

BACKGROUND REPORTS

Current and future trends in the following areas will continue to influence the conservation and development of the Western Berks area:

- Regional Location
- Historical Origins
- Natural Features
- Population, Housing and Employment
- Existing Land Use
- Community Facilities and Services
- Local Government
- Parks and Recreation
- Transportation
- Land Use and Zoning Policies in the Region

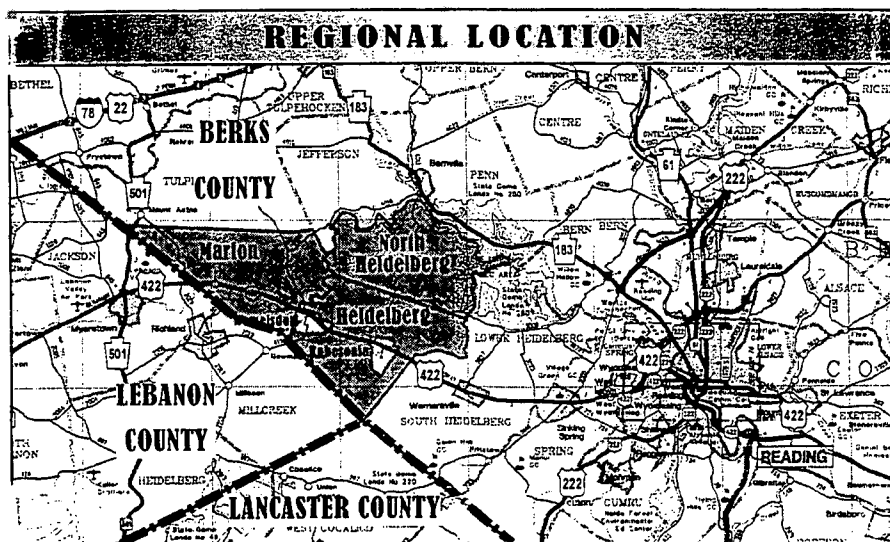
The following reports summarize the most relevant information about existing conditions in the Western Berks area.

REGIONAL LOCATION

The Western Berks area is along the Berks County-Lebanon County border between the City of Reading and I-78. U.S. 422 connects the Western Berks area with Reading to the east and cities of Lebanon and Harrisburg to the west. Three state routes provide access to I-78, including PA 501, PA 419 and PA 183 via Bernville Road.

Regional growth pressures are affecting Berks County from several directions. From the east, suburbanization is spreading through Montgomery County and Chester County from Philadelphia along the Schuylkill River corridor. This trend has accelerated since the Schuylkill Expressway extension was completed in the early 1980's. From the northeast, major growth from the Lehigh Valley has moved into Berks County along both PA 222 and PA 100. Development is also moving northward along PA 222 from Lancaster County.

Closer to home, the Western Berks area is primarily affected by growth spreading westward along U.S. 422 from Reading via the Sinking Springs and Wernersville vicinities. Harrisburg and Hershey area growth has the potential to affect the Western Berks area along U.S. 422 from the opposite direction.



HISTORICAL ORIGINS

The Delaware or Lenni Lenape Indians were the earliest known inhabitants of Berks County. Their symbol was the turtle and they named the area "Tulpehocken" meaning land of the turtles. The first Europeans came in the early years of the 1700's after England's King Charles granted 40,000 square miles to William Penn in what is now eastern Pennsylvania. Immigrants came from Germany, France, Sweden, England, Wales, Ireland, Scotland and elsewhere, often seeking religious freedom. Many moved inland from Philadelphia along the Schuylkill River. The Delaware were unable to obtain assurances of protection from settlers from the colonial government and most moved further west by 1724.

Settlers from the Palatine region in Germany proved to be most influential in the formative years of the Western Berks area. Many had originally settled along the Hudson River in New York and later resettled in the Tulpehocken valley. Known as the Tulpehocken Settlement, they arrived in three successive waves beginning with 15 families in 1723 and followed by an additional 18 families in 1725. A third group arrived in 1729.

By the first federal census in 1790, Germans and German descendants comprised almost 75% of Berks County's population. Their farming traditions, religious convictions and self-reliance, which came to be known as "Pennsylvania Dutch" characteristics, have dominated in the region for nearly 300 years. Religion was a major factor in the development of the Western Berks area. Mennonites, Lutheran, Reformed and other congregations each built places of worship in the area prior to the mid 1800's. The Mennonite/Amish presence in the Western Berks area is still distinct today, particularly in Marion Township, the Western Berks area municipality where farming is most prevalent.

As early as 1690, William Penn conceived the idea of a grand canal to connect the people of his lands with its resources and goods. In 1791, the Union Canal was begun to connect the Schuylkill River and Schuylkill Canal with the Susquehanna River. Work continued until the canal was completed in 1828. The canal proved to be a strong boost to the area's industrial and commercial growth. Railroads led to the demise of the canal during the 1850's and the canal ceased operations in 1884. Today the Tulpehocken Creek Historic District protects the canal and other historic architecture along the canal.

Early highways also played an important role in the early growth of the area. The first highway in the area was the Berks and Dauphin Turnpike. Built in 1729, it connected Reading with Lebanon. The present day U.S. Route 422 closely follows this same alignment. This roadway has become the major highway in western Berks exerting development pressures and economic opportunities.

Aside from farming, water powered industry was the dominant economic activity in the area's formative period. Mills for grain, lumber, paper and other commodities were common along local creeks until the mid 1800's. The furnace and ironworks in Robesonia were the largest of the area's water powered industries. Evidence of the area's early industries still exist, including old mill buildings, furnace sites, mine holes and other remnants.

According to the Pennsylvania Historical and Museum Commission, the Western Berks area has four National Historic Register Districts, three individual sites listed on the National Historic Register and two sites that are considered eligible for the Register. These are as follows:

Historic Districts

- Stouchsburg Historic District
- Womelsdorf Historic District
- Robesonia Furnace Historic District
- Tulpehocken Creek Historic District

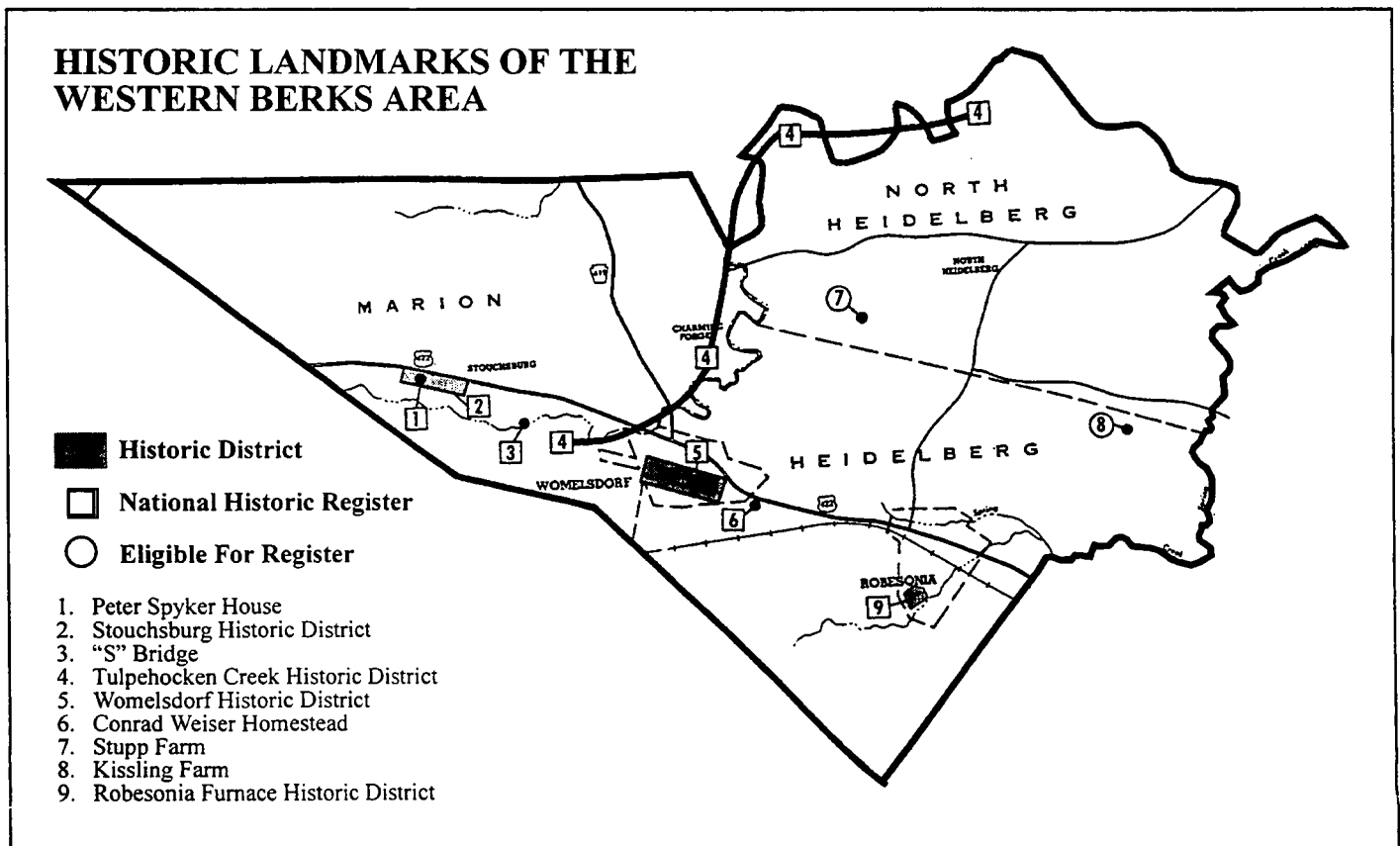
National Register Sites

- Conrad Weiser Homestead
- Peter Spyker House
- "S" Bridge

Sites Eligible for the National Register

- Kissling Farm
- Stupp Farm

The following map shows the Historic Landmarks of the Western Berks area.



POPULATION, HOUSING AND EMPLOYMENT

Total Population

Womelsdorf Borough is the most populous of the five municipalities in the Western Berks area with an estimated 2,791 residents in 1996. Each of the other four municipalities had a total population of between 1,400 and 2,000 people in 1996. Womelsdorf has also added the most people since 1980. The Borough's population increased by 24.3 % during the 1980's and by an additional 23.0% between 1990 and 1996. In the overall vicinity, South Heidelberg added the most people during the 1980's and Lower Heidelberg has added the most people since 1990. Within the Western Berks area, North Heidelberg had the highest percentage growth during the 1980's (35.2%). Womelsdorf's 23.0% increase has been the highest growth rate in the Western Berks area for the 1990's.

TABLE 1
TOTAL POPULATION
Western Berks Area, Surrounding Municipalities and Berks County
1980 - 1996

MUNICIPALITY	1980 Population	1990 Population	Change 1980 to 1990	% Change 1980 to 1990	1996 Estimated Population	Change 1990 to 1996	% Change 1990 to 1996
Heidelberg Township	1,561	1,513	- 48	- 3.1	1,599	86	5.7
Jackson Township (Lebanon County)	5,028	5,732	704	14.0	5,990	258	4.5
Jefferson Township	1,310	1,410	100	7.6	1,504	94	6.7
Lower Heidelberg Township	1,819	2,209	390	21.4	3,104	895	40.5
Marion Township	1,341	1,415	74	5.5	1,502	87	6.1
Mill Creek Township (Lebanon County)	2,564	2,687	123	4.8	2,703	16	0.6
North Heidelberg Township	953	1,288	335	35.2	1,420	132	10.3
Penn Township	1,254	1,831	577	46.0	2,101	270	14.8
Robesonia Borough	1,748	1,944	196	11.2	1,962	18	0.9
South Heidelberg Township	3,355	4,382	1,027	30.6	4,963	581	13.3
Tulpehocken Township	2,569	2,843	274	10.7	2,979	136	4.8
Womelsdorf Borough	1,827	2,270	443	24.3	2,791	521	23.0
BERKS COUNTY	312,497	336,523	24,014	7.7	352,353	15,830	4.7

Source: U.S. Census, Berks County Planning Commission, Lebanon County Planning Commission

Population Projections

The Berks County Planning Commission projects that the five Western Berks area municipalities will add 864 people during the next decade. This is an average of 86 people per year, or approximately 29 new homes annually across the five municipalities. By comparison the five municipalities added an estimated 844 residents between 1990 and 1996.

While overall growth is expected to be moderate, the County projects that Womelsdorf will increase its population by 20.9% during the next decade and continue to be the fastest growing of the five Western Berks area municipalities. North Heidelberg is expected to increase its population by 16.6% over the same period.

TABLE 2
BERKS COUNTY PLANNING COMMISSION
POPULATION PROJECTIONS
Western Berks Area and Berks County
2000 and 2010

AREA	1990 Population	2000 Projected Population	Change 1990 to 2000	% Change 1990 to 2000	2010 Projected Population	Change 2000 to 2010	% Change 2000 to 2010
Heidelberg Township	1,513	1,570	57	3.8	1,537	- 33	-2.1
Marion Township	1,415	1,495	80	5.7	1,530	35	2.3
North Heidelberg Township	1,288	1,617	329	25.5	1,886	269	16.6
Robesonia Borough	1,944	2,075	131	6.7	2,150	75	3.6
Womelsdorf Borough	2,270	2,477	207	9.1	2,995	518	20.9
BERKS COUNTY	336,523	354,370	17,847	5.3	367,291	12,921	3.7

Source: Berks County Planning Commission

Population Density

The three townships in the planning area are very close in total land area as are the two boroughs. Womelsdorf Borough is the most densely developed municipality at 3,101 persons per square mile in 1996. Robesonia is next at 2,180 persons per square mile. The population density of the three townships in 1996 ranged between 102 and 116 persons per square mile. Most of the surrounding municipalities are more densely developed.

TABLE 3
POPULATION DENSITY
Western Berks Area, Surrounding Municipalities and Berks County
1996

MUNICIPALITY	Estimated 1996 Population	Land Area (in square miles)	Population Density (in persons per square mile)
Heidelberg Township	1,599	13.9	116
Marion Township	1,502	14.3	105
North Heidelberg Township	1,420	13.9	102
Robesonia Borough	1,962	0.9	2,180
Womelsdorf Borough	2,791	0.9	3,101
Jackson Township (Lebanon County)	5,990	23.8	252
Jefferson Township	1,504	15.8	95
Lower Heidelberg Township	3,104	15.9	195
Mill Creek Township (Lebanon County)	2,703	19.9	136
Penn Township	2,101	19.0	111
South Heidelberg Township	4,963	13.7	362
Tulpehocken Township	2,979	23.1	129
BERKS COUNTY	352,353	864.4	408

Source: U.S. Census, Berks County, URDC

Population By Age

In 1990, 5-17 year olds were the largest age group in two of the three Western Berks area townships. In the two boroughs, the largest age groups were 22-34 year olds. The number of residents in the 4 and under age group was exceeded by people 65-74 and people 74+ in both Robesonia and Womelsdorf. The opposite was generally true in the townships. In three of the five municipalities 35-54 year olds were the fastest growing age group between 1980 and 1990. They were second fastest in the fourth municipality and third fastest in the fifth.

TABLE 4
POPULATION BY AGE
Western Berks Area and Berks County
1980 - 1990

AGE	HEIDELBERG TOWNSHIP			MARION TOWNSHIP			NORTH HEIDELBERG TOWNSHIP		
	1990 Population		% Change 1980 to 1990	1990 Population		% Change 1980 to 1990	1990 Population		% Change 1980 to 1990
	%	Number		%	Number		%	Number	
4 and Under	5.6	85	- 7.5	7.9	112	- 1.8	7.3	94	22.1
5 - 17	20.4	308	- 32.8	21.7	307	- 0.7	17.4	224	- 0.9
18 - 21	5.6	86	11.7	5.0	71	- 34.9	6.7	86	62.3
22 - 34	16.3	246	- 13.1	19.8	280	6.1	18.5	238	9.7
35 - 44	16.2	245	18.4	15.1	214	35.4	20.4	263	122.9
45 - 54	13.7	207	21.8	11.2	158	29.5	14.2	183	67.9
55 - 64	9.6	145	- 21.2	8.2	116	- 17.7	7.2	93	19.2
65 - 74	9.1	137	80.3	7.0	99	32.0	5.2	67	26.4
75 +	3.5	53	60.6	4.1	58	18.4	3.1	40	81.8
TOTAL	100.0	1,513	- 3.1	100.0	1,415	5.5	100.0	1,288	35.2

TABLE 4 - CONTINUED

AGE	ROBESONIA BOROUGH			WOMELSDORF BOROUGH			BERKS COUNTY		
	1990 Population		% Change 1980 to 1990	1990 Population		% Change 1980 to 1990	1990 Population		% Change 1980 to 1990
	%	Number		%	Number		%	Number	
4 and Under	7.3	141	34.3	6.4	146	32.7	6.7	22,510	19.0
5 - 17	15.8	307	- 12.8	16.8	381	11.7	16.7	55,936	- 6.9
18 - 21	4.8	94	8.1	5.1	116	- 3.3	6.0	20,079	- 7.5
22 - 34	21.1	411	- 8.7	24.0	545	32.9	20.1	67,689	9.6
35 - 44	16.4	319	66.1	13.9	315	86.4	14.8	49,668	44.6
45 - 54	10.5	204	9.7	8.3	189	10.4	10.3	34,648	- 3.0
55 - 64	8.7	170	- 7.1	9.3	210	- 0.5	9.9	33,467	- 6.5
65 - 74	8.0	155	- 11.4	8.1	184	7.6	8.8	29,701	9.9
75 +	7.4	143	55.4	8.1	184	119.1	6.8	22,825	33.1
TOTAL	100.0	1,944	11.2	100.0	2,270	20.6	100.0	336,523	7.7

Gender

Gender refers to the number of males and females in a population. There are no special conditions in the Western Berks Planning area that have altered the traditional 50/50 balance between total males and total females.

**TABLE 5
GENDER
Western Berks Area and Berks County
1990**

AREA	TOTAL POPULATION	MALES		FEMALES	
		Number	Percent	Number	Percent
Heidelberg Township	1,513	745	49.2	768	50.8
Marion Township	1,415	732	51.7	683	48.3
North Heidelberg Township	1,288	670	52.0	618	48.0
Robesonia Borough	1,944	939	48.3	1,005	51.7
Womelsdorf Borough	2,270	1,092	48.1	1,178	51.9
BERKS COUNTY	336,523	162,646	48.3	173,877	51.7

Source: U.S. Census

Household Size

Households refer to persons living in a housing unit whether related or not. Reflecting a national trend, the area's and the County's average household size has become smaller in recent decades. Later marriages, more divorces, fewer children and more elderly households have contributed to this trend across the U.S.

TABLE 6
AVERAGE PERSONS PER HOUSEHOLD
Western Berks Area and Berks County
1980 - 1990

AREA	AVERAGE PERSONS PER HOUSEHOLD	
	1980	1990
Heidelberg Township	3.06	2.76
Marion Township	3.19	3.04
North Heidelberg Township	3.08	2.89
Robesonia Borough	2.72	2.56
Womelsdorf Borough	2.51	2.42
BERKS COUNTY	2.66	2.56

Source: U.S. Census

Income and Poverty

Median income is the level at which half an area's households earn more and half earn less. Median income in four of the five Western Berks area municipalities exceeds the Berks County median. Only Womelsdorf's is lower. Only Marion Township comes close to Berks County's percent of persons in poverty. Poverty levels are based on a federally established minimum income that changes based on number of persons in a household.

TABLE 7
INCOME AND POVERTY
Western Berks Area and Berks County
1990

AREA	MEDIAN ANNUAL HOUSEHOLD INCOME	PERCENT OF PERSONS IN POVERTY
Heidelberg Township	\$36,250	5.5
Marion Township	33,182	7.3
North Heidelberg Township	39,643	2.6
Robesonia Borough	34,318	4.9
Womelsdorf Borough	29,594	3.2
BERKS COUNTY	32,048	7.8

Source: U.S. Census

Total Housing Units

Trends in total housing units mirror population trends. However, even areas losing population tend to add housing units to accommodate new households being created by singles, divorced people and the elderly. Between 1980 and 1990, Womelsdorf and North Heidelberg added significant numbers of housing units. Housing growth in the other three Western Berks area municipalities was more moderate.

TABLE 8
TOTAL HOUSING UNITS
Western Berks Area and Berks County
1980 - 1990

AREA	TOTAL HOUSING UNITS		1980 - 1990 CHANGE	
	1980	1990	Number	Percent
Heidelberg Township	481	524	43	8.9
Marion Township	464	496	32	6.9
North Heidelberg Township	323	468	145	44.9
Robesonia Borough	662	772	110	16.6
Womelsdorf Borough	768	948	180	23.4
BERKS COUNTY	119,934	134,482	14,548	12.1

Source: U.S. Census

Housing Type

Households often need different types of housing as they mature. Young couples look for starter homes and move to larger homes as their families grow. As children leave and the remaining occupants grow older, requirements often return full circle to apartments, townhouses and other smaller units.

As in most suburban and rural areas, single-family detached homes comprise most of the housing stock in the three Western Berks area townships (87.8% in Heidelberg, 76.4% in Marion and 85.9% in North Heidelberg). Single-family detached units are also the most popular housing type in the two boroughs (51.2% in Robesonia and 37.0% in Womelsdorf).

TABLE 9
HOUSING TYPE
Western Berks Area and Berks County
1990

AREA		Single-Family Detached	Single-Family Attached	2-4 Unit Structure	5+ Unit Structure	Mobile Home & Others	TOTAL
Heidelberg Township	Number	460	17	18	7	22	524
	Percent	87.8	3.2	3.5	1.3	4.2	100
Marion Township	Number	379	31	46	0	40	496
	Percent	76.4	6.3	9.2	0	8.1	100
North Heidelberg Township	Number	402	9	5	5	47	468
	Percent	85.9	1.9	1.1	1.1	10.0	100
Robesonia Borough	Number	395	250	93	19	15	772
	Percent	51.2	32.4	12.0	2.5	1.9	100
Womelsdorf Borough	Number	351	342	65	175	15	948
	Percent	37.0	36.0	6.9	18.5	1.6	100
BERKS COUNTY	Number	68,688	33,036	13,594	12,282	6,882	134,482
	Percent	51.1	24.6	10.1	9.1	5.1	100.0

Source: U.S. Census

Housing Tenure and Vacancy

The amount of rental housing in an area affects housing affordability and the ability to accommodate the life cycle changes described earlier. More rental housing usually signifies an area more affordable to singles, young families and older people. Areas with high rates of owner-occupied housing may be less accessible to singles, starter families and the elderly.

The percent of owner-occupied homes exceeds the Berks County ratio in four of the five Western Berks area municipalities. Only Womelsdorf, at 68.2 % , has a lower percentage of owner-occupied homes than the County overall. Conversely, Womelsdorf has the highest proportion of renter-occupied units in the five-municipality area.

Marion Township, at 6.0% had the highest housing vacancy rate at the time of the 1990 census. Marion was the only municipality to exceed Berks County's rate of 5.1%. Vacancy rates of between 3% and 5% are usually considered desirable to offer sufficient choice on the housing market. Rates lower than this range typically reflect a more stable developed area.

TABLE 10
HOUSING TENURE AND VACANCY
Western Berks Area and Berks County
1990

AREA	Owner-Occupied		Renter-Occupied		Vacant		TOTAL	
	Number	%	Number	%	Number	%	Number	%
Heidelberg Township	945	85.4	120	10.9	41	3.7	1,106	100
Marion Township	354	71.4	112	22.6	30	6.0	496	100
North Heidelberg Township	390	83.3	55	11.8	23	4.9	468	100
Robesonia Borough	585	75.8	165	21.4	22	2.8	772	100
Womelsdorf Borough	647	68.2	275	29.0	26	2.8	948	100
BERKS COUNTY	94,336	70.1	33,313	24.8	6,833	5.1	134,482	100

Source: U.S. Census

Housing Age

In North Heidelberg Township and Robesonia Borough, more homes were constructed in the 1980's than any other decade. In Berks County, Marion Township and Womelsdorf Borough, homes built prior to 1940 are the most prevalent. The 1960's were the most popular decade for housing construction in Heidelberg Township.

TABLE 11
YEAR HOUSING BUILT
Western Berks Area and Berks County
1990

AREA	TOTAL UNITS	PERCENT OF TOTAL UNITS					
		Before 1940	1940 - 1959	1950 - 1959	1960 - 1969	1970 - 1979	1980 - 1989
Heidelberg Township	524	22.9	4.4	15.6	25.4	15.5	16.3
Marion Township	496	49.8	3.2	8.9	8.5	19.0	10.7
North Heidelberg Township	474	19.8	2.3	5.9	19.0	24.7	28.3
Robesonia Borough	772	48.2	8.8	10.9	5.3	16.1	10.7
Womelsdorf Borough	948	43.8	4.0	6.3	5.2	17.3	23.4
BERKS COUNTY	134,482	39.7	7.2	12.1	11.1	16.0	13.9

Source: U.S. Census

Employment by Sector

Many residents of the Western Berks area work elsewhere. Within the overall regional economy, Reading Metropolitan Statistical area (Berks County) figures show that jobs are growing in retail trade, finance/insurance/real estate, government and communications and public utilities. Construction, manufacturing and wholesale trade lost jobs between November 1997 and November 1998. Services and transportation neither gained or lost jobs during this period.

TABLE 12
EMPLOYMENT BY SECTOR
Reading Metropolitan Statistical Area (Berks County)
November 1997 - November 1998

ECONOMIC SECTOR	TOTAL EMPLOYMENT		CHANGE	
	November 1998	November 1997	Number	Percent
Construction and Mining	7,100	7,600	- 500	- 6.6
Durable Goods Manufacturing	26,400	28,100	- 1,700	- 6.1
Non-Durable Goods Manufacturing	15,300	16,000	- 700	- 4.4
Transportation	4,800	4,800	0	0
Communications and Public Utilities	3,500	3,300	+ 200	+ 5.7
Wholesale Trade	7,400	7,700	- 300	- 4.1
Retail Trade	32,400	32,100	+ 300	+ 0.9
Finance, Insurance, Real Estate	8,900	8,500	+ 400	+ 4.7
Services	40,300	40,300	0	0
Government	20,200	20,000	+ 200	+ 1.0
Total Non-Agricultural Employment	166,300	168,400	- 2,100	- 1.3

Source: PA Department of Labor and Industry

Employment by Industry

The U. S. Census reported on the industries in which people were employed as of 1990. As in Berks County, four of the five Western Berks area municipalities reported more residents employed in the Technical/Sales and Administrative Support trades category than in any other category. In the fifth municipality, Marion Township, the Operator/Fabricator/Laborer category was the primary employer.

TABLE 13
EMPLOYMENT BY INDUSTRY
PERSONS 16 YEARS AND OLDER
Western Berks Area and Berks County
1990

AREA	TOTAL	PERCENT OF EMPLOYED PERSONS					
		Management/ Professional Specialty	Technical/ Sales/Admin. Support	Service	Farming/ Forestry/ Fishing	Precision Production/ Craft/Repair	Operator/ Fabricator/ Laborer
Heidelberg Township	806	22.8	27.2	10.8	6.5	11.2	21.6
Marion Township	711	13.2	21.5	13.2	15.3	10.0	26.7
North Heidelberg Township	709	20.2	25.8	8.6	4.4	17.6	23.4
Robesonia Borough	1,039	22.6	31.7	11.2	0.7	10.5	23.4
Womelsdorf Borough	1,214	16.7	30.0	13.0	0.5	14.2	25.6
BERKS COUNTY	166,292	21.8	29.7	11.8	2.1	13.1	21.5

Source: U.S. Census

NATURAL FEATURES

Geology

The geology of an area dictates its groundwater potential and is an important determinant of soil types. The Western Berks area is underlain by three geological groupings: Ordovician, Cambrian and Precambrian formations. These formations represent different geological time periods, with Ordovician being the most recent and Precambrian being the oldest. Each geologic grouping has distinctive rock formations.

The oldest rock formations in the Western Berks area are located generally south of Route 422 particularly in the very steep area south of Robesonia, which is characterized by Precambrian gneiss. Quartzite and dolomite formations from the Cambrian area underlie most of Robesonia and Womelsdorf. North of Route 422, Heidelberg Township's geology consists of Ordovician formations, including shale, dolomite/limestone and limestone deposits. Marion is primarily limestone, a factor in the township's extensive prime agricultural soils. North Heidelberg is entirely underlain by shale formations. The following geological formations, their characteristics and their effect on planning are described below:

Ordovician Formations

Ordovician formations are composed of gray shales, sandstone interbeds and crystalline limestones. Ordovician shales are non-permeable and cause poor drainage. Both dolomite with its magnesium component and limestone are associated with the highly productive agricultural soils of the Western Berks area. Limestone has also supplied lime and other stone for the area's quarries. However, Ordovician dolomite and limestone are comprised of calcium carbonate, which is soluble and easily weathered. These formations tend to be perforated with depressions, sink holes and other vertical fissures that transport pollutants to the water table instead of filtering the pollutants through slow percolation. This tendency should be considered in limiting permitted densities where development is served by conventional on-lot septic systems. Ordovician formations tend to be small to moderate suppliers of ground water, but adequate for residential uses.

Cambrian Formations

Cambrian formations are composed of quartzite, dolomite and limestone. The Cambrian formations tend to have an abundance of surface depressions and sinkholes due to the relative purity of the limestone bedrock found here. Like Ordovician limestone, Cambrian limestone is highly porous and easily weathered. The relative purity of these limestone formations increases their tendency to form solutions when they come into contact with water. Larger and larger cavities are gradually carved out below ground until sinkholes are formed and the surface eventually collapses. Vertical fissures that permit the easy transport of pollutants down to groundwater are a related problem. Like Ordovician dolomite and limestone, Cambrian formations are generally associated with productive farm land.

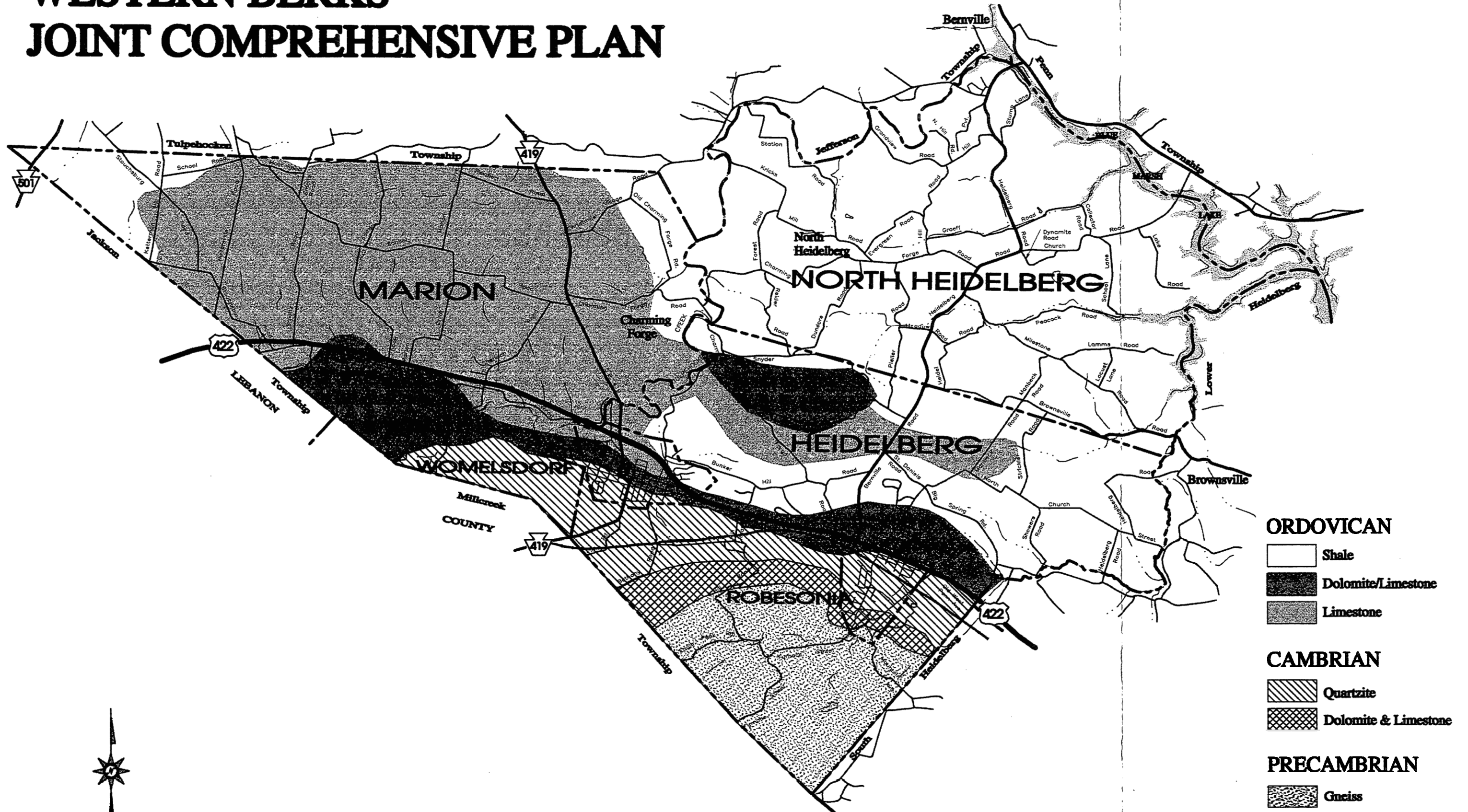
Precambrian Formations

Precambrian formations were the earliest rocks to form in Berks County. They are composed of Hornblende and Granite gneiss, a very hard and compact rock which resists erosion. Precambrian formations underlie the concentration of hills and ridges found in North Heidelberg Township. Precambrian formations tend to be poor aquifers. Locating and sustaining high yield wells can be difficult, although flows are usually sufficient for residential uses.

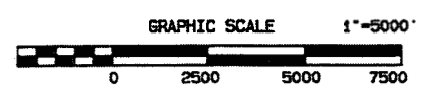
On a larger scale, Berks County contains the Reading Prong, a geological region that extends along the Blue Mountain corridor from Reading to the Lehigh Valley. The Reading Prong produces a high level of radon gas, an invisible, tasteless and odorless gas that can pose health risks when concentrations build up in enclosed areas, like basements. Houses vary significantly in their ability to resist radon. Yet there is no reliable way to predict where, within the radon-prone areas, that radon is likely to accumulate to dangerous levels.

WESTERN BERKS JOINT COMPREHENSIVE PLAN

GEOLOGY



- ORDOVICAN**
- Shale
 - Dolomite/Limestone
 - Limestone
- CAMBRIAN**
- Quartzite
 - Dolomite & Limestone
- PRECAMBRIAN**
- Gneiss



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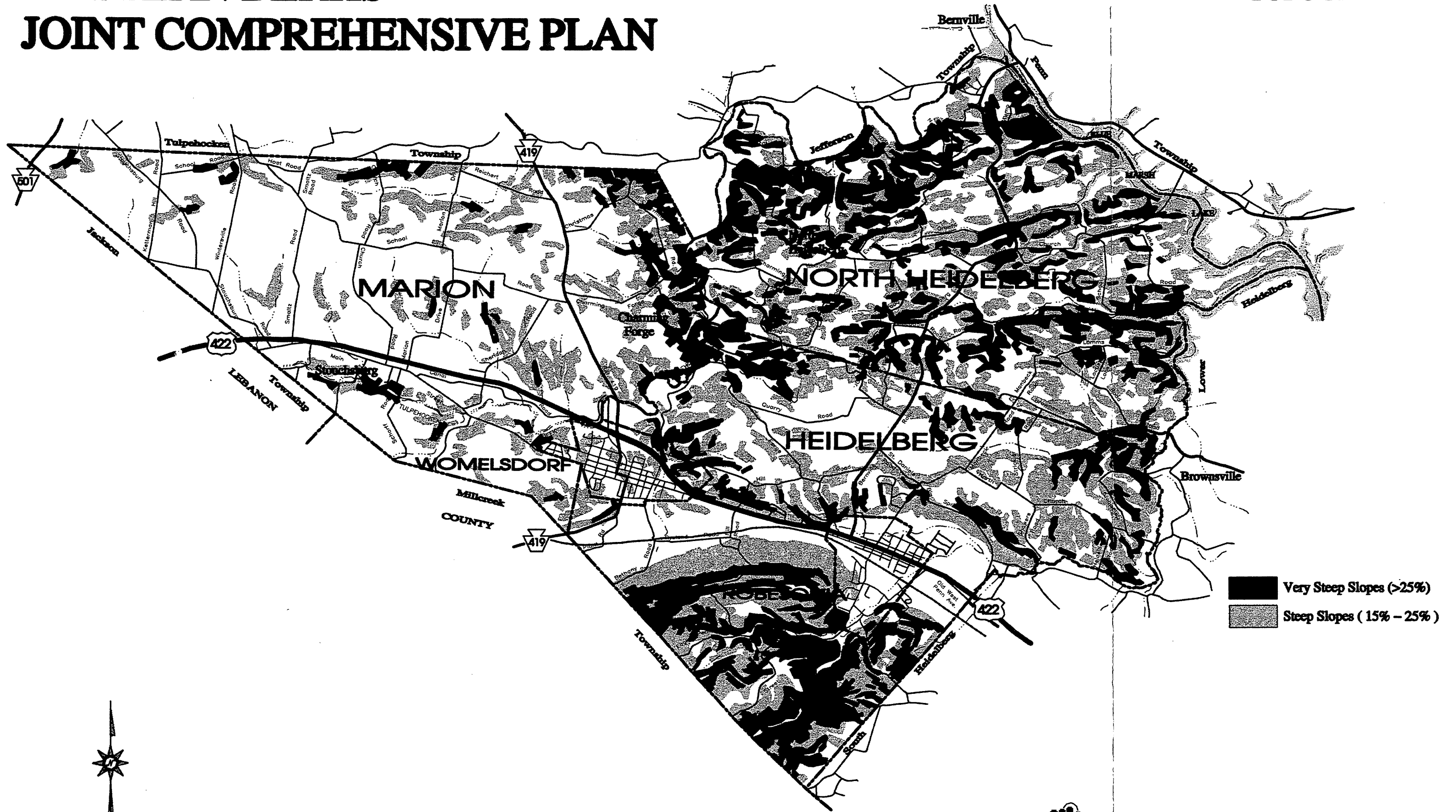
Topography

The accompanying Topography map shows two categories of slopes within the Western Berks area: land between 15 and 25% grade (steep slopes) and land over 25% grade (very steep slopes). It is important to know where steep slopes are located because steep slopes are susceptible to erosion when soil and vegetation are disturbed. Steep slopes can add significantly to the cost of constructing and maintaining roads and buildings. Steep slopes also limit the placement of on-site sewage systems.

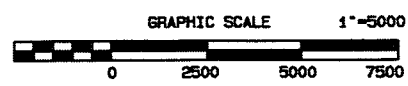
Most of Marion Township is a flat to gently rolling agricultural valley. Very steep slopes in Marion are concentrated along the Tulpehocken Creek. By contrast, most of North Heidelberg and much of Heidelberg Township is steep, particularly in that portion of Heidelberg south and west of Robesonia. Robesonia Borough contains only a very small steeply sloped area. Steep slopes are found in scattered locations in Womelsdorf along with some small areas of very steep slopes.

WESTERN BERKS JOINT COMPREHENSIVE PLAN

TOPOGRAPHY



Very Steep Slopes (>25%)
 Steep Slopes (15% - 25%)



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Streams

Streams are valuable aquatic habitats that provide both active and passive recreation. The major stream in the Western Berks area is Tulpehocken Creek, which forms Marion Township's boundary with North Heidelberg Township and most of Marion's border with Heidelberg Township. North of Route 422, Spring Creek separates the study area from adjacent Lower Heidelberg Township and South Heidelberg Township.

The Western Berks area's other significant streams include Furnace Creek in Heidelberg Township and Robesonia Borough, Owl Creek, Mill Creek and Little Swatara Creek in Marion Township, and unnamed tributaries to Tulpehocken Creek and Spring Creek.

Pennsylvania's Water Quality Standards designate protection categories for streams and establish water quality criteria for each category that are used in regulating the discharge of effluent into streams. Cold Water Fisheries are streams that should be protected as habitat for cold water fish and other fauna and flora indigenous to cold water. High Quality-Cold Water Fisheries are Cold Water Fisheries with excellent water quality and other environmental attributes. Trout Stock Fisheries are streams that qualify for trout stocking by the State.

Within the Western Berks area, different segments of both the Tulpehocken Creek and the Spring Creek qualify as Cold Water Fisheries or Trout Stock Fisheries. The Mill Creek is considered a Trout Stock Fishery. A portion of the Furnace Creek is a Cold Water Fishery and another portion is a High Quality-Cold Water Fishery.

Drainage Basins

Drainage basins are storm water catchment areas. Watershed boundaries for drainage basins are delineated by ridge lines. Drainage basins are logical service areas for sanitary sewer systems because lines that carry wastewater by gravity do not require pumping stations. For these reasons and others, drainage basins are important to consider in comprehensive planning.

Most of the Western Berks area drains into the Tulpehocken Creek either: a) directly, b) via unnamed tributaries or c) via Spring Creek. These waters then flow to the Schuylkill River and ultimately to the Delaware Bay in South Philadelphia. With the exception of one area, the balance of the Western Berks area also flows to the Schuylkill River - either by Owl Creek, Mill Creek or Furnace Creek. The Little Swatara Creek watershed in western Marion Township flows into the Susquehanna River and ultimately into the Chesapeake Bay.

Pennsylvania Act 167 requires that comprehensive storm water management plans be prepared for each watershed in the state. The purpose is to protect surface water quality and aquatic habitat by supporting municipal regulations that control storm water runoff. Two Act 167 plans now under preparation affect the Western Berks area. The Tulpehocken Creek watershed extends into all five municipalities. The Act 167 plan for the Tulpehocken Creek watershed (also called the Blue Marsh Study) is expected to be completed in December 2000. It is viewed as a "prevention plan" in that

initial analysis has found relatively few water quality problems in the watershed due to storm water runoff.

An Act 167 plan is also underway for the Swatara Creek watershed which extends into the Western Berks area via the Little Swatara Creek drainage basin, which includes the northwestern corner of Marion Township. Preparation of this plan is being overseen by the Swatara Creek Watershed Association, which is headquartered in Lebanon, PA. The Swatara Creek watershed extends into Dauphin, Lebanon and Berks counties.

Other surface water conservation initiatives directly affecting the Western Berks area include the Blue Marsh Study, which is being funded by the U.S. Environmental Protection Agency and administered by the PA Department of Environmental Protection. A final draft of this plan, which is a strategy for maintaining and improving water quality in Blue Marsh was submitted for state review by the Berks County Conservancy in November, 1999. The Berks County Conservancy is also preparing an update of the Tulpehocken Creek Rivers Conservation Plan, which is being funded through the PA Department of Conservation and Natural Resources Keystone grant program. Implementation grants for specific stream improvement projects are available through the Keystone Program because a Rivers Conservation Plan for Tulpehocken Creek is in place.

Floodplains

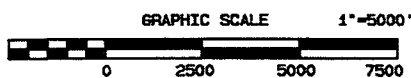
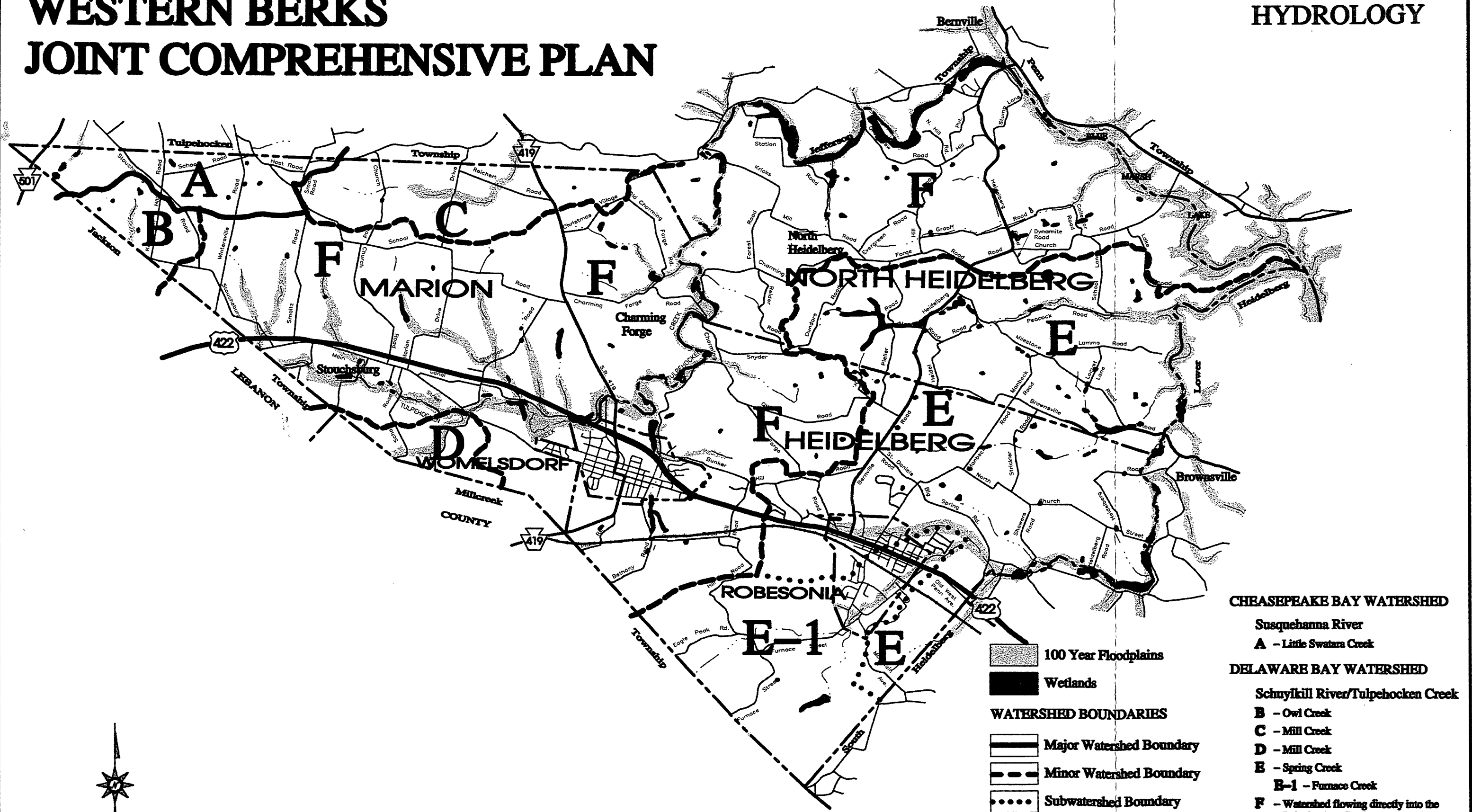
100-year floodplains are areas that, on average, have a one in one hundred chance of flooding in a given year, according to the Federal Emergency Management Agency (FEMA). Besides providing natural habitat, floodplains carry flood waters and help moderate flood heights. Interfering with these natural functions can result in more severe flooding, costly property damage and loss of life. The accompanying Hydrology Map shows the 100-year floodplains associated with the major waterways in the Western Berks area.

Wetlands

Wetlands are areas that have vegetation and soil types characteristic of a permanently or frequently saturated environment, including swamps, marshes, bogs and similar environments. Wetlands are important groundwater recharge areas that support wildlife, fish and other aquatic life. Wetlands also reduce flooding by detaining storm water. Besides protecting against floods, slowing storm water discharge helps filter impurities that can contribute to surface water and groundwater pollution. National Wetland Inventory maps, upon which the accompanying map is based, show the approximate location of many prominent wetlands based on aerial photography. However, the National Wetlands Inventory does not show all wetlands that exist along stream corridors and other low lying areas. Hydric soil types can also indicate wetlands. A professionally prepared, site-specific wetlands delineation is the most accurate way of locating wetlands.

WESTERN BERKS JOINT COMPREHENSIVE PLAN

HYDROLOGY



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Prime Agricultural Soils

The U. S. Soil Conservation Service (SCS) has established soil capability classes based on each soil type's agricultural productivity. Capability classes range from Class I, soils with few limitations for farming to Class VIII, soils generally unsuitable for farming. Class I and Class II are considered prime agricultural soils and Class III soils are considered of Statewide importance for agriculture. When evaluating farmland soils for potential purchase of development rights, Berks County considers Class III and Class IV soils but assigns more value to Class I and Class II.

Prime agricultural soils are abundant in the Western Berks area, according to the Berks County Soil Survey. Marion Township has some Class I and some Class III but is mostly Class II soils. Class III and Class II soils respectively comprise most of Heidelberg Township north of the railroad. Class III soils are the most prevalent throughout North Heidelberg Township, although significant areas of Class II soils are also present.

Soil Suitability For On-Site Septic Systems

Depth to bedrock, depth to groundwater and permeability are the primary factors in determining how well a soil type is suited for on-site septic systems. Septic systems in soils that percolate too rapidly can degrade groundwater because impurities are not sufficiently absorbed before they reach the water table. Conversely, soils that do not drain fast enough can cause the unhealthy surface ponding of wastewater. These soil characteristics are important to consider throughout the Western Berks area where most of each township relies on private wells and private septic systems rather than public water and sewer service.

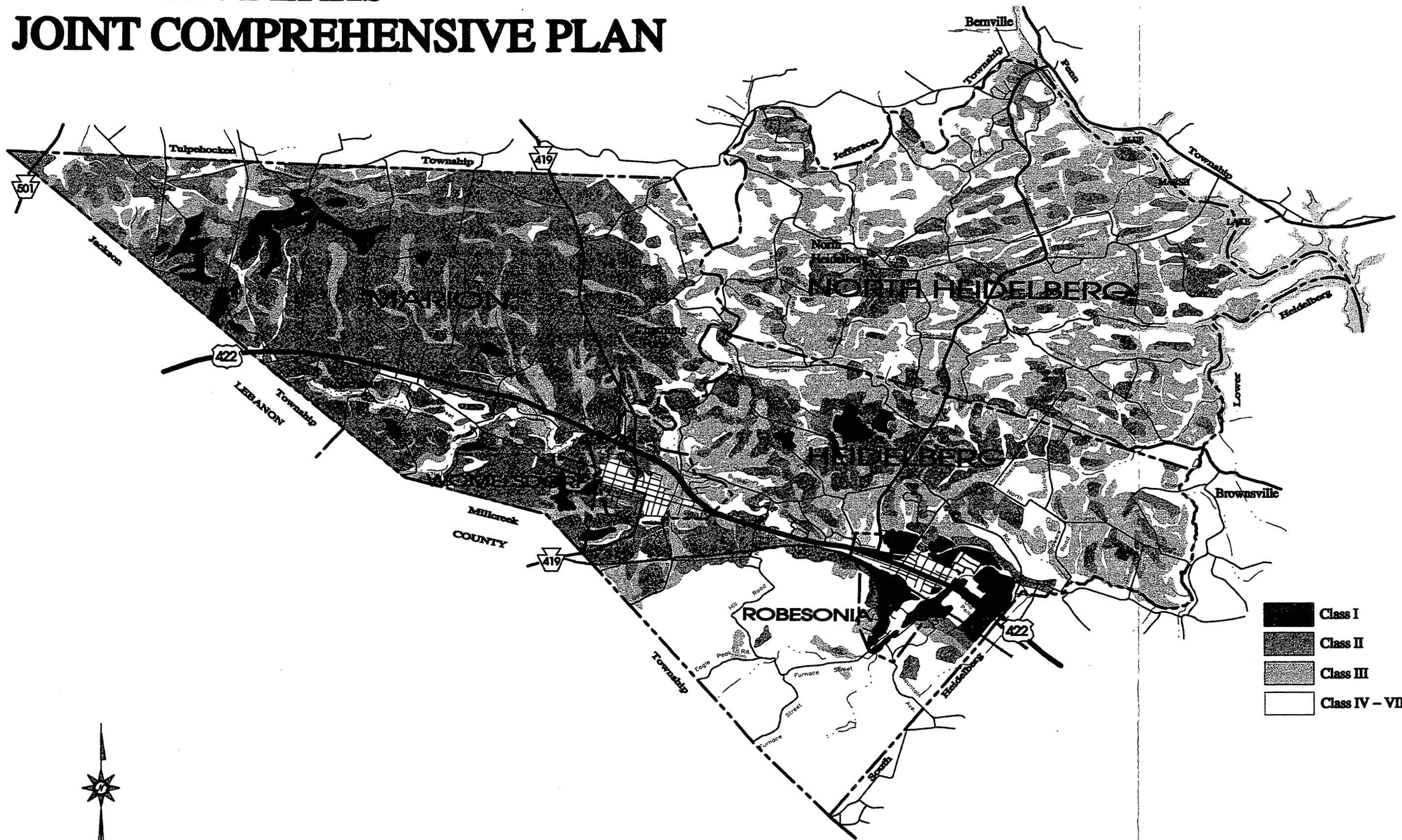
According to the Berks County Soil Survey, much of the Western Berks area has severe limitations for on-site septic systems. Porous limestone geology is a problem throughout most of Marion. Steep slopes with only a thin layer of soil covering underlying bedrock make much of North Heidelberg and Heidelberg unsuited. More moderate limitations and slight limitations are scattered throughout with some concentration of these areas in the boroughs and along the Route 422 corridor.




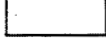
Despite its generally poor rating for on-site septic systems, most of the Western Berks area outside of Robesonia and Womelsdorf relies upon on-site systems for wastewater treatment. These systems range from traditional septic tanks to sand mound systems, among other methods. Although they are not without problems, sand mounds are preferable in areas with soils not well suited for on-site systems. Sand mound systems require wastewater to pass through an elevated mound of sand for additional filtration before the effluent passes into the septic tank.

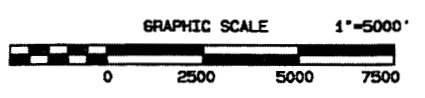
Primary treatment in a properly functioning on-lot system takes place in the septic tank where the heaviest matter (sludge) settles to the bottom and must be pumped periodically. The liquid matter exits the tank through pipes into a layer of gravel and then percolates through the soil where contaminants are largely neutralized.

WESTERN BERKS JOINT COMPREHENSIVE PLAN

AGRICULTURAL SOILS



-  Class I
-  Class II
-  Class III
-  Class IV - VIII



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Unique Natural Areas

In 1991, the Pennsylvania Science Office of the Nature Conservancy prepared the Berks County Natural Areas Inventory, a list and mapping of rare and endangered plants, animals and natural habitats in Berks County. The Natural Areas Inventory contains a) sites of local importance and b) sites of statewide significance as listed on the Pennsylvania Natural Diversity Index (PNDI).

A spring run community, which is in Heidelberg Township south of Robesonia, is the only site in the Western Berks area identified in the Natural Areas Inventory. This mature woodland is in a steep ravine along a spring-fed tributary to Furnace Creek. It is less than one acre in size but contains a diversity of sensitive plant species. The site is part of the protected Womelsdorf-Robesonía watershed property. However, soil erosion and runoff from logging and housing development at higher locations are potential threats. The Natural Areas Inventory report attributes Statewide Significance to the site and recommends that a buffer zone of vegetation be preserved around it to help protect the area's fragile biological diversity.

The most recent update to the Berks County Natural Areas Inventory identifies Host Cave in Marion and Tulpehocken Township as a habitat for several species of globally rare animal life. According to the Inventory, ... "Host Cave is a small cave with deep pools in its lower-most passages. The pools are sandy-bottomed, with some woody debris, and may be connected to the adjacent tributary of Tulpehocken Creek. The cave is also used as a hibernaculum for bats. Degradation of the water quality from surrounding agriculture is a potential threat."

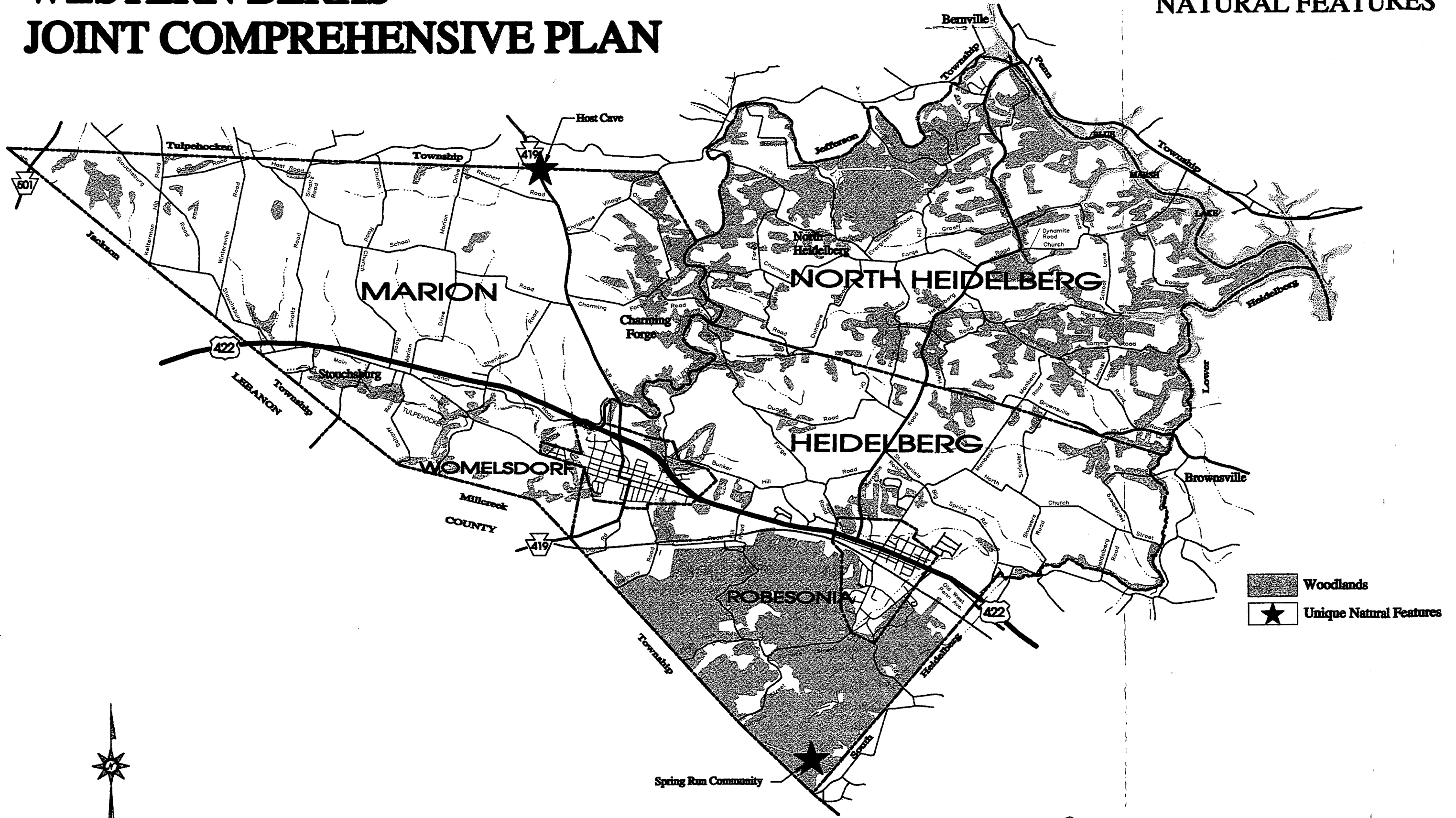
Woodlands



Woodlands are wildlife habitats that, if destroyed, take decades to replace. The root systems of trees and other vegetation stabilize the soil against erosion, particularly in steep areas. Woodlands are also a scenic resource that provide visual relief from the built environment.

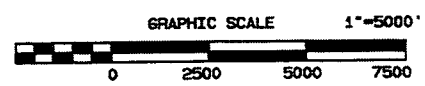
Large concentrations of woodlands are scarce in much of Marion Township because so much of the Township is cleared for farming. There are scattered woodlands in other areas, but most of Marion's woodlands are along the Tulpehocken Creek. By contrast, woodlands exist throughout North Heidelberg Township, particularly in the municipality's extensive steep areas bordering the Tulpehocken Creek and Blue Marsh Lake. Heidelberg also has significant forested tracts along the Tulpehocken Creek. The Western Berks area's largest concentration of woodlands is located in Heidelberg Township in and around the preserved Watershed property south of Robesonía Borough. In this vicinity, almost all land south of the railroad tracks is wooded.

WESTERN BERKS JOINT COMPREHENSIVE PLAN

WOODLANDS & UNIQUE NATURAL FEATURES



 Woodlands
 Unique Natural Features



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EXISTING LAND USE

Agricultural

Berks County is renowned for its fertile farmland and agricultural heritage. The Western Berks area is a major part of this tradition. Farming is the predominant land use in Heidelberg, Marion and North Heidelberg townships. Farming has historically been a key part of the local economy and remains so today. For example, 2.1% of Berks County's employed residents identified themselves as being employed in the Farming/Forestry/Fishing sector in the 1990 Census. The 1990 Census reported that 15.3% of Marion Township's employed residents worked in this sector. The equivalent percentages were 6.5% in Heidelberg Township and 4.4% in North Heidelberg, all significantly greater than the County overall.

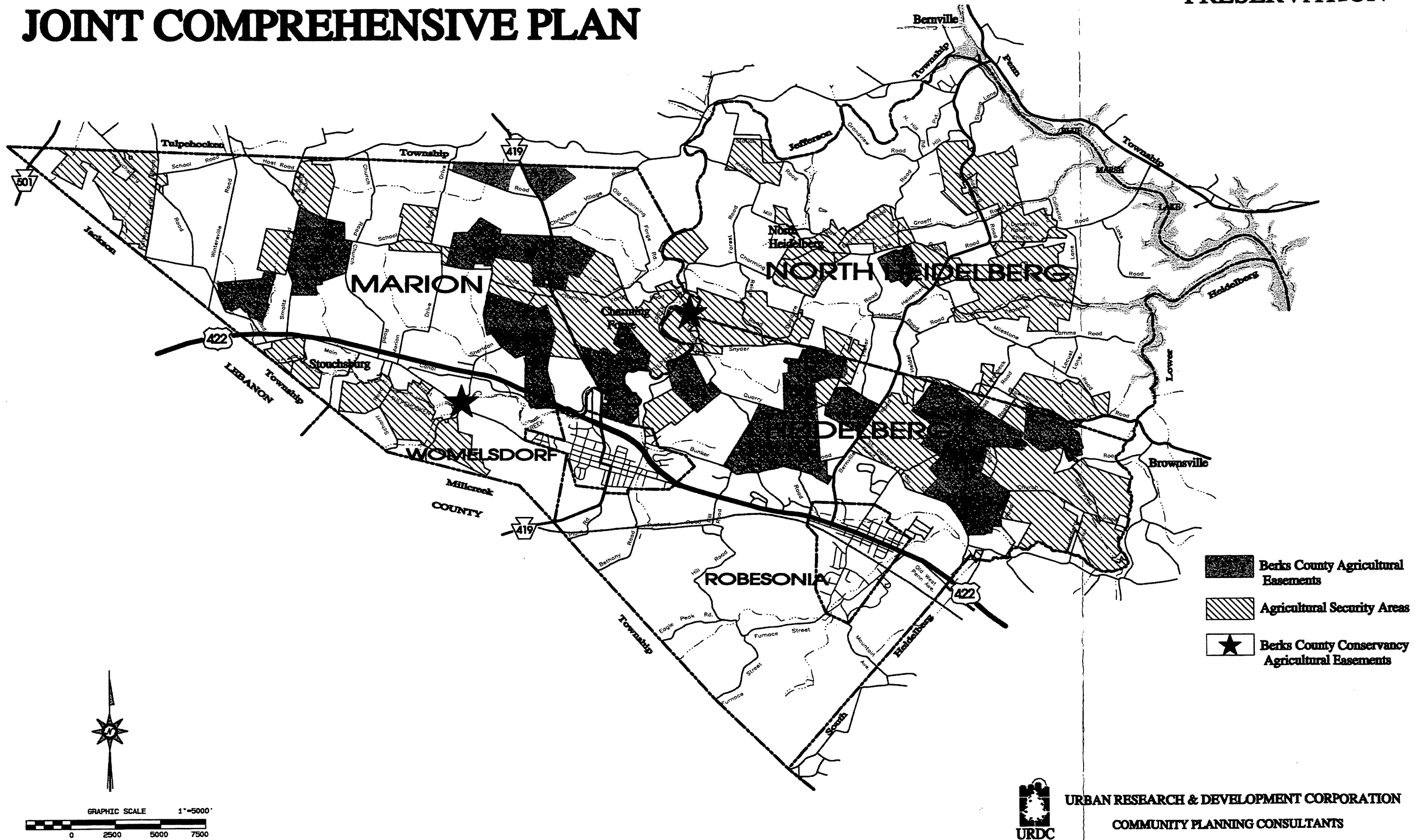
There is strong sentiment in the Western Berks area for preserving farmland and the farm economy. The accompanying Agricultural Preservation map shows properties for which agricultural easements have been sold to Berks County. According to the Berks County Agricultural Land Preservation Board, agricultural easements have been sold for 1,596 acres in Marion Township, 1,497 acres in Heidelberg Township and 72 acres in North Heidelberg Township.




The map also shows properties that are part of Agricultural Security Areas under State Act 43 of 1981. Farms within Agricultural Security Districts are protected against certain regulations that constrain farming and are eligible to have Berks County purchase their development rights. Within Agricultural Security Areas, Marion Township has 3,983 acres, Heidelberg Township has 3,011 acres and North Heidelberg has 2,467 acres. Each of the three townships has also established an agricultural preservation zoning district where non-farm development is severely restricted by large lot agricultural zoning regulations.

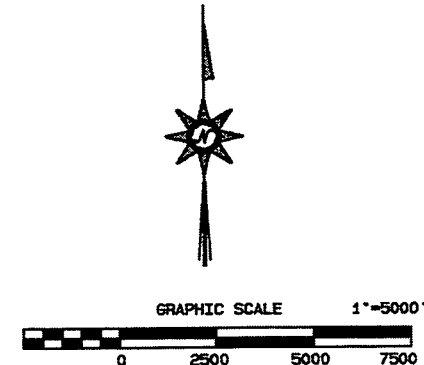
The Berks County Conservancy owns agricultural conservation easements in two locations in the Western Berks area: 64-acre Worley Farm near the intersection of Sheridan Road and Main Street in Marion Township, and 205-acres in four parcels at Charming Forge, which straddles Heidelberg, North Heidelberg and Marion townships. The property at both locations is now being farmed. The terms of the easements at Charming Forge permit one house to be built on each of the four parcels.

WESTERN BERKS JOINT COMPREHENSIVE PLAN

AGRICULTURAL PRESERVATION



-  Berks County Agricultural Easements
-  Agricultural Security Areas
-  Berks County Conservancy Agricultural Easements



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Residential

Single-family detached homes account for almost all residential land uses in the three townships with the exception of the village of Stouchsburg. These homes include many historic farmsteads in the townships' agricultural areas and houses that have developed in unplanned fashion over time along the townships' roadways. Single-family housing also is popular in the two boroughs. But in Womelsdorf and Robesonia, attached homes, row homes and apartments are also prevalent. Newer residential subdivisions in the Western Berks area include Chapel Ridge in Heidelberg Township, Heidelberg Heights in North Heidelberg Township plus Country Ridge Estates, Westview and Summit View in Womelsdorf, among others.

Commercial

North Heidelberg Township has very few commercial uses, only an auto garage, a ski area and a wood recycling establishment. In Marion Township, there is an auto dealer on Route 419 at the Tulpehocken Township boundary and a small cluster of retail uses on Route 422 opposite Stouchsburg.

Heidelberg Township's main commercial area is also along Route 422, between Womelsdorf and Robesonia. The main commercial intersection in the Western Berks area is at Route 422 and Route 419 in Womelsdorf Borough. Tulpehocken Village Shopping Center, the area's only planned, multi-tenant retail development is located here. A fast food restaurant, a hardware store and a gas station are situated opposite the shopping center. Womelsdorf Borough and Robesonia Borough each have a "Main Street" mixed use/commercial district on old Route 422 that features a variety of small retail and service establishments. In Womelsdorf, Third Street, which connects Route 422 with Old Route 422, also has some commercial uses.

Industrial

There is a bulk foods producer at the western end of the planning area in Marion Township on Route 501. In North Heidelberg Township, there is a natural gas facility on Station Road. Other than these locations, most industrial uses in the Western Berks area are clustered along the Route 422/railroad corridor in and around Womelsdorf Borough and Robesonia Borough. Major industrial employers in this area include a tool packager/shipper and a cardboard products firm in Robesonia Borough; a wholesale distribution firm, a casket maker and a candy factory in Heidelberg Township; and a flag factory and boot manufacturer in Womelsdorf Borough.

Institutional

Major institutional uses in the Western Berks County include the following:

Marion Township

- Marion Township Municipal Building
- North Marion Mennonite School
- Marion Township Fire Company

Heidelberg Township

- Heidelberg Township Municipal Building
- Bethany Children's Home
- Conrad Weiser High School
- Conrad Weiser Middle School
- Robesonia-Wernersville Sewage Treatment Plant
- Womelsdorf Borough Sewage Treatment Plant

North Heidelberg Township

- North Heidelberg Township Municipal Building

Robesonia Borough

- Robesonia Borough Municipal Building
- Robesonia Post Office
- Pioneer Hose Company
- Western Berks Ambulance

Womelsdorf Borough

- Womelsdorf Borough Municipal Building
- Veterans of Foreign Wars Post
- Womelsdorf Fire Company
- Womelsdorf Post Office
- Conrad Weiser West Elementary School
- Masonic Lodge

Public Recreation/Open Space

The following are the publicly-accessible parks and open spaces in the Western Berks area:

Marion Township

- Marion Township Municipal Playground
- Marion Township Recreation Area
- Marion Township Rod & Gun Club

Heidelberg Township

- Robesonia Fish & Game Association
- Conrad Weiser Homestead
- Robesonia Swim Association

North Heidelberg Township

- Blue Marsh Lake National Recreation Area

Robesonia Borough

- Robesonia Borough Recreation Park
- Triangle Park

Womelsdorf Borough

- Womelsdorf Community Park
- Mighty Mite Ballfield
- Womelsdorf Swim Association

COMMUNITY FACILITIES AND SERVICES

Public Sewer Service

Most areas within Heidelberg Township, Marion Township and North Heidelberg Township are served by on-lot septic systems. The private system that serves Heidelberg Estates in North Heidelberg Township is an exception. The Borough of Womelsdorf is served by the Womelsdorf Sewage Treatment Plant. In addition to providing service to Womelsdorf Borough, the Womelsdorf Sewage Treatment Plant also serves five homes in Marion Township and the Bethany Children's Home in Heidelberg Township. Providing service to fifteen additional homes in Marion Township has also been discussed. The Womelsdorf Sewage Treatment Plant is located north of the Borough in Heidelberg Township and discharges into Tulpehocken Creek. Currently, the treatment plant has maximum capacity of 300,000 gallons per day. A design is in progress to expand the Womelsdorf Sewage Treatment Plant's capacity to 475,000 gallons per day; construction is anticipated to start within a year. If Tulpehocken Village expands as planned, Womelsdorf will also serve these new connections.

Marion Township conducted a brief feasibility study on providing public sewers to Stouchsburg and the Shady Cabins Area. There are two scenarios under which these vicinities could become connected to the Womelsdorf Sewage Treatment Plant. The Womelsdorf Authority could provide the service directly to the new connections or the Authority could make treatment capacity available for Marion Township to allocate and administer. Alternatively, Marion Township could construct its own treatment facilities or connect to an existing treatment system other than Womelsdorf's.

The Borough of Robesonía is served by the Wernersville-Robesonía Municipal Authority Wastewater Treatment Plant. In addition to serving the boroughs of Wernersville and Robesonía, this treatment plant serves portions of Heidelberg Township, Lower Heidelberg Township and South Heidelberg Township. Currently there are 2,614 connections that serve approximately 8,601 people. The Wernersville-Robesonía Wastewater Treatment Facility is located in eastern Heidelberg Township, and discharges into Spring Creek. The Wernersville-Robesonía Treatment Plant has a maximum capacity of 1.4 million gallons per day. The Authority has no plans for immediate expansion of this facility which was built in 1968 and upgraded in 1990.

Public Water Service

The Womelsdorf-Robesonía Joint Authority provides public water service in the boroughs of Womelsdorf and Robesonía. The Authority has a 70 million-gallon surface reservoir supplied by a 0.625 million gallon per day allocation from Gold Stream and Furnace Creek. There are two million gallon treated water storage tanks and a fully metered water distribution system. The Womelsdorf-Robesonía Joint Authority serves approximately 2,038 connections. In addition to serving Womelsdorf Borough, Robesonía Borough and Sheridan, portions of the adjacent townships are also served by the Joint Authority. However, the majority of residents in Heidelberg Township, North Heidelberg Township and Marion Townships rely upon private on-site wells. The Womelsdorf-Robesonía Joint Authority is currently planning to install a new well.

Marion Township has also studied the feasibility of providing public water in Stouchsburg and the Shady Cabins Area. The recommended option for providing public water to these areas is to request service from the Womelsdorf-Robesonia Joint Authority. However, at the time the feasibility study was prepared, the Womelsdorf-Robesonia Joint Authority was not planning to provide any additional service to any municipalities outside of Womelsdorf or Robesonia.

Education

Heidelberg Township, Marion Township, North Heidelberg Township, Robesonia Borough and Womelsdorf Borough are each part of the Conrad Weiser Area School District, which also includes South Heidelberg Township and Wernersville Borough. The Conrad Weiser Area School District is currently constructing a new high school building in Heidelberg Township adjacent to the existing Conrad Weiser High School. When completed, the new school will serve grades 9 through 12. The new school will be named Conrad Weiser High School. Grades 5 through 8 will attend the old high school building, which will be renamed Conrad Weiser Middle School. Grades K through 4 will remain in the district's two elementary schools: Conrad Weiser West Elementary School in Womelsdorf Borough and Conrad Weiser East Elementary School in Wernersville Borough.

Table 15 shows that enrollment in the Conrad Weiser Area School District has increased from 2,069 in 1988 to 2,692 in 1998, a ten-year growth rate of 30%. Official State projections, as shown on Table 15, call for much slower growth in the coming years. However, these projections may underestimate local growth. As of the 1998-1999 school year, total enrollment in the Conrad Weiser Area School District had already equaled the State's year 2000 enrollment projections for the district.

Of the four Conrad Weiser Area School District facilities, the Conrad Weiser East Elementary School has the most significant enrollment growth. According to the district, this increase is largely due to the rate of residential development in South Heidelberg Township. The district currently predicts that its total enrollment will continue to grow steadily through 2006.

TABLE 14
TOTAL ENROLLMENT
Conrad Weiser Area School District
1988 - 2006

	TOTAL ENROLLMENT	TWO-YEAR CHANGE
1988	2,069	-
1990	2,222	153
1992	2,339	117
1994	2,454	115
1996	2,618	164
1998	2,692	74
2000*	2,692	0
2002*	2,726	34
2004*	2,758	32
2006*	2,774	16

* State Projection

Source: Conrad Weiser School District

North Marion School is the only private school in the Western Berks area. The following are the nearest colleges and universities to the Western Berks area:

Albright College - City of Reading
 Alvernia College - City of Reading
 Harrisburg Area Community College, Lebanon Campus - City of Lebanon
 Lebanon Valley College - Annville Borough
 Reading Area Community College - City of Reading
 Penn State University, Berks Campus - Spring Township
 Kutztown University - Kutztown Borough

Police Protection

Heidelberg Township has a police department with a full-time police chief and the township anticipates hiring two part-time police officers. Police headquarters are located at the Heidelberg Township Municipal Building. Marion Township is also protected by its own police department, which is comprised of a full-time police chief and three part-time officers. Marion's police headquarters are located at the Marion Township Municipal Building in Stouchsburg. North

Heidelberg Township is patrolled by the Pennsylvania State Police. Womelsdorf Borough has its own police department, located at 203 West High Street, with a full-time police chief and three full-time officers. Womelsdorf is considering hiring additional part-time officers. The Borough of Robesonia is also patrolled by its own police department, which has a full-time chief, one full-time officer and five part-time officers.

Fire Protection

Robesonia Borough, Womelsdorf Borough and Marion Township each has its own fire company. Pioneer Hose serves Robesonia Borough from its location at 32 West Penn Avenue in Robesonia. Womelsdorf Borough is served by the Womelsdorf Volunteer Fire Company located in the western portion of the borough. The Marion Fire Company, which is located along Main Street in Stouchsburg, serves Marion Township. Each of these fire companies provides primary protection in its own municipality. In addition to serving the Borough of Robesonia, Pioneer Hose also provides service to Heidelberg Township. In addition to servicing Womelsdorf, the Womelsdorf Volunteer Fire Company services a small portion of Heidelberg Township. Three fire companies provide fire protection to North Heidelberg Township. These include Pioneer Hose from Robesonia, Bernville Community Fire Company and Mt. Pleasant Fire Company. Mutual assistance agreements are in effect between these fire companies and fire companies from several neighboring municipalities to assist in fire emergencies.

Ambulance Service

Western Berks Ambulance Association provides emergency medical service to Heidelberg Township, Marion Township, North Heidelberg Township, Womelsdorf Borough and Robesonia Borough. Western Berks Ambulance Association is the sole provider in Heidelberg Township and Robesonia Borough. In addition to Western Berks, Newmanstown Ambulance and Myerstown Ambulance also serve Marion Township. North Heidelberg Township is covered by Western Berks Ambulance Association and Bethel Community Ambulance. Additional service in Womelsdorf Borough is provided by Newmanstown Ambulance.

Library Service

Womelsdorf Community Library services the Borough of Womelsdorf and Marion Township . The Robesonia Community Library provides service to Robesonia Borough, Heidelberg Township and North Heidelberg Township. Both libraries are open to anyone with a Berks County library card. Public school students in the Western Berks area also have access to Conrad Weiser Area School District libraries.

PARKS AND RECREATION

Parks and Recreation refers to the recreation areas available to the residents of the Western Berks area. Recreation lands are categorized as Regional or Local depending on who they are designed to serve.

Regional Recreation Areas

Regional recreation areas attract visitors from throughout Berks County and beyond. The focus of these areas is usually picnicking, boating, fishing, camping, hiking or hunting. They may also have areas set aside for environmental conservation. Regional recreation lands within a 25-mile radius of the Western Berks area are listed as follows.

Federal Lands

Blue Marsh Lake National Recreation Area (Berks County)

State Lands

French Creek State Park (Berks County)
Locust Lake State Park (Schuylkill County)
Memorial Lake State Park (Lebanon County)
Nolde Forest Environmental Education Center (Berks County)
Swatara State Park (Lebanon County)
State Gamelands 43 (Berks County and Chester County)
State Gamelands 46 (Lancaster County and Lebanon County)
State Gamelands 52 (Berks County and Lancaster County)
State Gamelands 80 (Berks County, Lebanon County and Schuylkill County)
State Gamelands 106 (Berks County and Schuylkill County)
State Gamelands 110 (Berks County and Schuylkill County)
State Gamelands 145 (Lancaster County and Lebanon County)
State Gamelands 160 (Schuylkill County)
State Gamelands 182 (Berks County)
State Gamelands 211 (Dauphin County, Lebanon County and Schuylkill County)
State Gamelands 217 (Lehigh County, Schuylkill County and Carbon County)
State Gamelands 220 (Lancaster County)
State Gamelands 222 (Schuylkill County)
State Gamelands 225 (Lebanon County)
State Gamelands 229 (Schuylkill County)
State Gamelands 246 (Dauphin County)
State Gamelands 264 (Dauphin County and Schuylkill County)

State Gamelands 274 (Berks County)
State Gamelands 280 (Berks County)
State Gamelands 286 (Schuylkill County)

Berks County Lands

Camp Joy (Berks County)
Kaercher Creek (Berks County)
Tulpehocken Creek (Berks County)
Youth Recreation Facility and Education Farm (Berks County)

Municipal Lands

Lake Ontelaunee (City of Reading)

Hiking Trails

Appalachian Trail
Bartram Trail
Conestoga Trail
Horse Shoe Trail
Pinnacle Side Trail
Stony Creek Trail
Thun Trail
Union Canal Trail

Other Regional Parkland

Hawk Mountain Sanctuary

Local Recreation Areas

Local recreation areas are parks and other recreation-related properties designed for use by residents of one or two municipalities, unlike regional recreation which serve a much larger geographic area. Marion Township has two municipally-owned parks, the Marion Township Municipal Playground which contains basketball, field sports, tennis and picnic facilities, and the Marion Township Recreation Area which is a tot lot. Both Robesonia Borough and Womelsdorf each have three municipally-owned parks. In Robesonia, the Robesonia Borough Recreation Park has basketball, field sports, tennis, a tot lot, ice skating and picnicking, Triangle Park is open space for picnicking, fishing, and nature study. In Womelsdorf, the Womelsdorf Community Park has play equipment, picnicking and fishing, the Mighty Mite Ballfield features field sports, and the Borough Swimming Pool is the only publicly owned pool in Western Berks. Heidelberg Township's park is primarily soccer fields. North Heidelberg Township currently does not have any municipally-owned recreation facilities.

The Conrad Weiser High School and Middle School in Heidelberg Township and the Conrad Weiser West Elementary School in Womelsdorf each have a gym, softball fields, track, and basketball courts. The High School and Middle School also have tennis courts, soccer fields, football fields, baseball fields, field hockey fields, and a nature study/picnic area. In addition, the Elementary School

also has a playground and tot lot. School District activities have first priority on the use of each school's gym and sports fields. However they are available upon approval of a request for public use.

There is a variety of other public, semi-public and private recreation areas available for Western Berks residents including the following.

- Blue Marsh Lake National Recreation Area (a large water sports and open space recreational area in North Heidelberg Township)
- Conrad Weiser Homestead (historic site and open space in Heidelberg Township)
- Robesonia Fish & Game Association (a private non-profit fish and game club in Heidelberg Township)
- Marion Rod & Gun Club (a private non-profit fish and game club in Marion Township)
- Robesonia Swim Association (private non-profit swimming pool in Robesonia)
- Blue Marsh Ski Area (a privately owned ski area in North Heidelberg Township)

NRPA Guidelines

NRPA, the National Recreation and Park Association, suggests that communities should have a minimum of 10.5 acres of active recreation land available for community use for every 1,000 persons. Active recreation land generally refers to land available for organized athletics and playground use. Together, the Western Berks area has an estimated 1996 population of 9,274 (1,599 for Heidelberg, 1,502 for Marion, 1,420 for North Heidelberg, 1,962 for Robesonia and 2,791 for Womelsdorf). Therefore, the five municipalities should have 97.4 acres of publicly accessible active recreation land, according to NRPA.

The Conrad Weiser High School and Middle School have 58.8 acres and the Conrad Weiser West Elementary School has 13.5 acres of active recreation land available. The Marion Township Municipal Playground Park is 4.0 acres and the Marion Township Recreation Area is 1 acre. Heidelberg Township owns a 2-acre recreation area adjacent to its township building. Robesonia Borough has 7.0 acres of recreational land and Womelsdorf Borough has 9.1 acres of recreational land. These facilities which are each used for active recreation, total 95.4 acres. As a rule of thumb, only 60% of the total school acreage is counted. NRPA suggests using this 60% adjustment to estimate the proportion of a school site actually available for recreation.

According to NRPA guidelines, the Western Berks area is only slightly deficient in active recreation land by 2.0 acres. NRPA guidelines suggest the Western Berks area should have 97.4 acres of active recreation land. As described above, 95.4 acres of active recreation land exists in the five municipalities. In addition, some active recreational area exists in the Blue Marsh Lake Area in terms of both water and land related activities. However, Blue Marsh Lake is not under the control of the local municipalities and therefore is not counted toward NRPA guidelines.

NRPA guidelines suggest the Western Berks area's recreation land acreage is sufficient for the current population and that additional active land will need to be provided for future population growth.

LAND USE POLICIES IN THE REGION

Adjacent Municipalities

Each of the Western Berks area municipalities is affected by what occurs along its borders with adjacent municipalities. Seven townships border the Western Berks area, including five in Berks County and two in Lebanon County. The following table and map show how the land adjacent to the Western Berks area is zoned in each of these eight townships. Most of the land adjacent to the Western Berks area is zoned for agriculture and low density single-family detached homes with a few exceptions. The Route 422 corridor is zoned for industrial use in South Heidelberg Township on the eastern end of the study area and zoned for commercial use in Jackson Township at the western end of the study area. In Jefferson Township, there is a very small commercial area bordering North Heidelberg Township. Millcreek Township has an industrial district bordering a portion of Marion Township between Womelsdorf Borough and the village of Stouchsburg.

WESTERN BERKS JOINT COMPREHENSIVE PLAN

ADJACENT ZONING

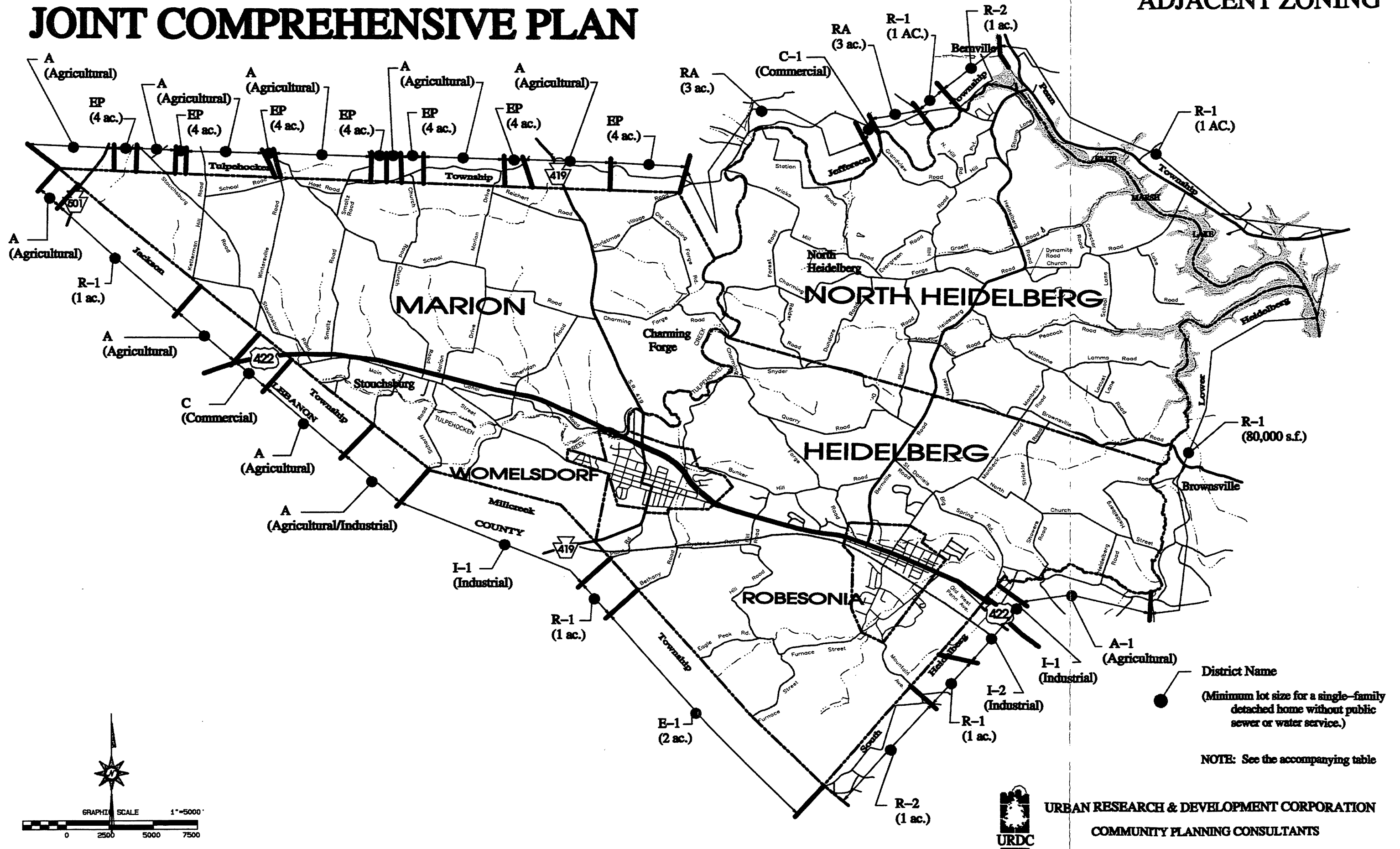


TABLE 15
ZONING ADJACENT TO THE WESTERN BERKS AREA
1999

ADJACENT MUNICIPALITY	ADJACENT ZONING DISTRICTS	PRIMARY INTENDED USES/ MINIMUM LOT SIZE
South Heidelberg Township	I-2 - General Industrial	Various industrial uses on minimum 1-acre lots
	R-1 - Rural Conservation	Single-family detached (SFD) on minimum 1-acre lots.
	R-2 - Rural Residential	SFD on minimum 1-acre lots.
Lower Heidelberg Township	A-1 - Agricultural Preservation	Agriculture, SFD on minimum 1-acre lots
	R-1 - Rural Conservation	SFD on minimum 80,000 s.f. lots with on-lot sewage disposal and 1-acre lots with public or community sewage disposal. Agricultural uses on minimum 3-acre lots.
	I-1 - General Industrial	Various industrial uses
Penn Township	R-1 - Low Density Residential	Agriculture, SFD on minimum 1-acre lots
Jefferson Township	R-A - Rural Agricultural	SFD on minimum 3-acre lots.
	C-1 - Commercial	Commercial
	R-1 - Low Density Residential	SFD on minimum 20,000 s.f. lot with public water and public sewer; 1- acre with public water or public sewer and 1-acre with on-site water and on-site sewer.
	R-2 - Medium Density Residential	SFD on minimum 10,000 s.f. lot with public water and public sewer; 1-acre with on-site water and sewer and ½ acre with public sewer or public water.
Tulpehocken Township	A-P - Agricultural Preservation	Agriculture, SFD on minimum 1-acre lots.
	EP - Environmental Protection	All permitted uses require minimum 4-acre lots.
Jackson Township	A - Agricultural	Agriculture, SFD on minimum 1-acre lots.
	R-1 - Low Density Residential	SFD on minimum 10,000 s.f. lots with public water and public sewer; 15,000 s.f. lots with public sewer and on-lot water; 20,000 s.f. lots with public water and on-lot sewer and 1-acre lots with no public utilities.
	C - Commercial	Various commercial uses
Millcreek Township	A - Agricultural Industry	Agriculture, SFD on minimum 1 acre lots.
	I-1 - Heavy Industrial	Various industrial uses.
	R-1 - Residential Suburban	SFD on minimum 10,000 s.f. lots with public water and public sewer; 15,000 s.f. lots with public water or public sewer and 1-acre lots with no public utilities
	E-1 - Ecologically Sensitive	All permitted uses require minimum 2-acre lots.

The Berks County Comprehensive Plan

This joint comprehensive plan is designed to be consistent with the goals of the Berks County Comprehensive Plan, which are reproduced below:

Goals

- *To develop and adhere to a systematic, coordinated land use pattern which provides a variety of uses, recognizes land capacities, and respects natural features and environmental and physical factors.*
- *To preserve natural features and conserve environmental resources throughout Berks County, to protect and improve environmental quality, and to preserve open space in suitable locations and quantities.*
- *To provide, to every resident and future Berks County resident, the opportunity for affordable, safe and healthful housing with sufficient range of choice by type and location.*
- *To maintain and improve the economic base of Berks County and to provide maximum employment opportunities for all Berks County residents.*
- *To provide facilities and services to Berks County residents in the areas of health, protection, cultural enrichment, education, recreation and social services, commensurate with the needs of the population.*
- *To provide a multi-modal, balanced transportation system which provides for the safe and efficient movement of people and goods, with minimum disruption to the environment, and with maximum conservation of resources.*
- *To provide the opportunity for increased citizen participation in the planning process to establish community values and reflect human concerns.*
- *To develop and maintain multi-municipal cooperation in meeting governmental responsibilities.*
- *To conserve energy and to effectively use renewable energy sources.*
- *To preserve and promote all community, cultural and aesthetic elements that identify Berks County as a special and unique place to live and work.*

Land Use Objectives

- *Provide for a balance of growth and conservation.*
- *Maximize the preservation of ecologically sensitive areas, natural resources and agriculture.*
- *Discourage continued sprawl.*

- *Promote a consolidated development pattern in or adjacent to existing developed centers which have or will have adequate infrastructure.*
- *Revitalize existing urban areas and communities.*
- *Promote innovative design patterns and techniques of development including mixed use, neo-traditional village design, cluster and sliding scale provisions.*
- *Encourage intergovernmental planning.*

The Berks County Comprehensive Plan's future land use map recognizes existing development in the Western Berks area, the largest concentration of which is located along the Route 422 corridor. The County calls for future growth in the region to follow this same pattern with additional infill development being accommodated along the corridor and growth not directly along Route 422 concentrated in those portions of the townships located nearest to the boroughs. The Berks County Comprehensive Plan is, by necessity, more generalized than a plan for specific municipalities. However, the recommendations of this plan for the Western Berks area are intended to be consistent with the overall philosophy and direction of the Berks County Comprehensive Plan.

TRANSPORTATION

Major Roads and Traffic

U.S. 422 is the central traffic artery of the Western Berks area. U.S. 422 connects the Western Berks area with the City of Reading to the east and the cities of Lebanon and Harrisburg to the west. Three additional roads that are major components of the area's circulation system include State Route 501, State Route 419 and Bernville Road (which is called Heidelberg Road in North Heidelberg Township). Route 501 and Route 419 each connect U.S. 422 with Interstate 78. Bernville Road (Heidelberg Road), which also intersects U.S.422, connects with State Route 183 near Bernville Borough. Northward from this point, Route 183 connects to U.S. 78.

The most recent Berks County Planning Commission traffic counts confirm that U.S. 422 is the major traffic carrier in the Western Berks area. According to these counts, the most heavily traveled portion of U.S. 422 in the Western Berks area is between Linden Street in Robesonia Borough and the Lower Heidelberg Township line (an average of 20,0271 vehicles daily). Just west of this segment, an average of 18,981 vehicles daily pass along U.S. 422 between Linden Street and Charming Forge Road. Traffic counts along U.S. 422 decrease as you move westward. An average of 16,587 vehicles daily were counted between Hill Road in Heidelberg Township and High Street at the Heidelberg Township/Womelsdorf Borough line. A total of 6,213 vehicles daily were counted at the Berks County/Lebanon County line in Marion Township.

Besides U.S. 422, High Street in Womelsdorf Borough is the most heavily traveled road in the Western Berks area (an average of 7,752 vehicles daily). Route 501 is next with 5,064, followed by Bernville Road (Heidelberg Road) with 3,802. Route 419 carries an average of 3,354 vehicles daily between U.S.422 and Charming Forge Road, and 3,497 from Charming Forge north.

Roadway Classifications

The accompanying Roadway Classification map shows each road in the Western Berks area according to its use. The three major use categories are Arterials, Collectors and Local Roads.

Arterials

Arterials provide a rapid connection between population centers such as between Reading and Womelsdorf or between Robesonia and Bernville. Arterials in the Western Berks area include the following roads:

- U.S. 422
- State Route 501
- State Route 419*
- State Route 183 (This road is adjacent to, but not within, the Western Berks area.)
- Bernville Road (Heidelberg Road)*

* PennDOT considers each of these two roads to be collectors. However, they function more as arterials in the Western Berks area.

Collectors

Collectors are the most important of the roads that collect traffic from local areas and funnel it on to arterials. Collectors in the Western Berks area include the following:

- High Street
- Charming Forge Road
- Kozier Road
- Stouchsburg Road
- School Road
- Milestone Road
- Brownsville Road

Local Roads

Local Roads provide direct access to local residential areas. All roads in the Western Berks area not designated as either Arterials or Collectors are Local Roads.

Roadway Concerns

Due to the evolution of the existing road system from earlier farm roads and the local topography, many of the Western Berks area's roads meet at less than ninety degree intersections. This causes poor alignment and sometimes shortened sight distances. This condition is most prominent in the three townships where it is often compounded by steep slopes and wooded areas. Buildings constructed close to roads and sharp curves can also create poor sight distances and pose safety concerns, particularly in bad weather. Narrow roads and bridges, and roads that do not meet current municipal specifications are other examples of potential circulation hazards found in the study area.

Multiple access points from adjoining driveways, parking areas, private lanes and streets contribute to congestion and less- than- optimum ingress and egress patterns, particularly along U.S. 422. Potential safety problems associated with unrestricted access to this corridor are a growing concern. The proliferation of driveway curb cuts for individual businesses and residential areas will continue to create unsafe traffic movements unless better managed. Increasing traffic volumes and peak hour congestion along U.S. 422 compound these concerns.

In addition to U.S. 422, some examples of shortcomings in the area's roadway system include the following:

- The alignment where School Road and Charming Forge Road meet Route 419 in Marion Township
- The sharp curve along Heidelberg Road at Church Road in North Heidelberg Township
- The potential need for a traffic signal at Bernville Road and U.S. 422 in Robesonia Borough
- Unpaved roads and dead end roads into Blue Marsh Lake National Recreation Area in North Heidelberg Township

Public Transportation

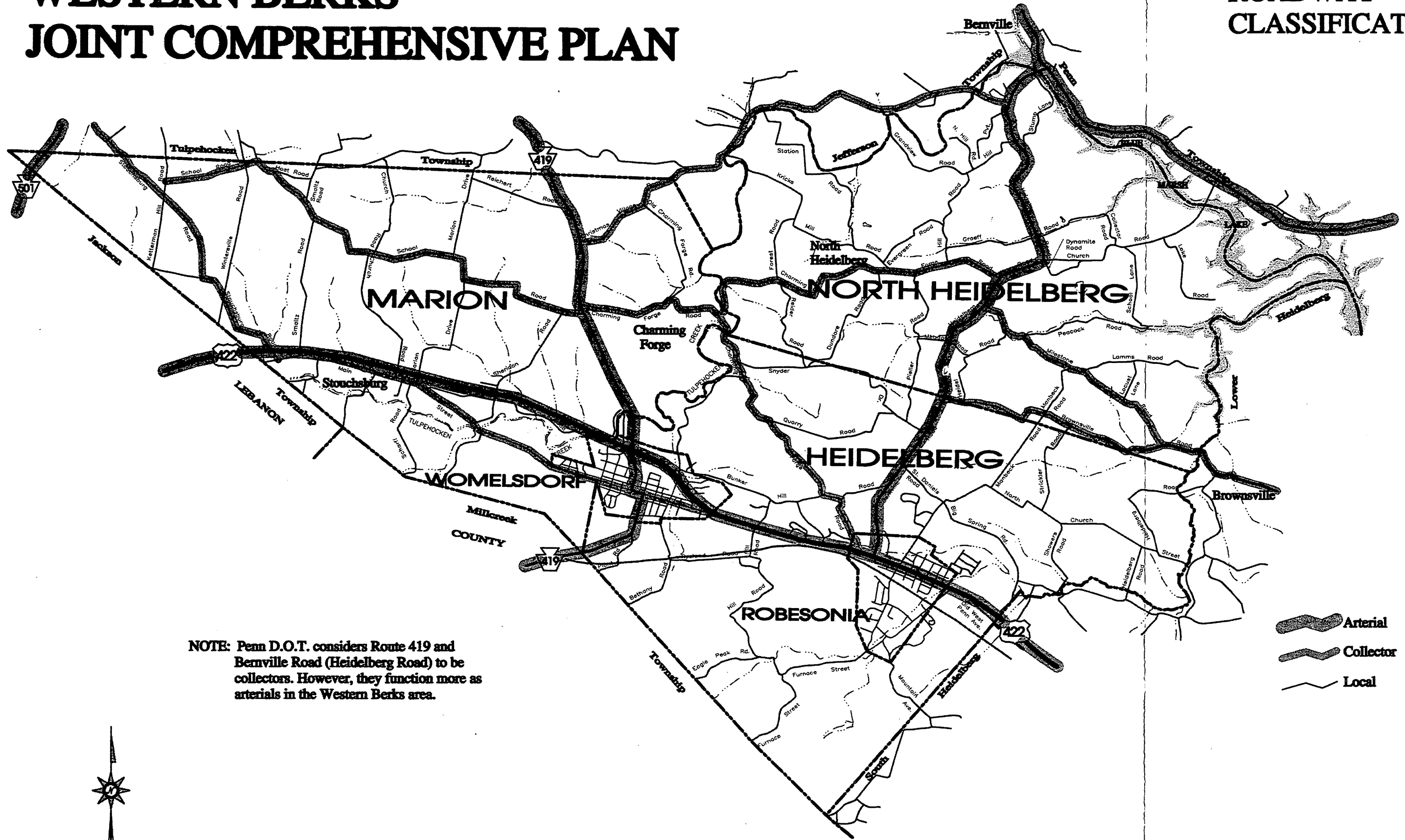
While no fixed bus routes serve the Western Berks area, the Berks Area Reading Transit Authority (BARTA) provides door to door van service to anyone in Berks County physically unable to use regular bus service. BARTA also has a "park and ride" lot on U.S. 422 in Womelsdorf that provides peak hour express service to Reading.

Alternative Transportation




Alternatives to motorized transportation are limited within the Western Berks area. Within both Womelsdorf Borough and Robesonia Borough, a network of sidewalks exists along the main thoroughfare and adjoining streets. Gaps or missing links, poor conditions of certain segments and areas not accessible to the physically challenged hinder the maximum efficient use of these sidewalks by pedestrians but overall they are adequate. No formal pedestrian and bicycle trails currently exist in the Western Berks area. The 1994 Berks County Open Space and recreation plan calls for establishing a greenway along the Tulpehocken Creek from Blue Marsh southward through North Heidelberg Township, Heidelberg Township, Marion Township and Womelsdorf Borough. This is a proposed recreation trail but may have future potential as an alternative transportation corridor as well.

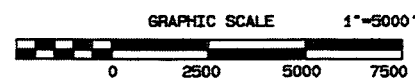
WESTERN BERKS JOINT COMPREHENSIVE PLAN

ROADWAY CLASSIFICATIONS



NOTE: Penn D.O.T. considers Route 419 and Bernville Road (Heidelberg Road) to be collectors. However, they function more as arterials in the Western Berks area.

-  Arterial
-  Collector
-  Local



URBAN RESEARCH & DEVELOPMENT CORPORATION
COMMUNITY PLANNING CONSULTANTS

SUMMARY OF ASSETS AND CONSTRAINTS

The Western Berks area's strengths and weaknesses are the basis for the following plan to guide the area's future growth and preservation. The plan attempts to capitalize on each municipality's assets and identify ways to overcome or mitigate concerns. The following summary of assets and concerns reflects the themes most frequently cited by the municipal officials, community leaders and other residents who provided input into this plan.

Assets

- Quality of Life in the form of scenic countryside and small town appeal is a major attraction in the Western Berks area.
- A Strong Sense of History exists throughout the area, especially concerning the need to preserve historic architecture and the region's Pennsylvania German heritage.
- A Commitment to Conservation of the area's prime farmland and rural environment is a prevailing spirit among the area's public decision makers.
- Strong Agricultural Zoning in Marion Township, Heidelberg Township and North Heidelberg Township is the basis from which other conservation-oriented policies are being considered in this plan.
- U.S. 422 is a major highway through the area, with three convenient connections to I-78: Route 501, Route 419 and the Bernville(Heidelberg) Road.

Constraints

- Residential Development Potential could in the future alter the rural character and landscape of the Western Berks area and increase demand for costly municipal services, such as schools and utilities.
- Development along U.S. 422 has generated ingress/egress concerns and increased the possibility of more extended strip roadside development in the region.
- Failing Septic Systems in selected areas are a health concern being addressed in the Western Berks area.
- Stronger Environmental Protection of steep slopes, woodlands, stream buffers and other natural features is needed in the Western Berks area.
- More Business Development particularly industrial development in appropriate locations in the boroughs, is needed to create jobs and enhance local tax revenues.