), METERS, NGVD 1927.

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 (b) PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, GEOLOGY OF NORTHAMPTON COUNTY.
 (c) TOWNSHIP OF UPPER MOUNT BETHEL, HISTORIC PAPER MAPPING.



SCALE: 1" = 4000'; 1 : 48,000



UPPER MOUNT BETHEL TOWNSHIP
 NORTHAMPTON COUNTY, PA

SOIL RESOURCES

MAP #4

SOURCE NOTE:

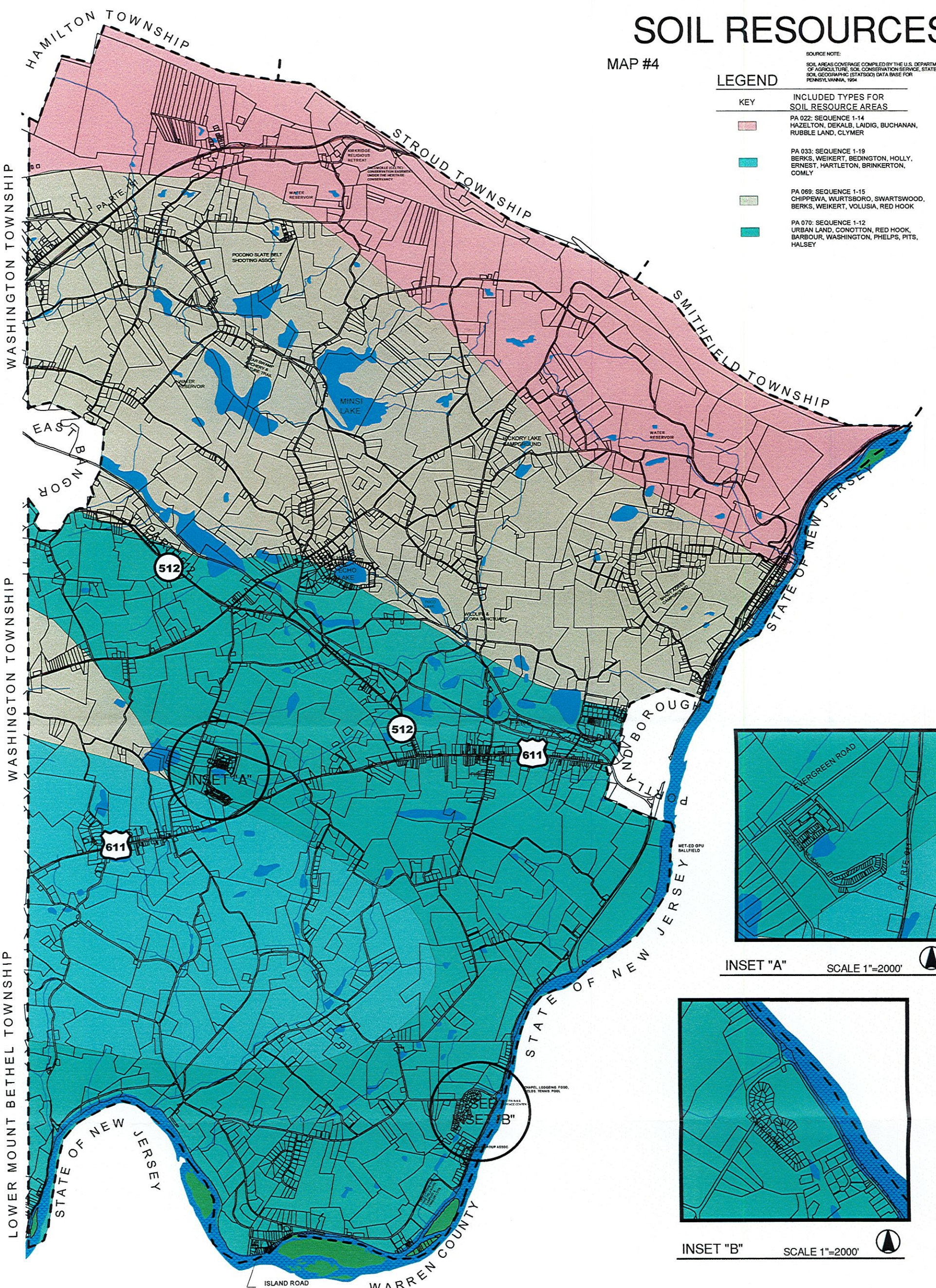
SOIL AREAS COVERAGE COMPILED BY THE U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, STATE SOIL GEOGRAPHIC (STATSSO) DATA BASE FOR PENNSYLVANIA, 1994

LEGEND

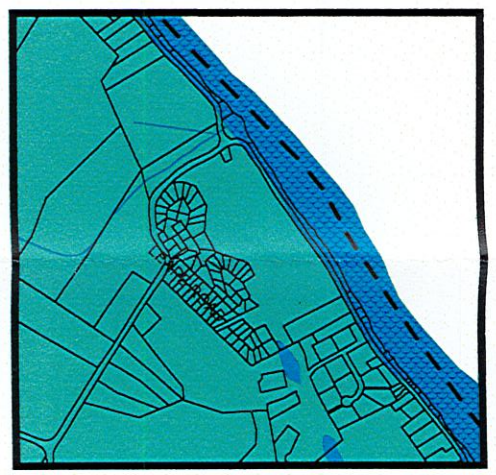
KEY

INCLUDED TYPES FOR SOIL RESOURCE AREAS

- PA 022: SEQUENCE 1-14
 HAZELTON, DEKALB, LAIDIG, BUCHANAN,
 RUBBLE LAND, CLYMER
- PA 033: SEQUENCE 1-19
 BERKS, WEIKERT, BEDINGTON, HOLLY,
 ERNEST, HARTLETON, BRINKERTON,
 COMLY
- PA 069: SEQUENCE 1-15
 CHIPPEWA, WURTSBORO, SWARTSWOOD,
 BERKS, WEIKERT, VOLUSIA, RED HOOK
- PA 070: SEQUENCE 1-12
 URBAN LAND, CONOTTON, RED HOOK,
 BARBOUR, WASHINGTON, PHELPS, PITS,
 HALSEY



INSET "A" SCALE 1"=2000'



INSET "B" SCALE 1"=2000'



COVERAGES DIGITIZED FROM MAP PREPARED BY
MICHAEL CABOT ASSOCIATES, INC. JUNE 2000








**PRINCETON
HYDRO, LLC.**

PROPOSED ZONING COVERAGES DIGITIZED
AND CONVERTED TO G.I.S. BY PRINCETON
HYDRO, LLC., JULY 2000

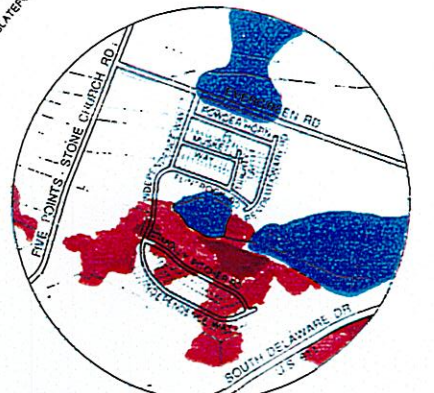
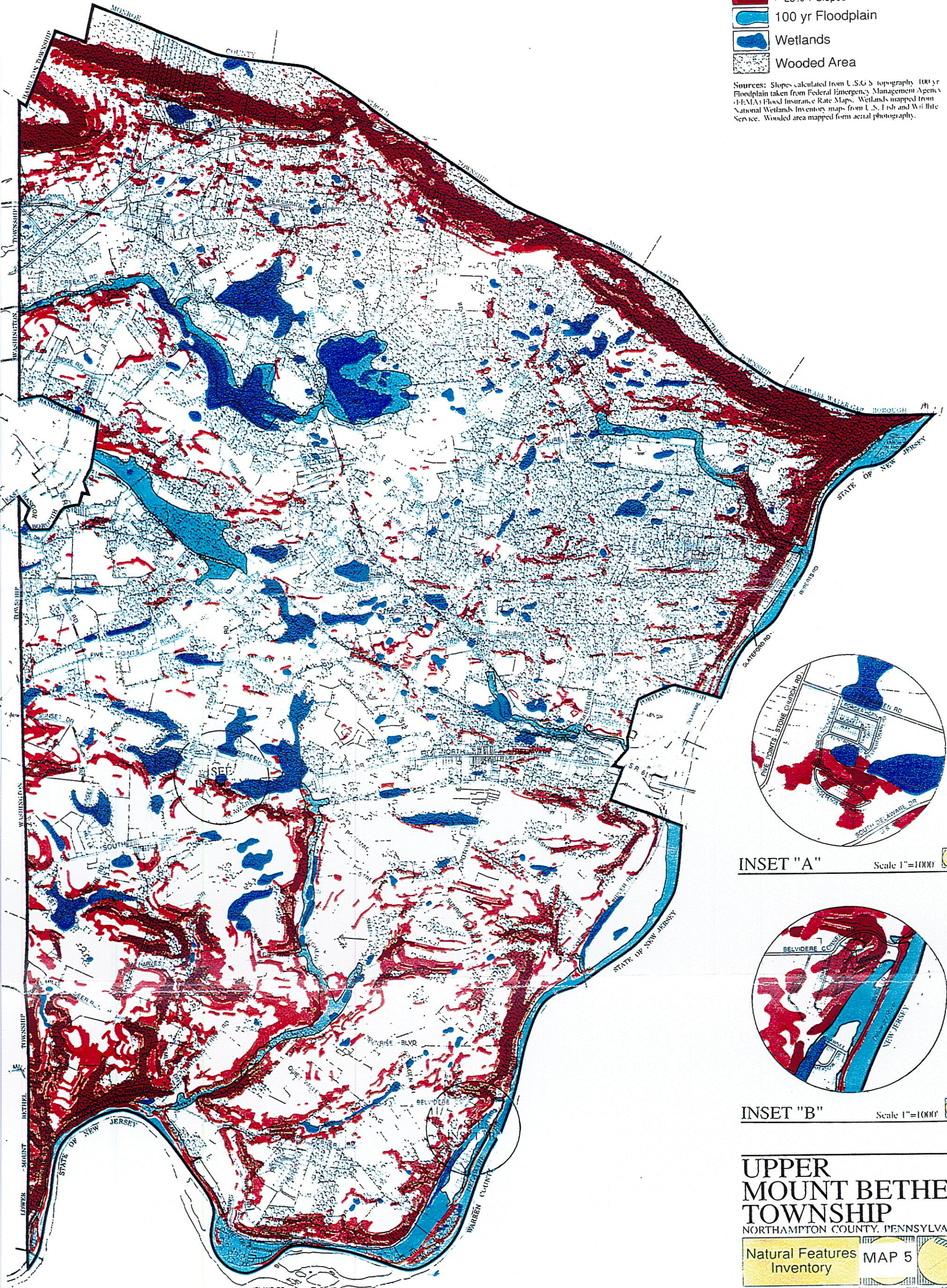



**UPPER MOUNT
BETHEL TOWNSHIP**
NORTHAMPTON COUNTY, PA

LEGEND


-  15 - 25% Slopes
-  25% + Slopes
-  100 yr Floodplain
-  Wetlands
-  Wooded Area

Sources: Slopes calculated from U.S.G.S. topography. 100 yr Floodplain taken from Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps. Wetlands mapped from National Wetlands Inventory maps from U.S. Fish and Wildlife Service. Wooded area mapped from aerial photography.




INSET "A" Scale 1"=1000' 



INSET "B" Scale 1"=1000' 

UPPER MOUNT BETHEL TOWNSHIP

NORTHAMPTON COUNTY, PENNSYLVANIA

Natural Features Inventory **MAP 5** 

0 1000' 2000' 3000' 4000' 5000' 6000' 7000' NORTH
May, 1992
1" = 2000'

PREPARED BY THE WAETZMAN PLANNING GROUP
326 W. Lancaster Avenue • Ardmore, PA 19003 • 215-642-5200
22 Euclid Street • Woodbury, NJ 08096 • 609-853-2600

Base Map prepared by Lehigh - Northampton Counties Joint Planning Commission. Updated per tax maps current through December 1991, and by Township officials. Selected road names changed per Township officials' request, March, 1991.

EXISTING LAND USE

Upper Mount Bethel Township covers a 44.5 square mile area, or 28,480 acres. A break-down of land uses can be found in Figure 1. Vacant/Undeveloped is the largest land use category within Upper Mount Bethel. Totalling 15,873.26 acres, it comprises over half the lands in the Township, at 55.73%. Farmland is the second largest land use; at 8,714.29 acres, it covers 30.6% of the Township area. (This information is based upon land assessed for this purpose.) Recreation, at 1,605.6 acres or 5.6%, is the next largest land use in the Township; most of the recreational land is found in the Delaware Water Gap National Recreation Area. Residential use, a close third at 1,554.07 acres or 5.5%, is broken down into the categories of "Single Family Detached", "Twin", "Townhouse", and "Mobile Home". Residential usage is scattered throughout the Township, with some concentration along Route 611 and within several subdivisions. Likewise, commercial activity (133.84 acres) is random but is somewhat concentrated near residential units along Route 611. Other land uses, none of which equal more than 1.5% of the Township area, include: Industrial, 367.08 acres; Institutional, 196.51 acres, and Utility, 18.6 acres.

Over half of Upper Mount Bethel is in woodlands, a designation considered here as an overlay which may cover any of several different land uses. Thus, the total area under the woodland designation is not included in a breakdown of land uses, so as not to count any acreage more than once. These woodlands represent the mature, concentrated woodlands, the acreage of which has been derived through aerial photograph interpretation. Land designated as woodland may be used for several different purposes, such as residential or recreational. Areas under woodland coverage are depicted on the Natural Features Inventory Map following page 7, and also shown for reference on the Existing Land Use Map following page 11.

EXISTING LAND USE PATTERN

The pattern of existing Land Use includes the following existing features located in Upper Mount Bethel Township (See Existing Land Use Map No. 6 following page 11):

1. The Township is located at the northeasterly edge of Northampton County.
2. The easterly and southern boundaries are bordered entirely by the Delaware River.
3. The northerly boundary of the Township is bounded by Monroe County and the Kittatiny Mountain Range, including the lands of the Delaware Water Gap National Recreation Area.
4. The western boundary of the Township is bordered by Washington and Lower Mount Bethel Townships and by the Borough of East Bangor.

5. The southerly area of the Township, south of US Rt. 611 is primarily devoted to agricultural uses, with an extensive scattering of residential developments.
6. The northerly area of the Township, north of PA Rt. 512 and the Conrail Railroad right-of-way, is also devoted primarily to agricultural uses and a scattering of residential development throughout the entire area, extending to the north but limited by the steep slopes of the Kittatinny Mountain Range. Also included in this northerly section are a large number of Natural Diversity Features including recreation areas, water resources, wetlands, swamp and water areas, nature trail, wildlife sanctuary and areas of rare fauna and flora, all worthy of preservation.
7. The central part of the Township consists of a generally triangular section bounded by PA Rt. 611 on the south and PA Rt. 512 on the north (and extending to the Conrail railroad), and it includes more concentrated residential development within this area, including commercial and industrial uses.
8. A number of small village areas exist in various parts of the Township. These include the following:
 - Mount Bethel located along both sides of Rt. 611, a total of 166 acres adjoining the Borough of Portland
 - Stone Church located along the westerly end of Rt. 611, a total of 28 acres
 - Shooktown, 31 acres, located in the northwesterly section of the Township at the North Bangor section of the Township
 - Johnsonville, an older historic village located at the north of Rt. 512 at the intersection of Ridge Road and Totts Gap Road
 - Slateford, 20 acres, located in the northeasterly section of the Township
 - Echo Lake, a small community located along the easterly side of Totts Gap Road, north of Johnsonville
 - Tuscarora-Shawnee, 190 acres, located along the southerly portion of the Delaware River which includes a Conference Center, seasonal vacation homes and a few year-round homes with its own private sewer system
 - Sandy Shore, 35 acres, along the Delaware River

These are primarily older developments located on small lot sizes and primarily served with on-lot septic systems and with potential septic problems due to small lots and soils which are not suitable for such systems. The villages provide a nucleus around which more modern new residential neighborhoods can be created.

See the Conceptual Land Use Plan Map No. 10, following page 55, which identifies proposed new Neighborhood Development Areas adjoining village locations.

Figure 1: Existing Land Use in Upper Mount Bethel

Use	Acres	Percent
Residential	1570.82	5.51%
- Single Family detached (inc. mobile homes)	(1443.07)	
- Twin	(8.49)	
- Townhouse/Multi-family	(8.26)	
Recreation	1605.6	5.64%
Industrial	367.08	1.3%
Institutional	196.51	0.69%
Commercial	133.84	0.47%
Utility	18.6	0.06%
Farmland +	8714.29	30.6%
Vacant/Undeveloped	15,873.26	55.73%
Total	28,480 (44.5 Sq.Mi)	100%
* Woodland (not considered a separate category; may cover parcels under any land use)	15,421	

+ Farmland based upon information supplied by the Northampton County Board of Assessment.

Source: Existing Land Use Survey by the Waetzman Planning Group, May, 1992

According to the Lehigh Valley Planning Commission, 378 new housing units were constructed in the Township between 1984 and 1991. This total includes only 11 apartments and 3 attached single family homes. All others, a total of 96.3%, have been single family detached dwellings. Figure 2 depicts the annual breakdown of this construction.

Figure 2: New Housing Construction

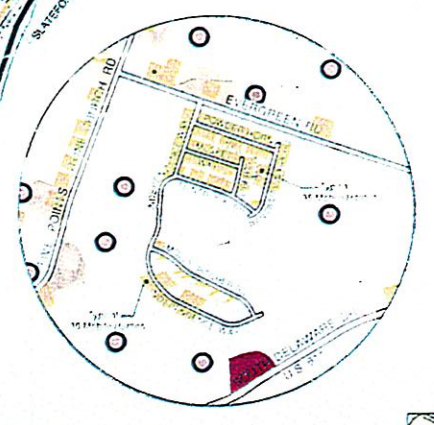
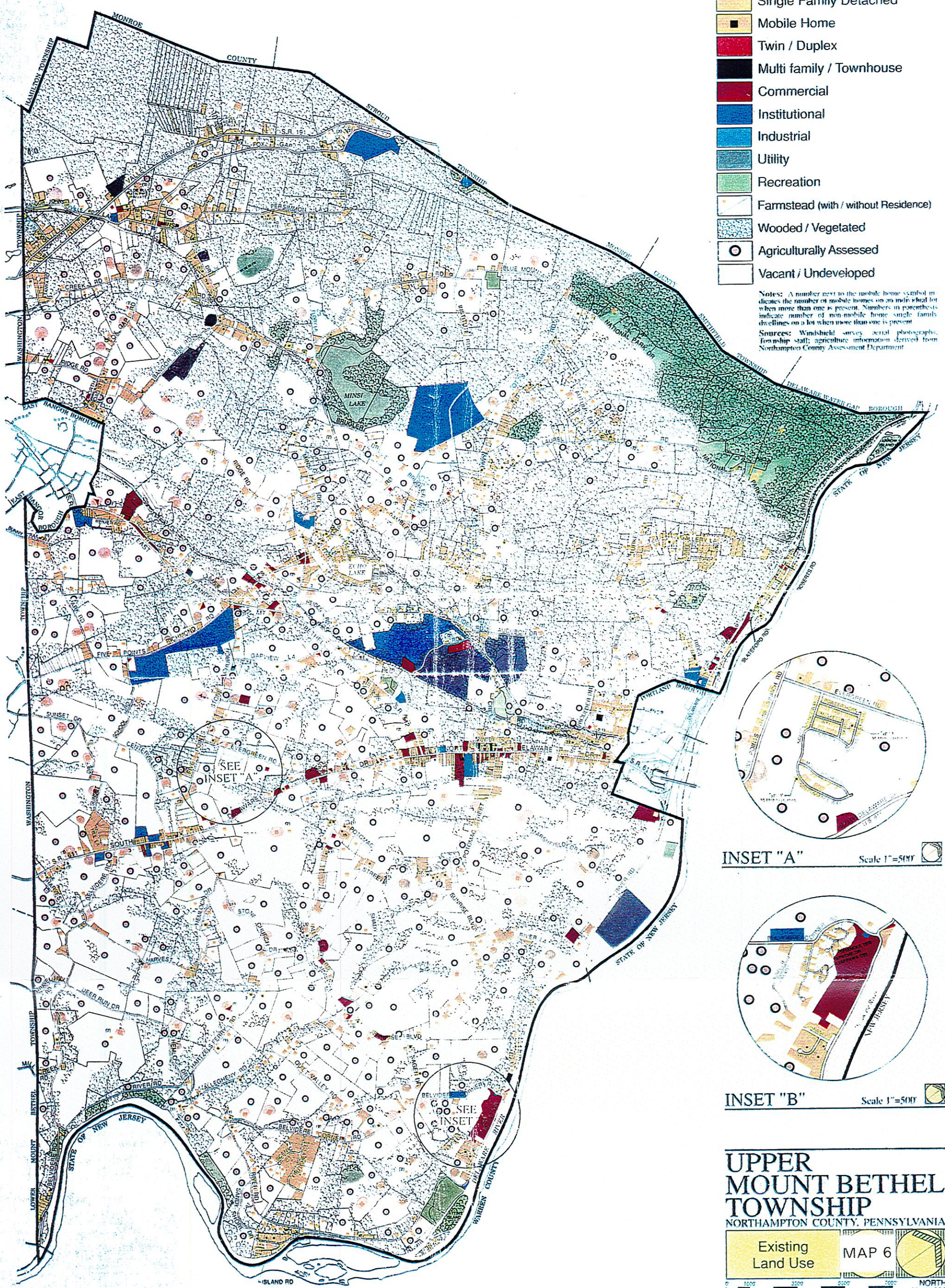
<u>Year</u>	<u>Number of Units</u>
1984	60
1985	32
1986	54
1987	69
1988	61
1989	31
1990	29
1991	42

Several utility companies hold rights-of-way within the Township, which have a bearing on land use. These include Metropolitan Edison Electric Company and Pennsylvania Power and Light, each of which have high-tension transmission lines in Upper Mount Bethel, while Union Gas and UGI maintain natural gas pipelines. The widths and restrictions on these rights-of-ways vary on each property that they occupy. They are all shown on the Community Facilities, Infrastructure & Historic Resources Map located after page 29.

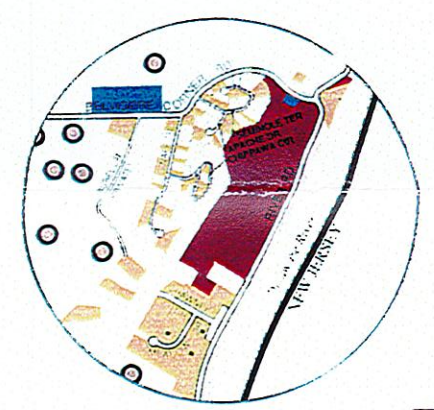
LEGEND

- Single Family Detached
- Mobile Home
- Twin / Duplex
- Multi family / Townhouse
- Commercial
- Institutional
- Industrial
- Utility
- Recreation
- Farmstead (with / without Residence)
- Wooded / Vegetated
- Agriculturally Assessed
- Vacant / Undeveloped

Notes: A number next to the mobile home symbol indicates the number of mobile homes on an individual lot when more than one is present. Numbers in parenthesis indicate number of non-mobile home single family dwellings on a lot when more than one is present.
 Sources: Windshield survey, aerial photographs, Township staff; agriculture information derived from Northampton County Assessment Department.



INSET "A" Scale 1"=500'



INSET "B" Scale 1"=500'

UPPER MOUNT BETHEL TOWNSHIP

NORTHAMPTON COUNTY, PENNSYLVANIA

Existing Land Use **MAP 6**

Scale: 1" = 1000'

NORTH May, 1992

PREPARED BY: THE WAETZMAN PLANNING GROUP
 326 W. Lancaster Avenue • Ardmore, PA 19003 • 215-642-5200
 22 Euclid Street • Woodbury, NJ 08096 • 609-853-2600

Base Map prepared by Lehigh - Northampton Counties Joint Planning Commission. Updated per tax maps current through December 1991, and by Township officials. Selected road names changed per Township officials' request, March, 1994.

DEMOGRAPHIC CHARACTERISTICS

Planning for the future requires an understanding of current conditions. This is done by reviewing Census information. The Census keeps track not only of population statistics, but also gathers information on housing characteristics, education, employment and occupation, income and poverty, and so forth. This detailed information is based on sampling techniques, and thus may contain errors. However, it represents the best available data.

Note: At the time of printing preliminary Census data on total population and race was available. Other Census data had not yet been compiled and released.

POPULATION

The population of Upper Mount Bethel in 1990 was 5,476. The Township has witnessed a tremendous growth of 28.9% (1,229 persons) from 1980 to 1990, a figure considerably higher than the increase of both the County (9.6%) and the region (8.1%). According to forecasts published by the Lehigh Valley Planning Commission, the Township is expected to continue to experience a substantial growth in the future, again outpacing both the County and the Lehigh Valley region. These population trends are documented in Figure 2, shown below.

Figure 3: Population Trends in Upper Mount Bethel, Northampton County and the Lehigh Valley Region, 1970-2020

	UPPER MOUNT BETHEL	NORTHAMPTON COUNTY	LEHIGH VALLEY REGION
1970 US Census	3,343	214,545	469,849
1980 US Census	4,247	225,418	497,767
1990 US Census	5,476	247,105	538,235
2000 Preliminary US Census	6,063	267,066	576,129 (a)
2010 LVPC Forecast	9,067	291,790	610,650
2020 LVPC Forecast	11,369	320,026	654,563

Footnote:

- (a) 2000 LVPC Forecast. Forecast from LVPC may be a little high. This figure, however, will still be used as the high range projection since the long term trend of growth in the population is expected to continue.

AGE & SEX COHORTS

1980 to 1990 - The breakdown of the population into age and sex cohorts is useful in planning such needs as community facilities and schools. Figure 3 depicts the breakdown of the 1990 populations of the Township and County into age cohorts. The Township's largest category is the age 25 to 44 group, with 1,795 persons or 32.8%. Comparatively, this cohort is also the County's largest, at a slightly smaller 30.9%. This cohort has grown by 52.8% in the Township, from 1,174 persons between 1980 and 1990. The other age bracket that has shown substantial growth is the over 75 group. Between 1980 and 1990 Census, this group has grown by 120 people, or 70.2%, to a 1990 total of 291 persons. Children under the age of 18 represent 23.3% (1,278 persons) of the total population, which is equivalent to the County total of 23.2%. Persons over age 65 number 774, making up 14.1% of the population, slightly less than the County total of 15%. The median age of the Township is 36.6, making it slightly older than the County as a whole, at 34.9 years.

The Township possesses a typical sex ratio, as it was comprised of 50.5% females and 49.5% males in the 1990 Census data. This ratio remains essentially unchanged from that shown in the 1980 Census. The population of Northampton County as a whole includes only 48.5% males and 51.4% females.

1990 to 2000 - This decade shows that the largest age bracket in the Township is those between the ages of 35 and 49 years. Children under the age of 18 years represent 23.8% of the total population and in this decade it is again equivalent to the County total of 23.1%.

The percentage of persons over the age of 65 grew larger this decade. From 1980 to 1990 a total of 14.1% of the population was over 65 years, from 1990 to 2000 that percentage grew to 15.4%. This current percentage of elderly residents now mirrors that of the County which is also at 15.4%.

The Township's and County's sex ratios have remained virtually the same.

RACE & ETHNICITY

The 2000 U.S. Census population estimates for Upper Mount Bethel show almost no racial diversity, as an overwhelming 96.55% of residents are classified as white, 0.68% are black, 0.13% are Native Americans, 0.49% are Asian or Pacific Islander, and 0.78% are other races. The Township's Asian and Hispanic population increased between 1990 and 2000. By comparison, Northampton County is only slightly more diverse. The vast majority (94.2%) of County residents are white, with blacks comprising 2.1% and Hispanics 4.7% of the population.

Persons of Hispanic origin constitute 1.37% of the Township population, a total of 84 persons. This ethnicity signifies no particular race, because of the complexity of its definition. It may be based on ancestry, national group, lineage, or country in which the persons parents or ancestors resided before immigrating to the United States.

Figure 4 shows the racial and ethnic breakdown of Upper Mount Bethel Township.

Figure 4: Race and Ethnicity in Upper Mount Bethel, 1990 - 2000

	White	Black	Am.Indian	Asian/Pac Is	Other	Hispanic
# of Persons, 1990	5433	6	9	24	4	29
% of Population	98.69%	0.11%	0.16%	0.44%	0.07%	0.53%
# of Persons, 2000	5935	42	8	30	48	84
% of Population, 2000	96.55%	0.68%	0.13%	0.49%	0.78%	1.37%

Source: Based on available 1999 and 2000 Census Data.

HOUSEHOLDS & FAMILIES

Census data distinguishes between households and families. A household is comprised of persons living alone or with non-relatives. A family consists of a head of the household and all members of that household who are related to the head in some way, including adoption. Thus all families are part of a household, but not all households are families. Persons living in group quarters are given a separate category; only 7 persons fall into this group in the Township in the Year 1990. The 2000 Forecast reports 2,107 households in Upper Mount Bethel. Of these, 1,605 (76.5%) are families. While the nation as a whole is experiencing a movement away from family households, this is also reflected in Upper Mount Bethel, which had a 79% figure for families in 1990. This data is shown in Figure 5. Additionally, the traditional married-couple family household is being maintained in the Township, comprising 88% of all families, and 67.2% of all households. County-wide, fewer households (72.0%) are families, yet the County is close to the Township for married couple families at 88.1%. The average number of persons in each household is 2.67, an increase of less than 1% from the 1990 figure of 2.66. This is not significantly different from the County average of 2.64 persons per household.

Figure 5: Households in Upper Mount Bethel and Northampton County, 1980-1990

	TOTAL HOUSEHOLDS	PERSONS PER HOUSEHOLD	TOTAL FAMILIES
Upper Mount Bethel - 1990	2,057	2.66	1,625
Upper Mount Bethel - 2000	2,107	2.67	1,605
% Change (1990-2000)	+ 2.4%	+0.4%	- 1.2%
Northampton County - 1990	90,955	2.62	67,185
Northampton County - 2000	95,180	2.64	68,344
% Change (1990 - 2000)	+ 4.6%	+ 0.8%	+ 1.7%

INCOME

The projected income figures for 2000 show the per capita income for the Township as \$25,750. The median household income was \$52,439. This is broken down into family and non-family incomes. The median family household income was \$52,439, while the median non-family household income was \$26,000.

By comparison, the Northampton County per capita income is \$21,985, and the median household income is \$46,778. The median family household income is \$55,985 and the median non-family household income is \$23,985. Relative to the County as a whole, Upper Mount Bethel residents have above average incomes.

EDUCATION

The 1990 Census outlines educational attainment figures for all persons 25 years of age and over. In Upper Mount Bethel, this includes 3,795 persons. Of these, 76.8% are high school graduates, and 14.6% have at least a college degree. A further breakdown shows that 10.2% have less than a 9th grade education, 13% attained 12th grade but did not graduate from high school. Persons with a high school degree but no further education total 38.9%, while those with some college but no degree make up 16.3%. Those with an Associate's degree total 7%, with a Bachelor's degree 9.1%, and those with Graduate or Professional degrees make up 5.5% of all persons age 25 or older. County-wide, 73.1% of the population have high school diplomas, and 16.7% have a college degree or more.

School enrollment figures show that 1,184 persons age 3 or older were enrolled in school in 1990. Of these, 140 were in pre-primary school and 808 attended elementary and high school, with 7.2% attending private school. College students were 236 in number.

EMPLOYMENT

The 1990 Census reports that Upper Mount Bethel had 4,302 persons age 16 and older. Of these persons, 2,832 or 65.8% were in the labor force. Unemployment totaled 124 persons for a rate of 4.4%. The great majority of the remaining 2,708 workers were private wage and salary earners (2,236) while 281 were government workers, 8 were unpaid family workers and 183 were self-employed.

Approximately 95% of all workers commuted to work by automobile, with 80.5% driving alone and 14% using a carpool. The mean travel time is 26.9 minutes.

The largest source of employment for Township residents was the manufacturing of non-durable and durable goods, which accounts for 743 jobs, or 27.4%. Other sources of employment include retail trade, 11.8%; construction at 9.3%; educational services 7.5%; health services 6.9%; and the finance, insurance, and real estate industries 4.7%. The most common occupations included precision production, craft, and repair, 16%; administrative support 13.5%; professional specialty 13.4% and machine operators and assemblers 11.4%.

1990 Census figures indicated that 63.1% of the County residents age 16 and over were in the labor force, with an unemployment rate of 4.3%. As in the Township, the largest source of employment for the County was in the manufacturing of durable and non-durable goods, at 27.1% of all occupations. Retail trade was second at 16%, followed by education (9.5%), and health (8.5%). The two largest occupations included administrative support at 16.4%, and special professional occupations, with 13.4% of the work force.

HOUSING

The Census provides information on housing, including the number of housing units, types, cost, and vacancies. These data, in conjunction with field surveys, provide some understanding of a community's housing stock which can be used in planning future land use patterns and in identifying needs.

According to the 1990 Census, 2,254 housing units were located within Upper Mount Bethel Township, of which 2,057 were occupied. Of the 197 vacant units, 116 are for seasonal or occasional use. 82.8% of occupied units were owner occupied, a figure considerably higher than that for Northampton County, which was only 73.6%. Vacancy rates were 0.9% for owner occupied units, and 4.3% for rental units. Mobile homes, at 434 units, comprised 19.3% of the total housing stock. This was considerably higher than the County-wide figure of 4.7%. The median value of owner occupied units was \$121,400, a figure which was 15% higher than the County-wide average.

The 1998 Profiles and Trends Report of the Lehigh Valley Planning Commission reports that, according to Census material, the Township gained 220 housing units between 1990 and 1996. This represents a 11.9% increase, for a 1996 total of 2,065 housing units. By comparison, the Northampton County increased by 8.6%,

and the Lehigh Valley Region as a whole by only 6.7%. This growth trend, which is documented in Figure 6, shows signs of continuing. The Report also stated that between 1987 and 1991, 818 lots were proposed in Upper Mount Bethel. While only 131 of these lots were approved, this is indicative of the growth potential within the Township. Subdivision activity during this same period included the approval of 32 of 52 proposed lots.

Figure 6: Housing Units in Upper Mount Bethel, Northampton County, and the Lehigh Valley Region, 1980 - 1990

	Upper Mount Bethel	Northampton County	Lehigh Valley Region
1980	1,854	84,265	190,270
1990	2,254	93,345	213,680
2000	2,392	101,586	237,090
% Change (1980-1990)	21.6	13.1	12.3
% Change (1990 - 2000)	6.1	8.8	10.9

Note to Reader:

It should be noted that the analysis above, for the Year 2000, was based on limited Census Data which was just being released by the Census Bureau. In most cases, the analysis had to rely on estimates and forecasts from other sources. Therefore, the Year 2000 data should be reanalyzed when it becomes available from the Census Bureau. The analysis above however, does reveal the direction of the demographic trends affecting the Township.

EXISTING TRANSPORTATION FACILITIES

ROADWAY CONDITIONS

Deficiencies in the condition of the roads in the Township consist of poor physical condition and repair, and poor geometric alignment. The Township Public Works Department conducts semi-annual road inspections to assess conditions of the road system, from which it is able to set up its maintenance and improvement program.

A description of the manner in which roads were repaired in 1993 is described below:

- Planned roadway repairs and improvements for 1993 centered on only one major project. Unpaved dirt roads in the Township were to be paved through an agreement reached between the Township and a private contractor. The Penn Jersey Paving Company purchased a several thousand tons of old gravel, from which it was supposed to separate the oil and tar at its local plant. From the unused and unsold remnants the company would be able to contribute enough asphalt to pave 15 to 18 miles of Township roads. No other road maintenance projects were scheduled, except for miscellaneous small patch and sealing jobs at various locations.

A more serious and longstanding roadway concern is the "Five Points" intersection on Route 512. A heavily traveled and complex intersection which handled traffic to several nearby schools. At that time in 1993, the intersection was in need of a traffic light for some time. To date that traffic light has not been installed.

The PennDOT 12-Year Transportation Program for the years 1992-2004 showed three projects within Upper Mount Bethel. Two involved the replacement of bridges, while the third proposed the demolition of a bridge. The two bridges to be replaced included the Jacoby Creek Bridge at Delaware Avenue, just north of Portland; the second bridge also crossing Jacoby Creek, at a point nearby the first bridge. Both of these projects were expected to be completed within the first four years of the 12-year plan. The bridge marked for removal was located in Slateford, and lies over a former Conrail line. It was scheduled for completion within the second four years of the Plan.

The passage of time and growth in the Township has increased the maintenance needs required and it has become apparent that an overall Transportation Plan for the Township is required. The beginning of such a plan is set forth in Section III of this Comprehensive Plan, titled "Proposed Transportation Plan" beginning on Page 66 and in Map No. 11 following that section.

ROADWAY JURISDICTION AND CLASSIFICATION

The roadways in Upper Mount Bethel include State, local and private roads; these are shown on Map 11 following page 72. The State roads in the Township, totaling approximately 30 miles, include those in the following figure (Figure 7).

Figure 7: State Roads

● State Route 191	Valley View Drive
● SR 512	East Bangor Mt. Bethel Highway
● SR 611	South/North Delaware Drive/River Road (partial)
● SR 1017	Five Points Richmond Road
● SR 1017	Bangor Johnsonville Road
● SR 1033	Creek Road
● SR 1035	Ridge Road
● SR 1035	North Broad Street/Fox Gap Road
● SR 1022	Lake Minsi Drive
● SR 1020	West Bangor Road

Township Roads - There are 61 roadways under Township jurisdiction, totaling almost 95 miles. Numerous private roads are also to be found in the Township. Some include the following: Kearney Lane, Roberts Road, Hill Lane, the roads of the Polly Acres, Sunset Acres, Echo Lake, Sandy Point, and Hallet's Woods developments.

The functional classification of roadways is based on intended use. Arterials are roads whose purpose is the mobility of through traffic to regional activity centers, and these have the heaviest traffic volume and are used for longer trips (arterials in Upper Mount Bethel are therefore the major State Routes 191, 512 and 611). Local Roads are focused on those roads whose primary function is for direct access to properties which abut the roadway; Collectors serve to connect local and arterial roadways. These classifications are spelled out in the Township's Subdivision and Land Development Ordinance. Further discussion about proposed classification of roadways within the Township is found in the "Proposed Transportation Plan".

TRAFFIC ACCIDENTS

In the early 1990's, the Township Police Department collected information on traffic accidents. Between 1985 and 1992 accidents have declined significantly, as can be seen in the following tabulation (Figure 8). This was attributed by the Police Department to a rise in the number of officers, stronger enforcement of drunk driving laws, and milder winters which result in less hazardous road conditions. No map of accident locations was available. According to the Chief of Police, in the early 1990's, they were well scattered throughout the Township, with no particular intersection or section of road identified as most hazardous. Accidents do tend to occur at curves in roads which follow a long straight-away, and where poor alignment and excessive grades exist. It should be noted that more recently the Township disbanded its Police Department.

Figure 8: Frequency of Traffic Accidents in Upper Mount Bethel

1985 Through 1992

<u>YEAR</u>	<u>NUMBER OF ACCIDENTS</u>
1992	98
1991	77
1990	75
1989	129
1988	103
1987	113
1986	115
1985	105

TRAFFIC VOLUME

Traffic counts in the Township are conducted and compiled by the Lehigh Valley Planning Commission. Shown below in Figure 9, these counts are Average Daily Traffic volumes at particular points, on particular dates, and indicate generally the normal volume to be found at that location. The heaviest traffic is found along Routes 611 and 512. These two roads have the six highest traffic counts in the Township. The highest count in the mid-1990's was not on either of these roads, but at the nearby Portland-Columbia Toll Bridge, with an average daily volume of 4,275 vehicles. This points to the rising significance of commuter traffic to New York and New Jersey employment centers, since the bridge gives ready access to Interstate 80 across the Delaware River. These traffic volumes have increased significantly since that time.

Traffic volume forecasts have been prepared for the years 2000, 2010 and 2020 by the Lehigh Valley Planning Commission. However, these are based on higher population projections than previously prepared by the LVPC (7,177 for 2000, 9007 for 2010, and no forecast for 2020); direct comparisons are therefore not available. However, the forecasts show generally increasing volumes in most instances on the arterial highways (Routes 191, 512 and 611), with significantly high increases on Route 512.

Figure 9: Traffic Volume

<u>Location</u>	<u>Most Recent Count</u>	<u>Date</u>
S.R. 191		
- Between Totts Gap & Bergen	2,650	1990
- Between Fox Gap & 1020	2,934	8/90
S.R. 512		
- West of Rt. 611	5,650	1990
- Between Ye Old Hwy. & Sand Pit	5,064	10/92
- Between Ye Old Hwy. & Ye Old Hwy.	6,239	8/90
S.R. 611		
- West of Portland	7,421	1990
- At intersection of Rt. 512	2,150	1990
- Between Mid. Village & Potomac St.	8,270	8/90
- Evergreen & 5 Points Stone Church	2,410	8/90
- North of Portland	5,382	1987*
S.R. 1017 Five Pts. Richmond Rd/Bangor Johnsonville Rd	619	1974*
S.R. 1020 West Bangor Road	1,266	1986*
S.R. 1030 Park Avenue	982	1974*
S.R. 1033 Creek Road	1,400	1974*
S.R. 1035 Ridge Road/N.Broad St/Fox Gap Rd	1,038	1987
S.R. 1037 River Road (portion of)	2,199	1987*
S.R. 1039 River Road	1,623	1974*
S.R. 1040 Million Dollar Highway	516	1974*
Portland-Columbia Toll Bridge	4,275	1990
* Indicates the count is an estimated update, as of Nov 1991, and is based on population growth since the original count was taken on the date indicated.		
Source: PennDOT (early to mid 1990's)		

TRANSIT FACILITIES

Available transit service in the Township is very limited. Service has been provided in Northampton and Lehigh Counties since 1972 by the Lehigh Northampton Transportation Authority (LANTA). According to the Lehigh Valley Planning Commission, LANTA currently operates 69 buses on 15 routes. However, this service does not extend to Upper Mount Bethel, as it is concentrated in the urban areas south and west of Upper Mount Bethel, and extends only to Bangor. Greyhound lines are also available in Bangor, and run to Easton. These run only in the early morning and afternoon, however. At the Easton bus terminal, routes are available to Philadelphia, New York, and other points.

Train service was planned to be extended by NJ Transit to Hacketstown beginning on October 31, 1994, with expanded service to Netcong (located along Route I-80). This service is intended to provide improved commuter service to northern New Jersey, New York and Morris and Essex Counties in New Jersey. It is also intended to improve reverse commuting to the Mount Olive Trade Center in Netcong. Proposals also exist for the restoration of train service between the Pocono region and New Jersey.

COMMUNITY FACILITIES INVENTORY

ADMINISTRATIVE FACILITIES

In the early 1990's, Upper Mount Bethel Township was staffed by nine full time and one part time administrative and public works employees. All staff are housed in the Municipal Building located on Sand Pit Road. It contains a total of 2,266 square feet of office space, and a 3,973 square foot garage, all on one level. Some discussion has begun concerning the possibility of a new site and building for the Township offices. The Township operated 19 vehicles in early 1990's, including police, road repair, and general transportation vehicles. Since that time, the Police Department has been disbanded resulting in a reduction of several vehicles.

SCHOOLS

The Township is a part of the Bangor Area School District. Four of the District's schools are in Upper Mount Bethel; these are all located together, on Five Points Richmond Road. In the early 1990's, they included the following: the senior high school (grades 10-12), with an enrollment of 584; the junior high school (grades 7-9), with 717 students; the Five-Points Elementary School (grades K-3), with 858 students; and the DeFranco Elementary School (grades 4-6), with an enrollment of 735 students. The School District underwent a realignment of its elementary schools in 1991; this involved the closing of the 107 year old Bangor Elementary Center, the construction of the DeFranco School, and the assignment of elementary grades to different schools.

POLICE PROTECTION

The Township recently dismantled its police force. Police protection is provided by the PA State Police. At this time, Township officials are satisfied that the services of the State Police are adequate to meet the needs of Upper Mount Bethel's residents.

FIRE PROTECTION

Upper Mount Bethel Township is served by two volunteer fire companies. The Mount Bethel company is located on Route 611, between Route 512 and South Street. In addition, the Township is also served by the North Bangor Fire Company (located at Fox Gap Road and Lake Minsi Drive).

SANITATION AND RECYCLING

Grand Central Sanitation of Pen Argyl, recently acquired by Waste Management, contracts with the Township to provide all residential trash and recycling pickup.

Trash pickup is conducted weekly. Recycling is collected every two weeks, using a rear load compactor truck. These services are for residential homes only; commercial uses must contract for service individually. According to Grand Central Sanitation, in the early 1990's, a total of 3400 tons of trash and 376 tones of recyclables were hauled away annually. This included 191 tons of newspaper, and 185 tons of glass, cans, and plastic (#1 & #2). Composting of leaves or biodegradables is not conducted. All trash and recyclables are taken to Waste Management (Grand Central Sanitation) facilities. No changes in pickup procedure are anticipated, nor are there any changes in legal requirements or industry standards which may affect service.

LIBRARY

The Township does not have a library of its own. The nearby Bangor Public Library and the School Districts' Library are available for the use of the Township's residents and children. At this time Township leaders feel the residents needs are adequately served by these two facilities. The American Library Association recommends that a permanent facility be established when a community's population reaches 20,000; thus the Township need not consider this an immediate concern, but may want to revisit this discussion at an appropriate time in the future.

MEDICAL

Emergency service is provided by the Portland Ambulance Service. The nearest hospital is the Pocono Medical Center in East Stroudsburg. Additionally, the Slatebelt Medical Center in Bangor provides outpatient services for the elderly.

RECREATION

Given its rural setting, Upper Mount Bethel offers a wide range of recreational opportunities. The major park of regional significance is the Delaware Water Gap National Recreation Area. The Northampton County Parks and Recreation Department manages Lake Minsi and Bear Swamp, and also is holding several parcels of land along the Delaware River, which collectively are known as the Mount Jack County Park. No facilities are available at this park, as it is currently being held for future unspecified development. Additionally, the County also owns Doe Hollow, and the Appalachian Trail runs along the Township border with Monroe County.

Currently, the Township operates two recreational sites, both of which are leased. One is located at the Metropolitan Edison power station property, on River Road. It includes a public boat landing, a ball field, and picnic areas, on approximately 5 to 6 acres. In the near future this site will no longer be available for the Township's use. Supervisors are currently seeking a new site that will accommodate not only the ballfield, but will also have enough acreage to accommodate a community-wide park to serve the entire Township. A second leased site is located on the grounds of the junior high school, and includes open space and a tot lot, also on 5 to 6 acres, giving the Township approximately 10 to 12 acres of recreational space.

The National Recreation and Park Association (NRPA) recommends a minimum of 6.25 acres of park and open space per 1,000 residents. This includes two types of acreage: active facilities such as playgrounds, ball fields, and neighborhood parks, to make up 40% of all acreage; and passive open space for such activities as picnicking and hiking, making up the remaining 60%. Given the 2000 Upper Mount Bethel population projection of 7,177, and the projected growth for the Township a minimum of 50 acres is recommended to address the current and future needs of the Township. Although not managed or owned by the Township, a more than adequate supply of passive recreational opportunities is available. The 10 to 12 acres of developed active recreational space, however, is short of the 13.7 acre standard set by the NRPA.

SEWER AND WATER

No public sanitary sewer system is operative within Upper Mount Bethel. All properties are served by on-site septic systems, with the exception of properties served by four small privately operated central sewage facilities. These four systems are operated by the Bangor Area School District, the Metropolitan Edison Generating Plant, the Tuscarora Lutheran Conference Center, and the Evergreen Village mobile home development. According to the Township Engineer, problems with malfunctioning septic systems, such as placement of septic systems in unsuitable soils, improper design, and lack of maintenance are problems throughout the Township. The Township's Sewage Enforcement Officer has indicated that these problems tend to be concentrated in the areas with smaller lot sizes such as Shooktown, the Villages of Stone Church and Mount Bethel, and the Echo Lake for example.

The existing Township Act 537 Sewage Facilities Plan was completed in September, 1990. It is currently out of date and the Township has begun the process of completing a new Act 537 Plan during the year 2001 and 2002. The Act 537 Plan of 1990 replaced a 1970 plan which was adopted prior to any land use controls. Produced with the assistance of RKR Hess Associates, the 1990 plan was intended to coordinate wastewater planning with zoning and land use planning. The main features are summarized below.

The existing Plan (now out of date) assumed that no financial assistance from State or Federal sources will be available for the construction of sewage facilities, and that conventional urban type systems are not desirable in the Township, because of the increased growth that such facilities promote. The general findings are that the majority of individual septic systems are functioning well and are expected to continue for the next ten years, and that the continued reliance on private systems is desirable whenever possible.

The plan that is built on these assumptions and findings is based on the Lehigh Valley Planning Commission's "On-Lot Sewage Disposal System Project". The Township is divided into seven "areas of concern" (AOC) and outlying areas:

AOC 1, Mount Bethel - encompassing 166 acres adjoining Portland, this is seen as a preferred growth area. While there are no large scale problems, there have been numerous recent repairs to old systems. The area has some difficulties due to small lots and subsurface soils.

AOC 2, Stone Church - totaling 28 acres and zoned R-1, this area is essentially built out. Individual system failures are due to age.

AOC 3, Shooktown - zoned for medium to high density on 31 acres, this area has access to a public water supply and is seen as a future growth and development area.

AOC 4, Slateford - zoned R-1 low density residential, this 20 acre area is essentially built out and is constrained by floodplains, and is thus not considered a growth area. Most systems are old and suspected of discharging sewage into the Delaware River; currently this is not seen as a severe problem as this area is served by a central water supply, and the amount of effluent can be accommodated by the river.

AOC 5, Echo Lake - this community was once a predominantly a seasonal vacation community but now has a growing number of year-round homes, it is zoned R-1 low density residential; its sanitary facilities are monitored by an Owners Association. Although a few problems have been identified recently, most systems are in good condition.

AOC 6, Tuscarora-Shawnee - occupies roughly 190 acres and is comprised of a conference center, seasonal vacation houses, and a growing number of year-round homes. Except for areas of steep slopes, the soils are well suited to septic systems and there are no significant problems. Located along the Delaware River, the area is zoned for medium and high density residential use, and is seen as a future growth area.

AOC 7, Sandy Shore - comprising 35 acres along the Delaware River, the area is not expected to see significant growth due to the extensive floodplain and the agriculture residential zoning. The homes were intended for seasonal use, and are located on non-conforming lots with older septic systems. No system malfunctions have been found, however, the growing number of year-round users warrants special attention.

Outlying Areas- comprise all areas not part of AOC, and includes the zoning districts Agricultural Residential, Steep Slope, Open Space Conservation, and R-1 Residential.

Recommended for all areas is continued monitoring, homeowner education, and the installation of water use reduction devices. Three possible responses are suggested, if system failures continue. The first is the creation of an On-lot Management District which would operate and maintain existing systems. When structural solutions are deemed necessary, a cluster effluent collection and

treatment system may be appropriate. Finally, the long-term response to certain problems in some AOCs may require participation in a joint sewage system with Portland and East Bangor.

WATER SUPPLY

Water is supplied for the great majority of the Township by means of individual on-site wells, except for limited community service in certain areas of the Township. The East Bangor Water Authority provides water to portions of Ridge Road by east Bangor, PA American water supplies homes along PA Route 191 and Shooktown Road, and The Portland Water Authority supplies water to the area bounded by Turkey Ridge Road and the northern border of the Village of Mount Bethel. Groundwater quantity and quality in Upper Mount Bethel Township varies according to the aquifer source. Based on limited data, median yields on 10 domestic glacial wells in Northampton County were 40 gpm (Poth, 1972). The water is characterized as hard, and highly susceptible to contamination from human activities.

Potential recharge aquifers in the Township include the Glacial, Limestone (Allentown and Beekmantown formations), and the Martinsburg Slate aquifers (TNC, 1999). The Limestone aquifer is relatively shallow with artisan wells and springs furnishing water to surface streams and ponds as well as municipal water supplies and private domestic users (Miller 1939). Domestic well yields are highly variable with yields ranging from <1 - 1500 gpm (Sloto, Cesil and Senior, 1991). Springs are extremely abundant and occur in every valley in the region. The Martinsburg Aquifer favors the formation of springs. This system is the most extensive domestic water supply source in the Township, with yields ranging from 2-100 gpm (Miller 1939, Poth, 1972).

The provision of reliable, adequate and clean water is directly related to existing aquifers, however it is also associated with the development of comprehensive land use planning. This is true for ensuring that the density and the type of development does not result in over use and contamination of existing water supplies. In fact, the preservation of water resources should be the focus of water supply planning in Upper Mount Bethel Township. Protection is accomplished by enforcing federal and state water quality regulations, implementing local land use controls, and requiring the use of best management practices (BMPs) to protect critical groundwater recharge areas.

AVAILABILITY OF PUBLIC SEWER AND WATER FACILITIES

As discussed above, Upper Mount Bethel Township currently does not provide or maintain public sewer or water facilities. These services are therefore largely not existent in the Township, except for the following:

- ▶ Certain areas of the Township have been able to extend limited public sewer service from adjoining East Bangor Borough and public water from the adjoining Borough of Portland.

- ▶ Several private public package treatment plants which serve past development projects including the Tuscarora Area and a mobile home development.

Therefore, virtually the entire remainder of the Township is not served with public water or sewer services.

As a part of the Comprehensive Planning process, the Township has adopted a Public Water and Sewer Policy (See Appendix B) which would not permit the development of private central sewer and water facilities by private developers based on a recommendation from the Lehigh Valley Planning Commission. The Township has also approved the preparation of an updated Act 537 Sewage Facilities Plan as required by the PA Department of Environmental Protection (DEP), and this Plan should be completed in the Year 2001. In addition, it is expected that priority for new public sewers would be given to the older sections of the Township along Rt. 611 which are experiencing septic system failures. Given the amount of time needed to design, finance and construct facilities of this type, new public sewers to serve new developments may not be available for another 7 to 10 years, and at that time, they could only serve a small section of the Township in the designated Future Growth Area shown on Map No. 9 following page 55.

When sewer and water facilities become available they could probably provide necessary services to only the older sections of the Township in Mount Bethel Area and along Rt. 611 and also service to major commercial and industrial areas, and possibly to new Neighborhood residential developments within a portion of the limits of the Future Growth Area.






STORM WATER FACILITIES

Rainwater flowing across land and entering rivers and lakes is known as storm water runoff. The amount and intensity of storm water increases as soils and vegetation are replaced by impervious surfaces (e.g., driveways, roads, parking lots, and structures). When more and more storm water is produced more frequent flooding occurs. In addition, as storm water runs over residential lawns, construction projects, streets, and farm fields, it transports pollutants (e.g., sediments, nutrients, pesticides, fertilizers, oil, gasoline, etc.) to our lakes, rivers, and wetlands. Therefore, managing storm water is important in Upper Mount Bethel Township.

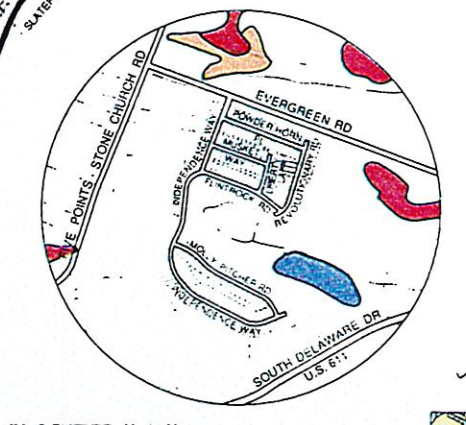
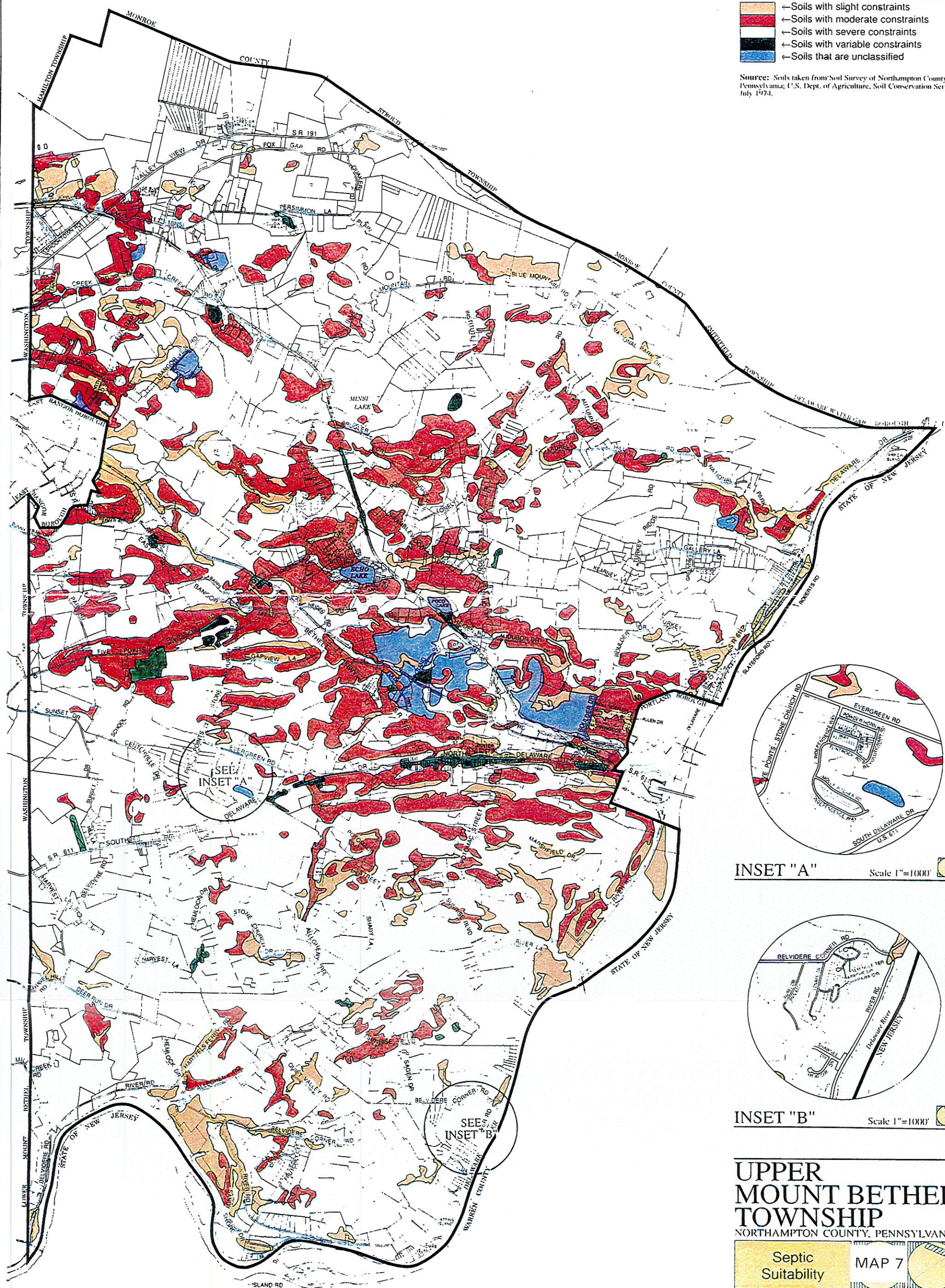
In Pennsylvania, storm water planning is guided by the technical and legal components of the Storm water Management Act (Act 167). The Act requires counties to complete storm water management plans in consultation with the municipalities. The plan addressing storm water in Upper Mount Bethel is the Martins/Jacoby Creek and the Delaware River Sub Basin 1 (Act 167) Storm water Management Plan (Lehigh-Northampton County Planning Commission, 1996). The drainage area is approximately 100 square miles and includes the following sub watersheds of the Delaware River: Martins Creek, Jacoby Creek, Slateford Creek, Allegheny Creek, Oughoughton Creek and Mud Run.

The Martins/Jacoby Creek 167 plan addresses runoff quantity rather than runoff quality. The goal of the 167 plan is to maintain existing peak runoff rates throughout the watershed through the implementation of the Release Rate Concept. Another goal of the Act 167 plan was to determine the suitability of storm water detention in sub watersheds throughout the Martins/Jacoby Creek region. Three basic districts are provided for Upper Mount Bethel Township including: Conditional No Detention I, Conditional No Detention II, and Dual Release Rate Districts. Minimum storm water criteria and standards are associated with each district category, and must be met for all new land development and proposed, additional impervious surfaces. Upper Mount Bethel Township has adopted a storm water ordinance based upon the research, storm water modeling, and recommendations included in the Martins/Jacoby Creek 167 plan.

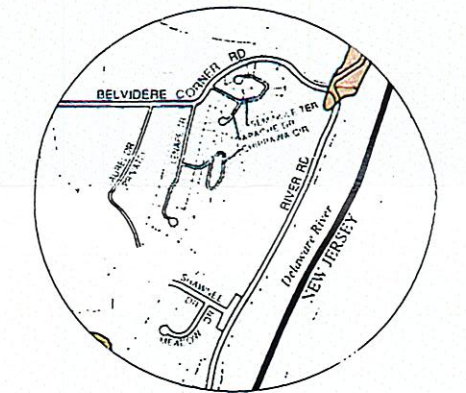
LEGEND

-  ← Soils with slight constraints
-  ← Soils with moderate constraints
-  ← Soils with severe constraints
-  ← Soils with variable constraints
-  ← Soils that are unclassified

Source: Soils taken from Soil Survey of Northampton County, Pennsylvania; U.S. Dept. of Agriculture, Soil Conservation Service, July 1974.



INSET "A" Scale 1"=1000'



INSET "B" Scale 1"=1000'

UPPER MOUNT BETHEL TOWNSHIP

NORTHAMPTON COUNTY, PENNSYLVANIA

Septic Suitability **MAP 7**

500' 1000' 1500' 2000' NORTH
1" = 2000'

PREPARED BY THE WAETZMAN PLANNING GROUP
126 W. Lancaster Avenue • Ardmore, PA 19003 • 215-642-5200
22 Euclid Street • Woodbury, NJ 08096 • 609-853-2600

Base Map prepared by Lehigh - Northampton Counties Joint Planning Commission. Updated per tax maps current through December 1991, and by Township officials. Selected road names changed per Township officials' request, March, 1993.

LEGEND

ROADWAY JURISDICTION

- State
- ▬ Township
- ▬ Private / Not to be Dedicated

TRAFFIC VOLUME

- 2,934 1990 Counts (Average Annual Daily Traffic)

UTILITIES

- ▨ Approx. Areas Served with Water
- ▨ Smith's Reservoir (Nat'l Amer. Water Co.)
- ▬ Electric Lines
- ▬ Gas Line
- ▬ Telephone Line

COMMUNITY FACILITIES

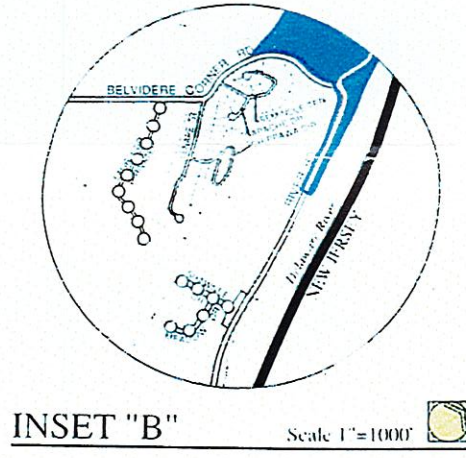
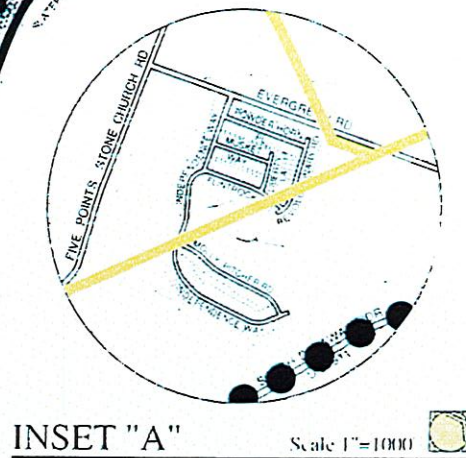
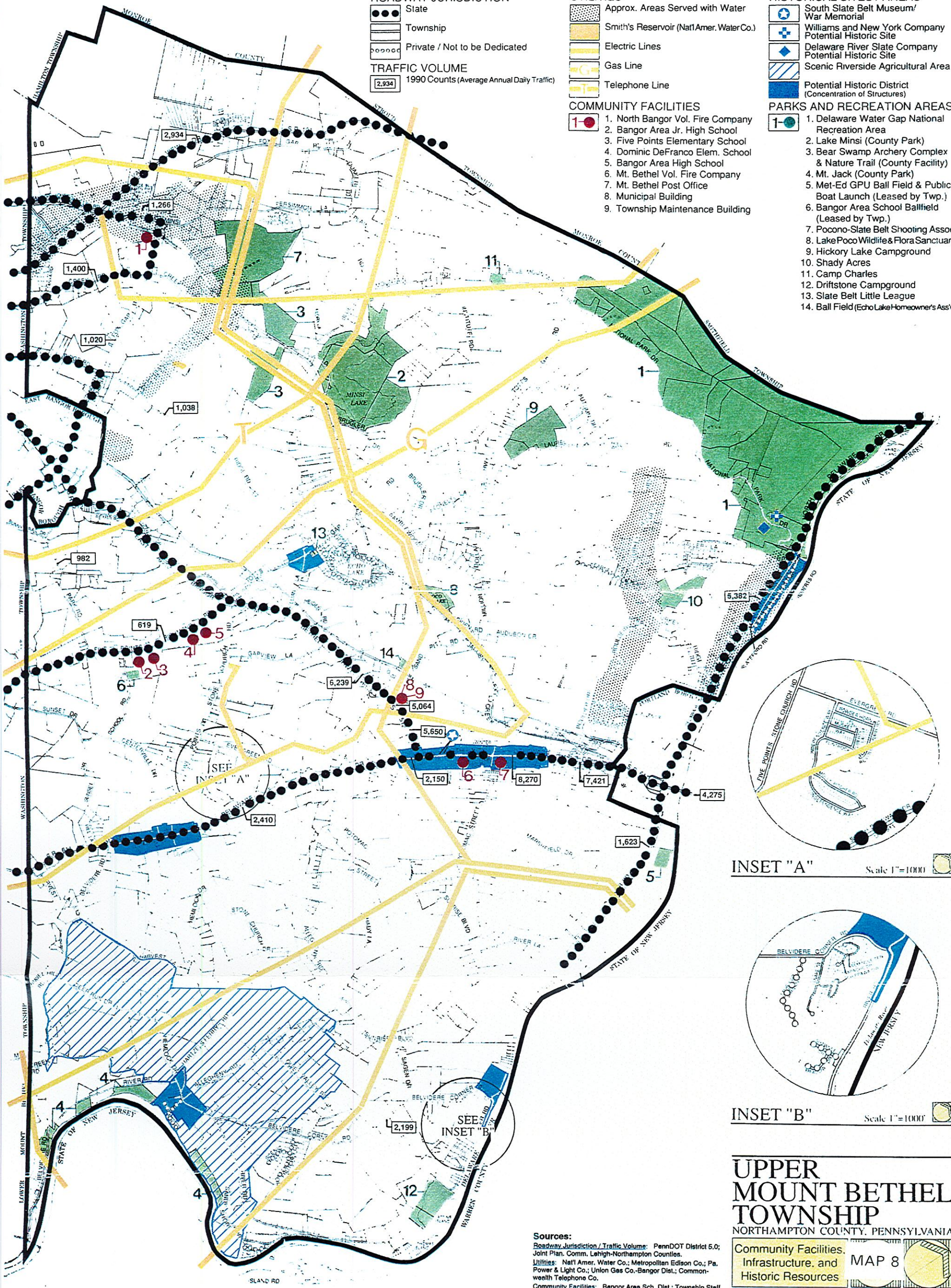
- 1 North Bangor Vol. Fire Company
- 2 Bangor Area Jr. High School
- 3 Five Points Elementary School
- 4 Dominic DeFranco Elem. School
- 5 Bangor Area High School
- 6 Mt. Bethel Vol. Fire Company
- 7 Mt. Bethel Post Office
- 8 Municipal Building
- 9 Township Maintenance Building

HISTORICAL SITES / AREAS

- ⊕ South Slate Belt Museum/ War Memorial
- ⊕ Williams and New York Company Potential Historic Site
- ⊕ Delaware River Slate Company Potential Historic Site
- ▨ Scenic Riverside Agricultural Area
- ▨ Potential Historic District (Concentration of Structures)

PARKS AND RECREATION AREAS

- 1 Delaware Water Gap National Recreation Area
- 2 Lake Minsi (County Park)
- 3 Bear Swamp Archery Complex & Nature Trail (County Facility)
- 4 Mt. Jack (County Park)
- 5 Met-Ed GPU Ball Field & Public Boat Launch (Leased by Twp.)
- 6 Bangor Area School Ballfield (Leased by Twp.)
- 7 Pocono-Slate Belt Shooting Assoc.
- 8 Lake POCO Wildlife & Flora Sanctuary
- 9 Hickory Lake Campground
- 10 Shady Acres
- 11 Camp Charles
- 12 Driftstone Campground
- 13 Slate Belt Little League
- 14 Ball Field (Echo Lake Homeowner's Ass'n)



UPPER MOUNT BETHEL TOWNSHIP
NORTHAMPTON COUNTY, PENNSYLVANIA

Community Facilities, Infrastructure, and Historic Resources **MAP 8**

Prepared by THE WAETZMAN PLANNING GROUP
326 W. Lancaster Avenue • Ardmore, PA 19003 • 215-642-5200
22 Euclid Street • Woodbury, NJ 08096 • 609-853-2600

Base Map prepared by Lehigh - Northampton Counties Joint Planning Commission. Updated per tax maps current through December 1991, and by Township officials. Selected road names changed per Township officials request, March, 1994.

Sources:
Roadway Jurisdiction / Traffic Volume: PennDOT District 5.0; Joint Plan, Comm. Lehigh-Northampton Counties.
Utilities: Nat'l Amer. Water Co.; Metropolitan Edison Co.; Pa. Power & Light Co.; Union Gas Co.-Bangor Dist.; Commonwealth Telephone Co.
Community Facilities: Bangor Area Sch. Dist.; Township Staff & Planning Comm.
Historical Sites / Areas: Thomas E. Jones, Chairperson, Northampton Co. Hist. Resource Survey.
Parks & Recreation Areas: US Dept. of Int., Nat'l Park Service; Joint Plan, Comm. Lehigh-Northampton Counties; Township Staff & Plan. Comm.

EXISTING HISTORIC RESOURCES

HISTORIC SITES

The Northampton County Historic Society has identified a number of Historical Sites and areas, and potential Historic Districts located in Upper Mount Bethel Township. These are listed below and located on Map 8, Community Facilities, Infrastructure & Historic Resources, located after page 29

- ▶ South Slate Belt Museum/War Memorial
- ▶ Williams and New York Company Potential Historic Site
- ▶ Delaware River Slate Company Potential Historic Site
- ▶ Scenic Riverside Agricultural Area
- ▶ Potential Historic District in the older Villages located along Rt. 611, including Mount Bethel and Stone Church, and the Villages of Johnsonville, Slateford, and in Hartzell's Ferry; and various buildings in the Tuscarora Conference Center.

The Society has also indicated that they will conduct a County-wide survey to assess and describe all historic sites in the County and in the Township. Therefore, the information shown on Map 8 is of a preliminary nature.

The first European settlers arrived in the New World some time in the 1730's. These were the Dutch, who built the first interior road in North America, from New Amsterdam (New York) to the copper mines north of the Delaware Water Gap in Monroe County. Following these first settlers, a variety of people began settling in the area, including Upper Mount Bethel Township, such as Huguonots, Irish, Scots, and other ethnic groups. This gave the Township a cultural diversity somewhat unique to the rest of Pennsylvania. This can be seen in the settlement patterns, which are focused on crossroads rather than in the type of German linear villages found in much of the State.

According to the County Historic Society, the Township has a very large number of sites which may be eligible for inclusion in the National Register of Historic Places, as sites which qualify under the "local significance criteria". The Society conservatively estimates 400 structures, and an additional 200 sites and structures which may be eligible under the National Register's agricultural area criteria. Many of these may also meet the criteria for State-wide significance. Of particular importance are the areas of Stone Church, Johnsonville, Slateford, and Hartzell's Ferry located in the Township.

ARCHAEOLOGICAL SITES

In addition to the above sites of historic importance there are also certain areas of archeological significance. While not shown on the map, these are located along various creek beds running into the Delaware River. One of the oldest pre-historic sites in North America is located adjoining Lower Mount Bethel Township and that site is estimated to have been inhabited approximately 12,000 years ago. Archeologists hope to expand their research to related sites that have been identified in Upper Mount Bethel, near Mount Jack.

PROPOSAL

Upper Mount Bethel Township should cooperate with the Slate Belt Museum officials and the Northampton County Historic Society in the local identification of well known historic/archaeological sites in the Township. Information available locally can be assembled and entered into a data base of Historic Sites being developed by the County Historic Society.

Available information, records, photographs and drawings can be pulled together to increase the information about these sites and brief summary descriptions prepared and catalogued for each site. This should also include information available from the records of the PA Bureau of Historic Preservation and from the Lehigh Valley Planning Commission and other knowledgeable persons in the Township.

FISCAL CONDITIONS AND TRENDS

The purpose of fiscal impact studies, according to "Fiscal Impacts of Land Developments", published by the Urban Land Institute, is to determine whether developments will generate enough revenue to cover the cost of the services they will require. Such studies may range from a review of individual projects to multiple studies of optional scenarios on a regional scale. At the local level, such studies are generally part of a larger impact analysis including environmental and transportation concerns, among others, and review different possible growth rates. A similar analysis can be utilized at the municipal level. (It should be noted that a variety of shortcomings are common in any such fiscal impact study, including a reliance on estimations, changes in demographic patterns, changes in the type, density, and distribution of development, and changes in the services demanded by citizens).

In figuring the demands that new development will bring to the fiscal status of the Township, a listing of the Township's sources of income is given in Figure 10, below.

In determining the number of new taxable housing units, two methods give approximately the same figures. If each new unit built is assumed to constitute a new household, then the number to be built during the 1990's can be derived by dividing the estimated new population (1,000 persons) by the current average persons per household (2.66). This comes to a total of 37.6 new units per year, or 376 new units during the 1990's. A second method is to simply assume that the number of new units built during the previous decade will continue on into the 90's. From 1980 to 1990, 400 new units were built in the Township, or an average of 40 per year. Taken together, these two figures confirm that the Township may anticipate approximately 376 to 400 new units during the 1990's.

For each of the past three years (1990-1992), the Township has gained an additional \$14,000 in tax revenues from new housing construction. A continuation of this trend would bring the Township approximately \$140,000 in additional revenue during the next ten years.

Recent State legislation concerning the collection of impact fees from developers may have some bearing on Township revenues. Amendments to Act 247 (PA Municipalities Planning Code -MPC) allow the collection of transportation impact fees, but only when predicated on the adoption of certain prerequisite planning documents. The MPC also allows for certain fees to be collected for recreation facilities, but only upon the adoption of a Recreation Plan.

Figure 10: Catalogue of Taxes and Sources of Income

	<u>1992</u>	<u>2000</u>	<u>2001</u> <u>Projected</u> <u>Budget</u>
Property Taxes	359,102	297,448	327,836
Enabling Act Taxes (Including real estate transfer, per capita, earned income, and occupational privilege taxes)	291,861	610,044	548,100
Penalties/Interest on Delinquent Tax	5,600	5,011	7,900
Business Licenses & Permits	12,385	30,757	31,350
All Other Revenue Sources (Interest & dividend income, shared and intergovernmental revenues, charges for service, sanitation and sewage, recreation concessions, etc.)	558,751	658,380	674,647
TOTAL REVENUES	1,227,699	1,601,640	1,589,833
* Revenue projections based on population projections; population to grow by approximately 100 per year for next 20 years (1,000 per decade)			

Despite the decrease in revenues from property taxes since 1992, the amount of total revenues increased by approximately one-third from 1992 to the Year 2000. This increase in total revenues can be attributed to significant increases in Enabling Act Taxes and Business Licenses and Permits. The category of All Other Revenue sources also increased, contributing to the rise in total revenues.

ECONOMIC CHARACTERISTICS AND TRENDS

INCOME

Economic conditions in Upper Mount Bethel generally compare favorably with those of surrounding communities, including townships, counties and Pennsylvania as a whole. This is clearly shown in Figure 11 on the following page.

As the figure shows, Upper Mount Bethel is in a strong position concerning the income of its residents. Among all communities with which it was compared, the Township had the highest income, including per capita, mean, and median household incomes. Both its per capita and median household incomes rose by the highest percentage since the previous census was taken in 1980. This is very likely due to the influx of new residents. Additionally, it had the lowest poverty rate, as a result of a dramatic drop of over 64% from the 1980 figure.

Although final data is not available from the US Census at this date, preliminary estimates indicate that the Township will continue to have a higher per capita income than Northampton County as a whole. The Township's per capita income rate will also rise, this means that the average income level of each resident will be higher than it was in 1990 and 1980.

Figure 11: Comparative Economic Conditions

<u>Per Capita Income</u>	<u>2000 (Est.)</u>	<u>1990</u>	<u>1980</u>	<u>1980-90 % Change</u>
Upper Mount Bethel	\$ 27,750	\$ 16,561	\$ 7,066	134%
Northampton Co.	\$ 21,985	14,562	7,382	97%
Monroe Co.		13,630	6,771	101%
Lehigh Co.		15,458	7,873	96%
Washington Twp.		15,417	7,136	116%
Lower Mount Bethel Twp.		15,630	6,700	133%
State of Pennsylvania		14,068	7,077	99%
Median Household Income				
Upper Mount Bethel	\$ 52,439	\$ 35,087	\$ 16,560	112%
Northampton Co.	\$ 46,778	32,890	18,470	78%
Monroe Co.		32,465	15,999	103%
Lehigh Co.		32,455	18,790	73%
Washington Twp.		30,974	18,656	66%
Lower Mount Bethel Twp.		34,880	18,057	93%
State of Pennsylvania		29,069	16,880	72%
Mean Household Income				
Upper Mount Bethel	\$66,670	\$ 44,360	n/a	n/a
Northampton Co.	\$59,571	38,612	\$ 20,541	88%
Monroe Co.		37,459	18,436	103%
Lehigh Co.		39,429	21,015	88%
Washington Twp.		35,864	20,391	76%
Lower Mount Bethel Twp.		39,268	19,069	106%
State of Pennsylvania		36,684	19,701	86%
% Below Poverty Level				
Upper Mount Bethel	N/A	3.8%	10.7%	-64.5%
Northampton Co.	N/A	7.3%	7.8%	-6.4%
Monroe Co.		7.3%	8.6%	-15.1%
Lehigh Co.		7.3%	7.2%	+1.4%
Washington Twp.		4.5%	5.1%	-11.8%
Lower Mount Bethel Twp.		4.8%	8.2%	-41.5%
State of Pennsylvania		11.1%	10.5%	+5.7%

Source: 1980 and 1990 Data reported by the Waetzman Planning Group. Year 2000 Data estimated by Michael Cabot Associates (MCA).

EMPLOYMENT

The face of the Labor Market in the Township is changing. In the Township's Comprehensive Plan of 1963, there were a total of 279 jobs reported in various industries. This total included 83 positions in Silk, Textile, and Blouse Mills. There were also Meat Processing and Packing Plants, Met Ed Co., Construction Materials, Supplies, Fabricated Metal Products and Machine Shops listed as operating at that time.

By 1995 there were over 500 jobs in the industrial sector of the market. The largest industrial employer in the Township is Wildon Industries. With a total of 275 employees, this business works with cut stone and stone products. The second largest industrial employer is Pocono Foods, Inc. on Route 611. Here 85 employees work in the poultry processing industry.

The other industries each had no more than 30 employees. They included several businesses that manufacture industrial machinery, equipment, or tools. Three business did millwork or produced other types of wood products, Eastern Industries is involved in mining and extraction, and Metropolitan Edison Co. continues its operations on the site it owns by the Delaware River.

One important change to note is that there were no more silk, textile, or blouse manufacturers left in the Township by 1995. The businesses and the jobs they provided had closed their doors and moved out of the area. This was the trend in our region during the last couple of decades, and it is not expected that these jobs will return. Residents who were previously employed by those companies have had to seek employment in the few remaining textile mills located in other communities or in other sectors of the job market.

THE FUTURE

The Township is in a good position to see growth in the job market in the future. There is a large section of land located on either side of Marshfield Drive that is zoned for Industrial use. This land is very close to the I-80 access in Portland and the possible development of a public sewer system to serve north to the Borough of Portland and this industrial area in Upper Mount Bethel Township plus an extension of public sewer and water facilities will provide the necessary infrastructure to support reasonable growth in industrial and commercial uses. Extension of water service from Portland is feasible making this area even more attractive to industry.

There has also been a slow but strong growth in the number of other types of business in the Township. New restaurants, shops, in-home businesses, offices, and banks can be seen around Mount Bethel and along Routes 611 and 512 as well. As the Township continues to grow, the number of businesses and services needed to serve the general population will also grow. The new Zoning Ordinance will help the Township direct the growth that is expected into appropriate areas as set forth in the Conceptual Land Use Plan.

PROSPECTS FOR GROWTH

Growth in Upper Mount Bethel in the past has been predominantly residential in nature. The interstate highways continue to draw new suburban residents from New Jersey, Philadelphia and the New York Metropolitan Area. Residents from closer communities such as the Allentown area, who seek a more relaxed and less expensive setting from which to commute are also moving into the Township. As the region continues to grow, with both businesses and residents moving into the area from the larger central cities, a reasonable growth trend is expected to continue.

Since 1960, the Township has sustained a moderately increasing residential growth pattern largely sparked by the increasing in-migration of persons moving into the area.

The prospects for attracting commercial and industrial activities has been more difficult. There is a need for controlled development of commercial and industrial areas to create new local jobs for Township residents and surrounding local municipalities in the northern part of the County. The improved highway system in the area which benefits the Township can help to achieve controlled commercial and industrial development include the following three major highways:

- ▶ I-80 major east-west highway that directly provides access to the Township at its eastern end at the adjoining Borough of Portland Interchange.
- ▶ I-78 another major east-west highway located in the Allentown Area which is also available to serve the Township.
- ▶ PA Route 33, a north-south limited access highway that connects to I-80 to the north and to I-78 to the south. PA Route 512 in the Township provides access to Route 33, but Rt. 512 needs improvement to improve the connection to Route 33.

These highways provide an opportunity for the Township to participate in increased commercial and industrial development. The amount of participation can be controlled by the Township by limiting such growth to a scale which is consistent with the Township's goal to preserve open space, to maintain its rural character, and to protect its natural resources and the abundant natural diversity which exists in the Township.

There is also an opportunity to utilize the Township's natural resources and Historic features to attract tourists and visitors into the area. This is an additional potential which can create jobs and improve the economy of the area.

In addition to more traditional industrial and office uses, opportunities for non-residential growth in Upper Mount Bethel are also likely to be those focused on the rural character and natural resources of the Township. Possibilities are as varied as family campgrounds, conference centers, and holiday resort centers given the presence of the Delaware Water Gap and the Appalachian Trail.

Current population projections prepared by the LVPC indicate a possible moderate growth in population by the Year 2020 to a total between 9,526 and 11,369 persons.

The new growth potential will require selected improvement of the Township's public sewer and water facilities in a limited section of the Township to eliminate existing sewage problems with adverse health consequences and to serve some limited new residential development and areas proposed for commercial and industrial development.

However, it is expected that most of the Township will not be served with public water and sewer services and that most of the Township will continue to rely on on-lot sewage and well water services.

POPULATION PROJECTION

Over the last 30 year period between 1960 and 1990, the number of new homes and the population increased in each of those three decades as shown in the following table. The projected growth for the Township between 1990 and the year 2020. Both High Range and Low Range projections are presented. The High Range projection was prepared by the LVPC in 1998. The Low Range figures have been prepared by Michael Cabot Associates (MCA) based on a more recent review of Building Permit Data between 1990 and the year 2000, with projections to the Year 2020.

See the table on the next page.

**POPULATION PROJECTION
1996 TO 1990 ACTUAL CENSUS DATA
1990 TO 2000 PROJECTED POPULATION
HIGH AND LOW RANGE**

Decades Between	Population at End of Decade	Increase in Population During Decade	Estimated New Housing Units Constructed (c)
Actual Census Data:			
1960 to 1970	3,343	399	Over 130
1970 to 1980	4,247	904	Over 300
1980 to 1990	5,476	1,229	Over 400
1990 to 2000	6,063	587	Over 195
Projection: High Range (a)			
2000 to 2010	9,007	1,830	610
2010 to 2020	11,369	2,362	787
Projection: Low Range (b)			
2000 to 2010	8,026	1,350	450
2010 to 2020	9,526	1,500	500

Footnotes:

- (a) Projections made by LVPC in 1998. This projection is considered to be in the high range based on an examination of Building Permit Data between 1990 and the year 2000. These projections may be overstated due to negative economic factors and moratorium placed on development by the Township during the years 2000 and 2001.
- (b) Projection by Michael Cabot Associates based on a reduced number of new housing units between 1990 and the year 2000 based on Building Permit Data (Low Range projection) between 1990 and 2000.
- (c) Based on 3.0 persons per household for persons purchasing homes assuming the families with children would be primary purchasers of new homes.

The 1998 Profiles & Trends Report of the Lehigh Valley Planning Commission includes a history and forecast of population. Growth in Upper Mount Bethel has outpaced both Northampton County and the Lehigh Valley region, and is expected to continue to do so. Between 1960 and 1990, the population of the Township increased by 81.4%.

Between 1970 and 1990 there was an in-migration rate of 1,765 people. This combined with the natural increase (the number of births minus the number of deaths) produced a population increase of 2,133 persons during that 20 year period. This trend of an increasing population due primarily to in-migration is expected to continue.

The growth trend for both the Low and High Ranges is up and this is expected to continue through the year 2020. The increase in population is based on both a natural increase of the population of births over deaths and also from the in-migration into the Township based on past birth and death rates as presented in Appendix C.

A recap of the Low and High Range Population Projections is presented below:

Year	MCA Low Range	LVPC High Range
1990 Census Actual	5,476	5,476
2000 Preliminary Census	6,063	6,063
Projection:		
2010	8,026	9,007
2020	9,526	11,369
% Increase 1990 to 2020 Projected	74.0%	107.6%
% Increase Actual 1960 to 1990	63.8%	63.8%

This amounts to an estimated number of new housing units between the years 2000 and 2020 of 950 to 1,397 for the low and high ranges, respectively, or an average of 47.5 and 70.0 units per year for the low and high range projections over the 20 year period of time.

II. GOALS AND OBJECTIVES OF THE COMPREHENSIVE PLAN

The Comprehensive Plan is based upon a statement of community goals achieved through specific objectives. Goals provide the broad support for the Comprehensive Plan. Objectives are means toward which goals are realized and may serve more than one goal. These are the basis for land use policies, for the creation and evaluation of the zoning, subdivision and land development ordinances, and for assessing proposals for new development in the Township. The Comprehensive Plan is designed to guide the physical and economic development of the community toward determined objectives, to provide harmonious and efficient allocation and arrangements of land uses, to protect natural resources and significant natural, cultural, and historic features, to preserve and enhance economic and social values, to protect property values, to promote the design of the built environment towards accomplishing these goals, and to provide for efficiency and economy in governmental administration. The Comprehensive plan seeks to involve citizens in the decisions regarding the future development of Upper Mount Bethel by providing opportunities to review and comment on the Plan and specific development proposals.

GOALS AND OBJECTIVES

GOAL 1: COMMUNITY AND VISUAL CHARACTER

Provide for the preservation of the scenic rural, agricultural and open space nature of the Township by guiding development and land uses to protect its character. Consider the importance of the existing village centers to the present Township landscape and image and develop a land use plan and development regulations which protect their integrity. Establish policies, and consider design guidelines, for governing the development of land that will promote the preservation of views from the roadway which will retain the visual "rural character" of the community.

Objectives

- Encourage master planned commercial or industrial development over a period of time based on a phasing plan and a developer's agreement with the municipality.
- Prevent the transformation and disruption of village centers from their existing character by providing suitable routes for through traffic and by providing the parking needed for commercial uses in visually attractive and accessible locations.

- Make the principal roadways, and particularly the entrances to the Township, more attractive by providing for significant landscaped buffer areas along the sides of each roadway.
- Prevent unsightliness by eliminating wherever possible existing utility poles and lines and by continuing to require that all new development provide underground utilities.
- Encourage new development in the existing villages to be compatible to their style and scale of building.
- Confine commercial land uses inside village areas to limited areas and designed to a residential scale.
- Control commercial and industrial development outside of the existing villages or major highway corridors in order to avoid the typical sprawl found in most suburban communities.
- Provide for the connection of new subdivisions by the extension of collector streets and local roadways to promote the development of neighborhoods and to promote social interaction within the Township.

GOAL 2: COMMUNITY BALANCE IN LAND USE

Foster a well integrated and balanced community with a mix of residential housing types in accordance with established state policy. Provide for institutional, commercial, and other land uses where they do not conflict with the goal of maintaining the low density residential character of the Township. The land use plan and development regulations should be designed so that conflicts among activities are minimized and so that one land use does not adversely affect other activities in the Township. Residential land uses should be encouraged that maintain and expand the predominantly single family housing unit that makes up the community while providing the opportunity for the municipality's fair share of other housing types.

Objectives

- Provide for managed land use development of the future growth of the Township which will serve the Township's normal growth pattern and the needs of its residents and of the surrounding area, but do not provide facilities or uses designed to generate growth and development resulting in high levels of in-migration and impact from regional metropolitan centers.
- Assure adequate living space for all persons, by requiring soundly constructed and attractive dwelling units.

- Design the land use plan and development regulations so that conflicts among activities are minimized, and so that land uses do not adversely affect each other.
- Provide a variety of low density residential development within which various dwelling unit types may be constructed to preserve the rural open space character of the Township, while providing for the needs of present and future residents.
- Separate residential areas from inharmonious land uses by utilizing major streets, topographic features, stream corridors, woodland, lakes and other natural features, or landscaped greenbelts and open space as transition areas between uses. Landscaped buffers should be instituted between adjacent residential and non-residential uses.
- Limit the access to non-residential uses to or through residential areas.
- Coordinate long range planning between local institutions and the Township in order to minimize conflicts in land use and also to provide areas needed for new institutional development, including public school and County facilities.
- Provide sufficient areas within the Township, in appropriate locations and amounts, for expanded commercial and industrial development of a type necessary to serve the normal growth and needs of the Township and the surrounding area.

GOAL 3: AGRICULTURAL LANDS

Promote the preservation of prime farmland and agricultural uses where such uses are economically feasible. Promote the orderly development of agricultural lands primarily for residential use, and where appropriate for commercial uses, in order to ensure the retention of rural characteristics within the community.

Objectives

- Protect and preserve the open attractive character of prime farmland areas and the economic viability of such areas through existing governmental programs, such as the Agricultural Security Act, the Right to Farm Ordinance, and federal, state, and local grant and low interest loan programs.
- Protect the open attractive character of farmland by minimizing the development of frontage along existing farm roads and encourage the clustering of compatible non-farm uses in selected locations.
- Work with farmers in identifying new uses for farmland which will preserve the economic basis on which farmland can be preserved.

- Work with the agricultural community, the Soil Conservation Service, and the County Conservation District to ensure updated conservation management plans that include erosion and sedimentation control, nutrient management, and stormwater management practices designed to prevent the loss of productive soil, and that reduce the pollution vulnerability of surface and groundwater sources.
- Protect stream and pond water quality through development regulations which adequately protect these water bodies from erosion and siltation and from contamination from on-site septic systems.

GOAL 4: OPEN SPACE AND RECREATION

Provide for the preservation of open space and ensure adequate passive and active recreation facilities serving the entire Township.

Objectives

- Utilize the preserved stream corridors and wetlands/open space areas and former railroad right-of-way within the Township as pedestrian and bicycle links between villages, municipal facilities, park lands and other public use areas.
- Protect and preserve the existing natural diversity of the Township by restricting development in areas containing significant natural resources, significant natural features, and sites of statewide and local importance.
- Expand the existing open space in the Township by linking them together into a connected network through the planning approval process, private donations, public funds, or conservancies.
- Provide a new centrally located community-wide recreation facility, and additional local recreation fields and facilities and activities to serve existing and future needs of the Township residents.
- Preserve the open space along the Delaware River.

GOAL 5: TRANSPORTATION CIRCULATION SYSTEM

Create the framework for providing an efficient transportation circulation system to adequately serve all sections of the Township. Encourage the retention of the rural characteristics of the present system. The circulation system for the Township should provide safe and economic movement of goods and people and should be integrated with the circulation system of the surrounding region.

Objectives

- Undertake an improved transportation planning and development process; and the preparation of a new transportation plan which provides a road network which separates through traffic from local traffic and directs through traffic to the regional roadway network.
- Prevent the transformation and disruption of the village centers by providing improved through traffic facilities and the parking needed for commercial uses in visually attractive and accessible locations.
- Provide for entrance/collector roadways and residential streets within new developments so that there is a visually apparent road hierarchy with entrances to existing and future neighborhood areas and subdivision developments are protected from high levels of traffic.
- Provide for the improvement of the Subdivision and Land Development review process to permit better coordination of road and neighborhood street development in adjoining subdivisions and encourage improved design of subdivisions which would result in coordinated development of neighborhood areas.
- Provide for the coordinated connection of new subdivisions by the extension of collector streets and local roadways to promote the development of identifiable neighborhoods and social interactions within the Township.
- Limit driveway and local roadway access to state roads and provide adequate building setbacks to promote the development of an attractive road network and to preserve the traffic carrying capacity of the existing two lane roads.
- Connect commercial or industrial uses directly to major state highways in areas where infrastructure exists or is expected to exist in the time period of the Comprehensive Plan.
- Update the Roadway Classification System, to be consistent with the projected land use patterns.
- Provide roadway improvement standards for new construction or reconstruction, whether to be initiated by a developer or the Township.
- Obtain state funding to develop bike and hike trails throughout the Township, and require new developments to provide sidewalks, shoulders, and bike and hike corridors linking existing residential developments with recreational and commercial areas.

GOAL 6: NATURAL RESOURCES AND SIGNIFICANT NATURAL FEATURES

Protect the critical natural features and resources of the Township including: wetlands, flood plains surface water, groundwater, steep slopes, carbonate geology, soil, woodlands, and areas of statewide and local significance. Use these natural features to organize and separate, where necessary, different types and intensities of land uses in the Township. Re-examine the controls on the permitted disturbance of critical resources during land development.

Objectives

- Periodically re-examine the regulations guiding permitted disturbance of critical resources during land development and make the necessary zoning and subdivision ordinance revisions/amendments.
- Protect air quality by assisting in the prevention of air pollution, to the extent possible, through land use policies that reduce automobile dependence and encourage the use of energy efficient vehicles.
- Protect surface and groundwater quality through development and enforcement regulations which adequately protect them from the excessive withdrawal and water quality degradation associated with poorly planned development.
- Continue to restrict development within the 100 year storm floodplain as defined by the Federal Emergency Management Agency of other more protective sources.
- Continue to restrict development and the clearing of vegetation on steep slopes so as to reduce the negative effects of erosion and stream bank stability.
- Actively cooperate with the PA Department of Environmental Protection, the Army Corps of Engineers, and other State and Federal agencies in the protection of wetlands, wetland buffers, and groundwater recharge areas.
- Control the clearing of woodlands, in order to add value and beauty to the community, and reduce atmospheric pollution. Encourage the preservation of existing trees, the use of native vegetation, the control of invasive species, street tree plantings, and the establishment of surface water greenway buffers throughout the Township.
- Implement the Martins/Jacoby Creeks Watershed (Act 167) Storm Water Management Plan and model storm water ordinance containing release rate of performance standards designed to maintain existing peak flow rates in the entire watershed.

GOAL 7: DELAWARE RIVER GREENWAY

To recognize the Delaware River as an important natural, cultural, scenic and recreational resource and to promote its protection and conservation.

Objectives

- Support the mission of the Delaware River Greenway to promote the public and private stewardship of a regional greenway as a continuous corridor of natural, historic, scenic and recreational resources along the Delaware River and its tributaries, and to recognize the integrity of the Delaware River system through a public/private partnership.
- Serve as a partner municipality within the Greenway partnership of public and private organizations.
- Promote the use of appropriate zoning and land use regulations that serve to protect the Delaware River as a regional greenway of important resources.
- Seek permanent protection of the lands and islands within the Township that are along or within the Delaware River.
- Promote the coordination of park and recreational planning at various levels (i.e., township, county, state and federal), including local groups and organizations (e.g., Coastal Zone Management, Delaware River Greenway Partnership, The Nature Conservancy).

GOAL 8: UTILITY SYSTEMS

Locate higher intensity land uses where the provision of community utilities are nearby or likely to be in the future. The extension of community water and sewer systems should only take place if there is significant population projection increases, market demand for commercial and industrial areas or documented on-lot facility failure.

Objectives

- Prepare and adopt a Sewage Facilities Act 537 Plan, including public water facilities, to serve those existing critical high density areas proposed in this Comprehensive Plan to protect the public health and safety.
- Provide public sewer and water facilities to serve the proposed commercial or industrial uses which derive access from major state highways as proposed in this Comprehensive Plan.

- The above two objectives will require the following:
 - Consider the planning and development of public water systems in areas not served with public sewers partially in the US Route 611 corridor.
 - Consider development of a public sewer system in older higher density historic and residential areas and in industrial and commercial areas to support these land uses.
- In accordance with DEP and LVPC recommendations discourage the use of scattered private central water and public sewer systems except where needed to serve institutional or public uses or recreation areas.
- Finance the extension of additional utility systems in accordance with the Act 537 Plan only through the proposed development that creates the demand for such new infrastructure.
- Prevent unsightliness by eliminating wherever possible existing utility poles and lines, and requiring that all new development provide underground utilities.
- Provide sufficient lot sizes and the use of "one good acre" rule to provide space for the location of at least two separate approved septic systems on lots not served with public sewers.
- Limit the extent and the intensity of land development in groundwater and surface water recharge areas.
- Work with the PA Dept. of Environmental Protection and the County Department of Health in ensuring properly designed, permitted, and maintained on-lot sewage disposal systems.
- Implement a storm water ordinance based upon the research, storm water modeling, and recommendations included in the Martins/Jacoby Creek 167 plan.
- Require the implementation of stormwater best management practices (BMPs) that address the quantity and the quality of stormwater runoff upon all proposed land developments in the Township.

GOAL 9: ADDITIONAL STUDY & COMPLETION OF FUNCTIONAL PLANS

Complete grant-funded studies and functional plans supporting the goals and objectives of the natural resource protection component.

Objectives

- Complete watershed plans that integrate natural resource protection with natural features protection and that emphasize the need to protect the ecosystems supporting critical species.
- Complete a Natural Resource Plan containing a supporting inventory and comprehensive management plan to implement the goals and objectives in the Upper Mt. Bethel Comprehensive Plan.
- Complete an Open Space Plan identifying public and private open areas and ranking them based on existing biodiversity, relationship to development pressure, and other pertinent criteria.
- Complete water resources and drinking water supply study focusing upon existing resources, conservation measures, and integrated resource management.

GOAL 10: HISTORIC PRESERVATION

Protect the integrity of the traditional historic villages and other historic areas of the Township which contribute to the heritage and positive image of Upper Mount Bethel.

Objectives

- The preparation of a Recommended Special Study and Design Manual for these historic areas. Develop design guidelines for all new construction, or alteration of existing buildings, in order to create visual harmony among all private property visible from public space, so as to ensure attractive views. Identify individual sites in Upper Mount Bethel of historic importance. Encourage the registration of buildings on the National Register of Historic Places, and assess the desirability of historic districts, through zoning.
- Promote the development of commercial areas that are attractive to public view through the use of design standards reflective of the historic character of the Township. The use of landscaping should be encouraged to enhance commercial development.
- Encourage new development in the existing villages to be compatible to their style and scale of building.
- Control the clearing of woodlands, so as not to reduce the value of the community in its appearance. New plantings should be encouraged in appropriate places, mainly in new subdivisions.

GOAL 11: COMMUNITY FACILITIES AND MUNICIPAL SERVICES

Establish and maintain a level of community facilities and public services sufficient to satisfy the needs of present and future residents and allow for the well planned expansion of facilities. Anticipate and plan for the needs of the municipal government to provide the level of service required by the residents and businesses of the Township.

Objectives

- Consider the development of a new municipal building and complex to house related municipal functions, including a new municipal building with room for other municipal functions and other related uses including other possible uses such as a Community Center, Senior Citizens area, public meeting room, and other indoor uses; and an outdoor community recreation area serving all sections of the Township.
- Provide for timely expansion of other municipal buildings and services required to serve Township residents.
- Develop an overall plan for recreation services and facilities to serve the public and the needs of all age groups.
- Regularly review and update, when needed, the land development ordinances of the Township.
- Provide or allow for the creation of streets, utilities, schools, parks, police and fire protection, and other services sufficient to meet the needs of the residential areas.
- Explore the shared use of community facilities to the mutual benefit of all parties.
- Adopt a Comprehensive Plan that can be legally and financially implemented using a combination of Township funds, governmental loan and grant funds, foundation grants, donations and other resources.

GOAL 12: CITIZEN AND INSTITUTIONAL PARTICIPATION

The municipal government desires to provide the opportunity for both long term and new residents to participate in making decisions that will shape the environment and the community in which they live. The municipal government desires to involve representatives of the major institutions in the Township in the formulation of the development policies of the Township. Future development plans shall be considered within the framework of the adopted Comprehensive Plan.

Objectives

- Continue to provide an atmosphere and opportunity within the comprehensive planning and development approval processes which provide the citizens of Upper Mount Bethel the chance to comment upon and participate in making decisions about the future of the Township.
- Invite representatives of the major institutions to present their long range facility plans to the Planning Commission and Township Board of Supervisors.
- Create special committees and groups to participate in addressing special issues of concern in the Township, such as the recently created Environmental Advisory Committee and the existing Township Recreation Committee. In addition, create new committees to address natural resource preservation and other new issues which will arise in the future.

III. THE COMPREHENSIVE PLAN

The Comprehensive Plan is the culmination of the work required to complete the Background Studies and identify the desired Goals and Objectives. The Comprehensive Plan presents specific recommendations for improvements within the Township. The Plan is divided into four individual sections:

- The Conceptual Future Land Use Plan
- The Environmental Preservation Plan
- Existing Roads and Transportation Plan
- The Community Facilities Plan

Each section will address the needs of their particular subject by presenting the specific recommendations after a brief introduction. Section IV will address how the Township can implement the recommendations of the Comprehensive Plan.

CONCEPTUAL FUTURE LAND USE PLAN

INTRODUCTION

Each type of human activity requires a certain location and environment. A land use plan deals with the spatial distribution of and interrelationships among various human land use activities, such as living, working, shopping, recreation, socializing, and enjoying nature. The basic goal of a land use is to achieve harmonious spatial relationships among all land use activities. To this end, the pattern and distribution of development should balance natural resource protection with the need to accommodate projected population and the need to foster economic growth.

This Upper Mount Bethel Township Land Use Plan serves as a guide for the Township in order to promote a healthful, pleasant, safe and functional community, meeting the needs of the population, serving regional needs, and meeting the goals identified by the member of the Upper Mount Bethel Community.. This Plan is now providing the basis for a new Township Zoning Map and Ordinance.

The Upper Mount Bethel Township Supervisors, Planning Commission, Environmental Advisory Council and Township staff, as well as private business and industry will be able to use this plan as a guide for public and private development decisions which will guide new growth through the Year 2020.

All land use activities in the Township are classified into the following five major land use categories: residential, commercial, industrial, open space conservation, agricultural preservation. The following presents plan recommendations on appropriate and desirable land use types, locations, density (i.e., building units per acre), and intensity (i.e., land coverage and building height) for each land use category.

All Land Use categories are classified into the following six major Land Use categories (See Conceptual Land Use Plan Map Located after page 58):

- ▶ Open Space Conservation Area (includes a "Mining Extraction Area" to be reclaimed as a Conservation Area)
- ▶ Agricultural/Rural Residential Area
- ▶ Neighborhood Development Residential
(Not to be confused with "Traditional Neighborhood Development" defined by MPC)
- ▶ Village Development Area
- ▶ Commercial
- ▶ Limited Industrial

The Plan also includes a Future Growth Area as described below.

The following plan presents recommendations for appropriate types of desirable land use areas at locations and densities of development for the designated land use categories.

FUTURE GROWTH AREA

The demographic, economic, infrastructure, and environmental data collected for this comprehensive plan indicate certain trends. Although over 55% of Township land is still vacant or undeveloped, the number of new homes has increased and the majority of them have been single family homes (see land use component). In addition, demographic data (see demographic characteristics) indicate an increase in population growth between 1980 and 1990 (28.9%) that has outpaced county and other municipalities in the region. Projected population data suggests that population growth will continue. The majority of households are families and families require centralized shopping, schools, and recreational opportunities. Demographic data also indicate that the majority of citizens in Upper Mount Bethel Township (95%) of all workers commute for approximately 30 minutes to their jobs. Therefore, future and more local employment opportunities may be needed.

One way to plan for growth and the associated needs of an evolving community, is to designate areas (e.g., "Growth Areas") to accommodate more densely populated residential areas, commercial areas, and employment opportunities. Future growth areas are usually designated after studies determine a need, the best location to accommodate additional growth, and the associated costs to provide for additional infrastructure.

There are four major reasons for establishing a Future Growth Area:

1. The population increase projected between the years 2000 and 2020 as set forth in the Population Projection presented on page 38.
2. The objective of the Township to provide areas for new commercial and industrial opportunities to benefit the residents of the Township and the local regional communities in northern Northampton County.
3. The need for improved commercial facilities in the Township to serve local residents by providing local commercial facilities in the Township.
4. To provide for less costly and centralized community facilities and shopping opportunities (e.g., community water, community sewage, stormwater systems).
5. Centralized growth areas help to control sprawl and may also protect significant natural resources in less developed, rural areas of the Township.

These considerations may be addressed by creating a Future Growth Area if studies such as the proposed Act 537 Sewer Facilities Plan indicate the need for one. The location of the Future Growth Area is shown on Map No. 9 following page 55.

A Future Growth Area could include the following uses:

- ▶ The provision of public water and sewer services to existing and future commercial and industrial areas of the Township.
- ▶ The Village of Mount Bethel is the largest and most densely developed area in Upper Mount Bethel Township. The homes and businesses within the Village were built on small lots, and the on-lot water and disposal systems were constructed well before the implementation of state sewage facilities regulations (Title 25, Chapters 71-73). As a result, the Township has received and investigated numerous septic failure reports. The Township has also assisted a limited number of eligible families with the repair and replacement of their systems. One solution to this problem, is to complete and updated Sewage Facilities Plan (Act 537) which may recommend that the Village requires public water and sewage treatment facilities.
- ▶ The area surrounding the existing Village of Mount Bethel also includes land areas suitable for a new Neighborhood Development Area to accommodate some the new growth which is projected for the Township.
- ▶ It is envisioned that these Neighborhood Development Areas will accommodate a significant share of the projected residential growth projection for the Township. The density of development is proposed to include minimum lot sizes of at least one acre.

- ▶ A Future Growth Area could also include the existing quarry in the vicinity of Sand Pit Road and in proximity to the Municipal Building on Ye Olde Highway. Quarrying may soon cease and the state-required reclamation of the quarry will commence. This area could support conservation and recreation areas and the preservation of wildlife and plant life; and an area where new municipal services may be located. These proposed uses have the potential to revitalize this section of the Township.
- ▶ A Future Growth Area could also include the residential development surrounding Echo Lake. Presently Echo Lake residents rely on the use of on-lot sewage disposal systems (OLDS). Since this development was constructed well-before stringent OLDS regulations, it is possible that the systems are failing. An updated sewage facilities (Act 537) plan may determine the need for a community sewage disposal system.
- ▶ The Future Growth Area also includes existing commercial and industrial proposals for the Township, including a large industrial complex located on the south side of Rt. 611, with potential access from Rt. 611, and proximity to the Interstate I-80 interchange. A Future Growth Area could also include additional commercial use opportunities with access from Routes 611 and 512.

The actual limits of the proposed extension of sewer and water facilities within the Future Growth Area will depend on the completion of proposed Act 537 Sewer Facilities Plan update being initiated by the Township Supervisors. It is expected that this Plan should be completed no later than the year 2002.

With the Future Growth Area targeted for this relatively small strategic area, the majority of the vast remaining portions of the Township would not require public water and sewer facilities. Development in those areas, particularly in agricultural and open space conservation areas which would be limited to new low density development.

This is an important consideration since it meets the important goals and objectives of the Township, namely the preservation of the rural characteristics of the Township and the preservation of open space, while at the same time making provisions for the reasonably growth of the Township as presently projected.



Status of Land Use Proposals - The proposed Conceptual Land Use Plan sets forth an image of a desirable pattern of development. The proposals may be subject to change and modification based on considerations of conditions as they emerge in the future. The Supervisors must reserve the right to alter the patterns set forth in the Plan if warranted by presently unforeseen conditions. The ability to depart from specific proposals set forth herein are provided for by Section 10-303(c), Subsection c. of the PA Municipalities Code.

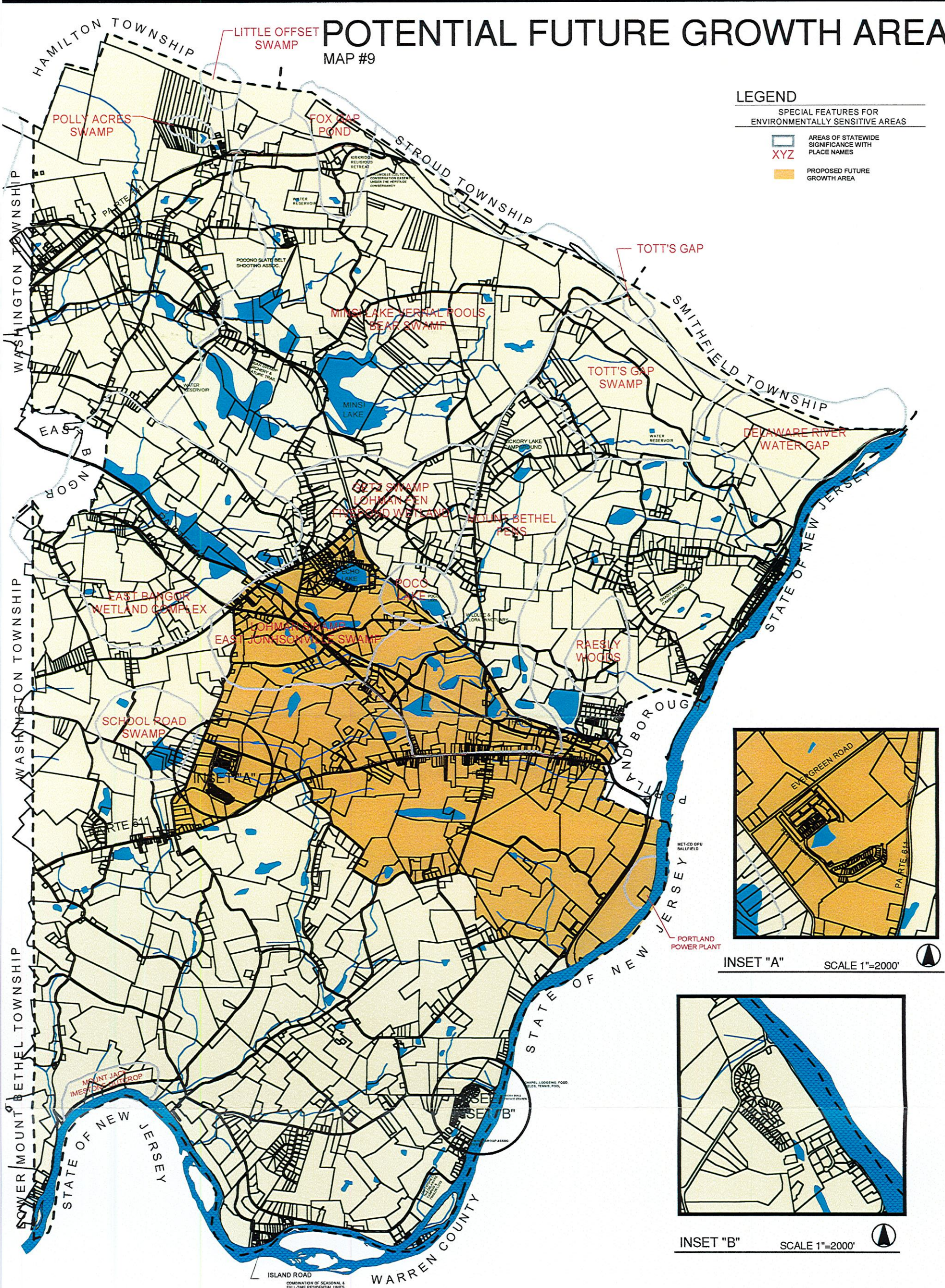
POTENTIAL FUTURE GROWTH AREA

MAP #9

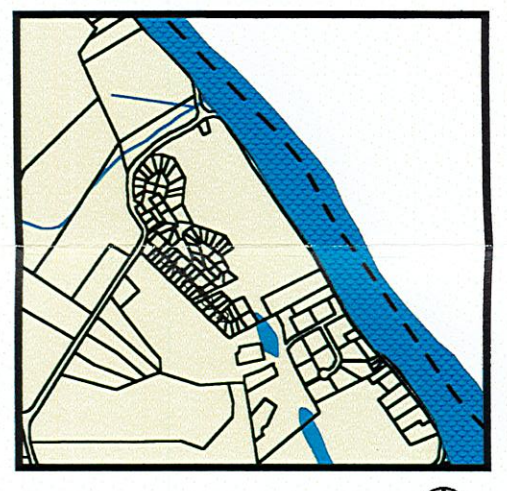
LEGEND

SPECIAL FEATURES FOR ENVIRONMENTALLY SENSITIVE AREAS

-  AREAS OF STATEWIDE SIGNIFICANCE WITH PLACE NAMES
-  PROPOSED FUTURE GROWTH AREA



INSET "A" SCALE 1"=2000'



INSET "B" SCALE 1"=2000'

UPPER MOUNT
BETHEL TOWNSHIP
NORTHAMPTON COUNTY, PA

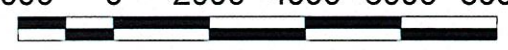


COVERAGES DIGITIZED FROM MAP PREPARED BY MICHAEL CABOT ASSOCIATES, INC. JUNE 2000



PRINCETON HYDRO, LLC. PROPOSED ZONING COVERAGES DIGITIZED AND CONVERTED TO G.I.S. BY PRINCETON HYDRO, LLC., JULY 2000

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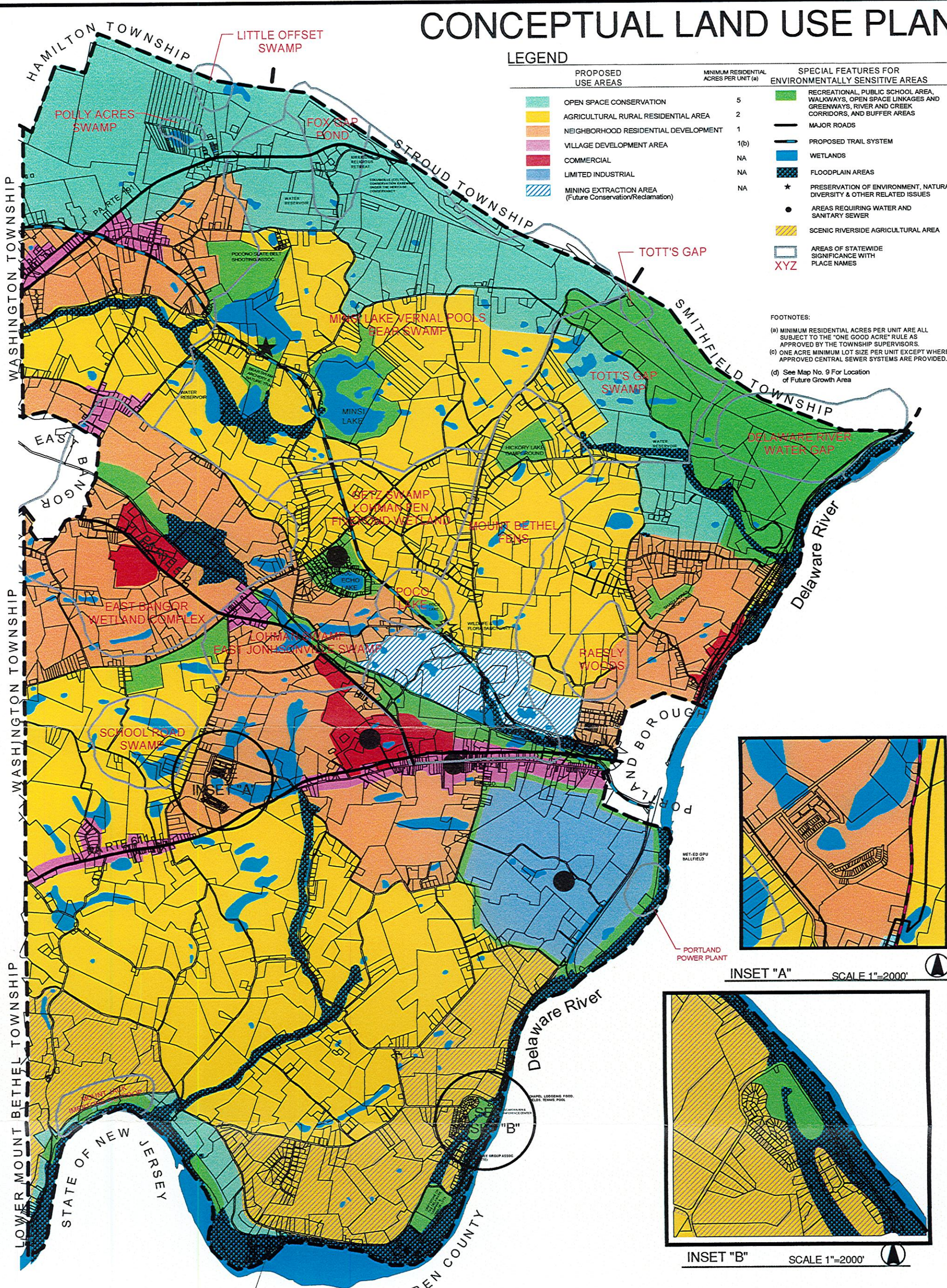
CONCEPTUAL LAND USE PLAN

LEGEND

PROPOSED USE AREAS	MINIMUM RESIDENTIAL ACRES PER UNIT (a)	SPECIAL FEATURES FOR ENVIRONMENTALLY SENSITIVE AREAS
OPEN SPACE CONSERVATION	5	RECREATIONAL, PUBLIC SCHOOL AREA, WALKWAYS, OPEN SPACE LINKAGES AND GREENWAYS, RIVER AND CREEK CORRIDORS, AND BUFFER AREAS
AGRICULTURAL RURAL RESIDENTIAL AREA	2	MAJOR ROADS
NEIGHBORHOOD RESIDENTIAL DEVELOPMENT	1	PROPOSED TRAIL SYSTEM
VILLAGE DEVELOPMENT AREA	1(b)	WETLANDS
COMMERCIAL	NA	FLOODPLAIN AREAS
LIMITED INDUSTRIAL	NA	PRESERVATION OF ENVIRONMENT, NATURAL DIVERSITY & OTHER RELATED ISSUES
MINING EXTRACTION AREA (Future Conservation/Reclamation)	NA	AREAS REQUIRING WATER AND SANITARY SEWER
		SCENIC RIVERSIDE AGRICULTURAL AREA
		AREAS OF STATEWIDE SIGNIFICANCE WITH PLACE NAMES

FOOTNOTES:

- (a) MINIMUM RESIDENTIAL ACRES PER UNIT ARE ALL SUBJECT TO THE "ONE GOOD ACRE" RULE AS APPROVED BY THE TOWNSHIP SUPERVISORS.
- (b) ONE ACRE MINIMUM LOT SIZE PER UNIT EXCEPT WHERE APPROVED CENTRAL SEWER SYSTEMS ARE PROVIDED.
- (c) See Map No. 9 For Location of Future Growth Area

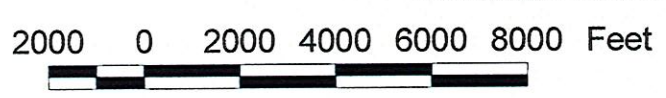


INSET "A" SCALE 1"=2000'



INSET "B" SCALE 1"=2000'

UPPER MOUNT BETHEL TOWNSHIP
NORTHAMPTON COUNTY, PA



COVERAGES DIGITIZED FROM MAP PREPARED BY
MICHAEL CABOT ASSOCIATES, INC. JUNE 2000



PROPOSED ZONING COVERAGES DIGITIZED
AND CONVERTED TO G.I.S. BY PRINCETON
HYDRO, LLC., JULY 2000

Description of Land Use Proposals - The following six sections of the Land Use Plan describe the character of all of the proposed uses of the Land Use Plan:

- A) Open Space Conservation Area
- B) Agricultural/Rural Residential Area
- C) Neighborhood Development Residential
- D) Village Development Area
- E) Commercial
- F) Limited Industrial

A) Open Space Conservation Areas - Open Space Conservation Areas are proposed for areas which should remain as permanent open space with uses restricted to those appropriate to the physical features of the area. The major portions of open space conservation areas are proposed in the following locations (See Map No. 10 following page 55):

- In the northerly part of the Township which includes the steep slopes of the Kittatinny Mountain Range which limit potential uses (See Maps No. 2 and 6). About one quarter of this northerly area includes lands of the Delaware Water Gap National Recreation Area.
- In locations where it is necessary to protect environmentally sensitive areas
- In floodways and floodplains which restrict major new development
- In wetland areas
- In Natural Diversity Areas which include threatened and endangered plant and wildlife species, and special natural features which mandate that they be protected and may be classified as permanent open space or otherwise protected
- In a former mining and mineral extraction areas (quarrying) which are now scheduled for reclamation and conservation in accordance with PA DEP requirements
- On steep slope areas exceeding slopes of greater than grades of 25%
- In permanently established recreation areas which contribute to the preservation of permanent open space in the Township
- In areas required as recharge areas for groundwater well supplies

- Rivers, streams, ponds and lakes which should remain permanent open space
- Areas subject to severe carbonate geology may be resulting in sink hole formations may be subject to locations in the OSC areas
- In areas that have soils with severe erosivity or other development constraints

Proposed Uses In The OSC Area - Open Space Conservation (OSC) Areas provide permanent open space for the various reasons listed above, but they are not completely restricted for use and development in appropriate locations.

Proposed uses in the Open Space Conservation (OSC) Areas may include the following in appropriate locations:

- Agricultural activities, limited to the maintenance of open space areas and crop farming, and limited processing of the products grown on the site, but excluding livestock and poultry farms and processing plants
- Greenhouses
- Forestry production and forestry services
- Open space land conservation uses
- Open space, low density recreational uses such as golf courses, lakes, fishing and hunting, nature preserves, bird sanctuary, trails, walkways, fish and wildlife refuges, wetland areas and areas subject to flooding
- Land conservation and reclamation areas which were previously affected by the extraction of mineral resources and which are currently scheduled for clean-up and reclamation.
- Very low density residential uses which are appropriate to the proposed location
- Low density rural area businesses, with convenient and safe access utilizing products produced on the site
- Low density specialized housing and non-profit facilities to serve handicapped and elderly persons which are developed in areas surrounded by permanent open space

Minimum Densities and Coverage of Development - Minimum parcel sizes for various new uses in these areas are as follows:

- Densities of development on tracts of Agricultural Areas of at least 50 acres
- Minimum single family residential and seasonal homes which comply with the Township's Building Code on lots at least 5 acres in size in areas with convenient access and suitable slopes
- Minimum lot areas for other proposed uses, 5 to 50 acres depending on the use
- Other densities which are appropriate to the specific use proposed

Maximum building coverage for all buildings on the site shall not exceed 5% of the total lot or parcel area.

Maximum building height is 35 feet or 2.5 stories.

Other uses and densities of development may be considered if they are shown to be appropriate to the specific locations proposed. Such uses would be reviewed by the Planning Commission and the Environmental Advisory Committee and by other agencies and authorities in accordance with the requirements of the Zoning Ordinance, with recommendations presented to the Township Supervisors.

B) Agricultural/Rural Residential Area - The "Agricultural/Rural Residential" category, cover the largest portion of the Township. A major objective of the Land Use Plan is the preservation of existing farmland areas.

Objectives:

- To preserve the existing prime farmlands and successful farms in the Township and to save them from permanent loss resulting from residential, industrial, commercial, road construction, or other types of development.
- To protect the agricultural land base from the adverse impacts of nearby urbanization and to reduce the conflicts between farming and non-farming uses.
- To strengthen the agricultural industry (including all agricultural related businesses) , and to retain high productivity for the local agricultural economy, so that agriculture may continue to thrive and prosper.
- To control large scale commercial farming operations which may adversely affect the environment and adjoining farming, residential and other land uses.

All of the tracts under the Agricultural Security Act are located in this category, though this category includes much more land than just those under the Act. Only very limited new development would be expected on lands within this category. Any minor single-family development would be at an average density of approximately one dwelling for every two acres. Any "new" subdivisions, however, should utilize site planning techniques which discourage road frontage development, and internalize the houses, so that the character of the area (as seen from the road) is similar to what it is today. The major intent for this land use category is to encourage the retention of the agricultural uses currently there.

The Agricultural/Rural Residential Areas are shown on Map No. 6. These agricultural lands are located in the vast areas on both the northerly and southerly sides of the Township. The major land uses in these areas include the following:

- Agricultural uses limited to parcels of land at least 50 acres in size
- Permanent open space and natural resources uses
- Rural Residential uses including single family residential on minimum lot areas of two acres with maximum of 15% building coverage.
- Group Care and related residential uses
- Rural area business, limited in size
- Mobile Home Parks with adequate sewer and water facilities
- Other customary accessory uses and appropriate public uses and essential services

The uses listed above and their allowed densities are further detailed in the proposed new Zoning Ordinance now being prepared for the Township.

C) Neighborhood Development Areas - Neighborhood Development Areas (NDA) are those areas of the Township which have convenient and direct access from the local road system including the major roads such as PA Routes 611 and 512, and which are centered around or adjoining some of the older village areas (See Map No. 10 following page 55).

The Neighborhood Development Areas focus on new growth in the triangle formed by the intersections of both sides of PA Rt. 611 and Rt. 512 around the Village of Mount Bethel where public service is most likely to be provided.

The Land Use Plan proposes the location of new "Neighborhood Development Areas" where new homes can be developed at minimum lot sizes of one acre. The Plan also proposes a new Future Growth Area as identified where most of the new development and new subdivisions would be located if public sewer and water is provided.

The new Neighborhood Development Areas recognize the importance that Mount Bethel has played in the development of the Township and employs this Village and other villages as the centers of larger "neighborhoods". It is expected that new development in these areas would include additional residential development, convenience commercial development, and small-scale professional offices.

The areas proposed as village areas currently contain existing development; it is not recommended that existing single family homes be converted to the other uses described here. These village areas would be expected to be served with additional roads, which would generally connect developing parcels to each other, with interconnections to existing, and some new cross streets. A complete **pedestrian system** would also be anticipated throughout the villages and the new Neighborhood Development Areas.

The new Neighborhood Development Areas could provide for a variety of housing types at densities of one unit per acre. At the same time, the one acre density requirement in this area would help to keep down the cost of new development in these areas. In addition to family-oriented homes in the new Neighborhood Development Areas, a portion of the Bethel Heights development at Tuscarora is anticipated to be housing for senior citizens. This has long been a goal of the Tuscarora Inn, which it hopes to realize through the development of this PRD.

The proposed NDA located within the Future Growth Area is centered around the Village of Mount Bethel.

The number of these areas are limited, but they provide more than enough space to accommodate the future development projection and potential for new residential development extending to the year 2020.

Proposed uses in these areas include:

- Open space uses
- Agricultural uses
- Single family residential
- Family Care homes
- Uses requiring special reviews:
 - Group Care
 - Special purpose housing for the elderly
- Other appropriate customary accessory and uses, public uses and essential services

Minimum densities for development include:

- One acre per residential unit
- Maximum building coverage of 35% of parcel area

D) Village Development Areas - Village Development Areas provide for extensions of the existing village areas of the Village. They provide areas for expansion of the village areas and permit integration of these villages with the surrounding proposed new Neighborhood Development Areas.

Proposed uses in the Village Development Areas including the following:

- Open Space uses
- Single family residential
- Two family residential
- Family Care residential
- Neighborhood Commercial, including professional offices
- Uses requiring special reviews
 - Multi family residential
 - Group Care and related residential uses
 - Special purpose housing for the elderly
- Other appropriate customary accessory uses and public uses and essential services

Minimum density for development is one acre per unit. If public sewer and water facilities become available in the future, consideration may be given to the clustering of units in these areas.

E) Commercial Areas - Uses included in the Commercial areas consist of the following two types (See Conceptual Land Use Plan Map, following page 55, for locations):

1. Limited Commercial Use Area
 - Open space uses
 - Agricultural uses
 - Family care residential
 - Neighborhood commercial

2. General Commercial Use Area

- Open space uses
- Agricultural uses
- Neighborhood commercial
- General commercial
- Uses requiring special reviews
- Special commercial uses

The above uses include customary accessory uses and appropriate public uses and essential services.

3. New Commercial Area Complex - One large commercial area complex, centrally located in an area with access from both Rt. 611 and Rt. 512 is proposed. This area is large enough to permit the preservation and protection of the existing natural resources in the area which would not be fully developed for active commercial use.

An overall plan and feasibility study for the use of this central area as a commercial complex, with integrated permanent open space and natural resource reservations is proposed.

This central location would also be an attractive area with shopping conveniences. The commercial development is envisioned as a design with nature that would not only serve residents of the Township and nearby regional areas, but could attract and bring tourists and visitors to the Center.

Minimum densities for development include one acre parcels for Limited Commercial and two acre parcels for General Commercial with maximum building coverages of 35% for uses not requiring special reviews.

F) Industrial Area - One major large industrial area complex (approximately 1,000 acres) located adjoining the Portland Borough with access from I-80 and Rt. 611 is proposed. This area is now partially developed and there is considerable space for additional development for all types of light industry and industrial park type uses including business and office uses.

Uses included in the Industrial Area:

- Open space uses
- Agricultural uses
- Neighborhood commercial
- General commercial
- General Industrial uses subject to performance standards

Uses requiring special reviews:

- Special Commercial
- Special Industrial
- Detention Centers
- Adult Oriented Facilities

Minimum densities for development include one acre parcels and a maximum building coverage of 35% for uses not requiring special reviews.

PERFORMANCE AND ENVIRONMENTAL REQUIREMENTS

All uses will be required to meet performance and environmental standards including:

- Performance requirements
- Traffic Impact requirements
- Environmental Protection requirements
- Provision of off-street parking

CONCLUSION

The Future Land Use Plan sets forth an image of how the Township may improve its development pattern over the next 20 years and most importantly how it can preserve the rural open space character in the future. It provides for moderate anticipated growth without jeopardizing the positive attributes which presently exist. Most importantly, it addresses major deficiencies of the existing land use pattern including potential health problems that may arise in the denser areas of the Township due to the lack of public sewer and water facilities.

The above land use descriptions are intended as a guide for the preparation of a revised Zoning Ordinance for the Township. However, they are not intended to modify the requirements which may be eventually proposed and legally adopted by the Township.

ENVIRONMENTAL PRESERVATION PLAN

FEATURES TO BE PROTECTED

The Areas of Major Environmental Concern (See Maps #2, #3, #4, and #5 located after page 7) depict areas of the Township that have environmental constraints and/or outstanding and diverse natural and ecologically significant features. These areas include: areas of statewide significance, wetlands, floodplains, surface water and groundwater resources, surface and groundwater recharge areas, steep slopes, carbonate geology, protected soils, and woodland resources.

EXISTING ENVIRONMENTAL REGULATIONS

The proposed new Zoning Ordinance may require that the minimum lot size in any district should be increased if there are any environmentally sensitive areas present. A "density factor" is utilized to determine the maximum number of permissible lots on a particular tract by reducing the allowable density where there is environmentally sensitive land. The use of the "density factor" is a commendable process to assist in protecting environmentally sensitive land, and has recently stood the test of litigation. The density factor, also referred to locally as the "one good acre" requirement, would be available to reduce densities of development where natural features and conditions exist which require larger lot sizes. These conditions may include the following:

- Steep slopes
- Areas subject to flooding
- High water table
- Wetland areas
- Other factors

Steep slopes are individually addressed as a sub-district of the AR Agricultural Rural Residential District with restrictions placed on the location of the building or structures depending on the severity of the slope.

The General Flood Plain District encompasses all areas within the one hundred year floodplain. All uses in this district are by special exception only. The Open Space Conservation District comprises land that has unique natural and historic features.

Additional environmentally protective regulations are included in the Zoning Ordinance and the Subdivision and Land Development Ordinance.

RECOMMENDATIONS

It is clear from the Questionnaire Analysis (see Appendix A, Question 7) that environmental protection of the Township's sensitive areas is of great importance to the majority of the Township's citizens. The recommendations below will enhance the Township's regulations for environmental preservation.

It is recommended that vegetation protection standards be incorporated into the Subdivision and Land Development Regulations. Tree protection standards for significant trees and woodland areas, as well as replacement requirements are all recommended.

It is recommended that as functional plans (such as, Open Space, Park & Recreation, Sewage Facilities, Groundwater Hydrology, Rivers Conservation) are completed that growth boundaries, zoning districts, and protective regulations are utilized to amend the Conceptual land Use Plan, Zoning Ordinance, and Subdivision and Land Development Ordinance. Amendments should be based on conclusive findings and should strengthen existing natural resource protection regulations.

The Township should also consider allowing the recently appointed Environmental Advisory Commission (EAC) to provide environmental review comments for proposed land development and other environmental issues under consideration. The EAC would provide their findings, comments, and development review findings to the Board of Supervisors and the Planning Commission concurrently.

PROPOSED TRANSPORTATION PLAN

INTRODUCTION

The location of the Road System in rural areas in most cases was established many years ago and the location of the roads were largely determined by local topography. This resulted in poor zig-zag alignment of some of the roads in order to avoid topographic obstacles and to follow property or field lines.

Since the system was created, the road widths for most of the Township roads was limited to the State PennDOT standards requiring 33 foot wide right-of-way widths. The State will not provide Liquid Fuels tax reimbursements for any roads which are less than 33 feet wide. No new roads are accepted by the Township unless they have been improved to PennDOT's standards.

The early history of road development in rural areas appears to lack the smooth alignments now associated with more recent modern development serving larger numbers of people. In Upper Mount Bethel Township, as well as in other rural Townships, the low number of persons which use these roads, the road system has functioned well with their original alignment, without any major change from alignment existing at the time of construction. It is difficult and perhaps unwise to justify realignments unless hazardous conditions are involved which results in delays or accidents. See map to facilitate understanding of plan and the names all the roads.

CLASSIFICATION OF EXISTING ROAD SYSTEM

The existing road system has been functionally classified into the following categories as depicted on Map No. 11, entitled "Road Classifications". The road classifications are based on proposals for categories of roads which are appropriate for the Township as set forth in the existing Subdivision and Land Development Ordinance:

1. **Arterial Roads** - "Arterial Roads" are major roads which serve County movements and through traffic connections to adjoining Counties or localities at higher speeds of up to 55 or 65 mph, except as posted in specific locations. The Township's arterial roads are SR 191, SR 611 and SR 512. These roads connect to other major thoroughfares outside of the Township, such as I-80, Rt. 33, etc.
2. **Collector Roads** - "Collector Roads" are the important roads which connect different sections of the Township. "Collector Roads" also intercept local streets and provide access to abutting properties, as well as serving individual neighbor-hoods or areas. Their function is to collect traffic from the Local Streets and to feed this traffic into the connector roads or major thoroughfares.

They do carry local through traffic, but not the type of longer distance traffic carried by the major thoroughfares. Speeds are usually limited, depending on the level of development along these roads, but they vary between 35 and 55 mph. In the case of Upper Mount Bethel Township, they do not carry heavy traffic volumes. Small local roads feed into these collector roads and they in turn feed into the arterial roads.

In Upper Mount Bethel Township, the majority of the road system includes collectors. These collector roads include Fox Gap Road, Creek Road, Lake Minsi Drive, Quaker Plain Road, Blue Mountain Drive, Brugler Road, Ramblewood Road, Ridge Road, Totts Gap Road, National Park Drive, Laurel Hill Road, Turkey Ridge Road, Million Dollar Highway, Boulder Drive, Middle Village Road, Evergreen Road and Orchard Road to the north of Route 611.

South of Route 611, the collector roads include Allegheny Road, Potomic Street, Sunrise Boulevard, Shady Lane, Sager Drive, Belvidere Corner Road, River Road, Stone Church Drive, Hemlock Drive, Riverton Road, and Harvest Lane.

3. **Minor Roads** - "Minor Roads" or streets (also called Minor Streets or "Local Roads") are those streets used primarily to provide access to abutting property and to feed into the Collector Roads. New subdivisions consist primarily of minor roads. Certain minor roads are not shown on the map. These minor roads are anticipated to serve low traffic volumes and have designated speeds of up to 35 mph. They are primarily the remaining roads of the Township after the first two functional road classifications have been assigned.

All the roads in the Township have been classified into one of these three categories as shown on Map #11 referred to previously. An important use of this classification system is that it can help to establish priorities for the improvement of existing roads requiring maintenance by the Township. State owned roads are of course referred to PennDOT for improvement where needed. However, when Township roads require improvement, the higher functional classification (for example, Collector roads as compared to Minor roads would normally be considered to have a higher priority for improvement, other conditions being equal).

ROAD IMPROVEMENT STANDARDS

Road Improvement Standards for the various types of roads, as classified above are summarized in the following tabulation. These standards apply primarily to new construction, or to the improvement of existing roads. In many existing situations, road rights-of-way will not be wide enough to meet these standards, but the standards will serve as a guide for the proposed improvements.

The standards should apply completely when new subdivisions are proposed, particularly when these subdivisions include collector or minor roads.

Some new land subdivisions include proposals for "private roads". Such roads, if approved by the Township, should be designed to proper standards consistent with the requirements for equivalent Township and PennDOT roads. Construction of these roads should conform with other public roadway requirements. Most importantly, proper permanent assurance for the provision and responsibility of proper maintenance of these roads must be received before such roads are permitted and approved. Many municipalities have learned a hard lesson if proper continuing maintenance responsibilities are not provided up front.

Road improvement standards are required in the current Subdivision and Land Development Ordinance (SALDO) of the Township and these standards are summarized below in the following tabulation.

ROAD STANDARDS, BY TYPE OF ROAD

Road Classification	Right-of-Way Width (Ft.)	Pavement Width		Shoulders Where No Curbs Exist
		With Curbs Only	With Shoulders Only	
Arterials	80	--(a)	-- (a)	-- (a)
Collector Roads	60	40'	20'	4 ft. on each side
Minor Roads	50	(b) 30' - 36' (c)	20'	4 ft. on each side

Source: Existing Subdivision and Land Development Ordinance (SALDO) (Upper Mount Bethel Township)

Footnotes:

- (a) Refer to PennDOT standards
- (b) 30' with parking on one side only
- (c) 36' with parking on both sides

RESPONSIBILITY FOR ROAD MAINTENANCE

Federal Highway - There are no Federal Highways in the Township, but Rt. 611 does provide access to I-80 via the Portland-Columbia Bridge located just outside of the Township.

State Roads - State roads are the responsibility of PennDOT. These roads were identified in Figure 7 and are repeated below for the convenience of the reader.

- State Route 191 Valley View Drive
- SR 512 East Bangor Mt. Bethel Highway
- SR 611 South/North Delaware Drive/River Road (partial)
- LR 48028 Five Points Richmond Road

- LR 48032 Bangor Johnsonville Road
- LR 48075 Creek Road
- LR 48089 Ridge Road
- LR 48120 North Broad Street/Fox Gap Road

Township Roads - Township roads are the responsibility of the Township. However, the State does provide some financial assistance in the form of annual payments derived from PA Liquid Fuels Tax refunds which are collected by the State. These refunds are calculated based on the existing total number of miles in the Township. These State funds are not sufficient to undertake all necessary improvements and they must be supplemented with local funds from the Township General Fund or from bank loans or bond issues, or where available from Federal or State grants. Developers proposing roadway changes or undertaking development which generate major traffic changes or increase in traffic may be required to provide necessary financing.

Condition of Township Roads - Township roads are maintained by the Supervisors and a local Township Roadmaster with field personnel.

The condition of the Township roads has apparently improved greatly in Upper Mount Bethel Township since the early 1990's. These improvements were carried out primarily with local Township personnel and the careful use of liquid fuels tax refunds and the Township General Fund. The level and type of improvements carried out have improved the condition of the more important local roads in the Township. Priorities for improvements should be based on the condition of the road and also on the number of persons served by each road.

The Township Roadmaster with the approval of the Township Supervisors currently establishes priorities for the maintenance and improvement of Township roads. Priorities could be established by considering the amount of traffic on each road with those roads having the heaviest volume of traffic receiving first priority. Improvement of existing dangerous conditions is also a high priority include poor design which increase the number of accidents. Such improvements should emphasize the following:

- Improvement of road alignments
- Improvement of inadequate curvature radii for roads, relative to speeds at which travel occurs
- Misaligned intersections
- Dangerous grades
- Lack of traffic lights where necessary to control traffic flow

The Township should also be working with the State to establish priorities for the improvement of State roads, PA 611, PA 512, PA 191 and other Legislative Routes.

Condition of State Roads - State roads are kept in reasonably good condition, although it is anticipated that they will need to be improved over the next few years. PA Rt. 512 needs improvement both in the Township and in the municipalities through which it passes on its way to PA Rt. 33, an important north-

south limited access highway which will shortly connect to both I-78 to the south and I-80 to the north.

TRANSPORTATION PLAN

The proposed Transportation Plan identifies the following improvement actions:

1. **Classification of Roads** - All roads within the Township have been listed and classified into one of the three categories previously set forth: Arterial Road, Collector Road, or a Minor (Local) Road (See Map No. 11).

Road width standards established in the SALDO should be reviewed periodically to ensure their adequacy. The roads should then be inspected to ensure that they all meet the minimum standards for their category.

2. **State Roads** - It is expected that Routes 611 and 512 will handle much of the increasing traffic volumes that will occur as the Township grows. These roads are currently functioning adequately, however, Township officials will want to monitor traffic flow rates over the next five to 10 years. As traffic levels increase, a system of traffic lights may need to be installed.

- a. **Route 611** - From Portland through the Village of Mount Bethel this route has several speed limit changes. Establishment of a consistent speed limit from the Township's border with Portland to the end of Mount Bethel Village would be desirable.

- b. **Route 512** - The Five Points Intersection by the Bangor School Complex has been the topic of much discussion within the Township. Township officials and residents alike feel this area of Rt. 512 is very unsafe, but there has been no conclusion on what the best remedy would be, or who is responsible for the costs that would be involved.

It is recommended that a traffic light be installed at the intersection of Rt. 512 and Five Points Richmond Road. Flashing lights should also be installed along both sides of Rt. 512 as it nears this intersection. The flashing lights can be used to warn motorists of the school zone, and they could also be used to slow the speed of passing traffic during regular school hours.

3. **Road Improvements on Remaining Roads** - Various roads have been improved by the Township through the year 2000, so they do not require major improvement at this time. All of the remaining roads which have not been improved since 1997 will require improvement action over the 12 year period extending from 1998 through 2010. These roads include the following two categories:

- PennDOT legislative routes which are the responsibility of the State
- Township roads which are the responsibility of the Township

The Township is well organized to meet its responsibility over the next 12 years, using a combination of Township funds, PA Fuels Tax refunds, PA DCED Program and other funding sources. Tax ratables should also increase as new industrial and commercial development takes place.

Improvement of Existing Road System - There should be an annual road condition survey during which all of the Township Supervisors look at the condition of each road in the Township. Pictures should be taken of the deficiencies. Identified deficiencies should be reviewed and prioritized by the Road Master and the Township Supervisors and action should be taken to accomplish the following steps:

- a. **Roadway Deficiencies** - Road conditions should be updated to identify the status of roads discussed under the prior sections of this report. An up-to-date list of all roads needing repair should be prepared. This list should also be incorporated into the LVPC GIS for the Township. The list should itemize the roads which are owned by the State and the possible repairs to those roads should be discussed with PennDOT. This discussion should result in a decision on those roads which can be programmed for improvement, including the establishment of priorities. (Show priorities on the GIS)

The Township should make special note of Township owned roads needing repairs. Cost estimates for carrying out such improvements should be prepared. These improvements should then be prioritized, with priorities established based on the condition of each road and on its functional classification. The cost estimate should include the cost of the repair, including improvement of shoulders and replacement of culverts where necessary. (Show priorities on the GIS)

The list completed by the Township should then be discussed with PennDOT and the use of future Liquid Fuels Tax refunds and other funding sources programmed to carry out the improvements agreed upon over a feasible time period.

If sufficient funds are not available to improve all of the roads on a timely basis, then the Township should consider requesting Federal Community Development Block Grant (CDBG) funds or other grant programs administered by the Commonwealth and the County. Road user surveys may be required to determine which roads are eligible for such funding. Income surveys may have to be programmed by the County to determine eligibility so that this step should be taken as soon as possible, if required.

The above process should also include all of the gravel roads which the Township wishes to consider for improvement.

- b. **Bridges** - Bridges are normally inspected on a regular basis. The latest inspection report should be reviewed and priorities given to required improvement of the narrow bridges. Priority should be established based on the volume of traffic on each road and also on the condition of each narrow bridge. A program for funding the proposed bridge improvements, including bridges which can be placed on 12 Yr. Plan prepared by PennDOT can then be finalized.

4. **Other Traffic Considerations**

- a. **Land Subdivisions** - Any new growth in the Township will require the subdivision of land and new streets required to serve the subdivision will have to be included on such subdivisions plans which are submitted to the Township. These subdivision plans will be reviewed, and compliance by the land developer with Township Road Standards should be required, prior to any approval of the Plan by the Township.

The Township and the Developer, working together at that time, will determine the layout of the new subdivision that best serves the proposed development and which meets the needs of the Township. This of course is an important opportunity for the Township and the subdivision review process should be carried out carefully to achieve the best possible layout for new streets in these growth areas.

- b. **Traffic Study** - The Township should complete an updated new Traffic Study as soon as possible. The study should list the Township's streets, roads, and highways; the amount of traffic they carry; and their current condition. The study can then also serve as a source of information for decisions that will be required when reviewing land subdivision plans.

When the Study is conducted, public comment and information should be solicited from local residents familiar with their individual neighborhoods.

PennDOT and the LVPC should also be contacted for available information and to provide assistance in the establishment of priorities.

This information, plus the planning and engineering expertise to be used should provide relative up-to-date information to identify and address the most severe needs and problems.

This proposed Study is a high priority need which should address all major problems in the Township and major traffic growth projections based on projected Township and County growth patterns. The solution may require a partnership approach using Township, County and Federal resources.

ROAD CLASSIFICATIONS

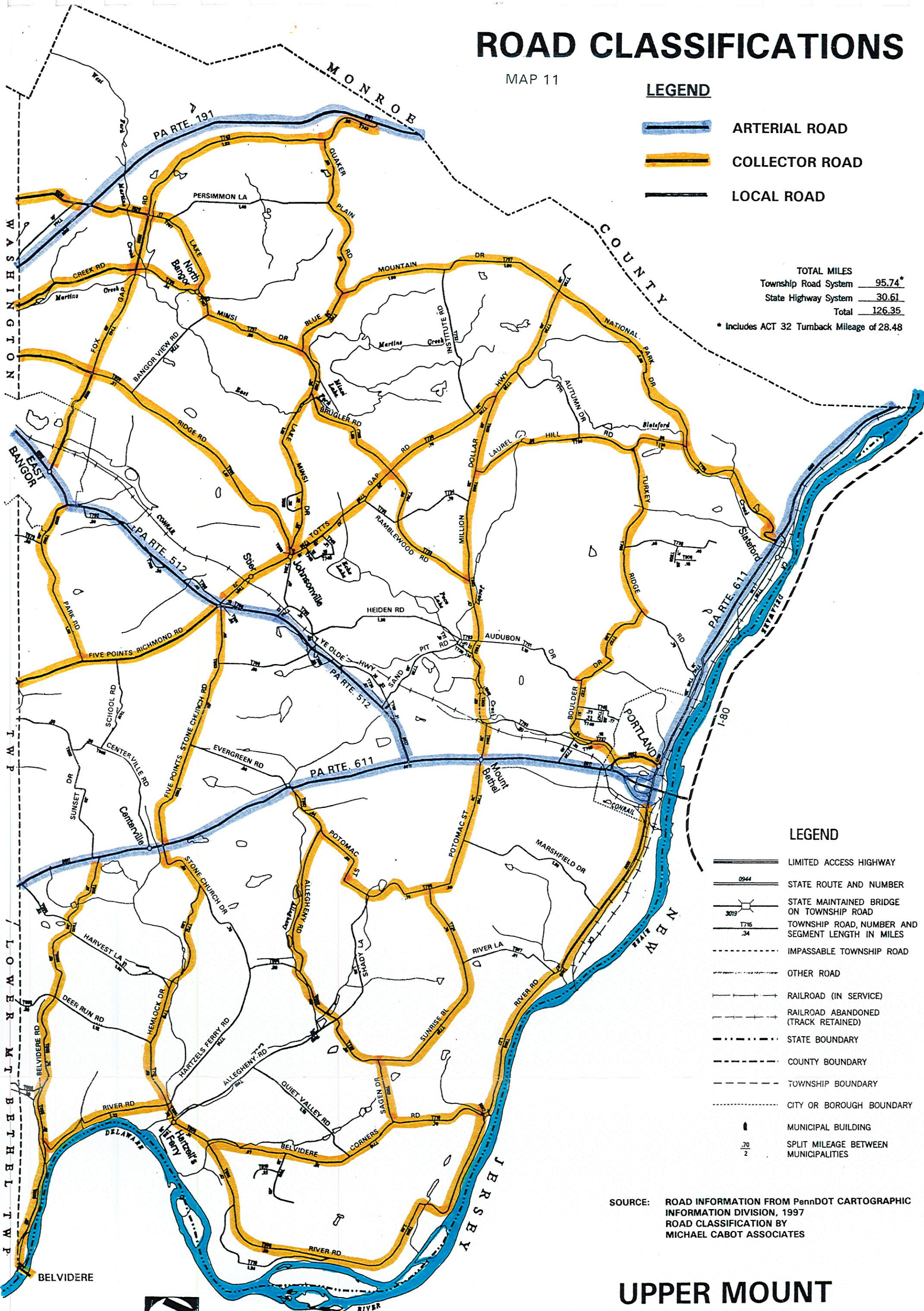
MAP 11

LEGEND

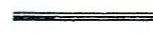
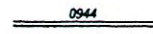
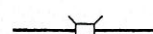
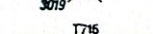
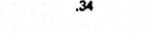
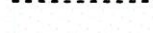
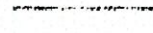

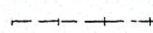





-  ARTERIAL ROAD
-  COLLECTOR ROAD
-  LOCAL ROAD

TOTAL MILES	
Township Road System	95.74*
State Highway System	30.61
Total	126.35

* Includes ACT 32 Turnback Mileage of 28.48



LEGEND

-  LIMITED ACCESS HIGHWAY
-  STATE ROUTE AND NUMBER
-  STATE MAINTAINED BRIDGE ON TOWNSHIP ROAD
-  TOWNSHIP ROAD, NUMBER AND SEGMENT LENGTH IN MILES
-  IMPASSABLE TOWNSHIP ROAD
-  OTHER ROAD
-  RAILROAD (IN SERVICE)
-  RAILROAD ABANDONED (TRACK RETAINED)
-  STATE BOUNDARY
-  COUNTY BOUNDARY
-  TOWNSHIP BOUNDARY
-  CITY OR BOROUGH BOUNDARY
-  MUNICIPAL BUILDING
-  SPLIT MILEAGE BETWEEN MUNICIPALITIES

SOURCE: ROAD INFORMATION FROM PennDOT CARTOGRAPHIC INFORMATION DIVISION, 1997
ROAD CLASSIFICATION BY MICHAEL CABOT ASSOCIATES

UPPER MOUNT BETHEL TOWNSHIP NORTHAMPTON COUNTY, PA

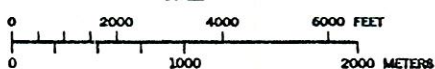
PREPARED BY MICHAEL CABOT ASSOCIATES, INC.

JUNE, 2000



NORTH

SCALE



COMMUNITY FACILITIES PLAN

INTRODUCTION

An inventory of the existing Community Facilities Inventory in the Township is presented in the report on page 23 of this Comprehensive Plan. In addition, Map No. 5 identifies the location of various existing community facilities.

Based on the inventory of existing facilities and the needs for actions to improve these facilities, the following recommendations are made:

1. **Administrative Services Building and Site** - Investigate several new sites in the Township which are centrally located and which would provide opportunities for either the construction of a new municipal building or the cost of rehabilitation of an existing building which could be used for a municipal building.

Compare the cost of these sites and construction activity with the cost of expanding and renovating the existing building located at the present site in the Township at Sand Pit Road.

Give additional consideration to the possibility of acquiring the building located in the quarry now being operated by Eastern Industries. That building is currently available and the quarrying activities at the site will cease shortly and the entire site area will be reclaimed for other possible uses. These uses could include a new municipal building and related recreation areas. The company has indicated that they would be willing to consider sale of the site to the Township with cost incentives to reduce the cost to the Township.

The building at the quarry site can be used not only for municipal offices, but it is large enough to be used as a community center for Township residents, including senior citizens and other age groups.

The municipal garage located at the present Township office site on Sand Pit Road can remain at its existing location and can be enlarged if necessary.

2. **Fire Protection** - The primary problem relative to firefighting facilities is the cost of purchasing new equipment. The Volunteer Fire Companies do manage to provide necessary personnel at minimal cost to the Township.

Several programs do exist for borrowing low interest funds for the purchase of new equipment and all fire companies are aware of these programs and are perhaps already taking advantage of them.

Undertake a systematic analysis of the age and condition of existing equipment and facilities, including any needs for the renovation of each of the two fire stations located in the Township. Develop a detailed list and

cost estimate for remedying the deficiencies which do exist and for updating and purchasing new equipment (See Appendix C).

Investigate a new Federal Program recently announced which provides a substantial sum of money to Volunteer Fire Companies in the form of grants.

3. **Sanitation and Recycling** - Continue the existing arrangements with Grand Central Sanitation (now Waste Management). As a related issue, several municipalities have encouraged companies to locate within their community for the purpose of establishing recycling activities. This may be a possibility for the Township, and one in which several new jobs would be created. Perhaps the present municipal building could be used for such an operation.
4. **Library** - No action is needed on a public library. However, a local library committee could be organized to explore the increased use of other nearby libraries in the area, on a more organized basis.
5. **Medical, Emergency Services** - No action is necessary relative to the provision of emergency services.
6. **Recreation** - The provision of suitable recreation facilities for all age groups of the population in the Township is an essential need to be addressed as soon as possible. Consider and acquire a 50 acre site to be developed as a community park serving all residents in the Township. Consider donations which may be available and also consider the use of the Keystone Recreation Program which could provide up to 50% of the cost of purchasing a suitable site.

That same program could later be used to assist in the development of the site for recreational uses.

Consider developing coordinated activities with the Northampton County Recreation Commission to determine if the use of the existing facilities which the County agency owns, could be increased.

Establish an indoor community center for seniors and other age groups.

Many of the above activities will require extensive study to determine the feasibility of undertaking these actions. The Upper Mount Bethel Township Parks and Recreation Committee should obtain funding to study available open space and park and recreational needs of the community.

7. **Sewer and Water Facilities** - Complete an updated Sewage Facilities (Act 537) Plan. The Plan should contain a community facilities needs assessment, a list of identified problem areas, and a wastewater treatment alternatives analysis (e.g., new community system alternatives, potential for extension of existing municipal facilities, non-structural planning alternatives, no action). Upon completion, initiate implementation of the Act 537 Plan.

Until such time that the 537 plan is complete, the Township should consider implementation of the public sewer and water policy...allow additional on-lot sewage disposal systems for those parcels containing suitable soils. For those areas not containing suitable soils, alternative systems or other appropriate best management practices (BMPs) should be required in order to adequately treat projected sewage flows. Proposed alternatives should be accompanied by a planning module report containing the proposed design prepared by a certified engineer, percolation test data, and a proposed maintenance plan.

Undertake necessary stormwater management planning through the use of the Act 167 Program sponsored by DEP.

IV. THE COMPREHENSIVE PLAN'S CONFORMITY, COMPATIBILITY, AND IMPLEMENTATION RECOMMENDATIONS

This section presents the Plan Correlation Statements, it also addresses the Plan's compatibility with contiguous municipalities, and an implementation element.

The Plan Correlation Statements discuss how the Plan's various sections interrelate with each other. It also includes both short and long term implementation strategies, addresses the relationship of the Township and its plans with the surrounding municipalities, the County and the Region as a whole. Finally, it discusses Future Township Actions.

The Plan's Compatibility With Contiguous Municipalities is discussed by looking at each of those municipalities individually. It also reviews the compatibility of the Plan with the plans of the Lehigh Valley Planning Commission.

The Implementation Element discusses how the Township can achieve its Goals and Objectives; and the Plan's recommendations through various techniques. These techniques including zoning, regulations, budgeting, available funding sources, and interagency cooperation.

PLAN CORRELATION STATEMENTS

INTRODUCTION

The Pennsylvania Municipalities Planning Code requires that three statements be included in the Comprehensive Plan relative to the following:

1. A statement on the interrelationships between various planning components.
2. A statement on the short and long range plan implementation strategies.
3. A statement on the relationship of the existing and proposed development of the Township to the plans of contiguous municipalities, and of the County and the relationship of the proposed development in the municipality to regional trends.

These statements as required by Sections 301(a) 4.1, 4.2 and 5 of the Pennsylvania Municipalities Planning Code, Act of 1968, P.L. 805, No. 247, as reenacted and amended, are presented below:

SECTION 301(a) 4.1 - STATEMENT OF PLAN INTERRELATIONSHIPS AMONG VARIOUS PLAN COMPONENTS

Community Development Goals and Objectives - The Upper Mount Bethel Township Comprehensive Plan establishes a plan for the Township based on a series of integrated Community Development Goals and Objectives, dealing with the need to enhance the Township as a desirable place in which to live, which preserves the positive environmental conditions which presently exist and which encourages economic development and the creation of new jobs, neighborhood conservation and housing rehabilitation, the preservation of agricultural lands and historically significant structures and acceptance of its regional role by providing land uses and facilities to serve persons living outside of the Township.

The goals and objectives also encourage the stabilization of the Township's agricultural economy; and the preservation and improvement of the tax base primarily through the development of commercial areas and new rural area businesses, including businesses to serve tourists. These goals also provide for the enhancement of the quality of life and the preservation of property values.

The goals and objectives further provide for the development of a variety of housing types at appropriate densities which are capable of serving all groups and families, at various income levels, which are appropriately located in designated areas of the Township. The community development goals further provide for the improvement of the major street and local road systems which are designed to control and reduce traffic congestion, which can efficiently carry "through traffic" out of the area and which can circulate people and goods throughout all areas in a safe and efficient manner.

Finally, the goals provide for an adequate system of community facilities which are capable of serving the existing population and future population and such regional needs as Nursing Homes and Assisted Living housing, group care facilities and housing or services to serve elderly and handicapped persons.

Comprehensive Plan - The Comprehensive Plan sets forth a number of interrelated plans which are designed to accomplish the goals and objectives identified by the Township. These plans which are identified below further take advantage of the Township's existing assets and the opportunities for the purpose of enhancing community life within the Township:

1. A plan for the proper use of land to serve the needs of the existing and future population which will enhance the quality of life and will preserve and conserve the agricultural areas, provide land for industrial and commercial development, and provide improved opportunities to serve the regional population.
2. A plan for transportation and road improvements would provide a road network capable of serving the existing and proposed future land uses and the "through traffic" needs of the area.

3. Proposals for a Community Facilities Plan which will build on the existing network of community facilities in the Township and which will provide the necessary services, buildings and facilities to serve the needs of the future population. These services include recreation areas, public buildings, municipal offices, fire fighting facilities, and public utilities.
4. The plan also discuss the need for affordable housing and new housing construction.

All of the Township Plans are interrelated and they are intended to work together to achieve and support the goals and objectives outlined above. They have the following implications:

- The improvement of the land use structure of the Township and the achievement of a better balance between land use development of all types needed to preserve agricultural lands and to create new jobs, and serve the regional population.
- The new Township Zoning Ordinance will also be completed and adopted based on the Land Use Plan. This Ordinance promotes the elimination of existing environmental problems by providing for the future extension of new public sewer and public water systems in an area identified for possible future growth and the prevention of future environmental problems resulting from on-lot sewage disposal problems.
- The promotion of energy conservation through the rehabilitation of existing homes which provides for increased insulation of existing homes and structures in the Township through the use of housing rehabilitation programs.
- The preservation and enlargement of the existing commercial and industrial areas in the Township which will support economic development, job creation and maintenance of the Township's tax base.
- Improvement of the quality of life in the Township by addressing problems and needs of senior citizens and handicapped persons and other groups which will reduce social conflict and problems which adversely affect the population.
- Provision of sufficient land which provides additional alternative opportunities and choices for various types of housing for persons wishing to remain in the Township or move into the Township.
- The use of infrastructure improvement programs which will promote and make use of other available funding sources to carry out portions of the Plan.

SECTION 301(a) 4.2 - STATEMENT OF SHORT AND LONG RANGE IMPLEMENTATION STRATEGIES, INCLUDING IMPLICATIONS FOR CAPITAL IMPROVEMENT PLANS AND FOR NEW OR UPDATED DEVELOPMENT REGULATIONS AND IDENTIFICATION OF AVAILABLE PUBLIC FUNDS

The Comprehensive Plan establishes short and long range proposals extending to the Year 2020. This provides an opportunity for determining short term needs which require implementation in the near future. These short term needs include:

- Proper administration and enforcement of the Township's new Zoning Ordinance which will include areas for new development, for the preservation of agricultural areas, and for proper administration and enforcement of the Township's Subdivision and Land Development Ordinance to meet standards required for new developing areas.
- Extension of new public sewer lines by the Township as required to ensure adequate sewage service.
- Improvements of the Township's Community Facilities including firefighting needs, recreation, road deficiencies which should be addressed, maintenance of existing buildings owned by the Township and expenditures for other short term requirements.
- The Plan provides information to properly develop a Three Year Community Development Plan for carrying out short term plan proposals using local funds, and other grant and loan programs.

Many of the short term needs are currently being programmed through the use of general tax revenues. The Comprehensive Plan will also provide a basis for prioritizing those needs which can be addressed with other funding programs. Other programs can include PA Keystone Recreation and Growing Greener Programs, Federal Rural Development Agency and PennVEST for sewer programs, and other State and Federal programs and from Foundation Grants.

Longer term proposals, including long range housing rehabilitation programs to improve neighborhood quality, road improvements to be carried out over a ten year period, and economic development and other development actions where funding is required to continue over a longer time period since the problems which exist will take many years before they can be fully addressed. These programs provide opportunities to fund housing rehabilitation and also affordable housing programs using local funds, available mortgage resources and also HUD assisted "CDBG" and "HOME" housing programs. The Township has already made a start in the use of these programs and continued utilization to promote homeownership and improvement of housing quality can be programmed and continued over a long term basis.

The Township should also continue to assign longer term priorities to the various recommendations included in the Plan and should determine the extent to which they can be funded locally or by other agencies, such as Federal Rural Development Agency, PennDOT, PA DCNR, PA DCED and PennVEST and by local business and industry. Some of these problems may seem too expensive for immediate funding. However, adopting a longer time scale allows funding to be considered over many years which can permit the accomplishment of important projects in an orderly manner.

The Township has a Subdivision and Land Development Ordinance and is now scheduling adoption of a new Zoning Ordinance which provides for orderly land use changes in accordance with the Land Use Plan and which promotes the proper location of structures to meet the needs of the population and also to ensure public health and safety considerations. Updated building, plumbing, fire prevention, electrical and building and housing maintenance codes are also required and these should be programmed for future years. These regulations can serve to ensure that new construction and building changes will conform with modern standards and will result in the elimination of existing problems.

SECTION 301(a) 5 - STATEMENT INDICATING THE RELATIONSHIP OF EXISTING AND PROPOSED DEVELOPMENT OF THE TOWNSHIP TO PLANS OF CONTIGUOUS MUNICIPALITIES AND TO PLANS FOR THE COUNTY AND THE REGIONAL AREA

The Comprehensive Plan has been coordinated with available plans and development proposals established by the Lehigh Valley Planning Commission and with the adjoining municipalities of Lower Mount Bethel Township, Washington Township, East Bangor Borough, Hamilton Township, Stroud Township and Smithfield Township.

Township plans have also considered the land use development adjoining the Township in contiguous municipalities and also the transportation needs which are required to serve the Township and the region as a whole.

The Township's Comprehensive Plan, as proposed, will also be submitted to the adjoining municipalities, the School District and the Lehigh Valley Planning Commission and all comments received will be considered by the Township before the Plan is officially adopted.

Transportation improvements have also been discussed with PennDOT, including the control of "local traffic" and "through traffic" and traffic safety problems.

Proposed recreation improvements have also considered the availability of State Recreational facilities in Northampton County and in the Township.

All of the three statements presented above clearly indicate that Upper Mount Bethel Township is not an island in itself, but also an integral part of Northampton County and with close regional relationships with other municipalities.

The Comprehensive Plan is intended to permit the coordinated growth of the Township, consistent with the position which it has in the County, while at the same time meeting the specific needs of Township residents and the region as a whole.

FUTURE TOWNSHIP ACTIONS

This Comprehensive Plan is intended to give direction to public policies through the year 2020. However, every five to ten years, the plan should be reviewed and updated if necessary.

The adoption of the Comprehensive Plan is only the first step in the improvement process and a good comprehensive plan is one that is realistic. Additional steps are even more important and difficult to implement the Plan. Successful implementation of a comprehensive plan relies on the combination of the following key factors: leadership, flexibility and creativity, public support and cooperation, effective land use control regulations, financial resources and the ability to succeed.

The Upper Mount Bethel Township Supervisors, Planning Commission and other community leaders and citizens have much to do with carrying out community improvements as recommended in this Comprehensive Plan. First, this plan recognizes the importance of community involvement to prepare and implement the plan. Therefore, this plan recommends the use of grass roots approach to assure continued public participation in the decision-making process, by keeping residents informed of major matters affecting the community through meetings and public hearings, and other mass communication medium, such as newspaper, broadcast and television, by conducting a Community questionnaire survey periodically, and by frequent communication between the Township Supervisors and its residents, and various age groups.

Second, the Township will coordinate the proposed Zoning Ordinance, Building and Fire Prevention Codes as recommended by the Volunteer Fire Department and other regulations to ensure that they are all consistent with the Upper Mount Bethel Township Comprehensive Plan and are consistent with each other. When the Township applies one of these regulations, all of the regulations should be considered at the earliest stage to avoid later inconsistencies and problems.

Third, the Township must continue to address the lack of financial resources by utilizing Federal and State grants in combination with local tax resources to resolve priority issues. Township Supervisors, working with the Lehigh Valley Planning Commission and Volunteer Fire Company and other agencies will continually update priorities so that they can be accomplished in an orderly manner. Cooperation with adjacent municipalities and with the School District and the County is also essential in providing regionalized community facilities and services. The Township should also seek more opportunities for partnerships between the public sector and private sector, and with State and governmental agencies.

COMPATIBILITY WITH CONTIGUOUS MUNICIPALITIES

The greatest amount of authority for planning and zoning in Pennsylvania is given to the local municipality. In order to coordinate local efforts and promote orderly and rational development patterns, the State, under the Pennsylvania Municipalities Code, requires local master plans to review the master plans of contiguous communities, and the county in which it is located. An outline for each is given below.

LOWER MOUNT BETHEL TOWNSHIP

In 1991, the Township adopted a new comprehensive plan. Along the border with Upper Mount Bethel, the land use element calls for agriculture and open space. Only two areas near Upper Mount Bethel are designated for development. An area of "lowland residential" development in Riverton is described as a zone of clustered homes designed to meet the appropriate floodplain standards for its Delaware River location. A second area, along TR 694 between TR 663 and SR 1004, is also designated for clustered residential use, as well as some recreation.

WASHINGTON TOWNSHIP

The areas which abut Upper Mount Bethel Township include:

- Watershed areas
- Medium density residential
- Agriculture

These uses are not negatively impacted by the proposed Upper Mount Bethel Township Land Uses which include open space, residential and agriculture.

The uses on both sides of the municipal boundary line are therefore compatible with each other.

EAST BANGOR BOROUGH

The Borough currently has no zoning or comprehensive plan.

HAMILTON TOWNSHIP

According to the Township's consulting planner, at least 90% of lands in Hamilton that are adjacent to Upper Mount Bethel are in form of preservation. Much of this area is owned by the Blue Mountain Water Company, for watershed protection, with the remainder owned by the Federal government for protection of the Appalachian Trail. Zoning in the area calls for conservation and agricultural uses, with some light residential permitted.

STROUD TOWNSHIP

The portion of Stroud bordering Upper Mount Bethel consists of two types of open space. According to the Township land use plan, lands west of Route 191 are designated as "Resort Conservation" while those to the east are designated as Public Recreation. Neither of these designations supports any significant development.

PORTLAND BOROUGH

Portland Borough is surrounded by Upper Mount Bethel Township. The land uses to the north and west of the Portland are primarily residential. The Village of Mount Bethel is also located to the west of Portland. The residential and village land uses do not conflict with Portland's land uses.

To the south of Portland is Upper Mount Bethel Township's area of Limited Industrial use. The industrial area abuts Portland's open space/recreation area. Although there is currently no recreational development in this area of Portland, Upper Mount Bethel has designated a greenway buffer around its industrial use to reduce any impact industry may have on Portland.

In the future, Portland and Upper Mount Bethel Township have an opportunity to work together on community improvement projects. Public sewer and water services should be coordinated. Portland currently has the capacity to provide limited sewer service, and Portland's aquifer for its water service is located in Upper Mount Bethel Township. These factors make future cooperation very important.

SMITHFIELD TOWNSHIP

According to the Township, properties in Smithfield adjacent to Upper Mount Bethel are zoned R-1 for one acre residential lots. However, no development has taken place, no roads are located in this region of Smithfield, and the land is government property, functioning as a buffer for the Appalachian Trail.

LEHIGH VALLEY PLANNING COMMISSION

The 1992 General Land Use Plan calls for most growth to occur in existing urbanized areas. This is reflected in the lack of development designated for Upper Mount Bethel Township. The classification Natural Resource is given to all lands in the Township which border Monroe County, and all along the Delaware River. This category is intended to protect features such as steep slopes and floodplains, and is not intended for development. Farmland Protection is the designation for virtually all lands east of Route 512. Low density (no more than 1 unit per acre) Rural Development is called for from the Route 512 corridor to the steep slope areas of Blue Mountain.

IMPLEMENTATION ELEMENT

The value of any comprehensive plan depends on the extent that it is used to guide the development, both public and private, which is required to accomplish the desired features of the plan. The Upper Mount Bethel Township Planning Commission has the responsibility to prepare and recommend this Plan. It is the Board of Supervisors and other public bodies, however, which have the means and authority to carry out those parts of the Plan which require governmental support or actions. Other parts of the Plan, particularly those concerned with development, will require actions of individual entrepreneurs, private organizations and corporations, business, civic and professional organizations, and individual citizens, and the Upper Mount Bethel Township Environmental Advisory Council. Close working relationships between these official governmental agencies at the local, county, state and federal level and with the private sector and civic organizations are essential if the concepts and objectives of this plan are to be achieved.

The recommendations of the Plan are summarized here, together with a strategy designed to achieve the desired objectives. The Planning Commission, Board of Supervisors, and many citizens of the Township have donated much hard work to this comprehensive plan. It can be a valuable long range planning tool if the recommendations which follow are used as a guide for future development decisions by both the public and private sectors. However, if this plan is allowed to gather dust on a bookshelf, it can become little more than an expensive ornament.

LAND USE REGULATIONS

The most important administrative and regulatory controls which are available to Upper Mount Bethel officials to carry out the Plan are those ordinances which control land use within its boundaries. Both the zoning ordinance and the subdivision and land development regulations should be amended to reflect the recommendations of this plan, though the recommendations for the latter are more minor in nature.

Zoning Ordinance - While it is the comprehensive plan which sets broad visions and concepts a community wishes to embody, the zoning ordinance controls the specific character and intensity of land use within the Township. Although much of this plan recommends a continuation of existing patterns of development and densities, some significant amendments and modifications are proposed. The zoning ordinance recommendations found below, fall into two categories: map changes; and amendments to development regulations (text).

Zoning Map Amendments - The initial changes discussed in this section are ones recommended to implement recommendations embodied in the land use plan. They are designed to encourage development to occur in accordance with that plan, and not follow existing zoning where it is inconsistent with the plan. These changes should be considered as short-term recommendations. It should be emphasized, however, that in general, the zoning map recommendations do not imply that the zoning map must be immediately be redrawn to conform to the land use plan. Rather a long term and strategic zoning update, continually monitoring the existing level of the Township's development, should be undertaken.

It is recommended that the Village Center District be relabeled as "Village Development Area" and changed to incorporate the existing Village of Mt. Bethel and settled areas of Stone Church, Johnsonville and East Bangor. This would allow compatible new development in these areas and maintain these areas as neighborhood centers. In addition, it is recommended that the Tuscarora Inn and Tuscarora Village area be rezoned to reflect existing development in the Area.

The area to the northeast of the junction of SR 512 and SR 611 is recommended to be changed to open space conservation after the extractive activities are completed. This would allow for the possibility of a Township-wide Park that would be centrally located while protecting the environmentally sensitive areas known as the fens located along Jacoby Creek. The Open Space Conservation designation is also recommended throughout the northern part of the Township, Minsi Lake, the Lake by East Bangor and south of River Road in a steep slope area along the Delaware River.

There are two areas in the Township recommended for I-1 Limited Industrial. They are both areas that are currently zoned primarily for industrial use. Additional commercial designations, located on both sides of SR 512 where it meets SR 611, and south of SR 512 by Amy Lane, will expand commercial opportunities for new and existing business in the future. It is anticipated that these areas would allow for additional employment areas in the Township including office and flex space development.

Neighborhood Residential Development (R1) is proposed along portions of SR 191, on both sides of SR 512, and along a portion of SR 611 and on other areas shown on the proposed Zoning Plan map. This would allow for a more suburban character (on one acre minimum sized lots) adjacent to the Villages as projected in the Land Use Plan.

The remainder of the Township will be designated as Agricultural Rural Residential at minimum lot sizes of two acres. This should provide landowners in this zone the opportunity to build on their land if they so desire while maintaining the open, rural nature of the Township. The Township should also promote the preservation of agricultural land through programs which purchase "development rights" from farmers and through other means which may be considered in the future.

Of course, the above zoning map recommendations will not be the only ones which the Township may be asked to make in the future. Development-initiated zoning changes can be anticipated from time to time. These should be made in harmony with the land use plan; if circumstances present themselves which indicate that a decision which is not consistent with the plan is valid, then amendment to the plan should be considered in that case, simultaneously with the zoning change. The use and approval of "variances" should comply with all of the requirements of PA Municipalities Planning Code.

Amendments To Development Regulations - It is recommended that the density for residential development be the highest in the Village Center District closest to the core of the villages and should allow for a variety of structural types. The residential development at the edges of this district should be structures at minimum density of one acre per unit to provide open space and a distinct boundary with the surrounding Neighborhood Development Areas (NDA) and rural uses.

In order to respond to market demands and provide greater options, in accordance with the goals of the housing plan, a variety of single family homes may be built in the NDA areas (one acre minimum). This would give greater flexibility to the development process, allowing for greater responsiveness to environmentally sensitive features and will allow more land to remain undeveloped, thus preserving Township character.

Larger minimum lot sizes are recommended for the AR Agricultural Rural Residential District (2 acre minimum) and the Open Space Conservation District (5 acre minimum). This would achieve the stated objective of keeping the rural character of the Township by encouraging development in the proposed Future Growth Area. These recommendations should be implemented only after careful legal counsel in view of the multitude of challenges to large lot requirements throughout the state.

Subdivision and Land Development Regulations - The Subdivision and Land Development Regulations contains the specific design standards which control the form of most types of development. Few amendments are seen as necessary to implement the recommendations of the Comprehensive Plan. One that is, however, is the addition of a tentative sketch plan at the initiation of all major developments. The tentative sketch allows for a dialogue between the developer and the Township before extensive engineering is undertaken.

As previously discussed in the Environmental Preservation Plan, in view of the Township's strong desire to preserve existing character, consideration should be given to adding a requirement for submission of a natural features conservation plan for small subdivision proposals, and environmental impact studies for larger subdivision proposals. Submittal of natural features conservation plans and environmental impact studies should require at the tentative sketch process or at the preliminary plan stage of every development proposal; it would show (on a separate plan sheet), all of the environmentally sensitive areas. In this way, the

Township Planning Commission and the Environmental Advisory Council can better ensure that these are being protected to the maximum extent possible, by the proposed development. This is a technique which is used by other municipalities, and which functions well. Additionally, tree protection standards, as discussed in the Environmental Preservation Plan, should be considered as additions to the Subdivision and Land Development Ordinance. Finally, other design standards should be evaluated to ensure that they serve to preserve the Township's rural character and that they are also sensitive to environmental preservation goals. As one example, street design standards should be reviewed to determine if any cartway widths can be reduced. If any can, it would also assist in reducing stormwater runoff and subsequent management problems.

OFFICIAL MAP

The Pennsylvania Municipalities Planning Code establishes the right to enact an Official Map. This technique can be an effective way of assisting in the implementation of the Plan. It authorizes the Board of Supervisors to adopt a map showing the exact locations of existing and proposed public streets and bikeway routes, waterways, and public lands. A designation on an official map is not considered a taking or acceptance of the land by the Township, but makes the intention a matter of public record. Should the owner of such lands submit an application or other written notice to the Township of his interest in developing the land for private purpose, the Township is granted one year in which to acquire the land or to vacate it from the official map.

Two important changes to the MPC in recent years now make use of an official map a more usable tool. First, a metes and bounds survey is only required for acquisition of lands or easements. For identification purposes, mapping sufficient to identify the affected ground is all that is necessary. Secondly, only a portion(s) of the municipality may be officially mapped; previously, the entire Township would have to be mapped, with all identified lands surveyed, making it too expensive a technique in most cases.

The Official Map is an ideal way to provide for the implementation of several specific recommendations of the comprehensive plan. Specifically, it would serve as a valuable tool in preparing for any road re-alignments and new road segments that become necessary in the future. It can also be used to identify projected park sites or corridors for use as trails.

CAPITAL IMPROVEMENT PROGRAMMING AND BUDGETING

Capital Improvement Programming (CIP) and capital budgeting are techniques which the Township should consider initiating more formally in the future. Capital programming is designed to provide a multi-year (usually six) program for scheduling major capital improvements and purchases. Items which are in the first year of the program for any six year period, then become the capital *budget* for that year. Capital budget items are normally funded by bond issues and other long-term funding techniques. If done with forethought, items are anticipated in

advance of their needs; items in later years of the program move up to first part of the capital program as other items are implemented; they then move up from the program to the capital budget.

Capital programming would allow the Township to implement recommendations of this Comprehensive Plan, by programming for the acquisition of open space lands and development of existing park land and for constructing roadway improvements and new roadway linkages (such as "Village Collectors" or portions which don't lend themselves to be built through the land development process). While capital programming and budgeting allows improvements to be scheduled efficiently and encourages priority setting and long range financial planning by the Township, it may not be appropriate to undertake a full-scale capital process until the Township has adequate staff to keep the program updated and monitor adherence to it. Such a program must be updated annually to be effective, and amended when priorities change.

A much longer range concern for a CIP would include the possible future expansion of facilities within the Township's Administration Building (or a new building if appropriate), as functions outgrow their existing spaces or new uses must be accommodated.

FUNDING AND INTERAGENCY COOPERATION

Grants - Opportunities for grant monies to implement the comprehensive plan are not plentiful state-wide, but limited funding options do exist. State Planning Assistance Grants (SPAG) may be used to fund the preparation of the revisions to the zoning ordinance, the subdivision and land development ordinance, and/or the preparation of an official map. It must be cautioned that these matching grants are both limited in size (generally not exceeding \$10,000), and have a set of funding priorities which favor economically distressed municipalities or applications from groups of municipalities seeking a multi-jurisdictional plan or ordinance. As of this writing, there is a proposal at the state level to increase SPAG appropriations, but it would still result in limited funding potential for any individual municipality. Other funding opportunities are available through the Pennsylvania Department of Environmental Protection's (DEP) Growing Greener Program, the Pennsylvania Department of Conservation and Natural Resources' (DCNR) Community Conservation Partnership Program. Other funding opportunities will soon be available through the National Park Service and the Delaware River Greenway Partnership (Municipal Incentive Grants) as the Lower Delaware River was recently designated a Wild and Scenic River.

The Township should continually monitor and explore opportunities presented by grants made available to implement new federal mandates, such as those under the ISTEA (Intermodal Surface Transportation and Efficiency Act) and under the Clean Air Act amendments. Some of these monies will have applicability to improvements proposed for making roadway improvements to more efficiently move vehicles around areas of concentrated employment (such as proposed adjacent to the school complex), for trail systems to encourage pedestrians and

cyclists to travel from one facility to another in areas of higher intensity use, and for similar improvements. Demand for these monies initially is very high, so monitoring the priorities for their use, is important. It should also be noted, that some of these improvements require coordination with higher levels of government, such as the County, so that jointly funded projects may be appropriate. Special State and County Bond Issue funds may also be allocated to assist municipalities. Such funds may be directed at providing funds for open space and historic preservation projects (under separate programs); these monies may have applicability for future recreation projects as well as any efforts which the Township may want to undertake for historic zoning or preservation of individual buildings or sites.

Coordination - Fortunately, many of the plan's recommendations require little in the way of direct Township contributions for implementation. Coordination should be maintained with the Bangor Area School District, and the libraries and fire companies that service the community. Road improvements involving state highways will require the continued coordination with the Lehigh Valley Planning Commission and PennDOT to ensure that these improvements are incorporated into the region's 12-year program for roadway improvements. In addition, where legally feasible, improvements should be required of developers whose projects have direct impacts on public facilities (roads, recreation, etc.).

UTILITIES

It is recommended that the Township complete the 537 Sewage Facilities Plan once the Comprehensive Plan is adopted. Revisions should be based upon an alternative analysis and needs assessment required by Title 25: Chapter 71-73 as well as the specific the recommendations of the Community Facilities section of this plan. Plans for public sewer and water should be made for the future growth area, using the Act 537 Plan as a guide.

It is also recommended that continued coordination occur with the Borough of Portland and other interested municipalities. Water service should be extended to any area in which sewer service is proposed, and to other areas as the location of mains, allow.

Undertake necessary stormwater management planning through the use of the Act 167 Program sponsored by DEP.

CONCLUSION

The comprehensive plan provides a direction for the future of Upper Mount Bethel. Through its continued implementation, the Township will be able to implement the various goals and objectives proposed in the Plan, and will improve its services and facilities while retaining the character that has been cherished by its residents.

The plan should not be viewed as a static document. Conditions are constantly changing and the plan should be continually reviewed for its currency. At a

minimum the plan should be re-examined in five to ten years to determine if the assumptions upon which it is based are still valid. More frequent amendments to specific elements of the Plan, should also be considered when circumstances change. The most likely element which may need more frequent updates is the land use plan, which should continually reflect any changes of the future land development policies of the Board of Supervisors. With these steps taken, the citizens of Upper Mount Bethel Township will be able to work towards the achievement of the goals and objectives upon which this plan is based.

ADDITIONAL PLANNING STUDIES PROPOSED

The following additional studies will be developed by the Township, as a continuing phase of the Plan over the next few years:

1. **Transportation Study and Plan** - A more detailed Transportation Plan as discussed herein.
2. **Housing Element** - A detailed Housing Element as required by the PA Municipalities Planning Code.
3. **Act 537 Sewage Facilities Plan** - A detailed analysis of the need for provisions of both public sewers and public water facilities to serve all or a portion of the Future Growth Area.

APPENDIX A

APPENDIX A:

COMPREHENSIVE PLAN QUESTIONNAIRE ANALYSIS

This analysis is based upon the questionnaire conducted in the Fall of 1992 by the Township Planning Commission. The questionnaire was conducted in order to increase public participation in the planning process. A total of 2,525 questionnaires were mailed, of which an estimated 60 were returned to the Township as undeliverable, leaving 2,465 delivered questionnaires. A total of 865 were completed and returned, giving a response rate of 35.1%. This is an unusually high response rate, making this questionnaire a good indicator on public sentiment.

A summary of the responses is shown in the chart below. In order to maintain the quality of the responses, any questions which were improperly answered (such as those with two answers) were not counted in the results. Thus the

total responses for each question do not equal 865, but instead range from 834 to 844.

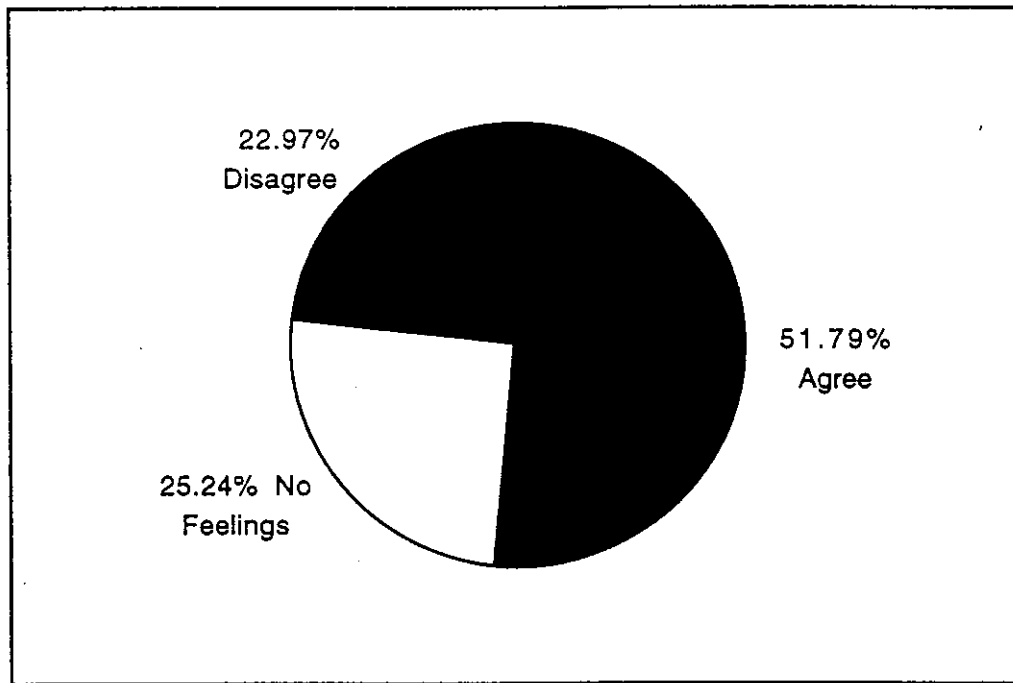
	AGREE	%	NO FEELINGS	%	DISAGREE	%	TOTAL	%
Question 1	433	51.79	211	25.24	192	22.97	836	100
Question 2	323	38.73	170	20.38	341	40.89	834	100
Question 3	555	66.07	156	18.57	129	15.36	840	100
Question 4	656	78.10	133	15.83	51	6.07	840	100
Question 5	383	45.49	229	27.20	230	27.32	842	100
Question 6	427	51.02	251	29.99	159	19.00	837	100
Question 7	637	75.83	136	16.19	67	7.98	840	100
Question 8	359	42.74	258	30.71	223	26.55	840	100
Question 9	161	19.08	144	17.06	539	63.86	844	100
Question 10	280	33.37	196	23.36	363	43.27	839	100
TOTAL	4214	50.21	1884	22.45	2294	27.34	8392	100

The majority of the questions found the Township essentially divided. This can best be seen in the consistent number of responses in the "no strong feelings" category. These averaged 22.45% throughout the questionnaire, ranging from a low of just over 16% for question number 7, to a high of 30.7% for question 8. Only

four questions were able to elicit any sense of consensus among the respondents. Questions 3, 4, and 7 each had strong majorities of "agree" responses, at 66%, 78%, and 75.8% respectively. Question 9 was the only question which gained a clear majority of responses in the "disagree" category, with nearly 64%. Each question, and a graph and summary of the responses, is shown below.

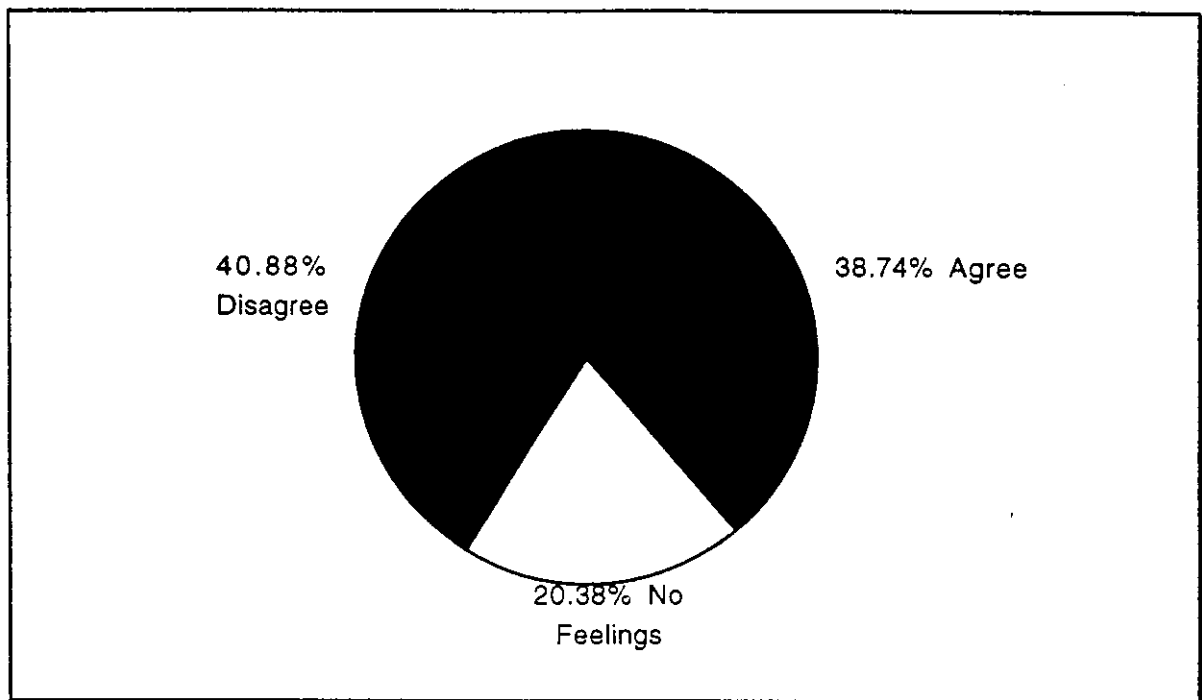
In addition to the ten questions, the questionnaire also gave recipients an opportunity to express any general comments or concerns. A total of 269 persons took this opportunity. These comments generally pertain to the questions, only occasionally venturing beyond the scope of the questionnaire; thus, although these comments cannot all be included here, they can be summarized and described along with each question.

Question One: I would like to see all future development in the community be single family detached homes.



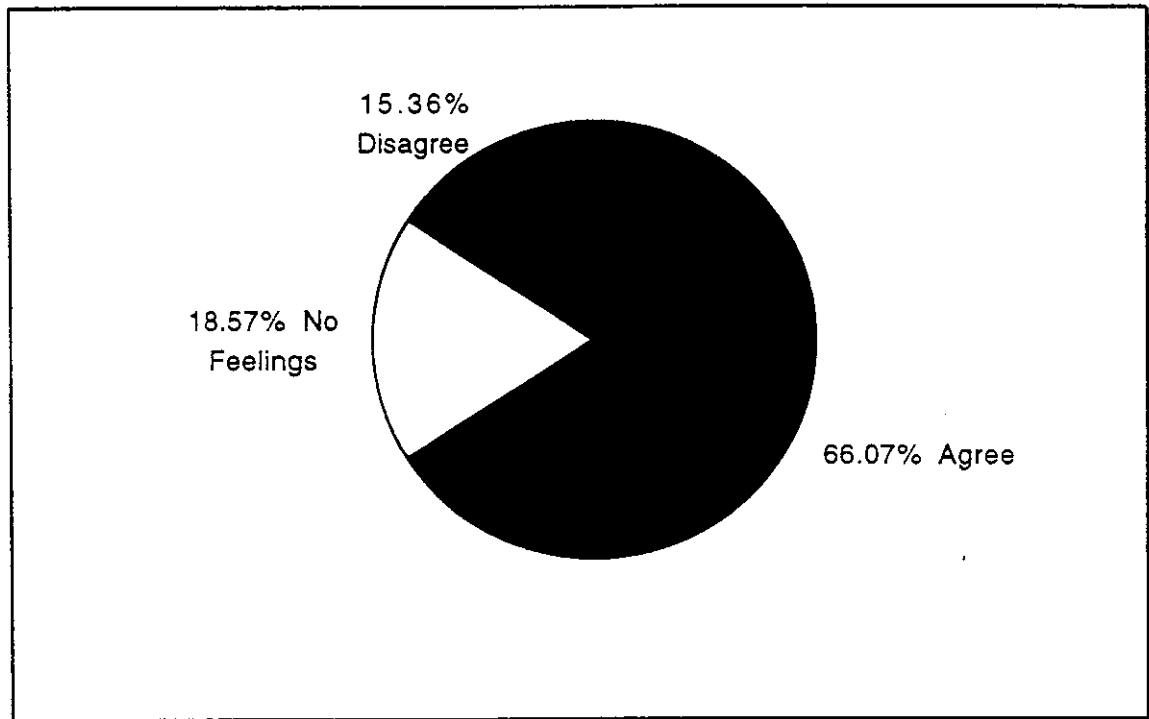
Slightly more than half the responses supported this statement, with the remaining responses evenly split. Comments reflected this, and focused on the need for affordability in housing.

Question 2: The Township should use zoning to see that homes are provided that are affordable to families of varying incomes, including townhouses and apartments.



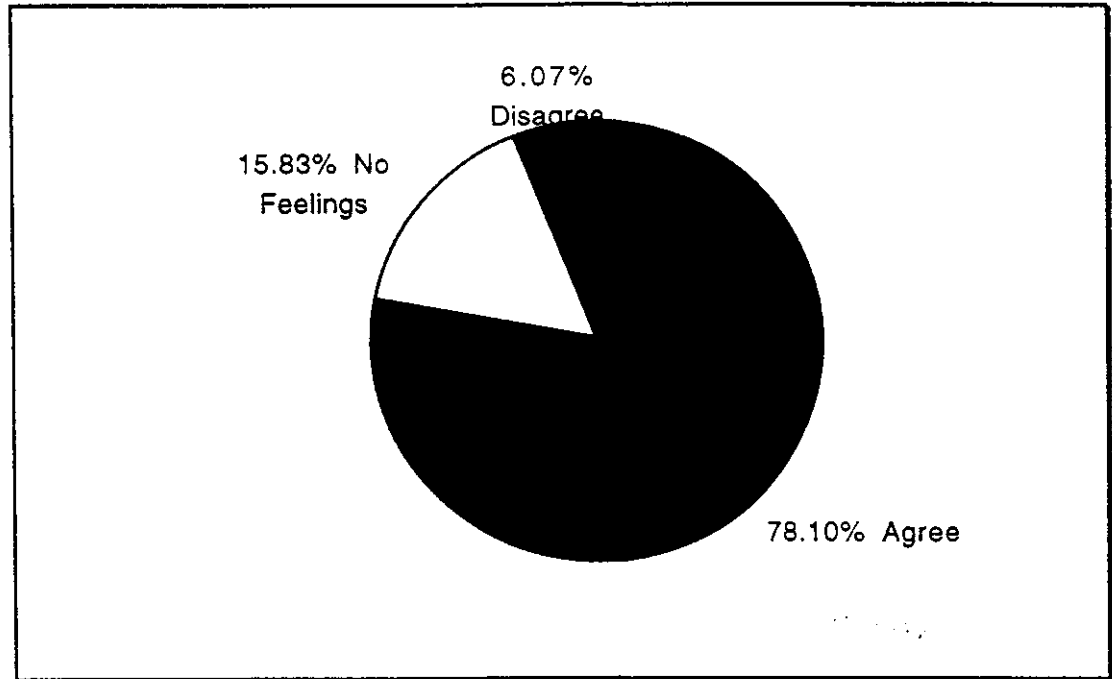
Responses to this question were quite evenly split. The comments helped to reveal that, while affordable housing is generally supported and understood to be necessary, apartments, condominiums, and townhouses are seen as detrimental to the rural character of the Township and thus the wrong approach.

Question 3: I prefer to live in a balanced community with appropriate areas for residential, commercial, and light industrial uses.



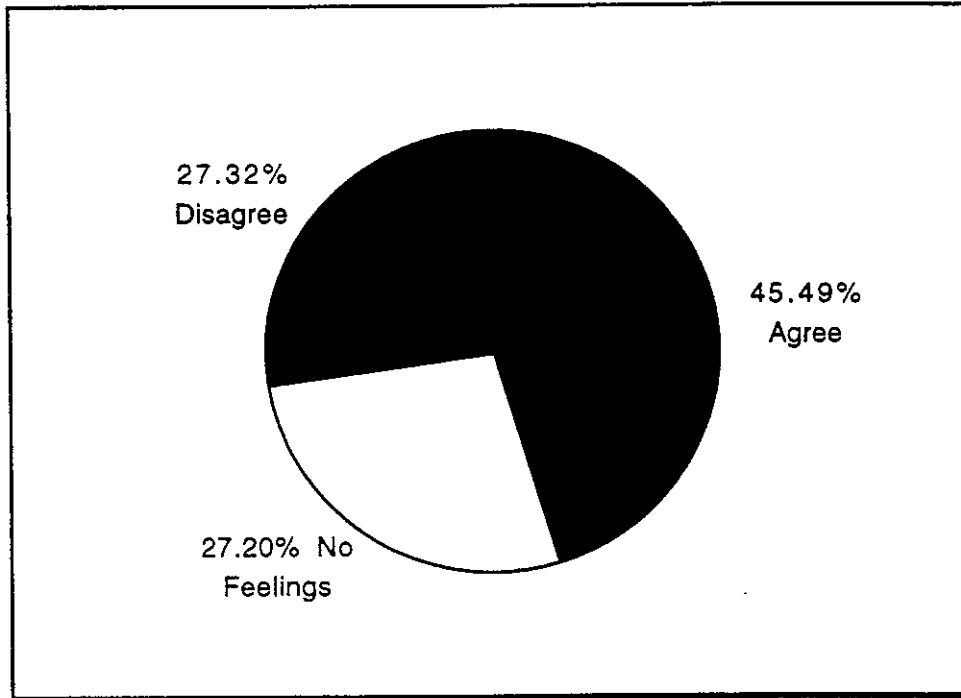
Two-thirds of all respondents agreed with this statement. Comments added emphasis to this, and also raised the issue of light industrial and commercial uses, if kept at a relatively small and intimate scale, as sources of needed employment and tax revenue.

Question 4: I think that the community should take an active role to preserve our remaining farmland and open space.



This question received the most unified response of any question. Over 78% of respondents agreed with this statement, while only 6.07% disagreed. A similar response was found in the comments. A number of comments stated that the persons moved to Upper Mount Bethel because of its rural character.

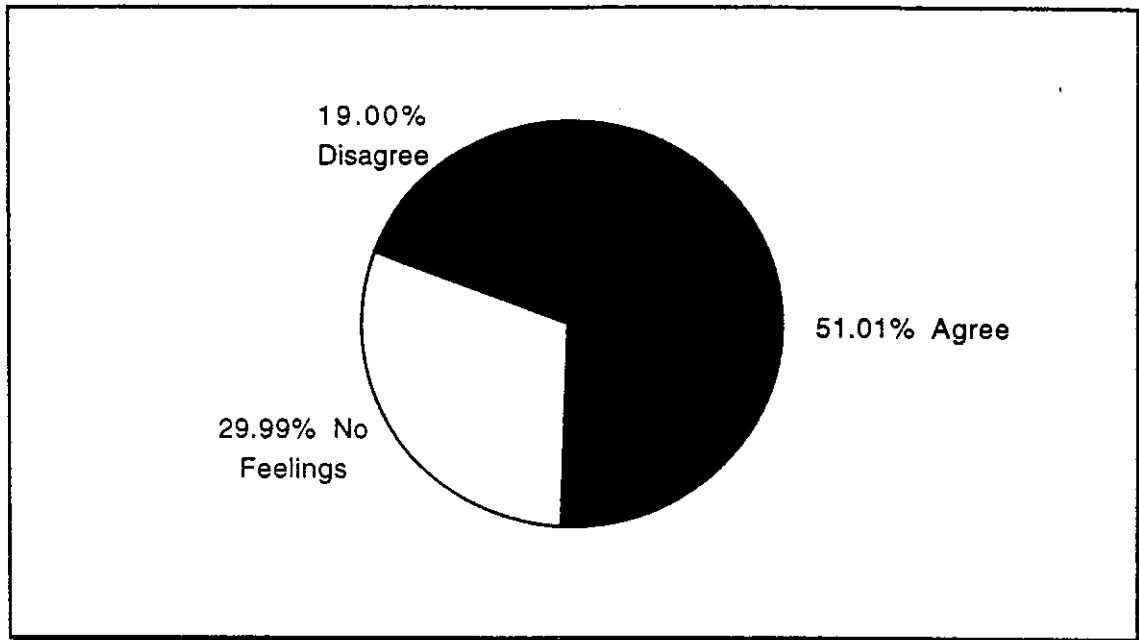
Question 5: I would like to see the community develop small commercial centers within an easy drive of most homes.



This question is somewhat similar to Question 3, although it did not gain as strong a majority of opinion. Comments did, however, often focus on the need for locally available commercial uses such as drugstores and markets.

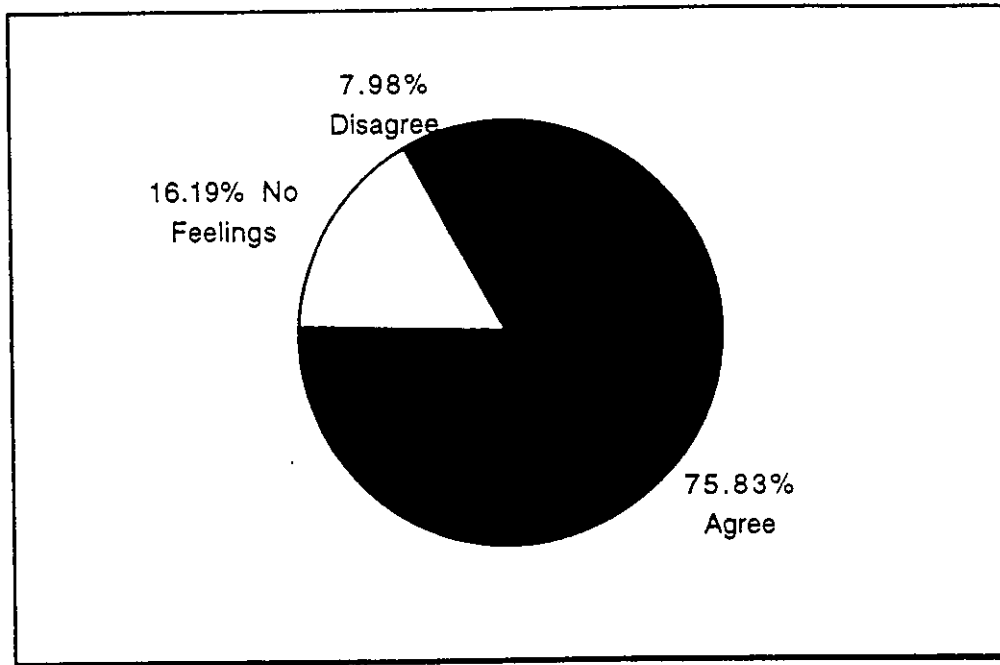
Questionnaire Analysis

Question 6: I would rather see the community develop one well equipped park than a more extensive system with fewer facilities at each location.



A slight majority of residents agree with this statement. The general sense given by the comments however, is that the community does need park and recreation facilities, focused on the needs of children.

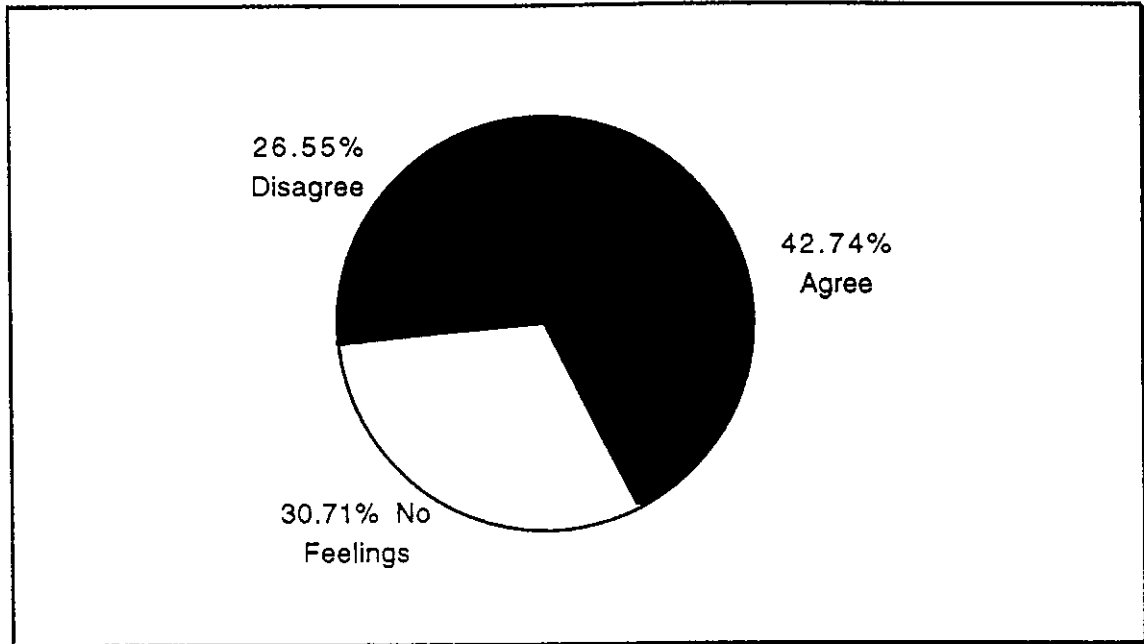
Question 7: I would like to see environmentally sensitive areas protected, with special restrictions in our ordinances.



With over three fourths of respondents supporting this statement, a concern for environmental preservation within Upper Mount Bethel is clearly revealed. When viewed together with Question 4, this concern is overwhelming. Those few comments accompanying Question 7 which disagreed often expressed a concern for expanded and troublesome government intervention in private land use decisions, and possible increases in taxes to pay for preservation programs.

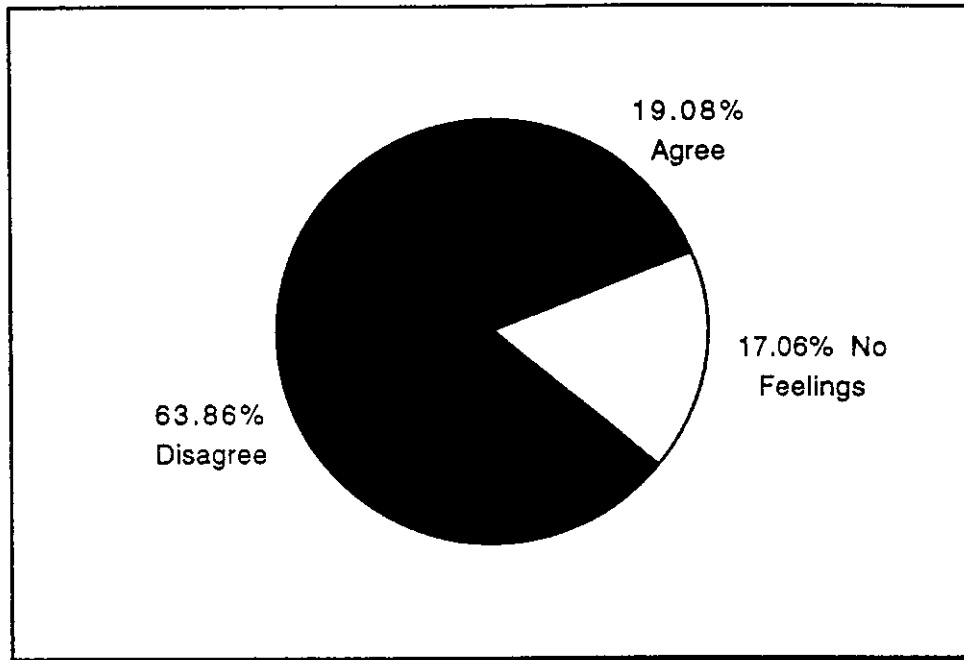
Questionnaire Analysis

Question 8: I would like to see utilities, such as water and sewer, provided in the Township, especially in highly populated areas.



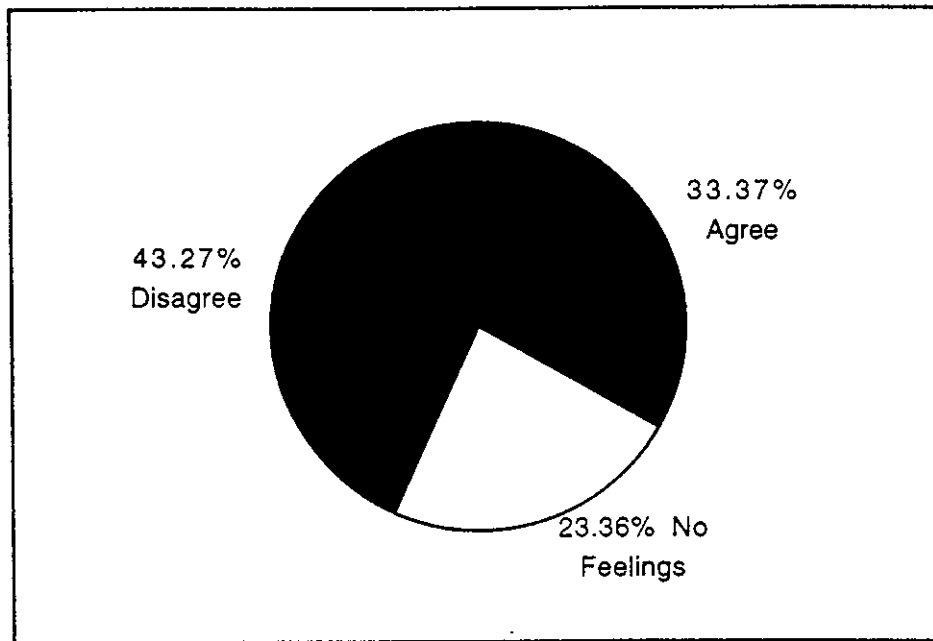
The responses to this question give no clear indication of the desires of the Township. Comments on the subject also varied widely, ranging from a concern that such infrastructure would increase taxes and bring too much development potential, to those supporting utilities as a method of maintaining environmental, health, and aesthetic standards.

Question 9: I would support setting aside appropriate areas for landfills and waste disposal sites in the township.



This was the only question to gain a plurality of "disagree" responses, and at over 63.8%, one of only four to gain any such unity of thinking. While the responses to the statement show a very strong negative reaction to landfills and waste disposal sites, the comments indicate that many persons would accept such a land use if it was limited to disposal of Township waste alone, to the exclusion of waste from any other community.

Question 10: If zoning permitted 50 homes to be built on 50 acres of land, I would rather see the 50 homes clustered on 25 acres and keep the remaining 25 acres of land as open space.



The responses to this question do not indicate any agreement on the subject. The comments relating to the issue also vary. Several respondents view clustering as a method of open space preservation, while others see it as too urban. Some also call for an increase in the minimum lot size, others a decrease.

The general thrust of the commentary, as it relates to the questions, is focused in two areas. These first includes a strong support of environmental and open space preservation, the maintenance of the rural character of the Township and the prevention of further development. A second major theme is the need for small commercial uses, both for employment and to meet the needs of shoppers. While not dealt with in any of the ten questions, a third concern for many respondents is the issue of the general appearance and cleanliness of Upper Mount Bethel. Many persons suggested a desire to see a Township-wide effort to deal with ill-kept and junk-strewn properties.

Addendum to Appendix A, Questionnaire Analysis

A total of 84 additional questionnaires were received by the Township by mid-January, 1993. These were received after the original questionnaires had been compiled and analyzed, and thus are included herein. The total number of responses is now 949, for a return rate of 38.5%. A comparison of the two questionnaire tallies reveals that the responses in the additional 84 questionnaires did not change the results of the earlier tally, as only one of the response categories (Question 10, "Disagree") changed by more than one percentage point. The tabulation for the 84 new questionnaires is shown in Figure A, and the total tabulation, including both the original survey responses and the 84 new ones, is shown in Figure A-1.

Figure A: Analysis of Additional Questionnaires

	AGREE	%	NO FEELINGS	%	DISAGREE	%	TOTAL	%
Question 1	53	64.63	14	17.07	15	18.29	82	100
Question 2	25	30.49	22	26.83	35	42.68	82	100
Question 3	50	60.98	20	24.39	12	14.63	82	100
Question 4	71	85.54	7	8.43	5	6.02	83	100
Question 5	36	43.9	23	28.05	23	28.05	82	100
Question 6	42	51.85	23	28.40	16	19.75	81	100
Question 7	60	75	18	22.50	2	2.50	80	100
Question 8	33	40.24	31	37.80	18	21.95	82	100
Question 9	21	25.93	10	12.35	50	61.73	81	100
Question 10	35	43.75	22	27.50	23	28.75	80	100
Total	426	52.27	190	23.31	199	24.42	815	100

Figure A-1: Analysis of All Questionnaires

	AGREE	%	NO FEELINGS	%	DISAGREE	%	TOTAL	%
Question 1	486	52.94	225	24.51	207	22.55	918	100
Question 2	348	37.99	192	20.96	376	41.05	916	100
Question 3	605	65.62	176	19.09	141	15.29	922	100
Question 4	727	78.76	140	15.17	56	6.07	923	100
Question 5	419	45.35	252	27.27	253	27.38	924	100
Question 6	469	51.09	274	29.85	175	19.06	918	100
Question 7	697	75.76	154	16.74	69	7.50	920	100
Question 8	392	42.52	289	31.34	241	26.14	922	100
Question 9	182	19.68	154	16.65	589	63.68	925	100
Question 10	315	34.28	218	23.72	386	42.00	919	100
Total	4640	50.40	2074	22.53	2493	27.08	9207	100

APPENDIX B

APPENDIX B

PUBLIC SEWER AND WATER POLICY UPPER MOUNT BETHEL TOWNSHIP

This Interim Policy has been developed for use by the Township Supervisors. The Lehigh Valley Planning Commission staff has informed the Township that this Township Interim Policy is in agreement with the LVPC's Regional Goals for the Township. The Interim Policy can be found in Article 6, Section 6.1003 of the proposed Year 2000 Zoning Ordinance of Upper Mount Bethel and is repeated here and made a part of this Comprehensive Plan.

6.1003 Interim Policy for Location of Various Types of Water and Sewer Services

- a. **Areas Served By Adjoining Municipalities** - Various areas of the Township which abut adjoining municipalities, such as the Borough's of Portland, East Bangor and North Bangor, and each has existing public water and sewer facilities respectively. The municipalities may continue to extend their existing public sewer and water facilities to serve proposed developments in the Township. Such extensions are welcomed provided that they are proposed for uses set forth in this Ordinance.
- b. **Growth Area** - The Township has designated a proposed "Growth Area" in accordance with the Statement of Community Development Objectives which is shown on the Zoning Map. Said growth potential indicates the future intention of the Township to provide public sewer and water service within all or a portion of this Growth Area.

Developers with proposals for development in these areas shall confirm the status of the Act 537 Planning Process prior to submitting plans for development of uses which are consistent with the use requirements of this Ordinance.

In the interim, prior to completion of final Township proposed sewer plans, developers may rely on the provision of on-lot sewer and water systems as required below or in some cases on the installation of private-central sewer and water systems for a limited number of specific uses as set forth under Subsection c below.

In cases where final plans have been established, the Subdivision and Land Development Ordinance of the Township

may also require that "capped sewers" be installed at proper locations to permit eventual connection to the proposed sewer system after it is completed.

c. **Private-Central Sewer Systems** - Private-central free-standing sewer or water systems (sometimes referred to as Community Systems) may be permitted by the Supervisors as a "Conditional Use" only for the following uses in any location in the Township, provided that the proposed use is in conformance with the uses permitted in the district in which it is to be located:

- Public or institutional uses of various types to be approved by the Supervisors which are to be carried out by the Township, School District or other public non-profit agency, or utility company that provides an essential service to the Township.
- Uses which fall under this category may also include municipal buildings, public schools, recreation areas, permanent open space, facilities to serve handicapped persons and special facilities which primarily serve handicapped persons; and other similar uses as determined by the Supervisors.

In all cases where such facilities are provided firm and permanent arrangements for the upkeep and maintenance of these facilities must be established prior to approval, and approved by the Supervisors.

d. **On-Lot Water and Sewer Systems** - All of the remaining areas of the Township, excluding those areas identified above will require On-Lot Water and Sewer. These systems shall be properly designed and constructed in accordance with standards of the PA DEP.

Any such systems which serve more than two separate uses shall be considered to be a private-central sewer system subject to the requirements of Subsection c above.



LEHIGH VALLEY PLANNING COMMISSION

961 MARCON BOULEVARD, SUITE 310, ALLENTOWN, PENNSYLVANIA 18103-9397
(610) 264-4544; FAX (610) 264-2616; e-mail: lvpc@early.com

EARL B. LYNN
Chair

IRA J. FARO
Vice Chair

ELEANORE M. HAYDEN
Treasurer

MICHAEL N. KAISER
Executive Director

September 20, 2000

Mr. Michael Cabot, AICP
Michael Cabot Associates Inc.
P.O. Box A
Stroudsburg, Pa. 18360

Re: Proposed Sewer and Water Policies
Upper Mount Bethel Township

Dear Mr. Cabot:

We believe that urban development and the provision of public sewer and water service should be coordinated. The provisions in your September 11, 2000 letter to have the Township update its Act 537 Sewage Facilities Plan to be consistent with the Township's Comprehensive Plan and the stated intent of coordinating the "Growth Area" shown on the zoning map with the provision of public sewer and water service are appropriate relative to our policy.

The September 11, 2000 letter also includes provisions related to interim use of private central systems and capped sewers in the "Growth Area". LVPC policy is that "In areas recommended for urban development, interim central sewage facilities should be allowed if properly installed and maintained, and if the development can be connected to public sewers within five years." LVPC policy also states that "In areas where the Comprehensive Plan recommends urban development, but where public sewers are not yet available, lot sizes smaller than one acre served by on-site sewage disposal should be allowed if the project is consistent with the municipal Act 537 Plan and if a viable financing commitment exists." We recommend that these considerations be incorporated into the Township's ordinances.


The use of central sewage treatment and disposal " may also be acceptable for recreational, institutional or other public uses that by necessity require a rural location." The provisions of Section 6.1003c are consistent with the LVPC policy.

B-3

Mr. Michael Cabot
September 20, 2000
Page 2

Please call Olev Taremäe if you have any questions about this matter.

Sincerely yours,



Frederic H. Brock, AICP
Assistant Director

Cc: Upper Mount Bethel Township Board of Supervisors
Ronold Karasek, Esq.

B-4

APPENDIX C

APPENDIX C

POPULATION GROWTH (Preliminary Estimate)

Upper Mount Bethel Township has experienced a growth in population from 3,343 persons in 1980 to 5,476 persons in 1990. Based on the number of new completed housing units between 1990 and the end of 1998, it is estimated that about 300 new homes will be completed by the Year 2000. This should result in a projected increase in the population of the Township by about 930 persons, for an estimated population by the Year 2000 of about 6,400 persons.

This growth is made of a combination of "natural increase" resulting from the increase of births over deaths, plus a continuing in-migration of persons moving into the Township from other locations.

UPPER MOUNT BETHEL TOWNSHIP POPULATION TRENDS: 1940 - 2000

YEAR	POPULATION	ACTUAL INCREASE	% INCREASE (c)
1940	2,532	--	--
1950	2,613	81	3.2
1960	2,944	331	12.7
1970	3,343	399	13.6
1980	4,247	904	27.0
1990	5,476	1,229	28.9
2000 Estimate	6,500 (a) to 7,177 (b)	1,024 to 1,701	18.7 to 31.1

Source: US Bureau of the Census

Footnotes:

- (a) Based on the number of housing units completed between 1990 and 1998, from Building Permit and Building completion data supplied by Upper Mount Bethel Township.
- (b) Estimate by the Lehigh Valley Planning Commission
- (c) Formula for calculating this percentage rate is $1940 - 1950 = X$; $X/1940 = \% \text{ increase}$

**UPPER MOUNT BETHEL TOWNSHIP
IN-MIGRATION AND NATURAL INCREASE**

TIME PERIOD	IN-MIGRATION	NATURAL INCREASE	TOTAL POPULATION INCREASE	POPULATION AT END OF PERIOD
1970 - 1980	799	105	814	4,247
1980 - 1990	966	220	1,186	5,476
1990 - 2000	927	97 (c)	1,024 (c)	6,500 (a) to 7,177 (b)

Footnotes:

- (a) Preliminary estimate based on number of new housing units completed between 1990 and 1998 (from Lehigh Valley Planning Commission data).
- (b) Estimate by the Lehigh Valley Planning Commission
- (c) Based on data from the PA Health Department

This past growth which has continued in the Township since 1970 should accelerate further if public water and sewer facilities are developed in the next decade.

**IN OR OUT MIGRATION POPULATION
UPPER MOUNT BETHEL TOWNSHIP, PA
1980 - 1990 AND 1990 - 1998**

MIGRATION FACTOR	Upper Mt. Bethel Twp.	Northampton County
<u>1970 to 1980 Census Period</u>		
Actual 1970 Population	3,343	214,545
Natural Change (a)	+ 105	+ 5,166
Potential 1980 Population	3,448	219,711
Actual 1980 Population	4,247	225,418
Net In-Migration (b)	799	5,707
<u>1980 to 1990 Census Period</u>		
Actual 1980 Population	4,247	225,418
Natural Change (a)	+ 220	+ 7,107
Potential 1990 Population	4,467	232,525
Actual 1990 Population	5,476	247,105
Net In-Migration (b)	1,009	14,580
<u>1990 Through 1998 Census Period</u>		
Actual 1990 Population	5,476	247,105
Natural Change (a)	+ 146	+ 6,304
Potential 1998 Population	5,622	253,409
Actual Estimate of 1998 Population (c)	7,177	269,265
Net In-Migration (b)	1,555	15,847

Footnotes:

- (a) Births minus Deaths (actual figures for 1990 - 1998 available and extrapolated increases for 1999 and 2000)
- (b) Actual population minus potential population
- (c) Estimated by U.S. Census Bureau

Sources: U.S. Census Bureau 100% Data for 1970, 1980 and 1990. PA State Health Data Center (*), 1970 through 1998. Township Building Permit Data, 1980 through 1998.

* The data was provided by the Division of Health Statistics, PA Department of Health, Harrisburg, PA. The Department specifically disclaims responsibility for any analyses, interpretations or conclusions.

**BIRTHS, DEATHS, NATURAL CHANGE AND
IN-MIGRATION OR OUT-MIGRATION RATES
UPPER MOUNT BETHEL TOWNSHIP AND NORTHAMPTON COUNTY, PA
1980, 1990 AND 1998**

MIGRATION FACTOR	Upper Mt. Bethel Twp	Northampton County
<u>Population</u>		
1970	3,343	214,545
1980	4,247	225,418
1990	5,476	247,104
1998 (a)	5,606	258,679
<u>No. of Births</u>		
1970	48	3,072
1980	47	2,787
1990	71	3,376
1998 (a)	51	2,829
<u>No. of Deaths</u>		
1970	30	2,787
1980	25	2,099
1990	30	2,178
1998 (a)	67	2,359
<u>Births/1000 Persons</u>		
1970	14.36	14.32
1980	11.07	12.36
1990	12.97	13.66
1998 (a)	9.10	10.94
<u>Deaths/1000 Persons</u>		
1970	8.97	12.99
1980	5.89	9.31
1990	5.48	8.81
1998 (a)	11.95	9.12
<u>Natural Change/1000 Persons</u>		
1970	5.39	1.33
1980	5.18	3.05
1990	7.49	4.85
1998 (a)	(2.85)	1.82
<u>In-Migration (Out-Migration) 1970 - 1980</u>		
Persons	799	5,707
Rate/1000 Persons in 1970	23.90	2.66
<u>In-Migration (Out-Migration) 1980 - 1990</u>		
Persons	1,009	14,580
Rate/1000 Persons in 1980	22.75	6.47
<u>In-Migration (Out-Migration) 1990 - 1998</u>		
Persons	1,555	15,847
Rate/1000 Persons in 1990	0.24	2.13

Footnote:

(a) Estimate calculated by the U.S. Census Bureau

Source: U.S. Census Bureau, 1970 through 1990; PA State Health Data Center(*).

* The data was provided by the Division of Health Statistics, PA Department of Health, Harrisburg, PA. The Department specifically disclaims responsibility for any analyses, interpretations or conclusions.

**RESIDENT BIRTHS AND DEATHS
UPPER MOUNT BETHEL TOWNSHIP AND NORTHAMPTON COUNTY, PA
1980**

YEAR	Upper Mt. Bethel Twp.		Northampton County	
	Births	Deaths	Births	Deaths
Census Period 1970 - 1979				
1970	48	30	3,072	2,147
1971	48	35	2,906	2,184
1972	42	34	2,608	2,185
1973	32	32	2,548	2,243
1974	35	30	2,582	2,270
1975	40	28	2,600	2,032
1976	52	38	2,567	2,128
1977	51	47	2,613	2,141
1978	58	39	2,549	2,122
1979	48	36	2,720	2,138
Census Period 1980 - 1989				
1980	47	25	2,787	2,099
1981	49	37	2,831	2,014
1982	53	36	2,764	2,076
1983	61	30	2,737	2,124
1984	51	41	2,662	2,129
1985	55	37	2,788	2,149
1986	59	45	2,718	2,229
1987	55	38	2,940	2,243
1988	70	43	3,173	2,336
1989	62	40	3,228	2,122
Census Period 1990 - 1998				
1990	71	30	3,376	2,178
1991	60	35	3,265	2,162
1992	56	31	3,203	2,304
1993	62	45	3,075	2,352
1994	53	36	3,016	2,305
1995	44	48	2,861	2,414
1996	48	47	2,820	2,467
1997	57	46	2,757	2,357
1998 (a)	51	67	2,829	2,359
Total for 10-Year Census Period 1970 - 1979	454	349	26,765	21,590
- Natural Increase	+ 105		+ 5,166	
Total for 10-Year Census Period 1980 - 1989	592	372	28,628	21,521
- Natural Increase	+ 220		+ 7,107	
Total for 9-Year Census Period 1990 - 1998	502	385	27,202	20,898
- Natural Increase	+ 146		+ 6,304	

Source: PA Vital Statistics, 1970 through 1998 and Michael Cabot Associates

Footnote:

(a) Figures are reported as preliminary information by the Dept. of Vital Statistics.