

**LITITZ-WARWICK JOINT STRATEGIC
COMPREHENSIVE PLAN**

BACKGROUND SUMMARIES REPORT

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INTRODUCTION

The data for the Background Summaries Report are information collected from primary and secondary data sources, including key person interviews, existing reports and current studies, statistics and data from government agencies, and geographical information systems (GIS) mapping and data from the Lancaster County Planning Commission and Warwick Township. The data collection activities occurred in the summer of 1998. The mapping, which supports the summary, is found in the Lititz-Warwick Map Atlas. Other mapping is contained in previous studies complementing this report. The summaries represent important background information about the region and will be referred to often during the planning process.

The purpose of the Background Summaries Report is not to reiterate information from previous studies and reports but is to give context and focus to the regional effort. A wealth of information and recommendations is available which describes the Lititz Borough and Warwick Township region. The report provides an update to dated information, a status report on recommendations, and a comparison of municipal planning and service activities. The focus is functional planning areas, that is: demographics, land use / housing, transportation, environmental and natural resource, public utilities, and community services and facilities.

These summaries plus the reports mentioned herein provide the technical foundation for the planning the future of the Lititz Borough and Warwick Township region. The objective is to develop an understanding of the link between current trends and policies and the future; however, the report is only one piece in creating a true picture of the existing community. Extensive community involvement is needed to better clarify the experience of those individuals who live, work and recreate in the region. Opportunities for public involvement are integrated throughout the planning process. The ultimate path, the Lititz-Warwick region will choose, crystallizes as the materials found in this report and the messages heard from the community merge into one future direction.

DEMOGRAPHIC SUMMARY

The review of demographic statistics is an important exercise in the development of a better understanding of the regional community. In the late 1980s, as a part of their individual comprehensive planning processes, both Lititz Borough and Warwick Township characterized their communities through the use of 1980 U.S. Bureau of Census statistics and estimates and population projections from the Lancaster County Planning Commission. These data are updated in this summary report with information from the 1990 Census, 1996 Pennsylvania State University Data Center estimates, the Lancaster County Planning Commission's Growth Tracking Report and population projections, and the Warwick Area School District Census.

The statistical parameters herein mirror the data developed in the 1993 Warwick Township Comprehensive Plan. Where possible, the discussion highlights the demographic changes in the communities and the region over the ten-year period. Changes are more clearly highlighted for the Township, which has experienced the greatest regional growth and development in the decade. Similar data was not included in the Lititz Borough Comprehensive Plan; therefore, in many cases the summary includes a "snapshot" of only the 1990 conditions for the Borough and region. New data for the decade of the 1990s will be available over the course of the next five years as a result of the completion of the year 2000 Census. This summary establishes the baseline statistics for the continued update of the demographic picture of the region as new data comes online.

CHANGE IN TOTAL POPULATION

The region has experienced tremendous growth during the 20th Century as shown on Figures 1-1 and 1-2. Figure 1-1 shows the numeric growth in population for the two municipalities and the region. Figure 1-2 relates this growth to the percent change in population.

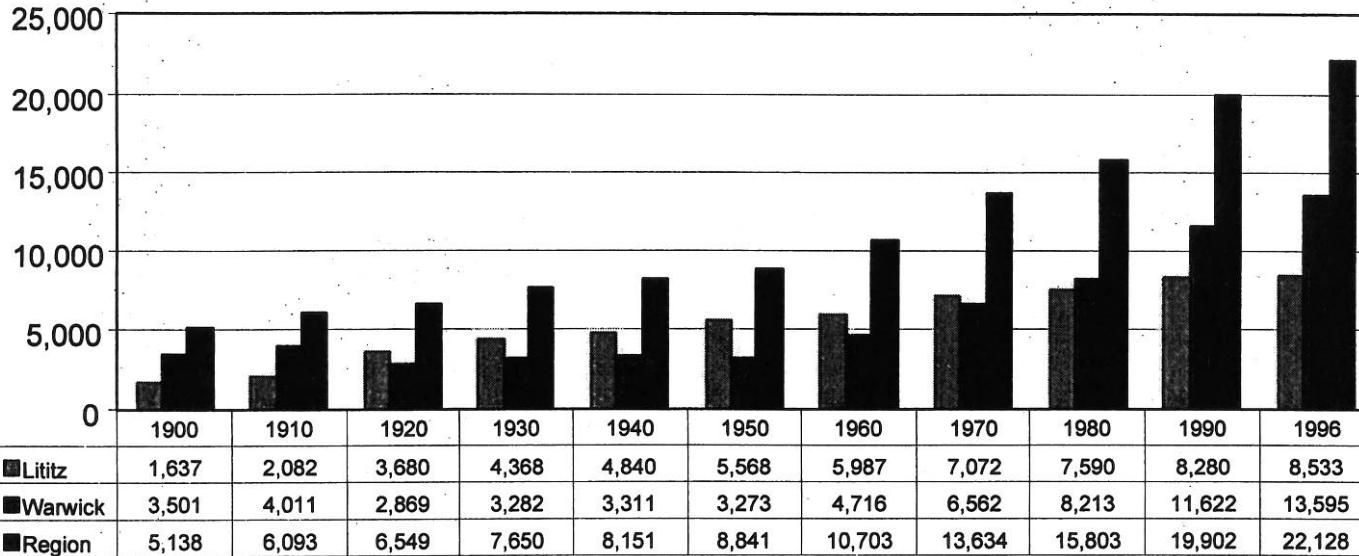
Observations About the Region (1990 to 1996):

The statistical data plus information gleaned from the previous planning studies leads to the following observations regarding the growth of the region.

- The Borough's 1915 annexation of Warwick Township land in the southern and eastern areas of the Borough, while not significantly impacting growth in the region, did have a significant impact on the shift of the population between jurisdictional boundaries and municipal responsibilities. Before the annexation, in 1910, the Borough's population represented 34.2 percent of the region's population compared to the Township's 65.2 percent. Following the annexation, in 1920, the regional population distribution shifted with the Borough representing 56.2 percent of the population and the Township 43.8 percent.
- In the period between 1930 and 1950, the region grew due to the growth and development of the Borough of Lititz as the center of regional activity. Growth in Warwick Township was at a standstill.
- In the 1950s, the region's growth patterns began to mimic the national trend towards the development of suburbia. Warwick Township became the suburban hinterland for the region demonstrated by the unprecedented population growth experienced by the Township beginning in the 1950s and continuing into the present. By 1980, the Township had surpassed the Borough in its share of the population of the region, 52.0 percent and 48.0 percent, respectively. In 1996, it is estimated the Township's population represents 61.4 percent of the region's population compared to 38.6 percent in the Borough. In the period from 1980 to 1996, it is estimated the Township has increased in population by 5,380 persons for a 65.5 percent increase. In the same period, the Borough increased its population by 940 persons or 12.4 percent.

**TOTAL
POPULATION**

**FIGURE 1-1
POPULATION CHANGE - 1900 TO 1996**

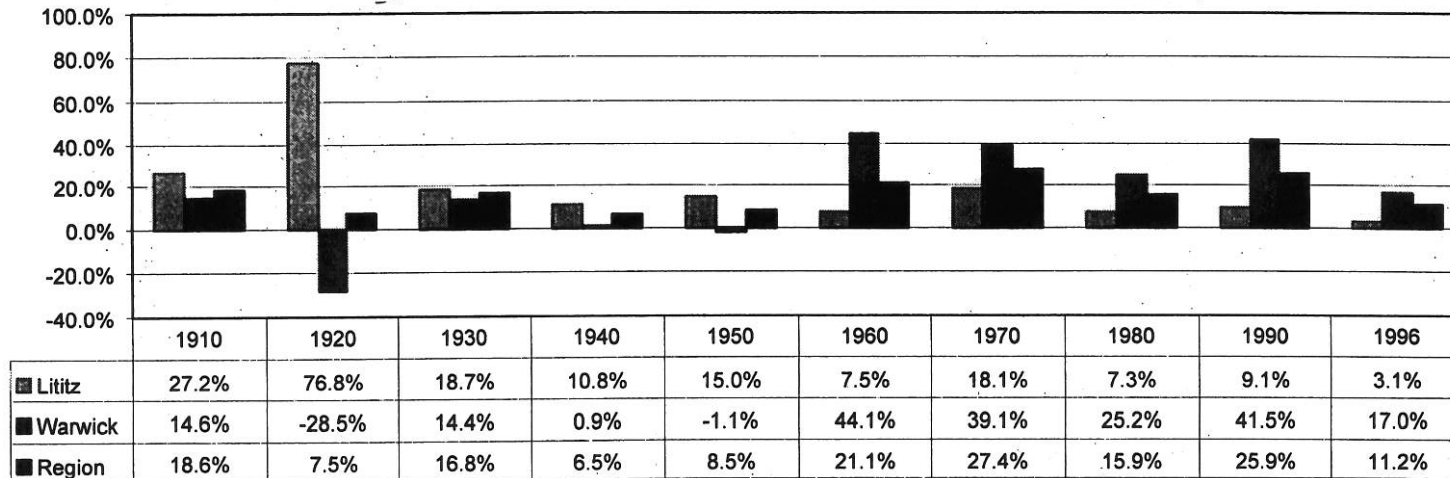


YEARS

Source: U.S. Bureau of Census (1900 to 1990)
Penn State Data Center 1996 Estimates

PERCENT CHANGE

**FIGURE 1-2
POPULATION PERCENT CHANGE - 1900 TO 1996**

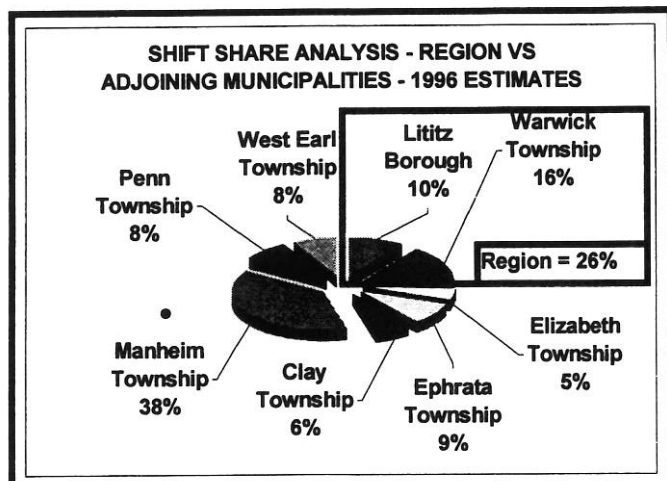
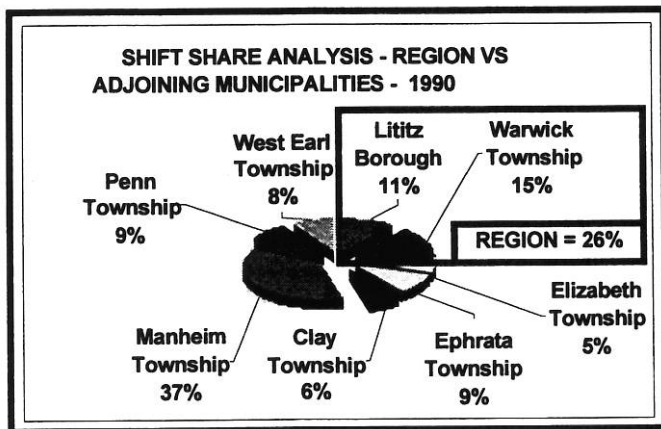
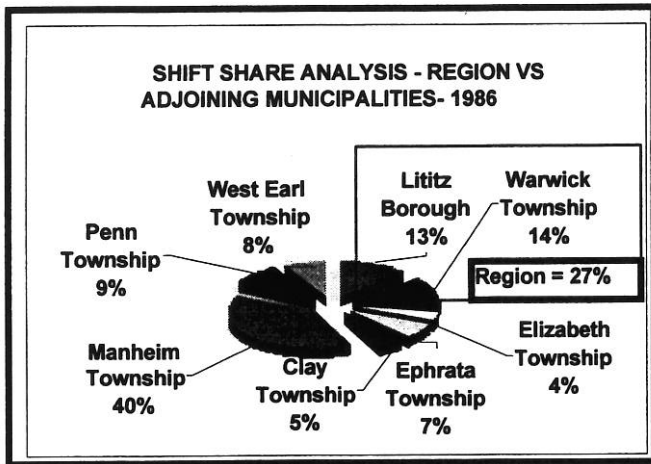


Years

Source: U.S. Bureau of the Census (1900 to 1990)
Penn State Data Center, 1996 Estimates

- The Warwick School District completes an annual census of the District for all service area municipalities. In 1998, the District counted 8,368 persons in Lititz Borough; however, the enumerators did not count residents in the retirement communities which approximate over 500 persons, bringing the Borough total to nearly 8,900 persons. The District enumerated 14,400 residents in Warwick Township. Adding the 150 persons from Moravian Manor, the total increases to 14,550 persons in 1998. These figures give evidence that the region may be growing faster than estimated in 1996 (i.e. 1996 population estimated at 22,128 persons compared to 1998 enumeration of 23,450 persons).

FIGURE 1-3 TO 1-5



Observations About the Region and Adjoining Municipalities (1986 to 1996):

The Warwick Township Comprehensive Plan provided interesting insight to the development influences and pressures that were realized in the immediate area of the Township (adjacent municipalities, including Lititz Borough). The Plan observed that “in total, Warwick Township and its neighbors experienced a combined 111percent population increase, while all Lancaster County posted a 54 percent increase from 1950 to 1980. it would appear that the development activities within the localized area ... provided more influence to Warwick’s growth than did Countywide development pressure ” (Warwick Township Comprehensive Plan, p. 38).

Figures 1-3 to 1-5 provide the shift share analysis for the region and adjoining municipalities for the years 1986 (source: Warwick Township Comprehensive Plan, p.39), 1990 (source: 1990 U.S. Census) and 1996 (source: Penn State Data Center estimates). The following observations are made regarding the region’s share of the population with adjoining municipalities:

- The region’s share of the population over the 10 year period has stayed relatively consistent between 27 and 26 percent of the total population.
- Shifts have occurred between individual municipalities. The greatest declining shift has occurred in the Borough of Lititz (13% in 1986 to 10% in 1996); however, regionally this decline is offset by the increases experienced in Warwick Township (14% in 1986 to 16% in 1996).
- This shift highlights the population impact of Warwick’s growth not only on the region but on adjoining municipalities.

POPULATION DENSITY

Density is the measure of the number of persons per square mile. Density is one indicator of the level of urbanization in an area. Generally speaking, the greater the density, the more urbanized the area or region. Increasing densities over time often provide statistical evidence of an area's changing from rural to urban characteristics.

Observations About the Region (1980 to 1996) and Adjoining Municipalities (1986 and 1996):

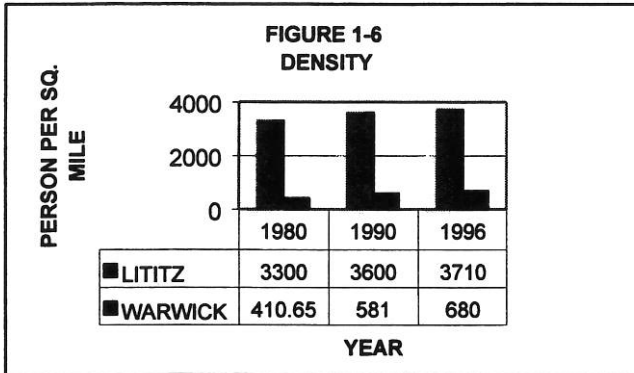
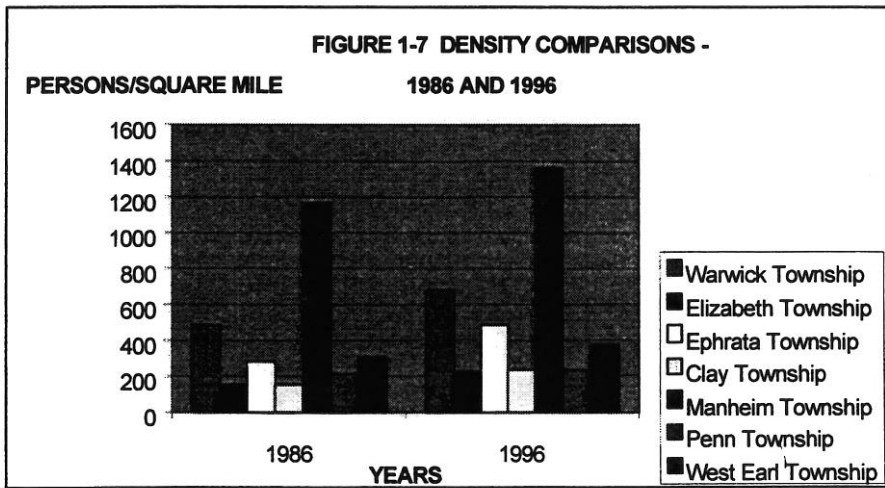


Figure 1-6 compares the density for the region's two municipalities. Figure 1-7 compares the density of area township's with the region's township, Warwick.

- The density in both communities has increased over the past 15 years. For the Borough, this increase represents infill development of vacant parcels. For the Township, the increase is due to subdivision and land development activities on large parcels.



- The changes in density in the area townships highlights the continuing loss of farmland and rural open space. From 1986 to 1996 all of the townships increased in density. The increase in Warwick Township was second only to Manheim Township.

POPULATION PROJECTIONS

Population projections are predictors of future growth activity. Typically, statistical models are utilized to develop these projections; however, these projections must be constantly monitored to adjust for localized anomalies and unexpected activity. The Lititz/Warwick region has been the subject of several recent studies that have developed population projections, including: the municipal comprehensive plans, planning activities of the Lancaster County Planning Commission, the Warwick Township Municipal Authority's Comprehensive Sewer and Water Studies and the municipal building permit surveys. The purpose of this study is to examine the projections relative to existing and planned building activity to determine the best estimate of future growth for the region.

A Summary of the Projections:

Since the completions of the previous municipal comprehensive plans, land development activity in both the Borough and the Township has impacted the population growth in the region. The land use summary highlights these projects and the use of other developable land.

**TABLE 1-1
POPULATION PROJECTIONS COMPARISON**

AREA	SOURCE	1990	2000	2002	2007	2010	2012
Lititz	1989 Borough Comprehensive Plan	9,500	11,000	N/A	N/A	12,000	N/A
	LCPC Projections	8,280	N/A	N/A	N/A	9,940	N/A
Warwick	1993 Township Comprehensive Plan						
	Selected Projection (method 4)	11,174	13,146	N/A	N/A	15,124	N/A
	Mid-level Projection (method 2)	11,376	15,518	N/A	N/A	21,168	N/A
	High Projection (method 3)	12,304	16,856	N/A	N/A	23,093	N/A
	LCPC Projections	11,622	N/A	N/A	N/A	17,433	N/A
	Comprehensive Sewer System Study	11,622	15,850	18,040	20,380	N/A	22,720
	Building Permit Method	11,622	15,450	16,220	18,120	19,260	20,020

Observations About the Borough's Projections:

- The Borough's 1989 Comprehensive Plan completed a comparative analysis of existing data projections and data estimates to arrive at population projections for the Borough for the years 1990, 2000 and 2010. These projections estimated population increases for 1980s (25.2 %), the 1990s (15.8 %) and the period from the year 2000 to 2010 (9.1%). The 1990 population was estimated at 9,500 persons and was expected to grow at a declining rate to 11,000 persons in the year 2000 and 12,000 persons in the year 2010. New data available from the Bureau of the Census reveals the previous Plan's overestimation of population growth. By 1990, the population of the Borough was more than 1,300 persons less the projected population. The 1996 estimates and the 1998 Warwick School District enumerations continued to fall below the 1990 prediction. **The projections in the 1989 Borough Comprehensive Plan are not a realist predictor of future growth given this new information.**
- The Lancaster County Planning Commission's population projections are a better indicator of the expected population growth in the Borough. The County projects the Borough population to the year 2010 will be 9,940 person. These statistics were compared to current development trends, current person per household and the availability of land for development. Based on these data and current economic conditions, the LCPC population projection is a realistic predictor of growth for the year 2010.
- It is expected as the Borough becomes built-out and less options are available for development the growth in population will decline and stabilize (complete build out is not expected within the next twenty years). The one unpredictable factor would be the extent of redevelopment or reuse of the Borough's older areas (see the land use discussion).

Observations About the Township's Projections:

Development has continued to occur at a rapid rate in the Township since the adoption of the Township's Comprehensive Plan in 1993. This development activity has been monitored through several planning activities, most notably through the Warwick Township Municipal Authority's Comprehensive Sewer and Water System Studies and the LCPC's Growth Tracking Report (the report is discussed in detail in the land use summary).

- The 1993 Comprehensive Plan reviewed four population projections generated through different methodologies (see the Plan for the description of the methodologies, p. 4). "Based on the Township's stated land use goal (Chapter II) to accommodate a manageable growth rate, rather than encouraging growth, projection Method 4 was selected..." (Warwick Township Comprehensive Plan, p. 42). At the time the plan was adopted, the hope was that the planning policy recommended by the plan would be put in place to achieve this preferred rate of growth; **however, the high level of land development activity over the course of the past five years has exceeded and outdated these projections.**
- By the year 1996, the Census Bureau estimated (13,595 persons) the population exceeding the year 2000 projection (13,146 persons). The Township's building permit data lists 795 new housing starts for the period from 1990 through 1995. At an average household size of 2.85 persons per household (statistic utilized by the LCPC in the Growth Track Report), the estimated population for the year 1996 would be 13,890 persons, again exceeding the year 2000 projection. The School District enumerated 14,450 persons in 1998 which provides further evidence of the Township's growth exceeding earlier predictions.
- Other models were utilized in the Warwick Township Comprehensive Plan which are more closely aligned to the existing experience of the Township. Table 1-1 provides the comparison of these projections applying the different models. **Method 2 appears to be more in line with existing estimates and building permit information.**
- In 1998, the Warwick Township Municipal Authority completed an indepth analysis of the development potential of the Township for the purposes of planning for sewer service. A multitude of factors and assumptions were utilized to develop the flow projections (see Comprehensive Sewer Study, p.11 and 12, for a description of the basis for the projection). Residential Equivalent Dwelling Units (EDU) have a direct correlation to the calculation of projected populations. One residential EDU is basically equivalent to one residential unit. A population projection is formulated for the year 2000, 2002, 2007, and 2012 by multiplying the residential EDUs for each planning period times an average number of persons per household (2.85 persons/household).
- The Building Permit Method utilizes a straight line methodology based on the average number of building units per year, from 1990 to 1997 (134 units/year). By multiplying the number of units by the average number of persons per household (2.85 persons/household) the projection is translated from units to persons.
- **Based upon the current level of development in the Township, it is expected that the Township's population will continue to grow producing a year 2010 population between 19,250 persons (building permit method) and 21,800 persons (sewer study method extrapolation of the year 2007 and 2012 values for the year 2010). This increase for the twenty-year period (1990 to 2010) would represent a low growth rate of 66 percent and a high growth rate of 88 percent adding between 7,600 and 10,200 new persons to the population.**

THE PEOPLE OF THE LITITZ / WARWICK REGION

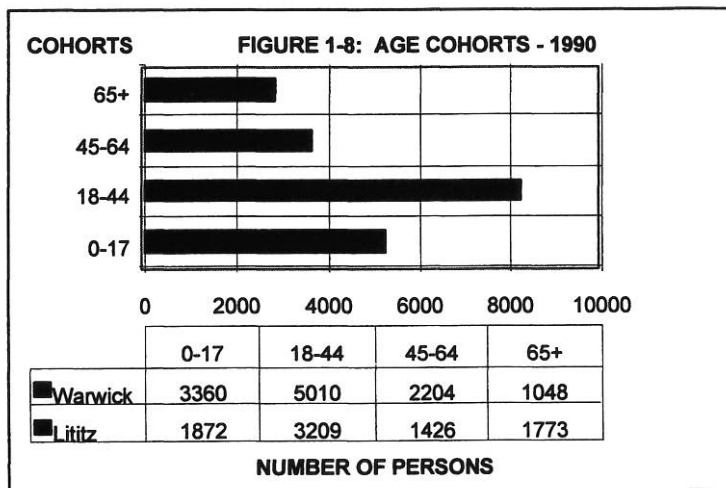
Features of the population help to portray qualities of the community, which may affect the planning effort. These features include the population's age, sex, race and origin, income and household characteristics.

Age of the Population:

The statistical measure for age is the age cohort or a range of consecutive ages representing periods of life which may indicate special needs from a planning perspective. For consistency the age cohorts selected are the same cohorts established in the Warwick Township Comprehensive Plan:

- 0-17 age cohort: preschool and school age population
- 18 – 44 age cohort: young labor force population and child producing population
- 45 – 65 age cohort: mature labor force population / reached height of earning power.
- 65 + age cohort: senior sector population

Figure 1-8 shows the contribution of each municipality to the region's age distribution.



Observations About the Region's Age Distribution:

- The 0-17 age cohort comprises 26.3 percent of the region's population. Over 64 percent of this population lived in Warwick Township. The Township recorded 2,458 persons in this age group in 1980. In 1990, the sector grew to 3,360 persons for an increase of 35 percent. The greatest impact of this group on the region is the continued demand for educational and youth recreational facilities.

- The young labor force and child-bearing population (18–44 years) represented 41.3 percent of the region's population. This cohort was the largest in both municipalities. The Township's share represented 61 percent compared to 39 percent contributed by the Borough. In 1980, 3,435 persons in the age group were located in the Township compared to 5,010 persons in 1990 for an increase of 46 percent. This age group places considerable demand on housing (both existing and new units of various types and sizes). Communities with a high population distribution in this age group are also prone to growing pre-school and school age populations. Other impacts include the demand for family-oriented activities and young adult recreational opportunities.
- The 45 to 65 cohort represented 18.2 percent of the region's population. The Township contributed over 60 percent of population compared to the Borough's 40 percent. The cohort was the smallest cohort in the Borough with 1,426 persons. The number of persons increased by 40 percent for the Township in the 1980s. The age group places fewer specific demands for services than other age groups.

- The 65 plus age group represented the region's senior citizens and comprised 14.2 percent of the population. This group was the only cohort in which the Borough (63%) exceeded the Township's (37%) contribution to the region. The higher percentage was due to the location of four retirement communities in the Borough. It must be noted the Township's population in this age group increased by 42 percent for the ten-year period. The growing numbers create increasing demands for specialized health care, transit, housing, and recreation services.

Other Characteristics of the Population:

Tables 1-2 to 1-6 provide other insights into the people of the region in 1990. The tables take a look at the two municipalities, the region and the county. These characteristics include sex, race and origin, income, household characteristics, and persons in group quarters. The source for these tables is the 1990 U.S. Bureau of the Census. In 1980, Warwick Township explored similar characteristics which provides the opportunity to identify any changes which have occurred in the Township over the ten year period.

Observations About the Characteristics of the Population:

**TABLE 1-2
POPULATION BY SEX (1990)**

AREA	TOTAL PERSONS	TOTAL FEMALES (%)	TOTAL MALES (%)
Lititz Borough	8,280	4,507 (54.4)	3,773 (45.6)
Warwick Township	11,622	5,824 (50.1)	5,798 (49.9)
Region	19,902	10,331 (51.9)	9,571 (48.1)
Lancaster County	422,822	217,540 (51.4)	205,282 (48.6)

- The region's distribution of males and females was consistent with the distribution of the County. The Borough had a greater percentage of females than the other three areas. The Township distribution had changed slightly from 1980 when 50.6 percent of the population was male.

**TABLE 1-3
POPULATION BY RACE (1990)**

RACE	LITITZ BOROUGH (%)	WARWICK TOWNSHIP (%)	REGION (%)	LANCASTER COUNTY (%)
White	8,166 (98.6)	11,467 (98.7)	19,633 (98.6)	397,815 (94.1)
Black	38 (0.5)	20 (0.2)	58 (0.3)	10,038 (2.4)
American Indian/ Eskimo & Aluet	7 (0.1)	7 (0.1)	14 (0.1)	484 (0.1)
Asia/Pacific Isl.	57 (0.7)	80 (0.7)	137 (0.7)	4,652 (1.1)
Other	12 (0.1)	48 (0.4)	60 (0.3)	9,833 (2.3)
Hispanic Origin	55 (0.7)	107 (0.9)	162 (0.8)	15,639 (3.7)

- Over 98 percent of the region's population was white compared to 94.1 percent in Lancaster County. In 1980, the Township's white population was 99.6 percent white, showing a slightly greater diversity in the period of the 80s. Few individuals of other races resided in the region in 1990, a similar characteristic of the County. Notably a greater number of individuals of Hispanic origin resided in the Township in 1980 (204 persons) compared to 1990 (107 persons).

**TABLE 1-4
INCOME (1990)**

MUNICIPALITY	PER CAPITA	MEDIAN HOUSEHOLD	MEDIAN FAMILY
Lititz Borough	14,938	35,187	39,380
Warwick Township	15,044	41,338	43,575
Lancaster County	14,235	33,255	37,791

- The income of individuals living in the region is reflected in the per capita, median household and median family income for the two municipalities. Clearly, the region was well above the County values for each of the indices.
- The medians for the Township exceeded the Borough median incomes. Comparing the three indicators with the Township's 1980 statistical data reveal that all indicators doubled in value in the decade of the 1980s.

**TABLE 1-5
HOUSEHOLD CHARACTERISTICS (1990)**

CHARACTERISTICS		LITITZ BOROUGH	WARWICK TOWNSHIP	REGION	LANCASTER COUNTY
Total Households		3,132	3,970	7,093	150,956
Family Households		2,229	3,309	5,538	112,106
	Married Couples	1,866	3,021	4,887	95,559
	% of Total	59.6	76.1	68.9	63.3
	Male Head (no wife)	92	78	170	N/A
	Female Head (no husband)	271	210	481	12,000
Non-Family Households		903	661	1,564	38,850
	One Person	794	520	1,314	31,547
	65 years and over	398	171	569	13,284
Persons per Household		2.46	2.91	2.81	2.71

- Warwick Township contained 56 percent of the households in the region compared to 44 percent in Lititz Borough; however, the Township contained 58.4 percent of the population compared to 41.6 percent of the population in the Borough. The greater percentage of population than households indicates the Township had more persons per household (2.91) compared to the Borough (2.46). The larger household size may be due to a greater concentration of smaller and/or multi-family units in the Borough compared to a greater percentage of larger, single-family detached units in the Township (see the land use and housing summary).
- Family households ("a householder and one or more other persons living in the same household who are related to the householder by birth, marriage, or adoption." Definition taken from 1990 Census of Population and Housing: Summary Population and Housing Characteristics, Pennsylvania, Appendix B.) represented 78 percent of all households in the region compared to the County's 74 percent. Family households in the Township were 83 percent of all households compared to the Borough's 71 percent. Clearly, the Borough had a greater percentage of non-family households than the Township.

- One reason for the Borough's high level of non-family households was the concentration of seniors (persons over 65 years). The statistical evidence supports this conclusion with over half of the one-person, non-family households being over the age of 65 years. It is expected this concentration has continued into the present given the four retirement communities located in the Borough.
- While 69 percent of the family households represent families with married couples, the region has a significant number of single heads of households (either husband or wife). The percentage of married couple households is lower in the Borough (60 percent) than the Township (76 percent). In each municipality a greater percentage of female headed (no husband) households exists than male headed (no wife) households.

**TABLE 1-6
PERSONS IN GROUP QUARTERS (1990)**

MUNICIPALITY	PERSONS IN GROUP QUARTERS
Lititz Borough	563
Warwick Township	82
Region	645
Lancaster County	13,042

- Approximately 3.1 percent of all persons in Lancaster County lived in group quarters¹. Similarly, 3.2 percent of the residents in region lived in group quarters compared to 6.8 percent of the residents in the Borough. These statistics reflect the impact of the retirement communities on the region and Lititz Borough. Also, in this group would be the residents of Linden Hall.

Implications on Planning:

From a planning perspective, population growth is a key indicator utilized to identify municipalities undergoing change and transition. Population growth often implies changes in land use (see land use summary) and characteristics of the community. In rural communities, such as Warwick Township, these changes may mean the development of vacant land or loss of farmland for residential uses. In urban areas, such as Lititz Borough, these changes imply infill development or redevelopment. These changes bring to the forefront three questions to be explored during the regional planning process:

- ***How much growth do we want and how much can we handle?***
- ***Will our infrastructure and community services and facilities be able to keep pace with this growth and development?***
- ***How is growth affecting our region's character (reflected in changing characteristics of the people) and are these changes acceptable?***

The other background summaries of this Baseline Profile examine functional features (land use/housing, environment, transportation, utilities and community services and facilities) which help to weave together a comprehensive picture of the Lititz/Warwick Region and form the basis for the community's planning activities.

¹ The 1990 Census of Population and Housing defines group quarters as one of two general categories: (1) institutionalized persons and (2) noninstitutionalized. The institutionalized persons include correctional institutions, nursing homes, hospitals, juvenile institutions and detention centers. Persons in noninstitutionalized settings include rooming houses, group homes, religious quarters, dormitories, military quarters, and emergency shelters.

EXISTING LAND USE AND HOUSING SUMMARY

The Joint Plan presents the summary of existing land use and housing in the same chapter due to the close association of these two subjects. Residential land uses continue to be the fastest growing land use in the region. The impact of this growth on the region is a major concern. The summary begins with a discussion of existing land uses: the definition and location of uses, the growth potential for the region, and special areas and uses. The housing discussion focuses on changes in the distribution and character of housing in the region.

EXISTING LAND USE

The purpose of the Existing Land Use Summary is to provide an overview and summary of the existing land use characteristics present within Lititz Borough and Warwick Township. Land use classification is an important task in the comprehensive planning process as it provides the foundation for the development of a future land use scheme and regulatory policy as administered through Zoning and Subdivision and Land Development Ordinances. It provides planners and decision-makers with a current picture of the overall makeup of the community and aids in identifying areas where future development is desirable both from an economic and aesthetic perspective.

Informational Resources:

Both Lititz Borough's and Warwick Township's Comprehensive Plans included a discussion on existing land use patterns. Data compiled for these studies were based on 1989 County tax records and windshield surveys. This summary provides updated information since the completion of previous land use inventories and is based on information provided by the Lancaster County Planning Commission, Lancaster County Assessment Office, Warwick Township staff, Lititz Borough staff and field reconnaissance. A listing of data sources reviewed for this summary include:

- The Warwick Township Comprehensive Plan, August 1993 (Gehring-Roth Associates).
- Lititz Borough Comprehensive Plan, 1989 (Acer / PSC Engineers and Consultants, Inc.).
- Warwick Township Growth Tracking Report, March 1998 (Lancaster County Planning Commission).
- Map of Approved / Pending Subdivisions, Warwick Township, 1998 (Warwick Township).
- Lancaster County Planning Commission Draft 1997 Growth Tracking Report for Warwick Township and Lititz Borough.

The Warwick Township Comprehensive Plan developed an Urban Growth Boundary (UGB) to help direct the growth and development of the community. For the region, the UGB is associated with the Borough and the Township area surrounding the Borough with connections to the rural villages (e.g. Brunnerville and Rothsville). Since the adoption of the UGB, the Lancaster County Planning Commission has been tracking the level of growth and development for the Township with particular emphasis on development occurring within the UGB. Two reports have been submitted discussing development from 1993 to 1996 and updating the information with new statistics for 1997. The growth tracking reports represent valuable new information in understanding the impact of development on the region.

Existing Land Use Map:

Several sources of information were used to develop the digital Existing Land use Map presented in Map 2-1 (see the Lititz-Warwick Map Atlas). The Lancaster County Planning Commission provided a digital Land Use Inventory for the area based on the Modified Anderson Level II classification system. The Anderson system uses vegetative land cover characteristics and land utilization to classify the land. Land use/ land cover boundaries were identified and delineated from aerial photographs taken in March of 1993. (The county was reflowed in 1998. This data was not available at the time of this report.)

The Lancaster Tax Assessment Office provided tax assessment data containing information regarding the land use for each parcel. Arcview, a geographic information systems software program, was used to combine and map the information provided from both County offices. It provided a means to view the data spatially and assign land use codes according to the land use categories developed for this project.

Land Use Classifications:

Land use classification involves identifying and categorizing the use of each land parcel within the study area. The land use categories used for this study are the following:

- Low Density Residential
- Medium Density Residential
- High Density Residential
- Commercial
- Industrial
- Transportation/Utilities
- Institutional
- Recreational
- Open Water
- Agricultural
- Open/Conservation
- Mixed Use

The definition of each category, observations of its occurrence after 1993 and its influence on the overall landscape are provided below. A detailed description of these land uses and their locations prior to 1993 are provided in the Warwick Township and Lititz Borough Comprehensive Plans, completed in 1993 and 1989, respectively.

Low Density Residential:

Description: Single-family detached dwellings on individual lots in densities not greater than 2 units per acre.

New Development Locations: These large lot subdivisions are located outside the Urban Growth Boundary. The development of low-density residential housing has been minimal since 1993 with a total of 16 dwellings built on 21.3 acres, representing an average density of 0.75 dwellings/acre. Locations of development are scattered throughout the Township and are typically located on frontage lots or within small subdivisions clustered around cul-de-sacs.

Medium Density Residential:

Description: Single-family detached dwellings on individual lots in densities not greater than 2.1 to 7 units per acres.

New Development Locations: The region is experiencing medium density development in the following locations:

- The development of Lititz Run (Phase II) north of Lititz Borough and south of Newport Road.
- The development of Fox Run (Phase I and II) located in the northeastern portion of Warwick Township east of Pine Hill Road
- The development of Pine Hill Estates and Meadow Springs (Phase I and II) located in the northeastern portion of Warwick Township west of Pine Hill Road.
- The development of Dogwood Valley located in the southeastern portion of the Township
- Owl Hill Perch development located just east of Lititz Borough in the southeastern portion of the Township along Owl Hill Road.
- Fair Meadows Development located in the northeastern corner of the Borough.
- A major development of approximately 75 units is pending called Newport Square located in the northeastern portion of the Borough north of Front Street and east of Rome Road.

- Lindenwood Estates located in the southeastern portion of the Borough south of East Fourth Street and east of Broad Street.

High Density Residential:

Description: Residential developments at densities more than 7 units per acres. Includes mobile home parks, apartment complexes, condominiums and townhouses.

New Development Locations:

- Pebble Creek Development located east of Lititz Borough and North of East Main Street.
- The Highlands at Warwick located South of the Borough in the southwestern portion of the Township.
- Crosswinds (Phase I and II) located southeast of the Borough.
- Pennwyck Estates located in the southeastern corner of the Borough.
- Windsor Gardens consisting of condominiums and 2 story multifamily townhouses (6 units per building), located in the northwestern portion of the Borough north of West Lincoln Avenue.

Commercial:

Description: Any retail or service oriented business including specialty shops, malls, service stations or places of business where large-scale production is not occurring.

New Development Locations: Noted locations of commercial development since 1993 are as follows:

- Northwestern quadrant of the Township in the vicinity of the intersection of Newport Road and Furnace Hills Pike.
- Northwestern quadrant of the Township, north of Arrowhead Drive.
- Southwestern quadrant of the Township near the intersection of Woods Drive and Broad Street.

Industrial:

Description: Generally large facilities with manufacturing, warehousing or wholesale trade activities.

New Development Locations: Development of industrial land since 1993 has been minimal. The one noted location of considerable development occurred within the northwestern quadrant of the Township southwest of the Furnace Hills Pike and Newport Road intersection at the location of the Wynfield Business Park. The Park is being developed in both industrial and commercial use. Currently, all of the lots in the Park have been sold.

Another noted area zoned for industrial development, but currently in agriculture use, is the 300 acre Airport Industrial area located in the southwest corner of the Warwick Township south of Millport Road. The area is the designated Transferrable Development Rights (TDR) receiving area. Under the current zoning scheme 10 percent of the area may be developed by right and up to 70 percent may be developed based on the purchase of development rights from the area of the Township zoned Agriculture (sending area). The hope is through the TDR program the Township will be able to preserve agriculture lands and accommodate more industrial development.

Transportation / Utilities:

Description: Wide transportation corridors, tollbooth areas, highway departments, transmission stations, water towers/tanks and sewage treatment plants.

Institutional:

Description: Public and private schools, municipal offices, government holdings, fire stations, churches and cemeteries.

Recreational:

Description: Recreational facilities including public parks, campgrounds and golf courses.

New Development Locations: See the Community Services and Facilities Summary – Recreation.

Open waters / streams:

Description: Surface water ponds and streams.

Agricultural:

Description: Any lands that are in agricultural use. This includes farmsteads, barns and outbuildings, croplands, pastures, orchards, hog and chicken operations and horticultural operations. Agricultural land represents approximately 7,701 acres or 57 percent of all land within the region. Preserved farm easements and agricultural security areas make up 1,240 acres and 2,933 acres of the total, respectively.

Open / Conservation:

Description: Any areas public or private consisting of open spaces with forested, herbaceous, grasslands or wetlands cover. Within the study area, the majority of land classified as open/conservation occurs along streams and other hydrologic features.

Mixed Use:

Description: Densely developed land generally associated with urban centers. This category is often comprised of a mix of other developed land categories including Commercial, High Density Residential, Institutional (see Map 2-2 {Lititz-Warwick Map Atlas} for concentration of Mixed Use Parcels in the Borough of Lititz, particularly the Downtown).

Table 2-1 shows the percent of the total acres of each land use within the study region. Not surprisingly, agriculture represents the largest land use class with 57.1 percent of the total area. Residential land uses are the second largest land use category and account for 22.7 percent of developed land. Areas classified as open / conservation represents the third largest land use class with 12.0 percent.

**TABLE 2-1
TOTAL ACRES BY LAND USE CLASSIFICATION**

LAND USE CATEGORY	ACRES	% OF TOTAL ACRES
Low Density Residential	269	2.0
Medium Density Residential	2461	18.2
High Density Residential	337	2.5
Commercial	294	2.2
Industrial	332	2.5
Transportation / Utilities	35	0.3
Institutional	239	1.8
Recreational	98	0.7
Agricultural	7701	57.1
Open / Conservation	1617	12.0
Open Water / Streams	102	0.8

Growth Tracking Report:

Warwick Township (1994 to 1996):

The Lancaster County Growth Tracking Report (1994-1996) highlighted the impact of growth within the Warwick Township (did not report for the Borough) Urban Growth Boundary for the three year period. These observations are important for the understanding of the long-term impact of the boundary and its implications on the planning process. Key observations include:

- 235.4 acres were developed in Warwick Township from 1994 through 1996. This figure does not include redevelopment or infill of existing developed areas.
- 218.8 acres or 97% of land development occurred inside the Urban Growth Boundary.
- Development was split among the following uses: residential – 176.6 acres, commercial – 22.4 acres, industrial – 0.0 and other uses 36.4 acres.
- The average net density of residential development occurring inside the UGB during 1996 was 2.6 dwellings per acres.
- Approximately 2,737 vacant buildable acres are included in the Township's Urban Growth Boundary.

Warwick Township / Lititz Borough (1997):

In 1998, the LCPC compiled new growth tracking data for both the Township and Borough as a part of the comprehensive planning process. New statistics reveal the following recent impacts:

Warwick Township:

- 86.1 acres were developed in Warwick Township.
- 81.4 acres or 95% of land developed occurred inside the Urban Growth Boundary.
- Development was split among the following uses: residential - 59.8 acres, commercial - 15.0 acres, industrial -11.3 acres and other uses - 0.0 acres.
- The average density of residential development was 3.0 units per acres within the Urban Growth Boundary (UGB) and 0.9 units per acre outside the UGB.

Lititz Borough:

- 7.1 acres were developed in Lititz Borough.
- Development was entirely residential with an average density of 3.8 units per acre.

FUTURE DEVELOPMENT POTENTIAL

Warwick Township:

Based on figures presented in the Lancaster Planning Commission Growth Tracking Report (March 1998), there are approximately 2,737 acres of land available for future development within the UGB. Lands with environmentally sensitive features such as floodplains, steep slopes, and wetlands were not included in the total figure. Approximately 2,100 acres of the total land available is zoned for residential development, a figure 7.5 times more than what's needed to accommodate growth projections through the year 2010.

Lititz Borough:

In order to evaluate the amount of land available for future development, all lands classified as either open/conservation or agriculture were located and mapped. Maps 2-3 through 2-6 show each of the quadrants of Lititz Borough and the locations of potential developable land. The quadrants are defined as follows:

Northeastern Quadrant (Map 2-3 – Map Atlas) – Area of Lititz Borough bounded by North Broad Street and East Main Street.

Northwestern Quadrant (Map 2-4 – Map Atlas) – Area of Lititz Borough bounded by North Broad Street and West Orange Street.

Southeastern Quadrant (Map 2-5 – Map Atlas) – Area of Lititz Borough bounded by South Broad Street and East Main Street.

Southwestern Quadrant (Map 2-6 – Map Atlas) – Area of Lititz Borough bounded by South Broad Street and West Orange Street.

Table 2-2 shows a summary of selected parcels including the location of the land within each quadrant, its current zoning designation, allowable density (for areas zoned residential) and the potential number of dwelling units based on allowable zoning densities. The Lititz Borough Planning Commission field verified the development potential of each vacant parcel. See Map 2-7 for the location of tracts summarized in Table 2-2 (see Map – Atlas).

The southeastern quadrant of the Borough has the most potential for development with approximately 96 acres of identified land. Under current zoning, this land has the potential for 569 dwelling units. Land in the northeastern quadrant totals approximately 53 acres; however field observations revealed much of this land has no development potential or is already under development. The remaining potential for the area is 77 dwelling units. Similarly, in the southwestern quadrant the 25 acres of identified land development potential is affected by development which occurred since the land use data was generated or is hindered by environmental features. The remaining development potential would be 169 dwelling units. Finally, the northwestern quadrant 26 acres has no residential development potential. The remaining parcels are designated for industrial development. The total residential buildout for the Borough given current zoning would be approximately 570 additional units. Utilizing a factor of 2.85 persons per household would equal a population of 1,625 persons.

SPECIAL PLACES AND FEATURES

Citizens of Warwick Township and the Borough of Lititz rated the *quality of life* as high in recent focus group exercises. Several areas which impact this sense of *quality of life* include recreational and leisure opportunities, historic preservation, quality and selection of goods and services in the downtown, retention of landscapes which represent a "sense of place," environmental quality, health care, cultural activities and youth and senior citizen amenities.

It is important that these *quality of life* factors be reviewed when exploring the regional comprehensive plan so that they serve as indicators to the community's health. Several of these are dealt with in other areas of this report. This section explores the downtown area and historic preservation. As is always true, *quality of life* elements often overlap and are inter-related.

Downtown Area:

Lititz is fortunate to retain a vibrant business district in its traditional downtown area. The area is anchored by the Lititz Springs Park on the west end and Church Square and Linden Hall on east end. Also serving as anchors are the Sturgis Pretzel Factory and Wilbur Chocolate Factory. These long-time Lititz businesses serve several functions: as local industry and job generators, as retail establishments which support the tax base and as tourist attractions. In addition, the downtown is surrounded by substantial residential neighborhoods.

TABLE 2-2: DEVELOPMENT POTENTIAL SURVEY

AREA OF BOROUGH	1989	1998				
	DEVELOPMENT POTENTIAL	MAP UNIT #	VACANT AREAS	ZONING	DENSITY	DEV. POTENTIAL
Northeastern Quadrant	136 dwelling units	1	5.32	R1	6	Parkland
		2	1.99	R1	6	Parkland/Pump Station
		3	8.22	R1	6	49.32
		4	4.60	R1	6	27.60
		5	28.48	R1	6	Development in Progress
		6	0.57	R1	6	Development in Progress
		7	4.68	R1	6	Parkland
Total NE Quad			53.86		Total Units	76.92
Southeastern Quadrant	517 dwelling units	8	0.83	I		Floodplain
		9	0.52	R1	6	Floodplain/ No Access
		10	0.95	I		Floodplain
		11	1.03	RA	20	20.60
		12	6.14	R1	6	Developed
		13	4.12	R1	6	Developed
		14	2.49	R1	6	Developed
		15	3.34	R1	6	20.04
16	6.43	RA	20	128.60		
Total SE Quad			25.85		Total Units	169.24
Northwestern Quadrant	118 dwelling units	18	8.01	I		Nonresidential
		19	9.23	I		Nonresidential
		20	3.90	I		Nonresidential
		21	3.53	I		Nonresidential
		22	1.76	R1	6	Recreation Courts
Total NW Quad			26.43		Total Units	0.00
Southwestern Quadrant	276 dwelling units	23	4.87	R1	6	29.22
		24	4.18	R1	6	Developed
		25	56.79	R1	6	340.74
		26	2.64	R1	6	15.84
		27	4.17	RA	20	83.40
		28	4.83	C		Nonresidential
		29	8.22	R1	6	49.32
		30	2.27	R1	6	13.62
		31	3.67	RS	3	11.01
		32	3.21	R1	6	19.26
		33	1.04	R1	6	6.24
Total SW Quad			95.89		Total Units	568.65

As retailing trends changed during the last 30 years, so have the businesses in downtown Lititz. Grocery stores enlarged and moved to strip shopping center, gas stations and fast food eateries moved along auto related routes to better capture their customer, and traditional retailers such as dress shops, shoe stores, hardware stores and sporting goods struggled to compete with "big box retailers" or the regional malls. To survive, retailers have sought niche markets. Downtown Lititz is alive, but in transition. In the eyes of long time, area citizens, the downtown may no longer be meeting the needs of the local population. It is, however, a viable economic base. It's role is changing. It is shifting to meet the needs of both new and traditional customers.

There are two key players in the downtown area that are dealing with market shifts: the Lititz Retail Association which embraces the concerns of merchants and the Lititz Improvement Committee which owns a large number of the downtown properties.

The Lititz Retail Association is a membership organization (52 members) with about half of the membership located in the downtown area. It was founded in the 1960's and is primarily a promotion and marketing organization. Officers and a core group of its members meet regularly. Areas of concern for the organization include: organizational funding, parking, no direct communication link with the Borough to solve problems, no chamber of commerce to be their advocate, compliance with local historic zoning ordinances and "hassles" or inconsistencies with permitting. Traffic as it relates to the larger picture in the region was also noted.

Additional areas of concern in the future should include: a lack of a network to "glean" good promotional ideas from similar communities, no one designated to recruit businesses to the downtown area and no educational programming regarding market shifts, demographic trends or new technologies.

The Lititz Improvement Committee is a group of local citizens who own a large number of downtown properties. When one entity holds multiple properties, they can control rents, maintenance, etc. If the property owner has a shift in philosophy regarding historic merit, new window treatments, paint schemes, etc., it can have major impacts on a downtown of this size. Additionally, as a result of the fact that downtown properties do not sell often, local realtors are not well versed in commercial trends, the need to cluster businesses, or incentives.

Not only do local citizens recognize a high *quality of life* in the region, but visitors are drawn to the area for the same reasons. It is unclear the impact that tourism has directly on the downtown area. Tourists come primarily from NY and the mid-Atlantic region. Some merchants may draw as much as 90% of their income from this market niche. The image that tourists are the primary customer certainly is evident in the types of businesses which are opening in the downtown.

The Lancaster County Tourism Bureau distributes the brochures and information at the Visitor's Center. The Lititz Retail Association is preparing a new brochure for distribution. Further research needs to be conducted before competent decisions about marketing, business recruiting and tourism impact are made.

Historic Preservation and Saving a Sense of Place:

Preserving cultural heritage includes documenting, maintaining and protecting the built and natural environment. It includes oral and written history, artifacts and memorabilia, buildings and sites, and landscapes.

The Historic Preservation Trust of Lancaster County (HPTLC) is located in Lancaster and is the primary advocate for the built environment. Between 1978 and 1985, HPTLC staff surveyed many of the historic sites in Lancaster County as a test model for the State Preservation Office. Lititz and Warwick Township were surveyed in the early 1980's. Since it was a test, the survey forms changed several times, the survey is not complete and, without additional state incentives, there has been no effort to continue.

Today, the HPTLC operates as follows:

- A property owner or interested citizen would obtain a Historic Sites Register form from the HPTLC, complete the form and submit it along with a \$45 application fee to HPTLC.
- The HPTLC Historic Sites committee meets quarterly to review the submissions. They decide if the site is of significance, and at what level, to be included on the County Register.
- If the site is of deemed eligible, it is listed on Lancaster's Historic Sites Register. The Register is a means for identifying and evaluating resources that contribute to Lancaster County's rich and diverse historical and architectural character. The program is intended to promote awareness of the county's architectural heritage, to foster a sense of pride in the community, to encourage good stewardship practices, and to provide a planning tool for the community. It includes buildings, structures, districts, objects and sites that possess sufficient local significance to warrant recognition. The Lancaster County Historic Sites Register is entirely separate for the National Register of Historic Places. Listing on the Lancaster Register is intended to be sufficient to obtain a preliminary opinion of eligibility for the National Register from the Pennsylvania Bureau of Historic Preservation.
- If the owner or interested citizen wishes to pursue the National Register listing, he/she could hire the HPTLC or a consultant to complete the necessary forms.

Additionally, the HPTLC maintains a small resource library to assist property owners, prepares and distributes the Preservation Services Resource Directory - a source book of contractors, suppliers and service providers specializing in old and historic buildings, and facilitates a Historic Marker program. The bronze markers are \$125.

The Historic Survey included the following Warwick Township sites, which were listed on the Lancaster County Historic Sites Register:

- 419 Arrowhead Drive
- 421 Arrowhead Drive
- Reist Farmstead, Becker Rd.
- Brunnerville Foundry, Brunnerville Rd
- Peter Shaeffer House, 43 Church St., Rothsville
- Hess Mennonite Church, Clay Rd
- Creek Road
- Pfautz Farm, 81 N Heck Rd
- Johannes Hess Homestead, Lititz Run Rd
- Rome Mill, Lititz Run Rd
- 920 Log Cabin Rd,
- Covered Bridge, Log Cabin Rd
- Union Meeting House, Log Cabin Rd
- Christian Eby House, 331 Meadow View Rd
- Jacob Shaeffer Mill, Meadow View Rd
- Jacob Weis House, Millport Rd
- Jacob Lieb House, Millport Rd
- Banberger Mennonite House, Newport Rd
- Barn, Newport Rd
- Hooker's Tavern, Newport Rd
- Shober House, Owl Hill Rd
- Salem Lutheran Church, Owl Hill Rd
- Jon Pfautz House, Peirson Rd
- 1248 Pine Hill Rd
- John Erb House 1310 Pine Hill Rd
- 1251 Pine Hill Rd
- John Oberholtzer House, Pine Hill Rd
- Rome Hotel, Rothsville Rd
- Pfautz Mill/ Rothsville Mill, Rothsville Rd
- Freidrich House, Rothsville Rd
- Compass Mill, Rothsville Rd
- Greystone Manor, Rt 272
- 1795 Reist House, 820 Woodcrest Ave.
- Snavely Mill, Snavely Mill Rd
- John Brubaker House and Farm, Snyder Hill Rd.

Currently the following properties are listed on the National Register (date of listing noted):

Congregational Store, 120-22 E Main (1983)
Lititz-Moravian Historic District (1986) - includes 55 contributing sites in district.
Julius Sturgis Pretzel House, 219-21 E Main (1974)
JA Sutter House, 17-19 Main Street (1982)

Wm Weiner House, 66 Main Street (1984)

The Borough of Lititz enacted the first Historic District Zoning Ordinance in the Commonwealth in 1959. Zoning was initiated in 1956. Several years later the Commonwealth created a Historical Architectural Review Board (HARB) Bill, but Lititz never changed to come under new state legislation; they are still working off of the 1959 law. It was one of the earliest such ordinances in the country; however, a full inventory of the area or design guidelines have not been developed to complement the ordinance.

The historic area boundary covers the central business district, but is not the same as the National Register Listing (see Map 2-8 – Lititz-Warwick Map Atlas). An Advisory Committee works with the Zoning Officer to provide guidance to property owners. The Committee, the Zoning Officer or the Borough, which make final decisions have not received training appropriate to a Historic District Review Commission. Since the 1950's new language and incentives have been added to most ordinances. This is not the case in Lititz. There is no one who fully understands how to best use the ordinance, to encourage its use or to enforce it. To date the community has been fortunate that property owners are sympathetic to preservation issues. In the past, local property owner cooperation has worked well; no one has ever paid a fine. However, the last case was tested informally and the lawyers agreed that the property owner did not have to change work. Each variance that is granted weakens the ordinance and local preservation efforts. Beyond the ordinance, there is no advocacy or educational organization directly concerned with the historic built environment in the Borough or in the Township.

The preservation of local artifacts and memorabilia is also important. As a function of the Lititz bicentennial in 1956, objects were collected to celebrate local heritage. Following the Bicentennial Celebration, the Lititz Historical Foundation and Museum were formed. Its original focus was the Moravian community; however, in the 1980's it broadened its scope to include the area within the school district. Today, the mission of the Lititz Historical Foundation is to preserve the artifacts of the area described as the boundaries of the Warwick School District.

The Foundation serves the local community as a repository of local history, by conducting school tours and by providing limited educational programming. In addition it maintains a house museum and gardens. These elements are an important component of the local heritage tourism market.

Archives of the Moravian Church and its early community complement local preservation efforts and provide documents for genealogical research. No genealogical records are available at the library nor is there research staff to provide assistance.

Lititz Borough and Warwick Township are prime for heritage development and enhanced tourism promotion. Lancaster County Heritage Tourism Program provides a county wide perspective for heritage development and recently produced a map and tour entitled: Villages, Valleys and Bridges which highlights Lititz Borough and Warwick Township. Yet, the current local heritage development and tourism program is unorganized. Each museum works separately and therefore the community does not fully capture the tourism dollar. Bus schedules are uncertain and bus parking is not handled in the most effective manner. Tourism impact information is not available. Packaged promotions do not exist.

As noted above, to fully preserve and protect cultural heritage and to create a heritage development program it is necessary to include the natural environment as well. The protection of farmlands, woodlands and waterways, which serve to illustrate the economics of the region and exemplify the spirit of the earlier generations, is critical. The protection of these elements is discussed in the Environmental Summary of this report.

HOUSING SUMMARY

Both Lititz Borough's and Warwick Township's Comprehensive Plans included a discussion of housing conditions. The majority of the information contained in these two reports was based on statistical data from the 1980 Census. This summary adds information from the 1990 Census and recent information taken from the two communities' building permit surveys. The discussion

focuses on previous planning recommendations and the extent in which the increase in housing and changes in the type and cost of housing demonstrate consistency or inconsistency with the planning recommendations.

Lititz Borough (Lititz Borough Comprehensive Plan, 1989) Recommendations:

Community objectives for housing included (p. 21):

1. "Provide decent, safe, and sanitary housing to all residents in order to meet physical and psychological needs.
2. Continue housing, land development, and other regulations which permit innovation in housing types and construction, in addition to protecting established values."

Warwick Township (Comprehensive Plan: Warwick Township, 1993) Recommendations:

From the housing analysis, pp. 48 and 49:

- "It would appear that relative lack of multiple occupancy dwellings (duplexes, townhouses and apartments) exist within Warwick Township. To avoid legal challenge based upon exclusionary zoning and/or fair share housing arguments, it is advised that no less than 26.2 percent of its planned residential development potential be targeted for multiple occupancy dwellings, like duplex, townhouses, apartments and condominiums."
- "This statistic (215 permanent mobile homes in 1980) indicates an absence of exclusionary zoning policies regarding mobile homes within Warwick Township, which should be continued."

From the goals and objectives, p. 6:

"Allow for a wide range of housing types and densities to acknowledge the public's varied needs, and to reduce development pressure in outlying rural areas."

From the Future Land Use, relating to type of units not location, p. 147. (Location is the subject of the land use summary):

"...it is the responsibility of every municipality to provide for a variety of housing types.... Different residential densities have been allocated to provide a balanced opportunity for housing of all types and costs."

Statistical Changes (1980 to present):

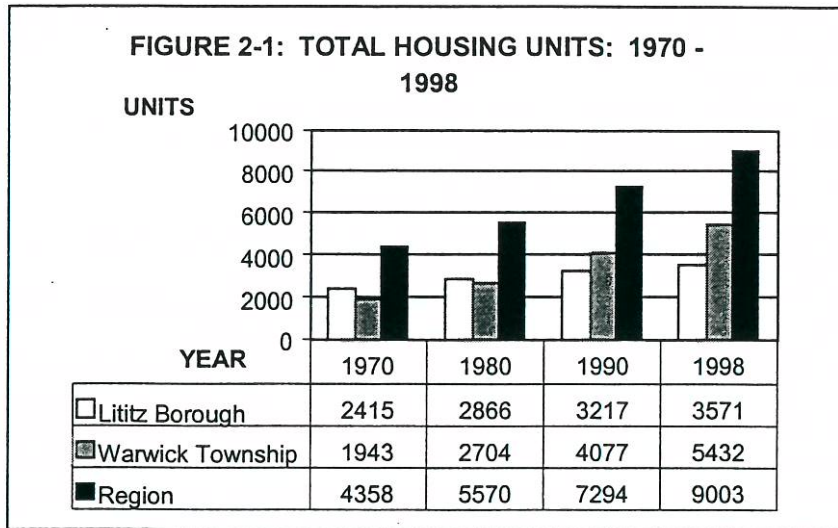
Three statistical indicators are examined: trends in total housing units, housing unit types and housing unit costs.

Total Number of Housing Units:

Figure 2-1 shows the trend in total housing units from 1970 to 1998 for the two communities. Dramatic increases in housing for the region have occurred in the period from 1970 to 1998. Both regional communities have increased in the total number of housing units.

Warwick Township: The greatest increases were found in Warwick Township, which has nearly tripled the number of housing units in the 28 year period. The greatest increases occurred in the period of the 1980s recording a 50.8 percent increase. The upward trend continues into the 1990s with a 33.2 percent increase recorded for the decade through July, 1996.

Lititz Borough: The trend for the Borough also has been increasing for the period at a steady rate. The greatest increase in housing units occurred in the 1970s with an increase of 18.7 percent over the



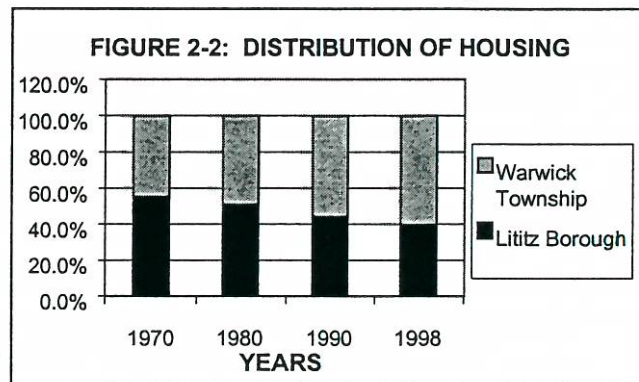
Source: 1970 to 1990 Bureau of the Census. Lititz Borough Building Permit Survey (1990 to 8/98) and Warwick Township Building Permit Survey (1990 to 7/98)

previous decade. The rate of increase continued over 10 percent in the 1980s and it appears to be increasing at an equal pace in the 1990s.

Regional Shifts in the Distribution of Housing:

As the remaining parcels of land are developed in the Borough, the Township will experience continuing residential development pressure. Figure 2-2 demonstrates the shifts, which are already occurring in the region's distribution of housing. This shift may have a dramatic impact on the future character of the region.

The shift was noticeable in 1970 when Warwick Township housing began to make an impact on the distribution of housing in the region. Prior to this time the majority of the residential community lived in the Borough. By 1970, 44.6 percent of the region's residences occupied residences located in Warwick Township. By 1990, the



number of residences (55.9%) surpassed the number of units in the Borough. The trend continues in the 1990s with an estimated 60.3 percent of the total housing being located in Warwick Township. How this shift will impact the character and the attitudes of residents towards the region is the subject of the next phases in the planning process.

Changes in the Type of Housing:

Diversity in housing is a serious consideration for all municipalities which are charged by the Pennsylvania Municipalities Planning Code to provide a variety of housing types at various densities and values for present and future residents.

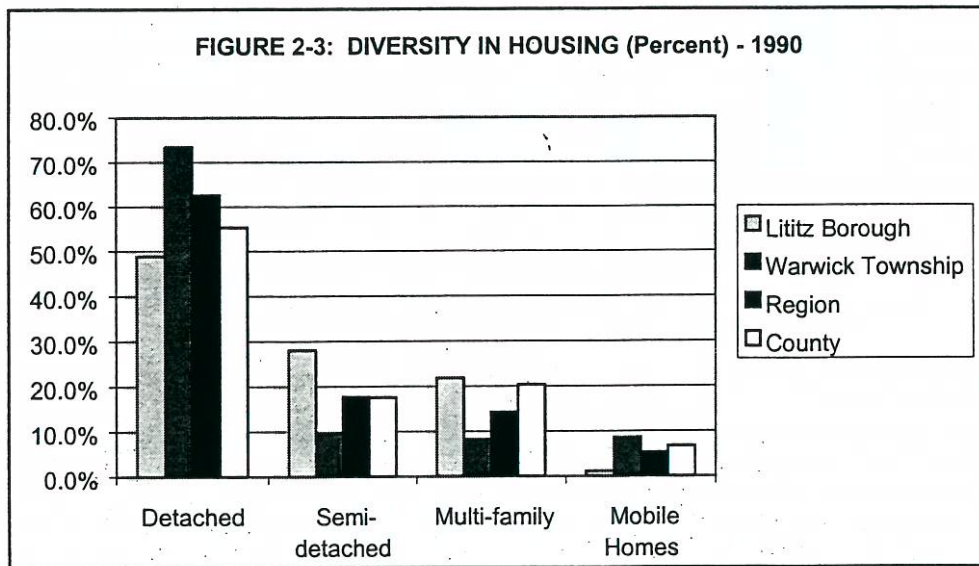
Historic Perspective:

The Warwick Township Comprehensive Plan paid particular attention to this charge when it recognized in 1993 that the Township housing stock was not sufficiently diverse to avoid possible legal challenges. The 1980 Census revealed 79 percent of all housing was single-family detached with ten percent semi-detached (duplex) and eight percent mobile homes. Only four percent were multi-family units. The challenge was to bring a more desirable mix of housing units to the community. With the expansion of public water and public sewer systems the opportunity to meet this challenge became apparent.

Conversely, the Borough's Comprehensive Plan did not analyze the total number of housing units from a unit by type perspective but instead examined diversity in the context of tenure; that is, owner-occupied versus renter-occupied. In 1980, nearly 30 percent of the Borough's units were renter-occupied which was an increase of nearly 15 percent over the number of rental units in 1970. Looking at the combined housing stock of the two communities in 1980, the region as a whole showed considerable diversity; however, individually, Warwick Township had significant room for improvement.

Recent Trends:

Both the 1990 Census and the building permit surveys of each community help to form a picture of the progress in diversity, which has been made since completing the last planning studies. Figure 2-3 and 2-4 compares the housing diversity for the two municipalities and the region in the years 1990 and 1998.



The overall diversity of housing for the County becomes the gauge for examining the diversity in an individual municipality or region. The County standard must be measured with the understanding that the level of infrastructure and public services will have a significant impact on the ability of an individual municipality to accommodate a reasonable mix. In rural areas, which do not have public utilities, the diversity is often provided through a higher percentage of manufactured homes, an affordable single-family dwelling unit alternative.

Trends in the 1980s:

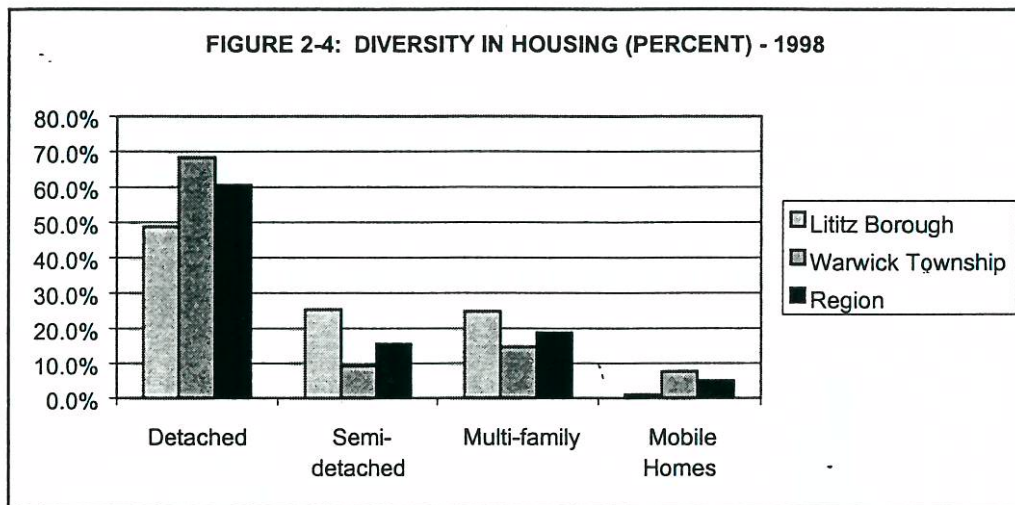
The 1990 Census uncovered the following local and regional trends:

- Single-family detached units. The Township and consequently the region, continued to exceed the County's percentage in single-family detached units (i.e., Warwick Township nearly 20% more than the County and the region nearly 10 percent more); however, it is important to note that in 1980 the percent of single-family detached units was recorded as 79% compared to 73.5% in

1990, showing a greater mix than the previous decade. The Borough's percentage was less than the County's, demonstrating greater diversity than Lancaster County.

- Single-family semi-detached and multi-family units. Likewise, the Township's percentage of single-family semi-detached (duplexes) and multi-family units were well under the percentage for the County; however, in the ten year period the Township went from a four percent distribution of multi-family units to eight percent. The Borough's percentages were higher than the County's.
- Mobile home units. Typical of predominately rural communities, the percentage of mobile homes for the Township exceeded the percentage for the County. As would be expected the Borough had few mobile homes.

These statistics demonstrate that during the period of the 1980s changes were beginning to make an impact on the diversity of the housing in the Township and the region as a whole.



Source: Municipal Building Permit Surveys (Warwick 1990 to 7/98 and Lititz 1990 to 8/98).

Trends in the 1990s:

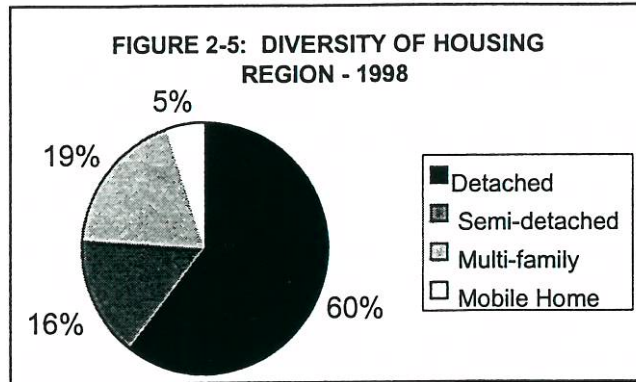
Since 1990, the Township has continued to increase the diversity of the housing stock:

- Single-family detached units compared to multi-family units. In the Summer of 1998, a ten percent shift has occurred in the percentage of single-family detached as compared to multi-family units reported in 1980. Today, nearly 15 percent of all housing units are multi-family, with 68 percent single-family detached and 9 percent semi-detached.
- Mobile home units. As the Township transitions to a more suburban environment the percentage of mobile homes to total units is decreasing (7.7%).

The Borough is also undergoing change in diversity:

- Single-family semi-detached compared to multi-family units. Since 1990, the Borough has undergone a slight shift in the percentage of single-family semi-detached (28.1 % in 1990) to multi-family (21.9% in 1990); in this case, the percentages are nearly equal in 1998 (semi-detached at 25.3% compared to multi-family at 24.8%).

The increased housing diversity for the two communities provides a favorable mix of housing types for the region in 1998 as shown on Figure 2.5.



The Township and the region have made significant improvement to the diversity of housing since the last planning study. The increase in the number of new units provided the opportunity for the region to diversify its housing stock.

The Cost of Housing:

Utilizing the 1980 median value indicators, the Warwick Township Comprehensive Plan provided an analysis of the cost of owner-occupied housing in the Township compared to the cost of housing in neighboring municipalities and the County. Table 2-3 provides a comparison of these values with the similar data obtained from the 1990 Census.

**TABLE 2-3
VALUE OF OWNER-OCCUPIED HOUSING
1980 AND 1990**

MUNICIPALITY	MEDIAN 1980 VALUE	MEDIAN 1990 VALUE
Lititz Borough	\$43,900	\$82,800
Warwick Township	\$58,400	\$104,700
Clay Township	\$49,200	\$99,200
Elizabeth Township	\$53,400	\$95,800
Ephrata Township	\$50,100	\$94,600
Manheim Township	\$63,300	\$112,900
Penn Township	\$55,600	\$95,400
West Earl Township	\$53,600	\$95,200
Lancaster County	\$47,200	\$89,400

Source: 1980 and 1990 Bureau of the Census.

The value of owner-occupied housing has nearly doubled for each of the represented municipalities as well as Lancaster County in the period of the 1980s:

- Lititz Borough continues to have the lowest value of housing which is reflective of the type, size and age of the units in the historic borough. In fact, when compared to other boroughs in the county of similar size and character, the Lititz value was relatively high, second only to Elizabethtown Borough, which had a 1990 median value of \$83,500.
- Warwick Township had the second highest housing value in both 1980 and 1990, second to Manheim Township.
- Compared to the County median, the Borough was \$6,600 less than the County value and the Township was \$15,300 higher.

The municipal building permit surveys provide a glimpse of housing values in the 1990s. The surveys do not allow a direct comparison with census data. The survey statistics do not provide

the breakdown by tenure (renter vs. owner occupied). The survey does provide a calculated average value for each type of housing unit.

The surveys uncover the following information regarding the value of housing for the region.

- Generally, housing values are higher in the Township compared to the Borough.
- The highest housing values are associated with single-family detached units.
- Semi-detached and townshouses are valued at nearly one-half the cost of single-family detached homes.

**TABLE 2-4
AVERAGE VALUE OF HOUSING BY TYPE
1990 TO 1998**

TYPE OF UNIT	AVERAGE COST/UNIT	
	LITITZ	WARWICK
Single family detached	\$98,390	\$111,721
Semi-detached	\$40,000	\$57,438
Townshouse	\$55,309	\$57,517
Mobile homes	n/a	\$26,727
Apartments	n/a	\$43,259
Triplex Cottages	\$162,409	n/a

Source: Warwick Township Building Permit Survey, 1990 to 7/98.
Lititz Borough Building Permit Survey, 1990 to 8/98.

- Apartment units are the cheapest multi-family unit.
- The mobile home continues to be the most affordable housing option.
- The triplex value is an anomaly when compared to other housing costs.

These values indicate a favorable distribution of new housing values, bringing a wider range of housing values to the region.

NATURAL RESOURCES AND ENVIRONMENTAL FEATURES SUMMARY

The purpose of the Natural Resources and Environmental Features Summary is to present a synopsis of current information regarding key environmental features identified in the municipal comprehensive plans and other recent publications. It is important to remember that the natural resources in the planning area are interrelated. For example, the natural fertility of the region's soils resulted in the small town/agricultural landscape, which developed in the 1700s. This agricultural land use impacted forests, which have been all but eliminated from the planning area and created ground water contamination problems. Also, the lack of a forested buffer along streams has contributed to the decline in surface water quality in the planning area. Although the various resources are discussed separately in this report, they are not stand-alone features.

Lititz Borough is basically built-out with only small areas available for development, while Warwick Township is one of the fastest developing municipalities in Lancaster County (see land use and housing summary). The conflict between the natural and man-made environments will continue to be a significant issue for the region as a whole and the Township, in particular.

INFORMATIONAL RESOURCES

The material presented in this section is compiled from many sources. These sources include Lititz Borough's and Warwick Township's comprehensive plans developed as policies for guiding growth over a reasonable (10 - 15 years) time period. The Lititz Borough Comprehensive Plan was developed in 1989 (Acer, 1989) while the Warwick Township Comprehensive Plan was developed in 1993 (Gehringer Roth Associates, 1993). Other sources of information include:

- "Summary Report and Findings from the Warwick Township Community Environmental Review" (Chesapeake Bay Local Government Advisory Committee, 1998)
- "Draft Lititz Run Natural and Cultural Resource Atlas", the watershed plan for Lititz Run (LandStudies, 1998)
- "Chesapeake Bay Wetlands Initiative" (Gannett Fleming, Inc., 1997).

Additional resources utilized included information on various on-going projects in the planning area including:

- Lititz Borough Wellhead Protection Community-Based Education Grant application
- Lititz Run Watershed Association Act 319 grant application
- Hammer Creek Watershed Pilot Project description
- Meeting minutes from the Lititz Run Watershed Alliance.

NATURAL RESOURCES AND ENVIRONMENTAL FEATURES OF THE REGION

Resource and features of the region include soils, geology, ground water, surface water and wetlands. Other environmental features addressed include woodlands, wildlife habitat and floodplains. The majority of these resources were mapped in the previous comprehensive plans, the Chesapeake Bay Wetlands Initiative, and the Lititz Run Natural and Cultural Resource Atlas.

Soils:

Soils in the study area belong to two of the six general soil units found in Lancaster County as discussed in the US Department of Agriculture's (USDA) 1985 Soil Survey of Lancaster County. Soils in Lititz Borough and the central and extreme southern sections of Warwick Township are part of the Duffield-Hagerstown unit while soils in the northern and south-central portions of Warwick Township are in the Bedington unit. The Duffield-Hagerstown unit consists of well drained soils in undulating broad valleys formed in residuum from limestone. The landscape where this soil unit is found consists of nearly level to rolling hills in limestone valleys. The

Bedington unit consists of well drained soils on dissected ridge tops and side slopes formed in the residuum from acid shale. The landscape consists of nearly smooth to rolling dissected ridges (USDA, 1985)

The USDA identified prime farmland in the study area as part of the preparation of the county-wide soil survey completed in 1985. Prime farmland was defined as land best suited for producing food, feed, forage, fiber and oilseed crops. Approximately 83 percent of the Township was classified as prime farmland in 1985, while most of the Borough was classified as non-prime farmland (Gehring-Roth Associates, 1993, USDA, 1985).

According to the USDA definition of prime farmland, the land must be either used for producing food or fiber or be available for such uses. Prime farmland which has been converted to non-agricultural uses is no longer prime farmland. The current percentage of prime farmland in Warwick Township is less than the amount present in 1985, when the most recent county soil mapping was completed. The loss of that prime farmland to development is changing the view of the landscape from rural-agricultural to suburban-residential. The implementation of the Urban Growth Boundaries and effective agriculture zoning as a result of the 1993 Plan has led to a dramatic reduction in the number of acres of prime agriculture lands lost to development.

The areas of the Township which do not contain prime farmland frequently have soils with development constraints. Construction and development constraints relative to various soil characteristics are discussed in detail in the Warwick Township Comprehensive Plan and the Soil Survey of Lancaster County (Gehring-Roth Associates, 1993, USDA, 1985). Characteristics such as wetness, steep slopes, depth to bedrock, and flooding must be considered when planning building activities. Approximately 22 percent of Warwick Township contains soils with development constraints. These constraints include slope, flooding, wetness and slow percolation.

Geology:

Geology impacts several environmental attributes of the study area including soils, topography, and groundwater. The study area lies in the Conestoga Valley Section of the Piedmont physiographic province which is characterized by rolling hills and broad valleys. Seven geological formations are located in the study area, the Cocalico, Epler, Stonehedge, Ontelaunee, Richland, Snitz-Creek-Buffalo Springs, and Millbach formations. The composition of the Cocalico formation is shale while the composition of the other formations is limestone and/or dolomite. These formations have different impacts on land use. For example, excavation is moderately easy in the Cocalico formation which is located in the northern and south-central sections of the study area but is difficult in areas underlain by the other six formations. Foundation stability is classified as good for all seven formations (Gehring-Roth Associates, 1993, USDA, 1985).

Ground Water:

Ground-water quantity and quality vary with the underlying geological formation. Reported yields of 239 wells in the study area ranged from 0 to 1,050 gallons per minute (gpm) with a median yield of 2 gpm and a mean yield of 12.4 gpm. Approximately 75 percent of the wells tested had yields of less than 5 gpm. According to the Warwick Township Comprehensive Plan, yields in the 5 gpm range may be problematic in that they cannot adequately supply water for domestic uses (Gehring-Roth Associates, 1993).

Ground-water quality in the study area, as in the rest of Lancaster County, is an area of concern. Elevated levels of nitrate-nitrogen (NO₃-N) have been found in the study area. Thirty nine percent of the wells tested as part of the Township Official Sewage Plan had NO₃-N concentrations greater than 10 milligrams per liter (mg/l). Federal and State Safe Drinking Water Programs require that public water suppliers not exceed 10 mg/l NO₃-N in water provide to their

customers. The Warwick Township Municipal Authority and the Borough of Lititz must remove NO₃-N from their well water to meet this requirement. Nitrate in ground water can come from agricultural and non-agricultural sources. Agricultural sources include over-application of manure and fertilizer to cropland while non-agricultural sources include on-lot sewage disposal systems. The issue of ground-water quality is important because the entire planning area relies on ground water for domestic usage (Gehring-Roth Associates, 1993, LandStudies, 1998(b)).

Surface Water:

The study area is part of the Conestoga River watershed. Named streams within the study area include Hammer Creek and Lititz Run while numerous tributaries to these and other streams are present. Water quality problems in the study area include agricultural runoff, lack of stream bank protection and shading, and urban-suburban runoff (Gehring-Roth Associates, 1993). Because of a lack of stream bank shading, warming of the water temperature occurs in Lititz Run which reduces the quality of aquatic life and affects the whole stream food chain (LandStudies, 1998(b)). Recent local efforts are attempting to improve water quality in several sections of the study area by promoting the development of riparian buffers, agricultural best management practices and installing fish enhancement structures.

Wetlands:

The study area contains many wetlands. Wetlands are important because they provide food and habitat for animal life, act as water storage areas during storms and floods, filter pollutants from water and provide ground-water recharge.

A wetlands project was recently conducted in the Lititz Run watershed as part of the Chesapeake Bay Wetlands Initiative. This pilot project was part of a comprehensive plan to identify wetland areas, including those most suitable for preservation and restoration on a watershed basis. A three-phase geographic information system (GIS) protocol was used to identify and classify the wetlands. Phase III of the project included field verification of wetlands which showed 47.6 acres of wetlands in the Lititz Run Watershed and the generation of several detailed wetlands maps for use by the municipalities (Gannett Fleming, Inc., 1997).

The Lititz Run Watershed Plan noted many wetlands in the Lititz Run Watershed have likely been drained for farming and development (LandStudies, 1998(b)). This statement applies to the entire planning area.

Other Natural Features:

Woodlands, floodplains and wildlife habitats represent other natural features in the region:

- **Woodlands:** Only a small portion of the study area is wooded. Approximately five percent of the Lititz Run Watershed is wooded (LandStudies, 1998(b)) while some wooded areas are located in the Cocalico Creek drainage basin in the Brunnerville and Rothville area (Gehring-Roth Associates, 1993). The stream bank protection projects being undertaken in the Lititz Run and Hammer Creek watersheds will increase the amount of wooded areas in the region (LandStudies, 1996, 1998(c)).
- **Floodplains:** Lititz Run, Santo Domingo Creek and Moores Run are subject to periodic flooding with damage occurring to property located in the floodplain (Gehring-Roth Associates, 1993). Many of the floodplains in the study area have been filled or encroached upon by development reducing their ability to handle flooding (LandStudies, 1998(b))
- **Wildlife Habitats:** The study area is agricultural/urban in nature and does not contain sufficient areas for wildlife habitat. According to the Pennsylvania Department of

Environmental protection there are no endangered or threatened species or unique habitats present in the study area (Gehring-Roth Associates, 1993, LandStudies, 1998(b)).

CONTINUING RESEARCH AND PLANNING

The pro-active approach taken by Warwick Township and Lititz Borough has led to numerous projects dealing with the natural resources of the study area. Many of these projects are currently in the development or planning process. Brief summaries of various projects initiated since the adoption of the municipal comprehensive plans are provided below.

Warwick Township Community Environmental Review:

The Chesapeake Bay Local Government Advisory Committee, which is a committee of the Chesapeake Executive Council, developed a review program to provide local governments with direct technical assistance to help them help themselves protect local natural resources and thereby contribute to the restoration and protection of the Chesapeake Bay. Warwick Township was selected to be one of the first two communities to participate in this type of review. The Community Environmental Review is designed to be flexible in order to meet the diverse needs of communities throughout the Chesapeake Bay watershed.

Warwick Township's participation anticipated that the recommendations developed would contribute to the development of the regional strategic comprehensive plan. Furthermore, the review would provide a broader range of innovative environmental protection and growth management approaches and ideas. Local officials, Chesapeake Bay Program representatives and Local Government Committee staff identified three topics for discussion during the environmental review. These topics were: low impact development, riparian forest preservation and village overlay district implementation.

As part of the review the individual team members provided recommendations on actions Warwick Township could take to integrate the three techniques into Township policies and programs. These recommendations were edited by the Local Government Committee into an overall list of recommendations which is summarized in next section of this report

Lititz Run Watershed "A Natural and Cultural Resource Atlas" Draft Report:

The Pennsylvania Department of Conservation and Natural Resources (DCNR), Farmer's Trust Bank and the Donegal Chapter of Trout Unlimited provided funding for the preparation of this report which provides information on the history and present conditions of the watershed. All of Lititz Borough and the central section of Warwick Township are located in the Lititz Run watershed. The goal of the report is to provide information on how to develop a proper balance between development and the preservation and consideration of the natural resources of Lititz Run. This report discusses the impacts of the various actions of people (native Americans, European settlers, current residents) on the natural resources in the watershed and presents recommendations to keep the Lititz Run watershed a quality place to live, work and raise a family. These recommendations are categorized by agricultural, urban/suburban areas and open areas and are summarized in next section.

Chesapeake Bay Wetlands Initiative:

As part of a comprehensive plan to identify wetland areas, including those most suitable for preservation and restoration on a watershed basis and with community involvement, EPA provided funding to conduct pilot assessments on the Lititz Run watershed and a watershed in Maryland. The goals for this project, which were achieved, included:

- Develop a 3-step GIS-based protocol for wetland assessment.
- Field verify and assess wetlands.

- Use the GIS protocol with Chesapeake Bay Program and local, state and regional data.
- Apply future land use information.

Lititz Borough Wellhead Protection Community-Based Education Grant

Lititz Borough has received a grant from DEP to conduct a dye tracing study to determine the direction of ground-water flow which contributes to their public water supply wells. This study will also determine ground-water velocity and relate the findings to sinkholes, fractures and lineaments within the ground-water watershed. A second part of the project involves the development and implementation of ordinances to protect the Borough's ground-water resources. Public education awareness of the importance of ground-water resources will be promoted as part of the project.

Lititz Run Watershed Alliance (various projects):

The Lititz Run Watershed Alliance was formed in 1997. The basic goal of this community-based group is the improvement of the Lititz Run watershed. At its monthly meeting the group is updated on the various projects in the watershed and discusses current watershed issues. Members of the Alliance are involved in all the reports and projects discussed in this section.

• **Lititz Run Watershed Restoration Project:**

Non-point source pollution from agricultural and non-agricultural sources is responsible for the degradation of Lititz Run. Past efforts to improve Lititz Run include stream bank fencing, bank stabilization, installation of fish habitat enhancement structures, tree planting and other physical improvements all done by volunteers. The Lititz Run Watershed Alliance has obtained a grant from DEP through the non-point source pollution program for the watershed restoration project which has the following goals:

- Reduce nutrient pollution associated with five dairy farms in the watershed, concentrating on problems associated with barnyards and persistent herd use areas.
- Reduce sedimentation problems associated with Santo Domingo Creek through the construction of a storm water treatment facility consisting of pre- and post-sedimentation areas and a wetland treatment area.
- Reduce nutrient loads and thermal pollution from Mill Pond by restoring the pond to a wetland and constructing a defined stream channel to maintain flow in Lititz Run.
- Create a GIS database and mapping for managing natural resource information in the watershed.
- Provide education and public outreach to the community.
- Establish forested riparian corridors along 2 miles of Lititz Run and its headwater tributaries with the work occurring at several locations.

• **Lititz Run Watershed Permit Coordination**

The Lititz Run Watershed Alliance will be undertaking several projects which require permits/authorization from state and federal agencies. The Alliance has had a pre-application meeting with the appropriate regulatory agencies in an attempt to obtain an

umbrella permit from DEP/Corps of Engineers/Fish and Boat Commission for restoration activities.

Hammer Creek Pilot Project:

Hammer Creek is believed to be impacted by non-point source pollution. A pilot project will be conducted with the following goals:

- Identify current land uses and associated environmental impacts
- Install agricultural Best Management Practices at the Leon Good Farm.
- Conduct an education workshop.

RECOMMENDATIONS FOR CONSIDERATION IN THE REGIONAL STRATEGIC COMPREHENSIVE PLAN

The following is a summary of recommendations relative to natural resources and environmental features from the various reports and resources identified previously. The summary includes the reference source with page number reference, statement of the recommendation, the status of the recommendations and impacted natural resources/environmental features. It should be noted that the Lititz Borough and Warwick Township comprehensive plans also include numerous recommendations not related to natural and environmental features which are not included in this table.

Report/Study (page number)	Recommendation Statement	Status of the Recommendation	Natural Resource / Environmental Feature
Lititz Borough Comprehensive Plan (p. 25)	Residential Land Use - Not worsen flooding problems.	Modified Stormwater Management Ordinance	Floodplains
(p. 31-32)	Open Space - Develop a plan for the acquisition and development of strategically placed parks and open space, work closely with Warwick Township in determining needs and identifying sites.	Completed Borough Parks and Recreation Plan in 1995, no joint plan.	Open Space
Warwick Township Comprehensive Plan (p. 14)	Exclude development from sensitive soil conditions; adopt regulations to mitigate adverse impacts from development in areas with sensitive soil conditions.	Modified environmental regulations.	Soil Ground water Surface Water
(p. 20)	Minimize more intensive land uses that rely upon on-site sewage disposal systems or agricultural chemicals on the land area above all geological formations except the Cocalico Formation.	Modified environmental regulations.	Geology Ground water
	Thoroughly and routinely monitor drilling of domestic or public water supplies for contamination.	Modified regulations.	Ground water

Report/Study (page number)	Recommendation Statement	Status of the Recommendation	Natural Resource / Environmental Feature
Warwick Township Comprehensive Plan (p. 24)	Educate and encourage farmers to practice sound waste storage and application techniques.		Surface water Ground water
	Use zoning to prohibit higher density residential and intensive commercial or industrial uses in areas not served by public utilities.	Modified zoning ordinance.	Ground water
	Ensure that minimum lot sizes for dwellings that rely upon on-lot sewage disposal systems be large enough to assure adequate dilution of NO3-N laden effluent from one lot to the next (minimum of .75 acre)	Modified ordinances.	Ground water
(p. 27)	Incorporate planning measures that protect known ground-water recharge areas from land use activities that generate harmful pollutants.	Initiated well head protection project in addition to other watershed projects.	Ground water
	Protect ground-water areas known to have declining levels of volume and quality	Modified zoning ordinance, well head protection project in progress.	Ground water
	Strictly enforce the Township's Manure Management Ordinance to regulate the spreading of manure in sensitive land areas.	Superceded by State regulations.	Ground water Surface water
(p. 30)	Keep abreast of any regulatory options available to address manure management issues and encourage agricultural practices that conserve prime soils and reduce level of harmful contaminates that enter surface water.	Superceded by State regulations.	Soils Surface water
	Monitor future urban development so as to reduce pollutant loads resulting from urban runoff.	Superceded by State regulations.	Surface water
	Strictly enforce Township's floodplain zoning ordinance	Taken appropriate actions.	Floodplains
(p. 31)	Steer development activities away from wetlands.	Expanded wetlands and field verifications.	Wetlands
	Implement specific wetlands protective regulations.		
(p. 31)	Protect important wildlife habitats and woodland areas by preventing intensive development and/or engaging development review procedures aimed at conservation of these areas.	Limited activity – ordinances should be modified.	Wildlife habitat Woodlands

Report/Study (page number)	Recommendation Statement	Status of the Recommendation	Natural Resource / Environmental Feature
Warwick Township Community Environmental Review (p. 6)	Serve as regional model for balancing economic and ecological objectives at the local level.	No actions taken – to be studied in regional planning process.	Soils Surface water Ground water Geology Woodlands Floodplains
	Integrate Riparian Forest Buffers, Low Impact Development and Village Overlay District activities to ensure that multiple objectives of the Township are achieved.		
	Consider the multiple objective approach when preparing the Joint Strategic Plan.	No actions taken – to be studied in regional planning process.	Soils Surface water Ground water Geology Woodlands Floodplains Geology
	Increase forest cover; accomplish by requiring afforestation activities, strengthening landscaping requirements.	No actions taken – to be studied in regional planning process.	Woodlands
(p. 7)	Enhance stormwater management ordinances to address both peak volume control and water quality issues; require use of stormwater best management practices.	No actions taken – to be studied in regional planning process.	Surface water
	Modify roadway design standards to reduce road widths to reduce impervious surfaces.		
	Encourage PennDOT to modify its roadway standards.		
	Maintain public and private stormwater systems.		
(p. 8)	Create a comprehensive riparian forest buffer restoration and protection strategy.	No actions taken – to be studied in regional planning process.	Surface water Woodlands
(p. 9)	Define riparian forest buffer protection goals and objectives; write into local ordinances.	No actions taken – to be studied in regional planning process/ Lititz Run Watershed Plan provides relevant information	Surface water Woodlands

Report/Study (page number)	Recommendation Statement	Status of the Recommendation	Natural Resource / Environmental Feature
Warwick Township Community Environmental Review (p. 9)	Evaluate Lititz Run Watershed ecosystem functions and values.		Surface water Woodlands
	Consider the development of a Riparian Corridor Conservation District that restricts landowner's use of riparian corridor.		
	Encourage wider riparian buffer zones.		
Lititz Run Watershed Natural and Cultural Resource Atlas (p. 25)	Preserve working farms.	Modified zoning ordinance – reevaluation during the regional planning process.	Soil
	Continue implementation of conservation tillage and agricultural land stewardship technique activities.	Taken by individual farmers – education appropriate	Soil Ground water Surface water
	Continue to implement nutrient management.	Superseded by State regulations.	Ground water Surface water
	Continue to implement barnyard management techniques that improve water quality.		
	Continue to implement streambank fencing.	On-going process – inclusion in the regional planning process.	Surface water
	Continue to implement Integrated Pest Management.	Individual actions – education appropriate	Ground water Surface water
	Protect and create wildlife habitat.	No actions taken – to be studied in regional planning process.	Wildlife habitat
(p.26)	Allow variances in weed ordinances.	No actions taken – to be studied in regional planning process.	Wildlife habitat
	Continue to encourage schools to promote hands-on watershed education.	Education program - to be studied in regional planning process.	Ground water Surface water
	Educate public on financial and environmental costs associated with maintaining large areas of turf and lawn.		

Report/Study (page number)	Recommendation Statement	Status of the Recommendation	Natural Resource / Environmental Feature
Lititz Run Watershed Natural and Cultural Resource Atlas (p. 26)	Encourage multipurpose stormwater management facilities.	Actions taken - to be studied in regional planning process.	Ground water Surface water
	Provide the opportunity for decentralized stormwater management facilities.		
	Continue multi-municipal planning with strong emphasis on the watershed.		
	Promote stream-lined approval process.	Part of on-going study	
	Establish a stream corridor protection ordinance.	No actions taken – to be studied in regional planning process.	Surface water Woodlands Floodplains
	Continue to restore the stream, streambanks and adjacent floodplains.	On-going activity (see previous recommendation)	
	Encourage application of water quality improvement techniques for stormwater management facilities.	To be studied in regional planning process.	Surface water
	Replace large sections of lawn with meadows and native landscaping.	No actions taken – to be studied in regional planning process.	Surface water Ground water
	Discourage people from feeding ducks in Lititz Spring Park.	No actions taken – to be studied in regional planning process.	Surface water
	Continue reforestation efforts.	Limited ordinance- to be studied in regional planning process.	Woodlands
	Continue to restore wetlands.	Expanded wetlands and field verifications.	Wetlands
	Establish protective zoning or conservation easements for wildlife habitat areas.	No actions taken – to be studied in regional planning process.	Wildlife habitat
	Establish and implement wellhead protection guidelines.	On-going project.	Ground water
Develop open space plan and greenway plan.	Initiated projects – no overall plan.	Surface water	

Report/Study (page number)	Recommendation Statement	Status of the Recommendation	Natural Resource / Environmental Feature
	Integrate low maintenance and natural areas on perimeter of active recreation areas.	No actions taken – to be studied in regional planning process.	Natural resource protection
	Continue to incorporate areas for resting and nature observation in open space systems.	Initiated projects – no overall plan.	Natural resource protection
	Continue to promote educational signage.	Initiated projects – no overall plan.	Natural resource protection
	Inventory opportunities for natural resource restoration.	Begun as part of other projects	Natural resource protection

TRANSPORTATION SUMMARY

The effectiveness of a highway transportation system is dependent upon the ability of the highway network to provide mobility and access. Transportation within and through the Lititz/Warwick area is primarily dependent upon the motor vehicle. Walking and cycling are non-motorized forms of transportation that provide an alternate means of transport, although these activities frequently combine recreation with transportation. Walking and cycling generally are dependent upon some component of the highway network.

Mobility is essential to the current lifestyle, and significant changes to the need for mobility do not appear imminent. Movement of persons and goods is an essential part of rural, suburban, and urban lifestyles, and planning for the transportation infrastructure must meet future mobility needs.

The initial activity in the planning process for the transportation network is the development of a transportation background profile. This profile establishes the base conditions upon which transportation plans and programs are developed. The transportation background profiles include:

- A review of the functional classification of roadways to determine the role of the specific highway link in regional and municipal transportation,
- A review of safety and capacity deficiencies in the transportation system to determine specific areas of need,
- Development of a comprehensive list of transportation improvements currently being implemented or initiated,
- Development of a comprehensive list of transportation improvement projects that are proposed by long range transportation planning, and the identification of various transportation modes currently being used to determine existing intermodal relationships.

FUNCTIONAL CLASSIFICATION

Highways form a mobility network that branches and connects depending on adjacent land uses and topographic features. Physical features which affect mobility may include streams, ridges, valleys, or lakes. Hammer Creek and Cocalico Creek are two physical features that form municipal boundaries for Warwick Township and have an effect on the highway network.

Highways also provide access to adjacent land uses, including residential, agricultural, and commercial activities. Two factors utilized in the classification of roadways are mobility and access.

- Mobility is the ability to accomplish a trip safely and conveniently with minimal amounts of delay. A roadway link with a high level of design criteria, i.e., one with good horizontal and vertical alignment, desirable lane widths, wide shoulders and clear roadside areas, will provide good operating speeds and low travel times. Such desirable operating conditions are frequently referred to as good "levels of service."
- Access refers to the beginning point and ending point of a trip. The access points and traffic movements to and from the highway network should be located to minimize interference with traffic flows already on the highway system.

Specific network roadways vary in the degree to which they provide mobility and access. The functional classification of a roadway depends upon the particular role the roadway section has in

providing mobility or access. The basic roadway classifications designated in the current comprehensive plans for Lititz Borough and Warwick Township are:

- **Arterial** - this system consists of a network of routes providing for corridor movements that represent substantial statewide, interstate, or regional travel and movements between major urban areas. The arterial system contains the most heavily traveled routes including multi-lane roadways and freeways. This system provides links between developed areas and adjacent towns and cities. The system is designed for relatively high speeds with a minimum of interference to through traffic. Mobility is the principal function and access management is desirable to preserve highway capacity.
- **Major Collector** - this system serves primarily intra-county trips and represents those routes with shorter travel distances than arterial routes. These routes have more moderate travel speeds, serve the more important regional corridors, and link with the arterial system.
- **Minor Collector** - this system accumulates traffic from the local roads and brings all developed areas within reasonable distance of collector roads. Minor collector routes are spaced at intervals consistent with population density providing service to small communities and linking locally important generators with the surrounding land uses.
- **Local Road** - the local road system, in comparison to collectors and arterial systems, primarily provides access to land adjacent to the collector network and serves travel over relatively short distances. Travel speeds are generally low and interactions with vehicles entering or exiting the highway network are expected. The local road system constitutes all roads not classified as arterials or collector roadways.

A map showing the functional classification network in Lititz Borough and Warwick Township is provided in Map 4-1. The functional classification of roadways within Lititz Borough and Warwick Township, as established by current comprehensive plans, is shown in Tables 4-1 and 4-2.

A review of the classification network indicates some areas where a common roadway has different classifications in the Borough and Township. Woodcrest Avenue within Lititz Borough is an arterial roadway, but is classified as a minor collector in Warwick Township. Owl Hill Road is a major collector in the Borough while it is a minor collector in the Township. West Lincoln Avenue and West Orange Street are classified as arterial streets in Lititz Borough but are major collector routes in Warwick Township.

**TABLE 4-1 - ROADWAY FUNCTIONAL CLASSIFICATION
WARWICK TOWNSHIP**

ARTERIAL

- Lititz Pike - Manheim Township to Lititz Borough
- Furnace Hills Pike - Lititz Borough to Elizabeth Township
- Oregon Pike - Manheim Township to West Earl Township
- US Route 222 - Manheim Township to West Earl Township
- Rothsville Road - Lititz Borough to Newport Road
- Main Street (Rothsville) - Rothsville Road to Newport Road
- Newport Road - Main Street (Rothsville) to West Earl Township
- Rothsville Road - Main Street (Rothsville) to Ephrata Township

TABLE 4-1 (continued)

MAJOR COLLECTOR

- Brunnerville Road - Lititz Borough to Elizabeth Township
- West Lincoln Avenue - Lititz Borough to Penn Township
- Orange Street - Lititz Borough to Penn Township
- Clay Road - Rothsville Road to Clay Township
- Newport Road - Rothsville Road to Elizabeth Township

MINOR COLLECTOR

- Lexington Road - Elizabeth Township to Brunnerville Road
- Woodcrest Avenue - Lititz Borough to Erbs Quarry Road
- Owl Hill Road - Lititz Pike to Lititz Borough
- Owl Hill Road - Lititz Borough to Millport Road
- Becker Road - Manheim Township to Disston View Drive
- Creek Road - Millport Road to Manheim Township
- Disston View Drive - Becker Road to West Earl Township
- Millport Road - Owl Hill Road to Becker Road
- Lincoln Road - Brunnerville Road to Clay Road

**TABLE 4-2 - ROADWAY FUNCTIONAL CLASSIFICATION
LITITZ BOROUGH**

ARTERIAL

- Broad Street - Borough Line to Borough Line
- West Orange Street - Broad Street to Borough Line
- East Main Street - Broad Street to Borough Line
- West Lincoln Avenue - Broad Street to Borough Line
- Second Avenue - Broad Street to Woodcrest Avenue
- Woodcrest Avenue - Second Avenue to Borough Line

MAJOR COLLECTOR

- Owl Hill Road - Borough Line to Borough Line
- East Sixth Street - Broad Street to Kissel Hill Road
- West Sixth Street - Broad Street to Woodcrest Avenue
- West Second Avenue - Woodcrest Avenue to Orange Street
- East Second Avenue - Broad Street to Kissel Hill Road
- South Oak Street - Kissel Hill Road to Main Street
- North Oak Street - Main Street to Borough Line
- South Cedar Street - Main Street to Owl Hill Road
- North Cedar Street - Main Street to Water Street
- South Locust Street - Sixth Street to Main Street

TABLE 4-2 (continued)

MAJOR COLLECTOR

- North Locust Street - Main Street to Water Street

MINOR COLLECTOR

- Kissel Hill Road - Owl Hill Road to South Locust Street
- West Seventh Street - Broad Street to Spruce Street
- South Spruce Street - Main Street to Seventh Avenue
- West Main Street - Broad Street to Spruce Street
- East Lincoln Avenue - Broad Street to Cedar Street
- Front Street - Broad Street to Oak Street
- Water Street - Main Street to Locust Street

ROADWAY DEFICIENCIES

Traffic Accidents:

Traffic accident data for Lititz Borough and Warwick Township was obtained from the PennDOT Bureau of Highway Safety and Traffic Engineering. The Bureau's Center for Highway Safety Accident Record System provided a listing of all reportable accidents that occurred in the Borough and Township from January 1, 1992 through December 31, 1997.

The objectives in evaluating traffic accident data are to define areas with high accident rates, to define the frequency of occurrence of certain accident types, and to develop remedial treatments to reduce accident frequency through the implementation of roadway or traffic control improvements. Each section of the highway network within Lititz Borough and Warwick Township, was reviewed to determine the number of accidents occurring within that section during the 1992 through 1997 time period. Map 4-2 provides a summary of the high frequency traffic accident locations within the Borough and Township. Tables 4-3 and 4-4 provide a summary of the high accident frequency locations.

Warwick Township has completed a major update of the intersection of Furnace Hill Road and Newport, as well as Newport Road from Furnace Hill Road to Brunnerville Road. A review of the accident data for these locations indicates a reduction in accident rate in 1996 and 1997 following the 1995 completion of the roadway and traffic control improvements. These locations appear in the accident summary listings primarily as a result of the accidents which occurred prior to completion of the improvement projects.

The traffic accident data for reportable accidents obtained from PennDOT was compared with municipal accident data. The following additional intersection locations consistently appeared in the municipal reports:

- Broad Street and Lincoln Avenue
- Broad Street and Main Street
- Main Street and Oak Street
- Main Street and Locust Street
- Water Street and Front Street
- Broad Street and Sixth Street

- Main Street (Rothsville Road) and Twinbrook Drive
- Rothsville Road and Heck Road

**TABLE 4-3 - 1992 - 1997 ACCIDENT SUMMARY
LITITZ BOROUGH**

LOCATION	TOTAL REPORTED ACCIDENTS
Second Street and Broad Street	30
Orange Street and Broad Street	16
Second Street, Spruce Street, and Woodcrest Avenue	14
Main Street and Cedar Street	13
Front Street and Water Street	9
Broad Street and Lemon Street	8
Broad Street and Sixth Street	7
Orange Street and Spruce Street	7
Main Street and Oak Street	7
Main Street and Broad Street	6
Second Street and Orange Street	6
Broad Street and Lincoln Avenue	6
Broad Street: Sixth Street to Borough Line	16
Broad Street: Orange Street to Main Street	13
Broad Street: Sixth Street to Second Street	9
Broad Street: Second Street to Orange Street	8

**TABLE 4-4 - 1992 - 1997 ACCIDENT SUMMARY
WARWICK TOWNSHIP**

LOCATION	TOTAL REPORTED ACCIDENTS
Furnace Hill Road and Newport Road	27
Newport Road and Clay Road	23
Newport Road and Brunnerville Road	15
Lititz Pike and Millport Road	12
Lititz Pike and Owl Hill Road	10

TABLE 4-4 (continued)

LOCATION	TOTAL REPORTED ACCIDENTS
Newport Road and Lexington Road	9
Owl Hill Road and Landis Valley Road	9
Rothsville Road and Pierson Road	7
Newport Road and Skyview Road	7
Brunnerville Road, Lexington Road, and Pine Hill Road	7
Furnace Hill Road and Copperfield Circle	6
Lititz Pike and Woods Drive	6
Rothsville Road and Warwick Road	6
Newport Road: Brunnerville Road to Clay Road	19
Newport Road: Clay Road to Rothsville Road	18
Newport Road: Furnace Hill Road to Brunnerville Road	15
Woodcrest Avenue: West Woods Drive to Erbs Quarry Road	12
Brunnerville Road: Newport Road to Pine Hill Road	12
Rothsville Road: Clay Road to Newport Road	10
Lititz Pike: Manheim Township Line to Landis Valley Road	10
Owl Hill Road: Kissel Hill Road to Millport Road	7
Clay Road: Newport Road to Lincoln Road	7
Newport Road: Furnace Hill Road to Lexington Road	6

Traffic Volumes/Capacity Deficiencies:

Traffic volume data has been compiled for the roadway network in Lititz Borough and Warwick Township. Current traffic volume estimates were obtained from the Department of Transportation and count data was compiled from Municipal Development project files.

Traffic volume data for current Annual Average Daily Traffic (AADT) volumes was compared with similar information provided in the recent PA 72/PA 501 Corridor Traffic Study. The current traffic volumes are generally within the volume levels observed and projected for the major roadways within the PA 72 and PA 501 corridor area. It appears, however, that there are some locations, primarily along the PA Route 501 corridor, which have higher volumes than previously anticipated. These variations appear to be the result of localized development. Such locations include Furnace Hill Road from Lititz Borough to Newport Road, Broad Street between Main Street and Lincoln Avenue, and Broad Street/Lititz Pike south of Lititz Borough.

Highway capacity is a measure of a roadway facility's ability to accommodate existing and anticipated traffic volumes. When traffic volume demands exceed the ability of the roadway to provide desirable operating conditions, a capacity deficiency occurs. Lititz Borough and Warwick Township have monitored locations with capacity deficiencies, and have implemented traffic

control and roadway improvements to mitigate observed capacity deficiencies. As traffic volumes increase along the PA Route 501 and PA Route 772 corridors, additional capacity deficiencies will become apparent and will require additional system improvements. Highway capacity on other significant area roadways such as Newport Road, Brunnerville Road, Lincoln Avenue, Second Avenue, Sixth Street, and Woodcrest Avenue, will be affected by future land use decisions and development. Traffic impact analyses conducted in conjunction with future development projects, will provide roadway and traffic control recommendations to mitigate future traffic demands and provide adequate roadway capacity.

Compiled traffic volume data is summarized with current annual average daily traffic volumes on Map 4-1.

TRANSPORTATION IMPROVEMENT PROJECTS

The Lititz/Warwick area has received considerable attention in conjunction with recent traffic studies and planning efforts. A significant corridor traffic study was conducted in 1996 for the PA Route 72/PA Route 501 corridors. Also the Long-Range Transportation Plan developed as part of the Lancaster County Comprehensive Plan (1998), includes many improvement projects for Lititz Borough and Warwick Township. The municipalities have also undertaken the development of roadway improvement plans to assure future funding for roadway maintenance and improvement projects. A list of anticipated improvement projects is provided in Table 4-5. Map 4-3 shows the anticipated transportation system improvement locations.

Lancaster County Comprehensive Plan

Lancaster County has developed a Long-Range Transportation Plan in conjunction with the County's Comprehensive Plan. The Transportation Plan was adopted March 25, 1998 by the Board of County Commissioners. This planning document provides a comprehensive listing of recommended transportation projects for the 1997-2017 planning period. Transportation projects included in the long-range plan include committed, non-committed, and unfunded transportation improvements. Committed projects are currently on the County's Transportation Improvement Program (TIP) and 12-year program, and have identified funding sources. Non-committed and unfunded improvement projects must be added to these two funding documents in future years in order to be implemented.

PA Route 501/PA Route 72 Corridor Study

A corridor study was prepared for the Lancaster County Planning Commission in December 1996 to evaluate future transportation needs and land use along the PA Route 501 and PA Route 72 corridors north of Lancaster City. The study provides detailed recommendations relative to transportation improvement measures which will provide relief for future anticipated traffic volumes along the PA Route 501 and PA Route 72 corridors. Specific report recommendations relating to Lititz Borough and Warwick Township are included in the list of anticipated improvement projects in Table 4-5.

Municipal Capital Improvement Projects

Both Lititz Borough and Warwick Township have ongoing procedures for identifying transportation needs, planning for project funding, and implementation of recommended improvements. Numerous roadway improvement projects have been completed by both municipalities through cooperation with PennDOT, the County, and the private sector in conjunction with development projects. Both municipalities require traffic impact studies to identify future transportation needs resulting from proposed land development plans. Transportation improvement projects identified by the municipalities, are included in the list of anticipated improvement projects in Table 4-5.

**Table 4-5 - TRANSPORTATION IMPROVEMENT PROJECTS
LITITZ BOROUGH AND WARWICK TOWNSHIP**

PROJECT NUMBER	DESCRIPTION	SOURCE	STATUS
1	East Lincoln Avenue - replace bridge over Santo Domingo Creek	County Long-Range Transportation Plan	Funds Committed 1st 4-yrs of 12-year Program
2	West Orange Street - reconstruct from Broad Street to Borough Line	County Long-Range Transportation Plan	Non-committed Funding
3	North Cedar Street - replace bridge over Santo Domingo Creek	County Long-Range Transportation Plan	Non-committed Funding 3rd 4-yrs of 12-year Program
4	West Lincoln Avenue - reroute PA Route 772	County Long-Range Transportation Plan	Non-committed Funding
5	Second Avenue, Oak Street, and Kissel Hill Road - intersection improvement	County Long-Range Transportation Plan	Non-committed Funding
6	Kissel Hill Road, Locust Street, and Forney Drive - intersection improvement	County Long-Range Transportation Plan	Non-committed Funding
7	Second Avenue, Spruce Street, and Woodcrest Avenue - intersection improvement	County Long-Range Transportation Plan	Non-committed Funding
8	West Sixth Street - construct from Woodcrest Avenue to Orange Street	PA Routes 72/501 Corridor Study	Non-committed Funding
9	Limerock Road - develop corridor from Orange Street to Lincoln Avenue	PA Route 72/501 Corridor Study	Non-committed Funding
10	Limerock Road - develop corridor from Lincoln Avenue to Newport Road	PA Route 72/501 Corridor Study	Non-committed Funding Ag zone - new corridor unlikely
11	Lititz Pike - provide center turn lane, West Woods Drive to Owl Hill Road	County Long-Range Transportation Plan	Non-committed Funding
12	Furnace Hill Road - provide center turn lane, Borough Line to Newport Road	County Long-Range Transportation Plan	Non-committed Funding
13	Spruce Street - construct from Sixth Street to Seventh Street	Borough	Private/Public Borough Project
14	Owl Hill Road and Landis Valley Road - intersection improvements	Township	Township 5-YR Capital Project

Table 4-5 (continued)

15	Brunnerville Road - replace bridge over Hammer Creek	Township	Township 5-YR Capital Project
16	Millport Road - replace bridge over Lititz Run	Township	Township 5-YR Capital Project
17	Woodcrest Avenue and Millport Road - intersection improvements	Township	Township 5-YR Capital Project Private/Public Township Project
18	Creek Road and Millport Road - intersection improvements	Township	Township 5-YR Capital Project
19	Newport Road and Clay Road - intersection improvements	Township	Township 5-YR Capital Project 1999 Completion
20	Kissel Hill Road and Owl Hill Road - intersection improvements	Township	Township 5-YR Capital Project
21	Woods Drive and Kissel Hill Road - intersection improvements	Township	Township 5-YR Capital Project
22	Lititz Pike and Owl Hill Road - intersection improvements	Township	Township 5-YR Capital Project Private/Public Township Project 1999 Completion
23	Lititz Pike and Millport Road - intersection improvements; Millport Road Improvements	Township	Township 5-YR Capital Project Private/Public Township Project 1999-2001 Completion
24	Newport Road and Rothsville Station Road - intersection improvements	Township	Township 5-YR Capital Project
25	West Newport Road and Lexington Road - intersection improvements	Township	Township 5-YR Capital Project
26	Rothsville Road (SR 772) and Heck Road - intersection improvements	Township	Township 5-YR Capital Project
27	Rothsville Road (SR 772) and Warwick Road - intersection improvements	Township	Township 5-YR Capital Project
28	Main Street (Rothsville Road) and Twinbrook Road - intersection improvements	Township	Township 5-YR Capital Project

Table 4-5 (continued)

29	<p>General Improvements:</p> <ul style="list-style-type: none"> a) S. Broad Street - improvements at major intersections b) Develop pedestrian facilities c) Develop bikeways d) Develop recreational trails e) Roadway maintenance f) Snow/ice removal g) Guide rail improvements h) Access Management Plan for major corridors 	County Long-Range Transportation Plan	Committed and Non-committed Funding
30	<p>General Improvements:</p> <ul style="list-style-type: none"> a) West Lincoln Avenue - shoulder improvements and left turn lane b) West Orange Street - shoulder improvements and left turn lane 	PA Route 72/501 Corridor Study	Non-committed Funding
31	Trolley Run Road - develop north/south corridor west of Lititz Pike in conjunction with Warwick Town Center Development	Township	Private/Public Project

TRANSPORTATION MODES

Public Transportation Services

The Lititz Area and the PA Route 501 corridor has public transportation services provided by Red Rose Transit. The available bus routes provide for adequate public transportation connections between Lititz Borough and the Lancaster Metropolitan Area.

Non-Motorized Transportation

The Township and Borough have been working together to develop a system of walking and bike trails in conjunction with development projects and roadway improvement projects. Planning has also been undertaken for a Rails to Trails project along an existing railroad corridor east of Lititz Borough. Trail and walkway connections are planned to link park areas, school facilities, the future library, etc. (Shown on proposed Township Official Map). Consideration has also been given to buggy routes in conjunction with the Rails to Trails project.

Park and Ride

The County's Long Range Transportation Plan and the PA Route 501/PA Route 72 corridor study both identify the need for a Park and Ride facility along PA Route 501 south of Lititz Borough. Such a facility would provide alternatives for travel to the Lancaster Metropolitan Area and would encourage car pooling from areas within Lititz Borough, Warwick Township, and municipalities to the north along the PA Route 501 corridor.

Parking Lots and On-Street Parking

For the Downtown area parking plays a key economic development role. Parking provides a vital link between the transportation system and the commercial, public and non-profit enterprises in the Downtown. In urban areas, where land is at a premium, parking is a more critical issue than in less urbanized areas, where land is available to accommodate parking on-site. The focus of most discussions of parking in the urban setting is the number / availability of parking spaces and the location of parking. Map 4-4 indicates the location of parking lots in the Downtown area. The following is a list of parking lots identified on Map 4-4 and the number of parking spaces associated with each lot.

PARKING LOT ID NUMBER	NUMBER OF SPACES
1	33
2	46
3	54
4	232
5	15
6	35
7	78
8	29
9	8
10	109
11	29
12	19
13	29
14	5
15	41
16	10
17	20
18	18
19	92

These 19 lots provide a total of 902 parking spaces. On-street metered parking is provided along Main Street, Cedar Street and Broad Street. Approximately 175 metered parking spaces are located in the Downtown area.

WASTEWATER AND WATER UTILITIES SUMMARY

The two major utilities in the region are public wastewater and water facilities. The utilities represent a major effort in regional cooperation. The existing and projected capacity of these systems have been the subject of several studies and on-going monitoring by the respective municipal authorities. The findings and recommendations of these efforts are highlighted in the utilities summary.

PUBLIC WASTEWATER UTILITIES

The Lititz Wastewater Treatment Plant, which serves Lititz Borough and Warwick Township, is located in the Borough of Lititz. Public wastewater facilities in Lititz Borough are owned and operated by the Lititz Sewer Authority. Public wastewater facilities in Warwick Township are owned and operated by the Warwick Township Municipal Authority.

The treatment plant has a permitted hydraulic capacity of 3,500,000 gallons per day (gpd). Following additional study and some improvements made to the treatment plant, the capacity may be successfully rerated for 3,850,000 gpd. The Warwick Township Municipal Authority owns an average daily flow reserve capacity of 1,300,000 gpd, with the remainder of the capacity held by the Lititz Sewer Authority.

Projected Wastewater System Customers:

Impact on Treatment Facilities

Nearly all of the Lititz Borough population is served by the public sewer system. Soil types in the undeveloped areas of the Borough may not be suitable for individual on lot sewage disposal systems (OLDS); therefore, it is anticipated that any significant development will occur where access to the public sewer system is feasible. The Comprehensive Plan for the Borough projected a year 2010 sewered population of 12,000, an increase of approximately 3,000, with an associated projected total hydraulic capacity requirement in the public facilities of 2,006,301 gpd. The projected capacity requirement does not suggest that the Borough will realize a capacity deficiency during the next ten years, but it does suggest that after ten years there may be no additional capacity available for further new development. However, as part of the planning process the population projections were reevaluated and determined to be high relative to the remaining development potential. A more realistic projection is 9,940 persons (see the Demographic and Existing Land Use and Housing Summaries).

Where Lititz Borough has relatively less available land for future new residential development, Warwick Township has an abundant resource in available land. Uncontrolled development could conceivably cause for the public wastewater facilities to become overloaded.

The average daily flow from Warwick Township Municipal Authority's customers to the public wastewater facilities for 1997 was 795,000 gpd, which is approximately 61% of the Township's allocated capacity. The Authority's reservation program also includes 722 equivalent dwelling units (EDUs) scheduled for connection. A recent study conducted for the Warwick Township Municipal Authority ("Comprehensive Sewer Study" March 1998) projected that wastewater flow from the existing and scheduled connections total 975,500 gpd. The Warwick Township Comprehensive Plan had projected that the Township capacity requirement would be 992,000 gpd by the year 2010, which is not significantly greater than the current flows "on the books" not considering future new development. It appears that development has occurred more rapidly than envisioned approximately ten years ago (see demographic and land use summaries).

The 1998 Comprehensive Sewer Study bases sewered residential population projections on the current zoning and unit densities contained in the Warwick Township Zoning Ordinance and considers implementation of Urban Growth Boundaries. An appropriate allowance was applied to

the total area to account for nondevelopable area (such as roadways); nondevelopable area due to physical constraints was likewise dismissed. Applying an allowance for nonresidential flows in appropriately zoned areas and using the past building permit history as a basis for the timing of new connections, the Study projects the wastewater flow capacity needs to be:

<u>Year</u>	<u>Flow (gpd)</u>
2000	983,750
2002	1,119,750
2007	1,448,750
2012	1,653,750
Ultimate buildout	2,268,775

The Warwick Township Municipal Authority has an allocated flow capacity of 1,300,000 gpd. Even with a successful rerating of the treatment plant to an increased flow capacity as currently underway, the total available capacity for Warwick customers would only be approximately 1,430,000 gpd which still falls short of the projected capacity needs. It is obvious that if new development within the Township's existing public sewer area continues at the currently recorded rate, available capacity at the Lititz Wastewater Treatment Plant for customers in the Township will increasingly become limited and will not exist in five to ten years.

No excess capacity currently is allocated to Lititz customers which can be made available to Warwick customers. Should the buildout occur as projected, additional public sewer facilities would be needed to accommodate sewered customers in Warwick Township. It appears there are three options to be reviewed as the Comprehensive Plan evolves: 1) increase capacity of the Lititz Wastewater Treatment Plant; 2) construct a new wastewater treatment plant to serve selected areas of the Township; and 3) pattern new development such that a burden on the public sewer system is not realized.

Impact on Collection and Conveyance Facilities

The 1998 Comprehensive Sewer Study evaluated the impact on pumping stations and associated force mains resulting from increased sewer connections within each Township station's service area. If new construction were to occur as projected, nearly all of the stations will require an increase in capacity within the next ten years. Recognizing this, the Warwick Township Municipal Authority has developed a computer program which will assist the Authority in assessing the impact of proposed new development on each of the stations. This tool can be used to locate new development in areas which will be less affected by increased wastewater flows.

A similar capacity analysis was conducted for the collector lines and interceptors. The analysis showed that the collection and conveyance pipeline system has adequate capacity for the projected flows. However, it is recognized that with new development, new or upgraded pumping stations may be proposed. The ability of the collection lines to accommodate the peak flows from the pumping activity will need to be reevaluated to ensure that available capacities are not exceeded.

A Word About Infiltration and Inflow:

The existence and quantity of extraneous water entering the public sewer system, known as infiltration and/or inflow (I/I), is monitored by periodically calculating the amount of flow contributed per EDU. At this time the flow figures do not suggest a large I/I problem for the system. The ongoing monitoring will continue and should a potential problem arise, additional flow monitoring and other inspections may take place to isolate the source(s). Keeping the I/I in check ensures that capacity will be available for future connections to the public system.

PUBLIC WATER UTILITIES

Two separate public water supply systems are within the planning area. The Lititz Borough system provides water to Borough customers and to the Warwick Township Municipal Authority for areas within the Township contiguous to the Borough. The Warwick Township Municipal Authority owns and operates the public water supply system which serves the Village of Rothsville area.

Lititz Borough Public Water Supply System:

This system comprises six groundwater wells located in two areas of the Borough. The safe yield of the entire system as recorded in the Lancaster County Water Resources Plan is approximately 2,474,700 gpd. The County Plan lists the population served by this system numbering approximately 8,100. The water supply is treated by nitrate reduction, filtration, and chlorination. A single storage tank located within the Borough provides system storage. Three water pressure booster stations serve customers.

An intermunicipal agreement between the Warwick Township Municipal Authority and the Borough allows the Township customers to use up to 700,000 gpd. This agreement expires in the year 2005. The current total average daily demand is approximately 1,025,000 gpd, with Township customers consuming approximately 365,000 gpd of this total.

Rothsville Area Public Water Supply System:

The system's source is a single well with a DEP permitted capacity of 200,000 gpd. Although the well is officially permitted for 200,000 gpd, the original pump test suggests that a withdrawal rate of 500 gallons per minute (gpm), or 720,000 gpd can be accomplished. The well water is chlorinated and undergoes nitrate reduction prior to release to the public water supply system. System storage totals 880,000 gallons. The locations and height of the storage tanks are such to maintain adequate pressures throughout the system. In 1997, the well pump averaged 12-13 hours per day of operation for a total average supply of 165,000 gpd.

Projected Water Supply System Customers:

Impact on Supply Facilities

As the 1998 Comprehensive Sewer Study bases sewered residential population projections on the current zoning and unit densities contained in the Warwick Township Zoning Ordinance and considers implementation of Urban Growth Boundaries, likewise does the 1997 Comprehensive Water Study base its projections. Again, the past building permit history was used as a basis for the timing of new connections.

Lititz Borough Public Water Supply System

A year 2010 Borough population of 12,000 served by the public water supply system is used to estimate projected water demands. A daily water consumption of 85 gallons per day per person thereby indicates a Borough customer water supply need of 1,020,000 gpd. Noting again, the safe yield of the Lititz system is approximately 2,500,000 gpd, with 700,000 gpd allocated to Township customers. Again, it is assumed the original population projections utilized by the study are high relative to current trends and expected development potential at build out.

The 1997 Study projects the Township water supply needs to be:

<u>Year</u>	<u>Consumption (gpd)</u>
2000	511,500
2002	678,100
2007	922,450
2012	1,134,850
Ultimate buildout	1,661,125

These numbers indicate a more rapid increase in public water system connections than indicated in previous plans; however, again these numbers may be high in light of a more realistic population projection.

With only 700,000 gpd allocated to Township customers, it is clear that sufficient water supply capacity is not available for the next five years at the projected rate of growth in the Township. However, using a projected Borough customer need of 1,020,000 gpd, the total combined need would be approximately 2,680,000 gpd, which does not greatly exceed the available supply capacity and might be even more favorable given current Borough growth trends and population projections. It appears there are three options to be reviewed as the Comprehensive Plan evolves: 1) continued bulk water purchase from the Borough with the renegotiation of the intermunicipal agreement prior its expiration in year 2005; 2) construct new water supply facilities to serve select areas of the Township; and 3) pattern new development such that a burden on the public water system is not realized.

Rothsville Area Public Water Supply System

The 1997 Study projects the Township water supply needs to be:

<u>Year</u>	<u>Consumption (gpd)</u>
2000	192,325
2002	215,500
2007	228,550
2012	295,375
Ultimate buildout	380,200

These numbers indicate a more rapid increase in public water system connections than indicated in previous plans.

The current well supply rating is 200,000 gpd. With the current pump capacity, the useful life of the well based on available capacity, as it is currently operated, is approximately three years. However, it was noted that based on past pumping tests the well could produce more than currently permitted. A second drilled well would certainly increase the water supply system's capacity, flexibility, and reliability and therefore this was the recommendation of the 1997 Comprehensive Study.

The Comprehensive Study briefly discussed construction of an interconnection between the Lititz system and the Rothsville system. Because of the cost of this endeavor, this option was not recommended. However, it is noted here that future development could be directed such that a future interconnection between both systems would be feasible.

Impact on Collection and Conveyance Facilities

The distribution networks for the public water supply systems was computer modelled and reported in the Warwick Township Municipal Authority's 1997 Comprehensive Water Study. And

the system storage capabilities to provide equalizing flow, fire flow needs, and emergency reserves were studied. The impact of the projected water demands was reviewed:

For the Lititz system, the Lancaster County Water Resources Study had determined that the Lititz system will be storage deficient by the year 2010 at an average water supply rate of 1,800,000. An additional storage tank, located in the Township, is recommended.

Computer modelling of the Lititz system, which included limited information from the Borough's system, indicated no major water supply problems. The use of eight inch pipeline is required for all new construction.

For the Rothsville system, computer modelling indicated that the use of six inch water main could pose a potential supply problem. Therefore, the Authority now requires a minimum of eight inch diameter water piping for new construction. The evaluation of storage requirements concluded that this system has sufficient storage to meet future needs.

It is also noted here that Wellhead Protection Programs have been initiated in the region. These programs will help to protect the water systems. A Wellhead Protection Program is developed to protect groundwater supplies and their recharge areas from man induced contaminants. These programs identify potential sources of contamination and establish remedial actions in the event of an accidental contaminant release. Typically a wellhead protection "zone" is delineated and activities (including agricultural, residential, and commercial) are monitored and/or regulated to ensure a safe supply of water.

COMMUNITY SERVICES AND FACILITIES SUMMARY

A major emphasis of the Lititz-Warwick regional planning effort is to enhance and/or create new arenas for cooperation between the two communities. Inroads to multi-municipal cooperation (regionalism) in Pennsylvania (a state noted for its governmental fragmentation) have come in the form of informal and formal agreements between municipal service providers. The Lititz-Warwick region has a long history with these mutual aid agreements. The well-being of the region is dependent on this cooperation.

The purpose of the community services and facilities summary is to describe the function, responsibility and levels-of-service of these providers; to highlight current levels of cooperation in the regional setting; and to expose differences in operations and organization. The background summary will form the foundation for the discussion of future cooperative efforts between the two communities and their service providers. The summary considers the following services: administrative; public works; emergency services (i.e., police, fire, ambulance and emergency management); recreation, including the community center; education and library. Summary information is a result of formal interviews with the top administrator in each organization.

The plan recognizes other service agencies are very active in the region, including but not limited to social service, health care, and historic preservation agencies (discussed in land use and housing summary), and fraternal and social organizations. These agencies and organizations are important contributors to the life and vitality of the community; however, operate outside the auspices of the local government. It is the expectation that representatives of these organizations will be involved in helping to develop the regional strategic comprehensive plan and will pursue complementary endeavors and programs as a result of their participation.

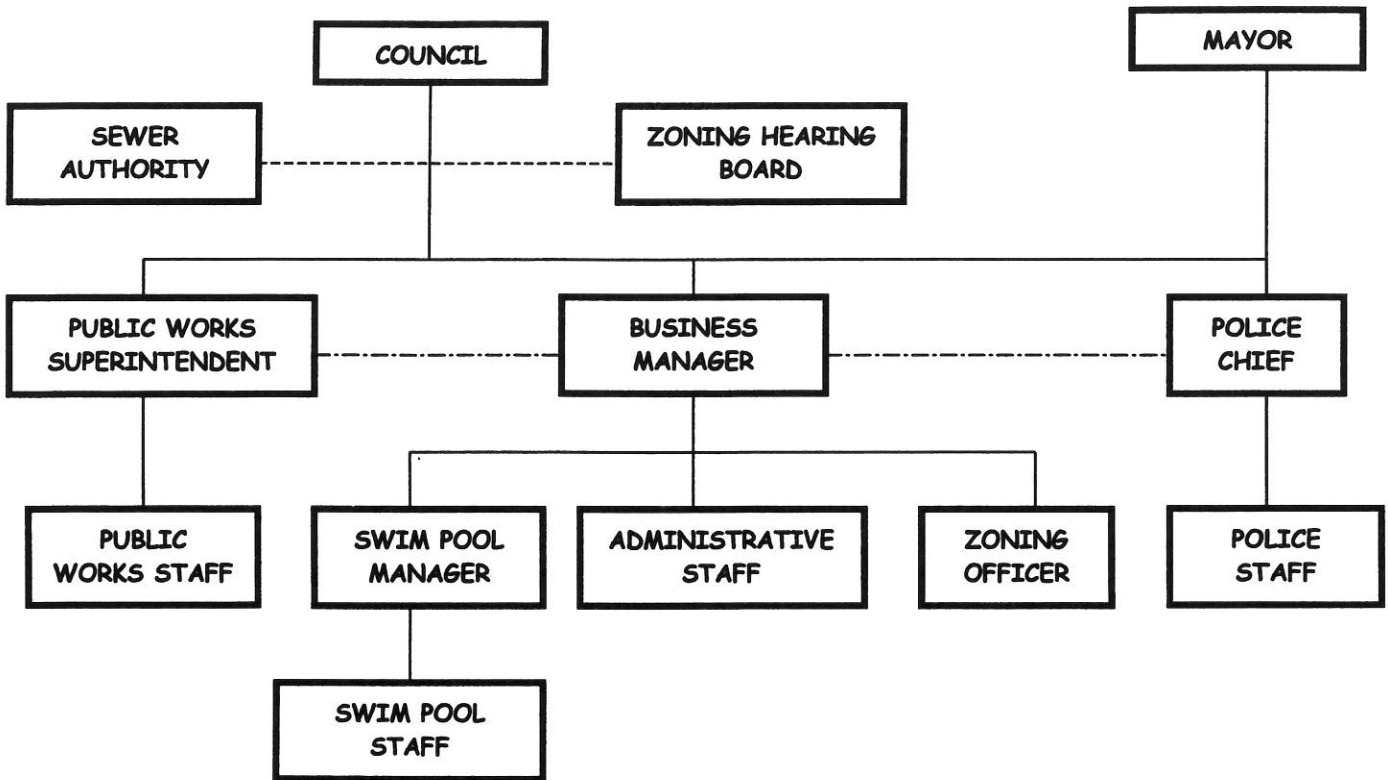
ADMINISTRATIVE SERVICES

Administrative services expand and develop in response to public demands for services and infrastructure and to the need to manage these community services and systems. The character of the community impacts the methods chosen for this management function. Lititz Borough and Warwick Township, separately, represent very different community characteristics. The Borough exemplifies an urban center of population and commerce with a strong connection to the historic, man-made environment. The Township typifies a rural-agriculture community with a strong connection to the natural environment quickly transforming into a late 20th Century suburb. The rapid growth and development of the Township requires a quick-response, proactive approach. The emphasis of the Borough is to preserve the man-made environment compared to the emphasis in the Township to protect the natural environment. The challenge for the region is to safeguard the combined diversity of the two communities.

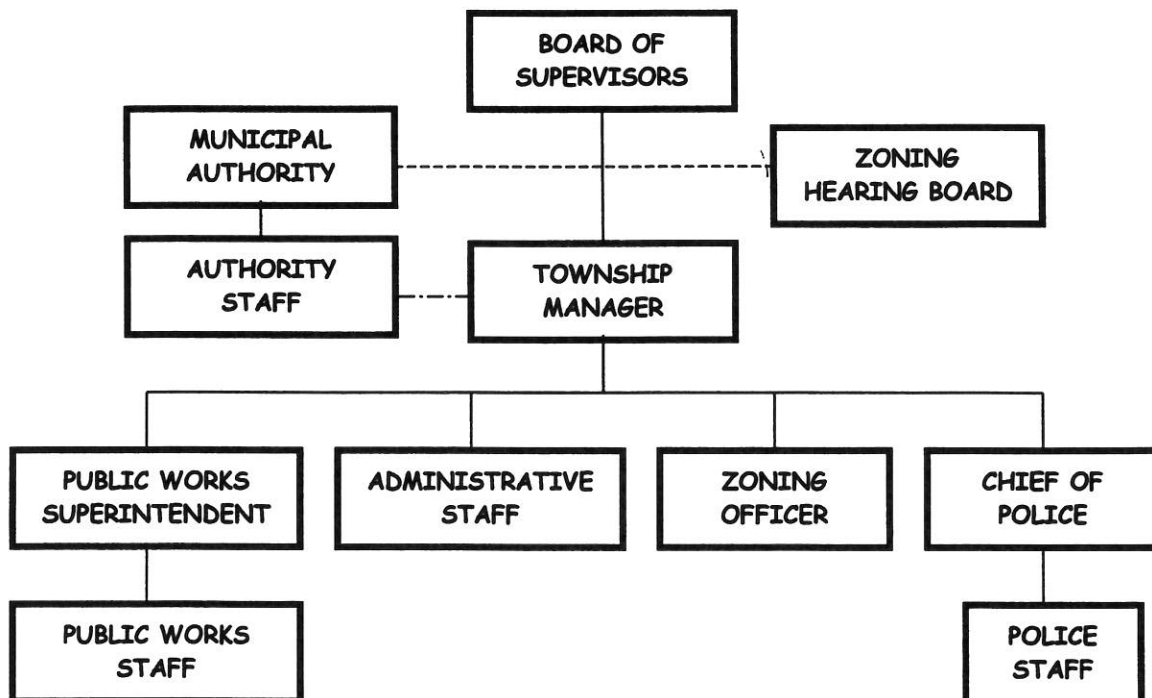
Organizational Structure:

The organization flowchart for each municipality is provided on Charts 6-1 and 6-2. The similarities and differences in the structure impact the flow of communications and cooperation between the two municipalities. Similarities in functions should enhance the flow of communications and cooperation whereas differences may represent impediments or obstacles.

**CHART 6-1
BOROUGH OF LITITZ – ORGANIZATION CHART**



**CHART 6-2
WARWICK TOWNSHIP ORGANIZATION CHART**



6-2

<p>----- Appointed by governing body, operates independently</p> <p>- - - - Interdepartmental coordination</p>
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Similarities

The organizational similarities include:

- The appointment by the governing bodies of an independent, quasi-judicial zoning hearing board to administer the zoning ordinance.
- The appointment of independent, incorporated utility authorities (Lititz Borough Sewer Authority and Warwick Municipal Authority) to establish policy for the operation of the public utility.
- The operation of three departments or offices: administrative, public works and police. Each department includes a similar management hierarchy; that is, public works superintendent, municipal manager, and police chief (the public works departments and the police departments are discussed in detail in a separate section of the summary). Each municipality maintains a small administrative staff for reception, clerical (bookkeeping) and secretarial services.
- An appointed municipal manager to direct the day-to-day business activities of the municipality. Similar responsibilities include administrative and financial management and supervision. Both managers supervise the zoning officer, serve as secretaries to the governing body and liaison's to appointed, professional advisors and citizen-voluntary committees.
- The zoning officer responsibilities. In each municipality, the zoning officer is the enforcement officer for the zoning ordinance and works closely with the zoning hearing board.
- The utilization of the requirements of the Pennsylvania Municipalities Planning Code (MPC, Act 247as amended) as the basis for planning and land use regulations. Planning for all communities in Pennsylvania, with the exception of the City and County of Philadelphia and the City of Pittsburgh, is enabled by the MPC, bringing uniformity to municipalities.

Differences:

The organizational differences include:

- The form of government. The Borough operates under a Council – Mayor system, which follows the Borough Code. The Township operates with a Board of Supervisors and follows the second-class township code. Administrative procedures vary for the two forms of government.
- The Lititz Borough Mayor's jurisdictional responsibility for the police department. The police department in the Township is the responsibility of the Board of Supervisors (responsibilities more closely parallel the responsibilities of Borough Council).
- The inclusion of the Borough's swimming pool manager and staff. Similar service is not provided in the Township.
- The Township zoning officer's function as building inspector. The Borough hires a special consultant to complete these activities.
- The Borough business manager's responsibility to the police department and public works department compared to the Township manager's responsibility. The Borough business manager's responsibility is to cooperate and coordinate with the two departments; whereas, the Township manager's responsibility is more administrative.
- The operation of the two authorities. The Lititz Borough Sewer Authority is responsible for constructing, improving, maintaining, operating, owning or leasing system components and sewage treatment works. The Authority does not have responsibility for the water system. A company is retained for sewer and water plant operations and an engineer is retained as a professional consultant. The Borough Sewer Authority Board has no paid staff. The Township Municipal Authority is responsible for both the public sewer

(Differences)

and water systems. Engineering consultants are retained for professional analysis and planning of the system. The Municipal Authority, housed in the Township building, maintains a staff of six including an Authority superintendent, two administrative staff and a three-member maintenance department.

Municipal Advisors and Committees:

The governing bodies of the municipalities retain and/or appoint consultants, special advisors and/or committees to assist with the business of government.

Similarities:

Both municipalities have retained or appointed advisors for the following services:

- Municipal Engineer
- Municipal Solicitor
- Zoning Hearing Board Solicitor
- Authority Engineer

Citizen volunteer committees and commissions (not previously mentioned) include:

- **Planning Commission:** The planning commissions function to make recommendations to the governing bodies on land development / subdivision plans and planning / zoning issues. The Borough's commission is comprised of five members; the Township's includes seven members. The planning commission's function and organizational structures follow the requirements of the MPC.
- **Recreation Committees:** Both municipalities have a recreation committee, the Lititz Borough Park Committee and the Warwick Township Advisory Committee. The three-member Borough's Park Committee makes recommendations for developing new Borough parks, maintaining current facilities and equipment and developing park resources. The seven member Township Committee provides recommendations for the develop of a diversified park and common open space facilities and systems for active

Differences:

The Borough has established numerous other advisory committees that are not paralleled in the Township. Several of these committees demonstrate the Borough's commitment to preserving its community character.

- **Lititz Borough Historical Area Advisory Committee:** The five member committee assists the Zoning Hearing Board concerning exterior architectural changes in the designated historical area (the Historical Area Advisory Committee is not organized as a Historical Area Review Board (HARB)).
- **Lititz Borough Shade Tree Commission:** The three member commission has exclusive custody and control of the shade trees in the Borough, including the planting, removal, maintenance and protection of shade trees in the public rights-of-ways.
- **Lititz Borough Flood Control Committee:** The seven member committee performs periodic inspections of flood areas and existing storm sewers and recommends projects for flood control and storm water management.
- **Lititz Borough Civil Service Commission:** The three member commission examines applications for positions on the police force.
- **Lititz Borough Health and Sanitation Advisory Commission:** The four member commission reviews all

(similarities)

and passive recreation; the preservation of areas and structures of historic, cultural or environmental significance; and the development of recreation programs for the needs of all residents.

(differences)

ordinances, resolutions and laws relating to health and sanitation to determine the best means of enforcement in conjunction with the State Board of Health, Health Officer and Borough Officers and to investigate reports of violations.

Administrative Facilities:

Lititz Borough Hall

Lititz Borough Hall is located off of the square in downtown Lititz at 7 South Broad Street. The two-story structure houses the Borough's Police Department, administrative offices and council chambers. Currently, the Council is investigating the relocation of the police department into an adjacent property and the expansion of administrative services in the existing building. The concept plan for administrative services would provide a larger reception area and general office work space, a first-floor zoning office with waiting area, direct elevator access to administrative services, larger council chambers and an additional conference room, additional storage rooms and areas, a manager's office to accommodate small meetings and a lunch room. A decision regarding the building project is expected in the Fall of 1998.

Warwick Township Municipal Building

A recent addition to the Township, the Warwick Township Municipal Building houses administrative services and the Township Municipal Authority. The facility includes a fully-equipped large meeting room and a small conference room. The facility located at 315 Clay Road is situated on a 22-acre municipal-campus site, including playing fields, the police department and public works building. The future space needs of the administrative services would be accommodated in the unutilized second floor of the building. The expectation is the administrative facilities will be adequate well into the next century.

The Municipal Budget and Budgeting Process:

The ability of the government to adequately budget for annual and capital expenses is an administrative task that effects the provision of services and the well-being of the community. The purpose of this summary is not to compare the way in which the two municipalities spend money but to look for similarities and differences in the budgeting process that may impact the municipalities ability to cooperatively work together.

- Schedule for the initiation and completion of the process: Each municipality begins the budgetary process in the Fall and ends the process by December 31.
- Method of budgeting:

Lititz Borough: The heads of the three departments present anticipated projects and expenses to the Council during formal discussions. Each item is discussed and deliberated based on

Warwick Township: The Township utilizes a technique known as budgeting by objective. At the beginning of each new fiscal year, the staff and Board of Supervisors prepares and adopts a list

(Lititz Borough)

projected revenue. The proposed budget is formulated to be published for public inspection and presented at the last Council meeting in November. Final adoption takes place before the end of the year.

(Warwick Township)

of objectives for the next year. In the Fall, the Township Manager compiles a budget based on a status report of the existing year's objectives list and the recommendations by department heads with final selection and listing by management. The focus of the budget reflects and supports the objectives adopted by the Board for the upcoming year. A series of budget workshop meetings are held in November to review and revise the draft budget. The budget is adopted prior to the end of the year.

- Funding Strategy: Each municipality develops the funding strategy within the auspices of specific funds as delineated below.

Lititz Borough:

- General Fund
- Water Fund
- Sewer Fund
- Swimming Pool Fund
- General Capital Improvement Fund
- Equipment Reserve Fund
- Storm Drainage Construction Fund
- Water Construction Fund
- Highway Aid Fund

Warwick Township:

- General Fund: The Township separates the fund into revenue and expense categories and provides individual accounts for specific purposes.
- Fire Company Capital Fund
- Capital Building Fund
- General Fund Reserve Fund
- Farm Reserve Fund
- Capital Reserve Fund

Plans and/or Issues of the Administrative Service for Consideration in the Planning Process:

Personnel

- Both municipalities are planning to expand administrative staff in the near future (other personnel additions are provided in the detailed discussion of public works and police)
- The Borough is reevaluating the number of service hours of the zoning officer to determine the need to expand the hours per week.

Land Use Planning / Zoning

- The Township's concern include:

- Dealing with rapid growth and development and the need to stay one-step ahead by planning for the consequences and impact of this development. The Township's proactive approach requires the management of a multitude of projects and studies (many of these studies are described in the natural resources and environmental features summary).
- Developing good standards for stormwater management, which encourages best management practices.
- Reevaluating the Township's urban growth boundary and future land use plan.
- Taking a three prong approach to land use planning which includes:



- The Borough's concerns include:
 - Resolving zoning issues, such as: dealing with absentee landlords; abandoned vehicles; property maintenance; outside storage; and lack of adequate parking, loading and unloading areas.
 - Dealing with the impact of sprawl on the Borough.
 - Reviewing the regulatory language and authority for historic preservation.

Use of computers and geographic information systems

- The Borough is in the process of upgrading its computer systems and developing a building permit and zoning hearing data base. Within the next year, the Borough anticipates purchasing a geographical information system (GIS) utilizing the Lancaster County Planning Commission (LCPC) data files. Integration of this technology with the existing administrative functions will be a new challenge.
- The Township is a leader in the County for using GIS as a local management tool. Maintaining the system with the latest mapping products and finding new ways of utilizing the technology to facilitate government functions is a continuing consideration.

PUBLIC WORKS SERVICES

One of the three departments in the Borough and Township's government structure is the public works department. The following summary highlights the similarities and differences in the operation of these departments. The summary is the result of interviews with the municipal public works superintendents. Reviewed items include descriptions of the:

- Department's roles and responsibilities,
- Service facility,
- Age, type and status of major equipment and vehicles,
- Staff and staff utilization,
- Agreements or contracts for services with other municipalities, and
- Plans and/or issues of the service for consideration in the planning process.

Department's Roles and Responsibilities:

The difference in community character (Borough's urban vs. Township's rural-urban transition) is apparent in the major activities undertaken by each department.

Similarities

Each department performs the following similar tasks:

- Maintenance of municipal lands including parks and lands housing municipal buildings and structures. Activities include tree trimming, mowing, and maintaining playground equipment.
- Maintenance of municipal roads and streets, including the roadway surface, signage, edge of roadway and lining of crosswalks, parking and curbing. The Township maintains 90 miles of roadway compared to the Borough's 35 miles.
- Maintenance of equipment, minor repairs only.
- Provision of snow removal and salting.

Differences

The Borough provides additional services due to the style and density of development. These additional services include:

- Provision of street cleaning. The Township provides this service through a contractual agreement.
- Provision of leaf pickup.
- Maintenance of municipal trash containers. Numerous containers are present in the downtown area.
- Maintenance of the Borough swimming pool.
- Maintenance of parking meters and collection of meter money.
- Maintenance of street trees in the public right-of-way.

The Borough public works department is more involved in the following activities than the Township:

- Maintenance and installation of sewer and water lines. The Township assists the Municipal Authority staff with these activities.
- Maintenance of storm sewers. The Borough's system is community wide compared to the Township's associated with individual subdivisions and land developments.

Public Works Service Facilities:

The public works departments are housed in specialized facilities as described below:

Lititz Borough

The public works department is housed in a facility located at 117 West Lincoln Avenue. The building is a renovated service station. The structure contains an office and break room and vehicle storage area equipped for minor servicing. Unenclosed storage on-site includes areas for the salt bin, stone pile and pipe storage. The building is fully utilized.

Warwick Township

The department is located at 315 Clay Road. The building was built in the 1980s and includes heated shop space with garage, cold storage for equipment, and office for the superintendent (built in 1997). In 1992, a 50' by 40' garage bay salt shed was constructed at the intersection of Route 772 and Clay Road.

Age, Type and Status of Equipment and Vehicles:

The level-of-service provided by the public works department is dependent on the age, type and status of equipment and vehicles. The most important factor is the municipalities ability to maintain and replacement the equipment and vehicles expeditiously in order sustain a high level-of-service. Equipment/vehicles owned but utilized not on a routine (daily) basis may signify opportunities for regional cooperation.

The Borough has no formal replacement policy for equipment and vehicles; however, the subject is revisited every year during the budgeting process. The expected life span for pickup trucks is ten years. The equipment reserve fund is utilized to provide funding for new purchases. Other moneys available include liquid fuels money (subject to State guidelines) and sewer revenues (purchase of sewer maintenance equipment).

The Township's need to maintain many miles of rural roadways defines its need for major pieces of roadway maintenance equipment and vehicles. In order to manage the replacement of major equipment the Township has utilized a large truck replacement schedule for the past five years as part of the Capital Reserve funding. Generally, twelve years is the expected life span for these vehicles. The existing fleet is at an acceptable level-of-service. The replacement schedule ensures this level-of-service is maintained. The Department's five year capital improvement plan provides an estimated cost for major projects and equipment replacement. The current plan includes the planning period of 1999 to 2003.

Lititz Borough

TYPE	AGE	STATUS
John Deere backhoe	9 years	Good
SECA sewer jet machine	9 years	Good
Inter dump truck	12 years	Good
Ford dump truck	3 years	Excellent
Ford dump truck	2 years	Excellent
Ford pickup	1 year	Excellent
Dodge pickup	5 years	Good
Dodge pickup	7 years	Fair
Elgin street sweeper	2 years	Excellent
Fair snow blower	6 years	Excellent
MGS vacuum	32 years	Fair
MGS vacuum	22 years	Good
Sweepster	2 years	Excellent
John Deere mower	4 years	Good
Kabota mower	4 years	Good

Warwick Township

TYPE	AGE
1 pickup truck	3 years
7 dump trucks	Oldest is 20 years; newest is 1 year
2 mowers	Over 20 years
2 mower	14 years
1 mower	1 year
2 rollers	Age unknown
1 grader	1990
2 loaders	1-2 years
2 trailers	4 years
1 chipper	3 years
2 pull brooms	28 years, 2 years
1 melter/applicator	3 years
7 salt spreader	Oldest is 18 years; newest is 1 year
13 plows	Oldest is 38 years; newest is < year

The table categorizes the type of equipment due to the numerous pieces owned by the Township. Status is evaluated on a yearly basis through the replacement schedule.

Staff and Staff Utilization:

Staffing for the two departments are described below. The Borough's Public Works Department with the exception of the superintendent and assistant superintendent is a union shop. The Township's Department is not unionized. Any future cooperative efforts between the two departments will need to assess the work relationship to the Borough's union contract.

Lititz Borough

The Borough's Public Works Department staff includes one superintendent, one assistant superintendent and a five-person, full-time (40 hour workweek) crew. The Department utilizes no part-time staff. During special events (e.g. snow events) the staff works overtime. The Department hires private providers for large snow events. Contractors are also hired for special projects (e.g., roofing, center-line painting, excavation for water mains, and resurfacing). As previously mentioned, the crew is a union shop. The contract is negotiated every three years. The existing contract ends in the year 2000.

Warwick Township

The Township's Public Works Department staff includes one Roadmaster (Superintendent) and a five person, full-time (42.5 hours) crew. During the summer months, the Department utilizes two full-time employees for park maintenance. During special events the staff works overtime and operates on a pager system. Three part-time employees are utilized during winter storm events for snow removal. In a major snow event, the Department contracts with private providers.

Agreements or Contracts for Services with Other Municipalities:

Neither department has any formal cooperative agreements or contracts with other municipalities for the sharing or contracting of services. The superintendents of the Borough and Township Public Works Department expressed a good working relationship between the two municipalities. The Borough and Township have recently undertaken two cooperative activities:

- The joint purchase of a crack sealing machine in which the Borough contributed 25 percent of the cost compared to the Township's 75 percent. Through an informal agreement the Township stores the equipment. The two departments share the use of the machine.
- A joint contract for the painting of center-lines on shared roadways. The Lancaster County Cooperative facilitated the joint bidding process.

Other cooperative efforts include:

- Opportunities for the joint purchase of materials. The Cooperative solicits prices and facilitates group purchasing of materials, such as; salt and paint.
- Verbal agreements for winter maintenance. The Township has a verbal agreement with Penn Township to share responsibility for snow removal of common roadways. Currently, these roadways include: Memorial Road (clearance by Penn Township) and Weaver and Penn Drive (clearance by Warwick Township). The verbal agreements do not include liability protection for either Township in the case of accidents on these roadways associated with snow removal.

Both administrators agreed other cooperative arrangements may be feasible in the future for equipment utilized on a part-time basis and materials representing similar utilization requirements.

Plans and/or Issues of the Public Works Service for Consideration in the Planning Process:

The superintendents were asked to identify existing issues in providing services. The following list summarizes these comments:

Lititz Borough

- Dealing with the maintenance of aging infrastructure systems. These systems include storm sewers (one problem area is Lititz Springs Park), roadways, water and sewer mains, sidewalks, and street lights. Two ongoing activities include assessing the condition of the infrastructure and developing funding approaches to implement the improvements.
- The Borough is constantly assessing these systems to determine where improvements will be needed. Several assessment activities include:
 - Roadways: Department inspection for resurfacing projects and creation of priority listing.
 - Sidewalks: Committee (engineer, council member and public works superintendent) inspection of sidewalks and curbs. It is the property owners responsibility for sidewalk replacement.
 - Streetlights: Department notification to service provider (PPL) for maintenance.
- Some of these improvement projects may be funded through redevelopment grant moneys to low and moderate income areas. Past projects have included sidewalk and water main replacement.
- Expanding the service facility. The administrator expressed the need to expand the facility either on or off-site for additional storage of seasonal equipment.

Warwick Township

- Removing snow in developed areas. Two problems were mentioned:
 - Obstacles in cul-de-sacs (i.e., parked cars, multiple driveways, and mail and utility boxes).
 - Parking on both sides of the street.
- Keeping pace with land development activity.

POLICE DEPARTMENT SERVICES

In August, 1997, the Warwick Township and Lititz Borough Police Departments prepared a joint grant application to the federal government for police services cooperation. The departments did not receive the grant but through the application process a concept was developed for the creation of a "compound" agency structure. It is the intent of the two governing bodies to explore further this concept during the regional strategic comprehensive planning process. The purpose of this summary is to provide easily accessible background information regarding the two police departments and to briefly present key features of the concept (the detailed description is available in the grant application narrative, "A Proposal for Cooperative Police Services Between the Warwick Township and Lititz Borough Police Departments," August 1997, prepared by Chief Alfred O. Olsen and Chief Douglas Shertzer.)

This summary describes the following:

- Location and description of the service facility,
- Age, type and status of equipment,
- Staff and staff utilization,
- Police activity,
- Funding of the service, and
- Plans and/or Issues of the Police Service for Consideration in the Planning Process.

Location and Description of the Service Facility:

Lititz Borough

The Lititz Borough Police Department is located at 7 South Broad Street in Borough Hall. The Borough is in the process of preparing plans and financing the purchase of an adjacent property for a new police station (see discussion of the Borough Hall under administrative services). The planned expansion would include:

- A garage to house prisoners to the rear of the building
- A large records room
- Evidence and records storage
- Two interview rooms
- Conference/meeting room
- Enlarged evidence room
- Men and women's lockers
- Police equipment room

Warwick Township

The Warwick Township Police Department building was built in 1930, with the latest renovation in 1997. The facility includes administrative offices (4 offices including Police Chief, Dare Office, detectives office, and secretary's office; conference room, and reception area), a squad room, locker rooms, kitchen, booking area, holding cell, interview room, and sally port. The facility is considered a complete facility, which is sized adequately for growth with attachment to an additional building offering more space. The Police Station is physically separated from other municipal services but is located within the municipal campus.

Age, Type and Status of Equipment:

Lititz Borough

The Department operates a fleet of seven vehicles (5 marked and 2 unmarked). The oldest vehicle is eight years old; the newest vehicle is one year old. The Department replaces one vehicle per year. The fleet is at full force.

The police forces will be linked to the County computer system on January 1, 1999. By the end of 1999, the Chief anticipates all radios in cars and the base station will be replaced to connect local and county systems. Grant money is anticipated to make these connections.

Warwick Township

The Department utilizes a fleet of seven vehicles (5 marked and 2 unmarked). A vehicle purchasing program has been established to include a new vehicle purchase every year. The annual department budget includes a capital budget to replace equipment (e.g., weapons and radios) and vehicles. The Township will be linked to the County computer system by January 1, 1999.

The police chief indicated no outstanding need. The Township meets needs on an on-going basis based on the budgeting process.

Staff and Staff Utilization:

Both organizations are unionized. The union contracts renewal dates are 2001 for Lititz and 2002 for Warwick.

Lititz Borough

The police force is comprised of thirteen sworn officers, including one chief, two sergeants, and nine patrol officers. The department also includes one civilian police aid that manages crossing guards, handles complaints (dog), and monitors the parking meters. One full-time and one part-time staff handle clerical and secretarial duties. The Borough department also manages 19 crossing guards.

The department offers twenty-four protection with overlapping shifts during high incident periods. The personnel operate on 8-hour shifts. One officer is dedicated to the DARE program.

Warwick Township

The Department includes 14 officers and one administrative secretary. The administrative structure of the Department includes: chief (1), detective sergeant (1), patrol sergeant (1), DARE officer (1), drug task force officer (1), nine line officers and one secretary.

The Department provides full service 24 hours. One officer is dedicated to Dare and Community Service. The personnel operate on 10-hour shifts with overlaps for focused operations, traffic enforcement, warrant squads, and community service projects.

Police Activity:

A direct comparison of police activity between the two forces is difficult due to the differences in reported incidents. The Township reports only actual incidents; whereas, the Borough utilizes the County's system which reports every call not just reportable incidents. In the future both communities will be on the County system which will allow a more reliable comparison. For the purposes of this report statements from the Departments' Annual Police Reports are being utilized to report general statements regarding the current incident trends.

Both Chiefs indicated as the region's population grows, the expectation is criminal activity will proportionately increase.

Lititz Borough

Observations from the 1994, 1996 and 1997 Department Annual Reports include:

- Part I Crimes (major crimes, such as: homicide, rape, robbery, assault, burglary, theft, arson and motor vehicle theft):

1994 crimes increased by 29.1 % - most significant increase in thefts.

1996 crimes increased by 17 % - most significant increase in thefts.

1997 crimes decreased by 29 % - most significant decrease in thefts.

Warwick Township

Observations from the Department's 1997 Year-End Report.

- The report compares the fourteen year trend for "calls for service." The report concludes, " the need for police service has grown right along with the township population."
- Part I Crimes: Burglaries and assaults increased and thefts decreased.

(Lititz Borough)

- Part II Crimes (minor crimes, such as: fraud, criminal mischief, D.U.I., public drunkenness, and disorderly conduct):

1994 crimes increased by 20.7% - most significant increase in D.U.I., criminal mischief, and disorderly conduct.

1996 crimes increased by 4 % - most significant increase in criminal mischief, drug offenses and forgery.

1997 crimes increased by 3 % - most significant increase in public drunkenness and disorderly conduct.

(Warwick Township)

- Part II Crimes: Disorderly conduct and public drunkenness increase and bad checks, criminal mischief and D.U.I decreased.
- 1997 represented the lowest total crime since the 1980s.

Each department provides a number of special community service projects. Both departments participate in D.A.R.E. through visitations to schools and special parent programs. The Lititz Department also organizes pick-up basketball games, a back to school party, school tours, drug testing kits for parents, and bike patrols. The Township organizes neighborhood watch programs, summer sports programs, bicycle safety rodeos, a "visit with Santa" event and lectures.

Funding of the Service:

Both departments are funded through the general funds of the respective municipalities. Special funds are utilized for the purchase of vehicles and major equipment. Both organizations utilize grants to supplement the departments' budget, including the utilization of grants for the DARE officer. In addition, the area service clubs are very generous in providing for various Department activities (e.g., Bike Patrol funding, crime scene equipment funding, computers, monitors and picture digitizer.) These private grants are initiated by the service clubs in exchange for public recognition of the service.

Plans and/or Issues of the Police Service for Consideration in the Planning Process:

The police chiefs identified two similar issues and/or ideas which will impact the planning process:

- The impact of growth and development on the number of police incidents and traffic in the region. As the region grows the departments must plan in anticipation of the impact of growth on the police services. Areas of concern include traffic management and youth programming.
- The development of a regional perspective and cooperative approach for the police services of the two municipalities. This approach was outlined in the 1997 proposal for cooperative police services. Major considerations of the approach include:
 - The police departments are already cooperating on the following activities: D.A.R.E programs in schools, collaborations between detectives in major investigations, and spontaneous support of patrol units.

- The proposal is not recommending consolidation of the forces but expansion of mutual aid agreements that grants police officers in each municipality full police powers in both communities to create a compound agency structure.
- The plan would include the equitable division of labor, equipment and facilities, including:
 - Standardized proportional staffing unit and minimum staffing requirement.
 - Each agency committing to one area of specialized training
 - Each agency responsible for one or more pieces of essential equipment or contributing a proportionate share towards the purchasing of equipment.
 - Broad range of patrol and enforcement configurations.
- Implementation would require the creation of a committee of local officials and administrators.
- On-going monitoring of the arrangement would be required.
- Procedures would be standardized.

FIRE PROTECTION SERVICES

The Warwick Township 1993 Comprehensive Plan discussed fire protection services in detail. The same companies discussed in the previous plan provide service for the entire study region. The plan discussed the history, service area, manpower, fund-raising activities, number and types of fire alarms, equipment and facilities and future issues. The purpose of this study is not to reiterate previously recorded facts but to update the previously collected information with the most recent available data, to check the status of previously reported issues and to identify new issues to be considered during the regional planning process.

This update is based on interviews completed at the annual fire chief's meeting an initiative of Warwick Township. The fire chiefs from the Brunnerville Fire Company, the Rothsville Volunteer Fire Company and the Lititz Fire Company participated in the meeting and interview. The meeting highlighted immediate topics of concern. The interview updated previously collected information and recorded other issues and planning topics.

Characteristics Unchanged from the Previous Planning Study:

Briefly, the following facts are unchanged as recorded in the 1993 Warwick Township Comprehensive Plan:

- The history of the three fire companies.
- The service area of each company, including the primary service area. Mutual-aid service continues to be provided through the preplanned four-alarm systems. No formal mutual-aid agreements are in place. The chiefs did not reach consensus regarding the value of these agreements. One reason for not supporting the development of formal agreements was the current number of volunteer fire fighters and the inconsistent level of fire fighter response.
- The location and description of the Brunnerville and Rothsville companies is unchanged. The Lititz company is still located at 24 West Main Street; however, significant changes have been made to the structure as described below.

Changing Characteristics:

Changes including additions to the Lititz Fire Company building, manpower, fund-raising activities, fire fighting activity and response times and equipment are described below.

Lititz Fire Company Building Improvements

The previous Township Comprehensive Plan made the following observations regarding the Lititz Fire Company facility: "the facility is equipped with three engine doors that are adequate at present time. However, the station is restricted in height with regard to the purchase of new vehicles, particularly a new aerial ladder apparatus. There is also a desperate need for storage, training, and office space " (p. 94). The Company recently resolved these issues by converting the building from one to three stories. The building now houses a two-story engine plus additional office space and administrative area.

Fire Volunteers

All three companies are volunteer organizations. Considerable attention was given to the issue of volunteer fire fighters in the Warwick Plan. At the time of the interview in the late 1980s, all three fire chiefs noted the reduction in the number of persons becoming involved in fire protection. At that time, they cited several reasons for the decline:

- Out-migration, lack of interest and lack of free time.
- Excessive amounts of time required for fund-raising.
- Lack of employers within the Township which keep the volunteers close to home.

The following table compares the 1998 manpower numbers with numbers provided in the previous planning study:

**TABLE 6-1
FIRE COMPANY ACTIVE FIRE FIGHTERS COMPARISON**

COMPANY	1993 PLAN VOLUNTEERS	1998 PLAN VOLUNTEERS
Brunnerville	28	18
Lititz	49	10
Rothsville	50	26

Since the Township Plan, the number of active fire fighters has decreased dramatically. The 127 active volunteers in the region has decreased by more than half to 54 active volunteers. When the level of volunteers become dangerously low the consequence is diminishing levels-of-service and longer response times.

Other volunteers are involved in fire company activities. Fire police are active for all three companies. The number of fire police have remained fairly constant, in fact, in some instances these numbers have gone up. Brunnerville's volunteer fire police have gone from three to thirty-three volunteers; Lititz volunteers have decreased from thirteen to ten volunteers; and Rothsville has increased from seven to ten volunteers.

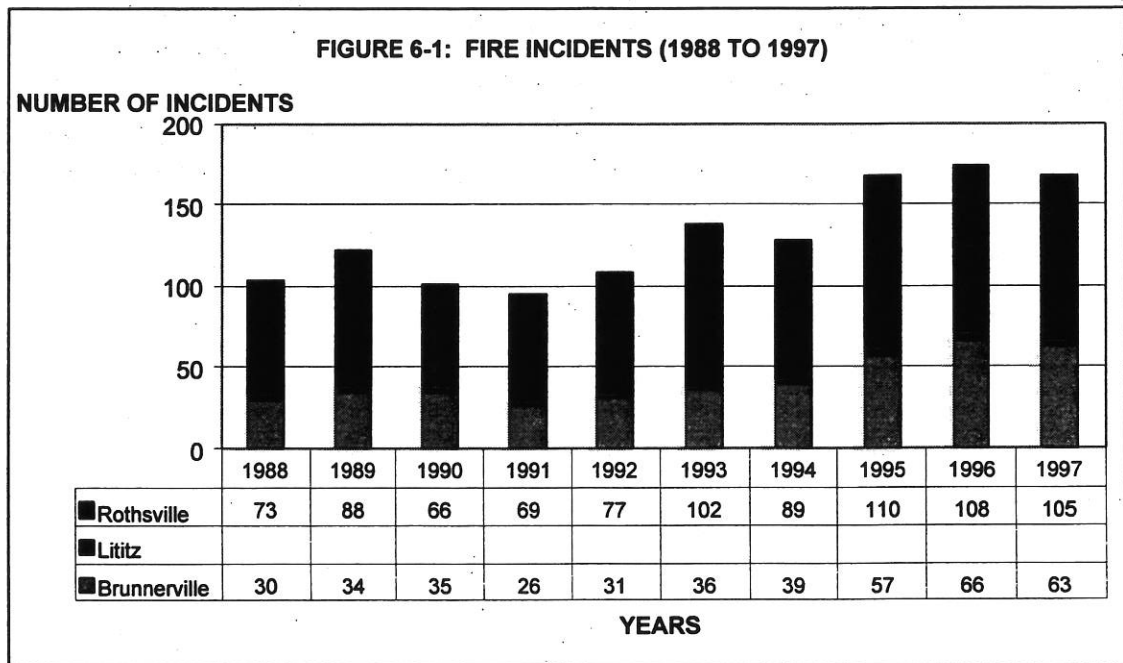
Both Brunnerville and Rothsville continue to have a Ladies Auxillary, which helps with fund-raising activities. The Brunnerville auxillary is comprised of eight to ten members. The Rothsville auxillary includes 24 members. Each organization also maintains social members (members who pay dues but are not involved in the fire fighting activity). Brunnerville has approximately 100 social members; Lititz has 102 members; and Rothsville has 29 social members.

Fund-Raising Activities

Each company holds an annual membership drive which yield a major proportion of the annual budget. In addition, the companies receive funding from the Firemen's Relief Fund (based on municipal allotments). Warwick Township provides a yearly contribution to all three companies; Lititz Borough provides a contribution to the Lititz Fire Company. Each company also operates several fund-raising events (e.g., raffles, food stands, banquets and suppers). The municipalities also maintain a capital reserve fund for capital equipment and vehicle needs.

Fire Fighting Activity and Response Times

Figure 6-1 shows the trend in total fire responses by the fire companies from 1988 to 1997 (Lititz Fire Company information was not available at the time of the survey).



Clearly the number of responses has been increasing (Brunnerville chief notes the numbers for the company have risen in part due to the fact that company is now running vehicle accidents and the 1997 tanker pumper is responding to more fires). These responses include primary and mutual aid responses. Both of the Township fire chiefs indicated a slight increase in response time over the 10-year period. Increases were primarily due to the increased amount of traffic on roadways.

Equipment

The following table describes the current fire fighting vehicles for each company. All the equipment bought since 1990 represents new purchases since the 1993 Plan.

COMPANY	EQUIPMENT/VEHICLE	YEAR
Brunnerville	Pumper	1993
	Tanker Pumper	1997
Lititz	Saulsbury Rescue Pumper	1990
	LTI Ladder Truck	1985
	Seagrave Pumper	1977 (to be replaced this year)
	Ford Utility Vehicle	1996

COMPANY	EQUIPMENT/VEHICLE	YEAR
Rothsville	Pierce Dash Pumper	1994
	Pierce Lance Pumper	1986
	1959 Mack C-85 Pumper (specialty calls only)	1959
	International Squad Truck (carries equipment and personnel)	1980

Plans and/or Issues of the Fire Service for Consideration in the Planning Process:

The Warwick Township Comprehensive Plan listed nine issues uncovered during interviews with the fire chiefs. The majority of these issues have been resolved with the Township. The only unresolved issue is the display of house numbering on each property for the identification of addresses during a fire event.

The fire department chiefs meet with each other on a quarterly basis to discuss planning activities and common issues. The group meets with the Township on an annual basis. Current topics discussed at the recent annual meeting include:

- Warwick Township is completing hydrant water modeling and will color code all hydrants for each company so they will know the flow rate for each hydrant. Utilizing the GIS system, the authority will be able to provide the companies with digital data and hard copies of the system. (The companies would be interested in a similar effort with the Borough.)
- The Township is moving in the direction of allowing parking only on one side of new subdivision streets with the water system on the opposite side to make access to hydrants readily available.
- The Township is sending new land development plans to the primary companies for review of hydrants during the planning stages.
- The Township is considering the siting of a fire fighting training area for use by all three companies.
- The police radio system is not compatible with the fire department and fire police systems. The police department is considering a low-band radio for the purposes of communicating on a regular basis with the fire departments.
- A mandatory annual training for fire police is being suggested to be run by the police departments.
- Rothsville Road renumbering project is being initiated.
- The widths of some residential driveways are problematic and cause damage to engines and properties.
- A registration of fire alarms and the inclusion of knox boxes is suggested for any property owner with an automatic alarm.

Other issues expressed by the chiefs include:

- Dealing with the declining level of volunteers at the same time the region is placing a greater demand for fire services. Suggestions included:

- Inclusion of paid staff, including a business manager for the companies to act as an administrative assistant for the chiefs and coordinate training, fire code related concerns, the preplanning process and administer the fund drive.
- Consolidation of companies without removing stations, service areas or losing individual identity.
- Improvement of employers attitude toward volunteer fire fighters.
- Preparing a needs assessment for the expansion and improvement of the Rothsville and Brunnerville Fire Company Station.
- Developing a Township-led negotiation process for private pond agreements for company use.

AMBULANCE SERVICE

Another emergency service offered in the region is ambulance service. This service is provided by the Warwick Community Ambulance Association, Inc. and the Rothsville Volunteer Fire Company Ambulance Corps. The 1993 Warwick Township Comprehensive Plan documented information regarding the history, service area, facility characteristics, staffing, equipment / vehicles, funding and issues of each company. With the exception of the companies' history and service areas / mutual aid agreements, changes have occurred in every aspect of the ambulance services. This summary reports these changes and challenges for the ambulance services.

Concerns expressed in the 1993 Plan are still evident today. These concerns included:

- Longer response times due to poor property address posting, inadequate street lighting, address mapping and traffic increases.
- The shortage of manpower and volunteers.

The summary report highlights changes in the companies' facilities, manpower, incidents and equipment. Plan and/or issues of the ambulance services are presented as they pertain to the regional planning process.

Ambulance Facilities:

Warwick Community Ambulance Association, Inc.

The association continues be owned and operated by the American Business Club (AMBUCS). The Warwick Club is the only club in the nation that owns an ambulance service. The organization owns two buildings in the location of North Lane and Water Street in the Borough of Lititz. Within the past decade renovations and additions have been made to the ambulance facility. These renovations include the addition of a

third bay, to house equipment and vehicles and the renovation of the second floor to include a fully equipped living quarters.

Rothsville Volunteer Fire Company Ambulance Corps

The facility continues to be located in the Rothsville Fire Station. One bay is utilized for the storage of the ambulance. No changes have been made to the facility since the development of the Warwick Comprehensive Plan.

Manpower:

The 1993 Plan reported concern over manpower (volunteer) shortages. Changes have occurred as a result of these shortages.

Warwick Community Ambulance Association, Inc.

In response to this continuing concern, the company hired one full-time (50 hours/week, four 12 hour days) paid driver and two part-time drivers (one working 36 hours/week and the other maximum of 20 hours/week). In addition to the paid employees the service has 27 volunteers each agreeing to be available 24 hours/month. The service hires part-time drivers from Lancaster General Hospital on an as needed basis.

The manager of the service notes the continued need for approximately 15 additional volunteers. In 1998, the company will be hiring a full-time business manager and go to a third-party billing system (billing insurance companies).

Rothsville Volunteer Fire Company Ambulance Corps

The Rothsville Corps continues to decrease the number of volunteers. In 1993, the service reported 22 active members. In 1998, this number has dropped to ten volunteers. These volunteers are divided into five teams with several unscheduled members for substitutions. Twelve hour shifts are run on weekdays and twenty-four hour shifts are run on weekends and holidays.

Incidents:

The report on the number of incidents is sketchy for Warwick Community since records of calls have not been compiled; however, the business manager indicated the service responds to approximated 1500 calls per year. In 1988, the Warwick Comprehensive Plan reported the service responded to 1215 ambulance calls. The manager estimates the number of calls have increased one percent per year and thirty percent of the calls are from nursing facilities. Call volumes increase with the increase in the number of new nursing homes and the increase in housing.

More information is available for the Rothsville Corps. The ambulance service records the number of calls on an annual basis by type and classification of calls. In 1988, the Corps responded to 376 calls (Warwick Plan, p. 104). The past three years, 1995 to 1997, the Corps has responded to 390, 361 and 407 calls, respectively. Last year the Corps had a record number of calls exceeding the annual rate for the ten-year period. The call rate for 1998 appears to be on track for breaking last year's record with 273 recorded calls for the seven-month period from January through July. The Corps representatives attributed a portion of the increase to the number of calls covered for the Warwick Community Ambulance Association. In 1989, the Corps covered 22 calls for the Association. Beginning in 1993 these call rates have increased as demonstrated by the statistical data for the years 1993 (40 calls), 1995 (60 calls), 1996 (69 calls) and 1997 (63 calls). The Corps has covered 63 Warwick Ambulance calls in the first seven months of 1998.

Equipment and Vehicles:

Both services have modernized their equipment and vehicles since the last planning report.

Warwick Community Ambulance Association, Inc.

The Association replaced both ambulances in the 1990s. Both the 1991 and the 1995 vehicles are in good repair. The vehicles are fully stocked, including two automated external defibrillation units (AED). The Association operates with a ten-year replacement cycle. The equipment and vehicles meet Pennsylvania Emergency Health Services Federation (PEHSF) standard. Equipment and vehicles have been purchased with State grants.

Rothsville Volunteer Fire Company Ambulance Corps

The Rothsville Company purchased a new vehicle in 1992. The vehicle includes an AED and meets the standards of the PEHSF. The Company utilizes an eight-year replacement policy. Grants are utilized for computers and specialized equipment.

Funding:

Both services are funded through similar sources, including an annual fund drive, grants, base-fee for non-member service and supplies, and donations (private individuals and service agencies). The Warwick Community fee schedule includes subscription rates for family, individual, nursing home and business. Members receive free service for emergency trips and five non-ambulatory trips per year. Members pay mileage after 40 miles and pay for oxygen use. In addition, the Association receives an annual contribution from the Borough for vehicle fuel and workman's compensation. The Rothsville Company receives free fuel from Warwick Township. The Company gives an annual donation to the Rothsville Volunteer Fire Company in lieu of facility rental.

Plans and/or Issues of the Ambulance Service for Consideration in the Planning Process:

Issues uncovered during the interviews include:

- The need to deal with the issue of routine transport and uncover the utilization of the regions ambulance for these services. Routine transport is the use of vehicles to transport individuals to health care providers for non-medical emergencies. It is hypothesized, with four nursing home facilities in the region, the routine transport of patients is limiting the availability of vehicles for response to actual emergencies. This assumption may be one reason for the increased coverage by the Rothsville Corps in Warwick Association service area. Alternative methods of routine transport may be a consideration.
- Traffic congestion in Rothsville during peak period and the associated problem of accessing the fire station.
- The need to heighten public awareness for house numbering at appropriate locations.
- The maintenance of an acceptable level of service given the loss of volunteers and the high level of development. The companies had little interest in consolidation but were interested in the hiring of part-time drivers from Lancaster General Hospital.
- Addressing high accident areas (see the transportation summary).

EMERGENCY MANAGEMENT AGENCY

The Emergency Management Agency (EMA) is a vitally important agency to the well-being of the residents and property owners of the region. The EMA provides the coordination required to control emergency events. Preplanned preparations help to minimize the losses and disasters, which may occur during unforeseen events; thus, the continued support of the emergency

management planning function and staff is of critical importance to the health and security of the community.

A new venture in regional cooperation began in 1995 with the Borough's retention of the Warwick Township Emergency Management Coordinator (EMC). The officer works with the local emergency service providers and municipal officials in developing the region's Emergency Operation Plan. The utilization of a common EMC is a natural fit for the region which is formally and informally connected through mutual aid agreements of the various emergency service providers.

Historic Beginnings:

The creation of municipal-level emergency management agencies began as a result of Section 7503 of the Pennsylvania Emergency Management Services Code. The Code mandates Commonwealth municipalities to prepare, maintain, and keep current an emergency operations plan (EOP) for the prevention and minimization of injury and damage caused by an emergency or disaster within the jurisdiction. The EOP provides for prompt and effective emergency response procedures to be followed in the event of an emergency or disaster thus reducing the impact of the event and protecting the health, safety and welfare of the residents of the region.

Description of the Program:

In 1997, the current EMC was the first volunteer in Lancaster County and the 22-county central region to receive professional certification by the Pennsylvania Emergency Management Agency. For the past five-years the EMC has been building an emergency operations plan for each municipality. The plan covers the operations for a wide variety of potential emergency situations including blizzards, fires, tornadoes, wind storms, earthquakes, medical emergencies, hazardous chemical spills, and hostage situations. Other activities of the EMA include mobile home park education in how to deal with weather events, participation in fire company training, and meeting individually with owners of facilities to discuss emergency planning (e.g., nursing homes, schools, and industries).

Emergency Operations Plan (EOP)

Each EOP contains sections on the following:

- | | |
|---|--|
| <ul style="list-style-type: none">• School Plans and Evacuation Plans• Emergency Service Providers Service Areas• Temporary Lodging Facilities (neighborhood-oriented and mass care facilities) Map• Map of the Dwelling Units (i.e., school bus routes with the number of households and the number of persons)• Listing of Emergency and Social Service Providers (listing department, equipment, technical assistance, supplies, and emergency numbers).• Utility Service Areas (mainline location, emergency numbers and description of the service) | <ul style="list-style-type: none">• Water Utility Information (public well, location of chemicals, and evacuation plan)• Mobile Home Parks Description (park layout with lot numbers, park owners number, number of residents, location of water and wastewater facilities)• Wastewater Plant Information• Copy of the EOP for Speedwell Forge and Middle Creek• Flooding Information• Lancaster Airport Site Plan• Radius Map from Nuclear Plants• Radio Frequencies and Call Numbers• Metric Tables• Radius Maps to Help Identify Incidents with Shelter Locations (34 shelter sites) |
|---|--|

The Borough's EOP also contains information on Linden Hall, retirement homes (e.g., maps, room numbers, evacuation plans), Lititz utility plants and Lititz Community Center.

Location of the Emergency Operations Center (EOC)

The Emergency Operations Center is located at the home of the current EMC, 18 Skyview Lane. The alternate EOC is the Lititz fire station.

Staff, Equipment and Funding

Typically, numerous positions are filled for the emergency management agency including but not limited to the EMC, a deputy EMC, public information officer, damage assessment officer, and service provider coordinators. The Lititz/Warwick EMA have two formal positions the EMC and the deputy EMC (wife of the EMC). The EMC coordinates all other activities with the service providers. The EMC and deputy EMC are on call 24 hours/day.

The agency utilizes used radio equipment from the fire department. Warwick Township pays for the EMA pager fee. The EMC contributes all other equipment including emergency scanners for the EOC and vehicle. The activity of the EMA is unfunded.

Number of Incidents

The EMC indicated eight to ten incidents per year is the typical response rate. He noted the incident rate appears to be decreasing. Incidents requiring EMA action in recent years have included: residential rescue, water problem at a mobile home park, chemical spills from accidents, and nursing home fires.

Plans and/or Issues of the EMA Service for Consideration in the Planning Process:

The following comments of the EMC are proposed for consideration in the planning process:

- Several characteristics of the region represent special consideration in the development of the emergency operation plan. These characteristics include:
 - Weather impacts (severe storms) due to the lay of the land.
 - The presence of large manufacturing facilities in and surrounding the Borough. The concern with these plants is the storage of chemicals. One site of special note is Warner Lambert. This business has its own EOP on site. Copies of the EOP are on file with the EMA. Other businesses may also store hazardous materials. A haz-mat local facilities notebook must be kept up to date in order to understand the location of these materials and develop appropriate evacuation plans.
 - The presence of Lancaster Airport in Manheim Township. Although not in the immediate region, the airport does have flight patterns over the region which leads to many questions regarding utilization of the facility. The only information currently available is information regarding the airport layout.
 - Dams at Speedwell Forge (Elizabeth Township) and Middle Creek (Clay Township). The region is the impact area of the facilities. The facilities are monitored by two different State commissions.
 - Four nursing homes/retirement centers (each requiring separate EOP).
 - Four mobile home parks. These facilities represent added vulnerability during severe storms with excessive winds and also operate private water supplies which require the storage of treatment chemicals.
 - A major underground gas line.

- Notification of incidents. Communications is a key factor in emergency events management. A protocol document is being completed for the emergency service providers regarding notification of events and communications.
- Additional volunteer support. The EMC and the deputy EMC have no designated backup when out of town. Additional volunteers are needed to provide this backup support.
- Enhanced mobile communication. The enhancement would include the addition of a low-band radio system. This radio system in addition to the high-band system would allow the direct communication between service providers.
- Additional education and training opportunities. The EOC recognizes the need for additional public education and training; however, time is limited for these programs due to the volunteer nature of the position. These opportunities would also help to enhance the public's understanding of the EMA and EMC function.

RECREATION SERVICES

Planning for park, recreation, open space and greenways often demands a specialized planning process apart from the comprehensive planning process. Both Lititz Borough (1995) and Warwick Township developed a comprehensive park and open space plan after completing the municipal comprehensive plans. The focus of both plans was on existing and future park facilities.

Facilities planning is one aspect of community recreation services. The other aspect is programming. Neither Lititz Borough or Warwick Township recreation documents developed a discussion of recreation programming.

This summary adds new information and changes which have occurred since the previous recreation planning activities. The summary provides detailed information regarding the Lititz Community Center, highlighting the recreation programming offered to the community and the impact of the Center's strategic planning process on the region. In 1995, the National Recreation and Park Association and the Academy for Park and Recreation Administration published Park, Recreation, Open Space and Greenway Guidelines. The summary lists the new recommended steps for completing a comprehensive evaluation and developing recommendations oriented towards the unique characteristics of each region.

A Synopsis of Previous Planning:

Relevant information is excerpted from the previous municipal recreation studies and information is updated.

Updated Listing of the Region's Park Facilities

Table 6-3 combines the listing from the municipal recreation plans and adds facilities which have been developed or are developing since the last plans. A separate summary is provided for the Lititz Community Center which provides facilities and programs for both communities plus Elizabeth Township.

Over 160 acres of recreation land is available through municipally-owned lands, school district facilities, the Lititz Spring Run Park and Rothsville Firemen Memorial Park. Since the last comprehensive study of park lands, Warwick Township has added over ten acres of new parkland associated with Lions Park (2.6 acres), the Linear Park (6 acres) and the new Riparian Park at the corner of Clay Road and PA Route 772. This acreage added facilities for both passive and active recreation, including one handicapped fishing pier and two picnic tables (Riparian Park), one tennis court (Lions Park) and two baseball diamonds, three soccer fields,

TABLE 6-3 RECREATION FACILITIES

FACILITIES INVENTORIES	WARWICK TOWNSHIP						
	LIONS PARK	MUNICIPAL PARK	LINEAR PARK	ROTHSVILLE FIREMEN MEMORIAL PARK	JOHN S. BECK ELEMENTARY	(RIPARIAN PARK)	RAILS TO TRAILS*
Owner/Maintenance	Township	Township	Township	Fire Company	Warwick SD	Township	Township
Park Type	N	(C)	C-L	N	S	(C)	C-L*
Outdoor Play Acreage	(7.1)	16.9*	(46)/3.0 Lititz Borough	5.6	4.4	(2.3)	2.2*
Baseball Diamonds	1*	5*	(2)	0	0	0	0
Softball Diamonds	1	0	0	1	0	0	0
Basketball Courts	1*	0	0	0	2	0	0
Volleyball Courts (sand*)	3*	1*	1*	1	0	0	0
Tennis Courts	(1)	0	0	0	0	0	0
Hockey Courts	1*	0	(1)	0	0	0	0
Soccer Fields	1*	5*	(3)	0	0	0	0
Open Play Area	1	1	(1)	0	1	0	0
Playground Equipment	YES	YES	YES	YES	YES	0	0
Picnic Pavilions	1	1	0	1	0	0	0
Picnic Tables	15	10	0	20	0	(2)	0
Rest Rooms	(1)	1	1*	0	0	0	0
Trail Systems	0	1*	1*	0	0	(1)	1
Fishing	NO	NO	NO	NO	NO	YES	0

FACILITIES INVENTORIES	LITITZ BOROUGH							
	LITITZ SPRINGS POOL	LION'S PARK	NEW STREET PARK	BUTTERFLY ACRES	LITIZ ELEMENTARY	KISSEL HILL ELEMENTARY	BONFIELD ELEMENTARY	WARWICK MS/HS
Owner/Maintenance	Borough	Borough	Borough	Borough	Warwick SD	Warwick SD	Warwick SD	Warwick SD
Park Type	C	N	N	Open space	S	S	S	S/C
Outdoor Play Acreage	3.4	2.2	2.5	5.8	0.8	12.8	15	36
Baseball Diamonds	0	1	0	0	0	2	3	1
Softball Diamonds	0	0	0	0	0	2	0	1
Basketball Courts	1	0	1	0	0	0	2	0
Volleyball Courts (sand*)	0	0	0	0	0	0	0	0
Tennis Courts	0	0	0	0	0	0	0	10
Hockey Courts	0	0	0	0	0	0	0	1
Soccer Fields	0	0	0	0	0	2	3	1
Open Play Area	1	1	1	0	1	2	2	1
Playground Equipment	YES	YES	YES	NO	YES	YES	YES	0
Picnic Pavilions	1	0	1	0	0	0	0	0
Picnic Tables	8	2	6	0	0	0	0	0
Rest Rooms	2	0	0	0	0	0	0	2
Trail Systems	0	0	0	YES	0	0	0	0
Fishing	NO	NO	NO	NO	NO	NO	0	0
Swimming Pool	1	0	0	0	0	0	0	0

TABLE 6-3 CONTINUED

FACILITIES INVENTORIES	LITITZ BOROUGH			
	BUCH FARM CAMPUS	LITITZ SPRINGS PARK	WOODRIDGE SWIM CLUB	WILBUR CHOCOLATE WARNER-LAMBERT
Owner/Maintenance	Warwick SD	Private	Private	Private
Park Type	S	C - Open to Public	Private	Private
Outdoor Play Acreage	48	18.1	n/a	n/a
Baseball Diamonds	1	0	0	4
Softball Diamonds	0	2	0	0
Basketball Courts	0	1	0	0
Volleyball Courts (sand*)	0	0	0	0
Tennis Courts	0	0	0	0
Hockey Courts	2	0	0	0
Soccer Fields	4	0	0	0
Open Play Area	Practice Field	YES	0	0
Playground Equipment	0	YES	0	0
Picnic Pavilions	0	3	0	0
Picnic Tables	0	84	0	0
Rest Rooms	0	2	2	0
Trail Systems	All weather track	NO	0	0
Fishing	0	NO	0	0
Swimming Pool	0	NO	1	0
() Changes since the last Recreation Inventory.				
*Proposed additions in the year 1999 - 2000.				
N=Neighborhood Park, C=Community Park, L=Linear Park, S=School Park				

one open play area and play ground equipment. The Borough has added linear parkland along 6th Street with a planned extension to the site of the new Lititz Library in Warwick Township. Greenways have also been developed east of Broad Street at Lititz Run in association with Farmer's First Bank.

The new rails to trails corridor proposed for development in the year 1999 and 2000 (Phase 1) will extend from Warwick Township to Oak Street in the Borough. The corridor is planned to accommodate walking, running, biking and roller blading. Other future plans for the Township include development of ten acres at the Municipal Park to include the addition of five baseball diamonds, five soccer fields and a trail. Additions at Lions Park will include one baseball diamond, one basketball court, one hockey court and three sand volleyball courts. All of the additions are scheduled for the years 1999 and 2000. The Borough plans a new neighborhood park to be tied into General Sutter Village as the area of the Borough continues to develop.

Status of Previous Planning Recommendations

The following table lists the status of recommendations from the previous municipal park plans.

Municipality	Recommendation	Status
Lititz Borough (source: Lititz Borough Parks and Recreation Plan, 1995. P. 22.)	Correct deficiencies in existing parks and recreation areas – deficiencies equaled 4.1 acres of mini-parkland and 10.3 acres of community parkland. By the year 2010, the deficiency was estimated to be 30 acres of parkland.	Lititz Spring ark was not considered in the calculation because it is privately-owned; however, access is available to the public. With the addition of this park the existing (year 1995) deficiency is eliminated. Other parkland including a mini parkland and the 6 th Street Linear Park, the Rails-to-Trails connection and the greenways on east Broad Street will serve to meet other existing parkland deficiencies. These parklands do not address long-term deficiencies.
	Develop a neighborhood park to serve the Sutter Village area.	No plans for park at this time.
	Develop a neighborhood park as part of any future development of the Green Acres Nursery in the Borough's southwester corner.	No plans for park at this time. The expectation is the park will be developed when a new subdivision is proposed for the area and would tie in with the General Sutter Village.
(P. 23)	Develop a neighborhood park to serve the northeastern quadrant of the Borough.	This area is adjacent to the Warwick Linear Park, which now addresses the parkland needs for the area. This statement assumes the public park would be accessible for use by Borough residents.
	Provide linkages or greenbelts between parks, schools, and residential areas throughout the Borough.	The newly proposed rails-to-trails system links the Borough (Oak Street) to the Township system.
		The initial linkage will give the Borough residents the opportunity to "test" the feasibility of further extensions. Other linkages include the greenways east of Broad Street at the Lititz Run and the continuation of the 6 th Street linear park to the proposed new library facility. No other linkages have not been initiated.

Municipality	Recommendation	Status
<p>Warwick Township (Comprehensive Park and Open Space Plan, P. 31). This Plan was adapted from the Warwick Township Comprehensive Plan; therefore, related and more detailed information is available from the Plan (pp. 70 to 85). The Comprehensive Plan took a regional approach including the Borough in the discussion.</p>	<p>Resolve existing and projected community park deficiencies. The existing (at the time of the open space plan) community park deficiency is 18 acres, the year 2010 deficiency will be 35.5 acres. Recommendations included:</p> <ul style="list-style-type: none"> • Enlarge the Linear Park, • Create another community park, • Enlarge Municipal Park, and • Add to Lions Club Park. 	<p>With the expansion of the Linear Park (6 additional acres) and the addition of the Riparian Park (2.3 acres) plus the addition of 10 more acres to the Municipal Park and the 2.2 acres with the rails-to-trails, the Township will be meeting its existing requirement for community parks (as determined by the previous recreation plan).</p>
<p>P. 34</p>	<p>Resolve existing and projected neighborhood park deficiencies. The amount of neighborhood park land is sufficient; however, several neighborhoods are inadequately served based upon the distance of the parkland from the neighborhood (i.e. greater than ½ mile). Recommendations included:</p> <ul style="list-style-type: none"> • Investigate and acquire open space for development of neighborhood parks in the northwest corner and the southcentral area of the Township. • Expand John Beck School property • Encourage new development to create a neighborhood park in lieu of fee. 	<p>Tot-lots have been encouraged to be developed with new subdivisions; however, the inventory of facilities for children over 5 years is sketchy at this time.</p> <p>New developments including facilities for children under 5 years of age are Pebble Creek and Highlands.</p>
<p>P. 35</p>	<p>Address linear park recommendations including:</p> <ul style="list-style-type: none"> • Encourage the Township's governing body to pursue acquisition of the railroad right-of-way to create a trail system. <p>Encourage Lititz Borough to purchase the railroad right-of-way within the Borough to create a trail that would line the Borough and Township.</p>	<p>Numerous trails have been pursued within the last three years:</p> <ul style="list-style-type: none"> • Further development of the Linear Park • The Riparian Park • The proposed rails-to-trails project. <p>The addition of trail corridors is a part of the draft Township Official Map.</p>
	<ul style="list-style-type: none"> • Propose pedestrian access easements paralleling Lititz Run. • Pursue trail right-of-way to link communities. 	

Municipality	Recommendation	Status
P. 46	Address recommendations regarding facility types. The Warwick Plan included an assessment survey, which led to specific recommendations regarding the types of facilities desired by the public. These facilities included: <ul style="list-style-type: none"> • Areas of Natural Quality • Intense Recreation Facilities • Incidentals 	The Township has added or proposed to add one new trail system to Lions Park, the Riparian Park and the rails-to-trails area, which addresses areas of natural quality and incidentals. The Riparian Park includes a fishing pier and picnic tables. Rest room amenities have been added to the Linear Park. Additional intense recreation facilities added or proposed for parks include eight baseball diamonds, one basketball court, four volleyball courts, eight soccer fields, and one hockey court.
P.48	Review the mandatory dedication requirements in the subdivision and land development ordinance.	The ordinance was updated.
P.49	Develop a systematic maintenance plan.	The systematic plan includes a Spring inspection program and a repair and replacement schedule.
P. 49	Include the Recreation Advisory Board as a part of the budget process. A parks acquisition and development fund should be established.	The Recreation Advisory Board is a part of the budgeting process. A Recreation Capital Fund has been established.

The Lititz Community Center:

The executive director of the Lititz Community was interviewed to obtain information regarding the Center's role, services and programs; location and description of the facility; number of volunteers and staff; utilization of the facility; agreements with municipalities; funding; and topics of current issues or areas of concern relating to the regional planning project. The Center is the primary recreation programmer in the region.

Description of the Roles, Services and Programs

The Lititz Community Center is a non-profit corporation begun in 1947. The corporation was started during World War II to provide activities for children with parents in the armed forces. The center has been in continuous operation since then in the old pretzel factory, Bobst Center and the since 1989, the new community center.

The mission of the Center is "to bring members of the community together, to enrich lives and fulfill individual and family needs. The Center runs a wide variety of children, youth and adult programs. These programs include: family events, travel tours, aquatics, fitness and dance classes, adult leagues and tournaments, youth summer camp, pre-school programs, school age care programs (before and after school at the elementary schools and Church of Bretheran), nursery school and special events. The most popular programs are the child care services. Seven hundred children are served through the school and summer programs. Other popular programs are the New Line Revue (twirl and pom team with 265 participants) and the five star swim club (150 participants from all over Lancaster County).

Location and Description of the Center

The new Community Center was built in 1989. The Center is located on 301 West Maple Street, north of the Warwick School Campus and adjacent to the Borough outdoor swimming pool. The new center is a 44,000 square foot facility. Features of the Center include one 14,400 square foot gym, 25 yard-eight lane swimming pool with access ramp and upper deck spectator area, locker and shower rooms, snack bar with fully equipped kitchen, game room, community room for meetings, fitness center, one conference room, and child care room.

Volunteers and Staff

The Center is managed by a fifteen-member board of directors. One director must represent Lititz Borough, Warwick Township, Elizabeth Township and Warwick School District. The remaining eleven directors are elected from the membership. The board has standing committees for program, financial/legal, ways and means, buildings and grounds and personnel. At least one board member plus volunteers comprise each committee.

Fifteen full-time staff and 80 part-time/seasonal staff are employed by the Center. Full-time staff includes an executive director, program director, aquatics director, director of children services, director of aquatic instructor and assistants to the directors.

Service Area and Utilization

The primary service area of the Center is the Warwick School District service area (Lititz Borough, Warwick Township and Elizabeth Township) and the Manheim Borough and northern Manheim Township. The Center operates on a fee for membership basis. Rates are established for families, individuals, seniors and youth. Non-residents (outside service area) pay a higher rate than residents. A discount is given for fee renewals. The Center does not keep utilization rates for the facility; however, current records indicate the breakdown of memberships for school district municipalities (i.e., Lititz Borough - 474 memberships, Warwick Township - 531 memberships and Elizabeth Township - 56 memberships).

Funding of the Service

In addition to the membership fees (25% of total income), the center is funded through program fees (49%), special events (8.5%), rentals (5.5%), snack bar (5%), donations (3.5%), municipal contributions (3%). The past years contribution by Lititz Borough and Warwick Township was \$18,000 and \$6,000, respectively.

Plans and/or Issues of the Community Center for Consideration in the Planning Process:

In the Spring of 1998, the Center completed a six-month strategic planning process. The result of the process was the development of six goals and actions steps for the future development of the Center. Several of these goals and actions impact the Joint Strategic Comprehensive Planning Process.

Goal 1: "Increase accessibility to pool facilities thus creating a marketing opportunity for LCC. Objective: Construct a second pool designated for free swim, aquacize, swim lessons, etc. and designate first pool for competition" (p. 1).

Goal 2: "Expand facilities useable square footage to meet increasing demands for space. Objective: Complete second floor and related areas (i.e., front entrance, locker rooms, etc)" (p. 2).

Action Steps impacting regional planning process:

Appoint representative to discuss with Warwick School District and Lititz Borough expansion topics as they relate to overall strategic plan. Topics to be discussed: land availability, traffic, parking and expansion.

Fund raising campaign. (p.1,2).

Goal 3: "To become a focal point of community organizations in order to optimize use of facilities and to access information.

Objective: Endeavor to establish stronger ties with community organizations" (p. 3).

Action Steps impacting regional planning process:

Complete list of community organizations and a contact person for each.

Contact organizations by letter with a follow-up phone call or visit. The purpose of this will be to gather pertinent information from the organization.

Designate, develop, and maintain a community organization/activities bulletin board.

Designate a community center employee to coordinate community organizations.

Establish and maintain a LCC Website which includes community information.

Develop a system for allocating meeting space and seeking additional meeting space.

These ideas were reinforced through the executive director interview.

- Actions over the last three years emphasize the need for a more coordinated approach to recreation programming. Within the three year period the Warwick Area Sports Council was formed to help organize facility scheduling. The Sports Council is comprised of representatives from the following organizations: American Legion (Lititz Post 56), Lititz Youth Soccer Club, Warwick Little League, Warwick Mat Club, Warwick Midget Cheerleading, Warwick Midget Football League, Warwick Youth Baseball Association, Warwick Girls Softball Association, Lititz Borough, Warwick School District, and Warwick Township. The group meets on a quarterly basis. The hope is the Community Center may become the clearinghouse for recreation activities in the region and help to enhance community programs.
- The executive director also recognized the need for more outdoor complexes and sports fields. It is uncertain the extent of this problem in light of the new fields which will be coming on line over the course of the next two years.
- Finally, the director approached the idea of a cooperative arrangement with the Lititz outdoor pool, in order to do a swim program in the summer.

A Word About Regional Recreation Planning:

Recreation planning has been completed at the municipal-level. The Township Comprehensive Plan attempted to take a regional approach. New guidelines have been established through the National Recreation and Park Association and the Academy for Park and Recreation Administration in a publication entitled: Park, Recreation, Open Space and Greenway Guidelines (1995). This publication departs from the former technique of assigning recreation parameters based on population size. The 10 step systems approach helps the community to define unique needs and level of service guidelines. The steps in the planning model include:

Step 1.	Identify Customers	Step 5.	Develop System Framework
Step 2.	Obtain Customers Involvement and Development Relationships	Step 6.	Develop System Plan
Step 3.	Assess Need	Step 7.	Develop Recreation Services Delivery Plan
Step 4.	Develop Strategic Plan	Step 8.	Develop Maintenance and

Step 9. Operations Plan
Develop an Implementation Plan

Step 10. Evaluate Overall Effectiveness of Systems Plans and Service Delivery.

EDUCATION SERVICES

The Warwick School District provides public education services to the region including Elizabeth Township. Private educational opportunities exist at Linden Hall School (college preparatory school for girls in grades 6th through 12th), Lititz Christian School, and Lititz Area Mennonite School. The focus of this summary will be the public education system, Warwick School District.

The previous comprehensive plans provided summary information on the School District facilities, enrollments, and issues. The summary highlights changes, which have occurred since the previous studies. The information includes updated descriptions of school facilities and programs, description of pedestrian and bus patterns, and the District's strategic planning process and on-going facility planning.

Description of School Facilities and Programs:

The Warwick School District owns and maintains seven parcels or campus facilities for educational and athletic purposes. The following table lists and describes these facilities.

TABLE 6.4 – WARWICK SCHOOL DISTRICT FACILITIES

Name	TYPE	ENROLLMENT CAPACITY	ACREAGE	DESCRIPTION	BUILDING SIZE (SQ. FT.)
Warwick High School	Educational Institution, grades 9-12	1,473 students	35	Includes recreation fields, stadium (2800 seats) 2 gyms (2400 seats), auditorium (800 seats).	241,214
Warwick Middle School	Educational Institution, grades 7 & 8	1,041 students	35	Includes recreation fields, gym (300 seats), auditorium (400 seats).	152,187
Buch Farm Complex (new)	Recreation Complex	N/A	48	Includes track and recreation fields.	N/A
Bonfield Elementary (new)	Educational Institution, grades K-6	800 students	26.8 (Lititz) 10.9 (Warwick)	Includes recreation facilities, gym / auditorium (200 – 400 seats).	92,852
Kissel Hill Elementary	Educational Institution, grades K-6	675 students	14	Includes recreation facilities	71,559

Name	TYPE	ENROLLMENT CAPACITY	ACREAGE	DESCRIPTION	BUILDING SIZE (SQ. FT.)
John Beck Elementary	Educational Institution, grades K-6	600	7.5	Recreation facilities	57,187
Lititz Elementary	Educational Institution, grades K-6	575	4	Recreation facilities (Pierson's playground)	77,759

The district facilities include a high school, middle school, sports complex and four elementary schools. All of the facilities are located in Lititz Borough with the exception John Beck Elementary, Buch Farm Complex and a portion of Bonfield Elementary which are located in Warwick Township. The enrollment capacity for these facilities is 5,164 students.

The school facilities and grounds are open for public use based on school district policy. Rental fees are applicable depending on the type of organization and area to be utilized.

The District offers a full range of academic, vocational, athletic, computer and art/music programs. Additional programming includes: special services (e.g., learning support, mentorship, psychological, gifted instructions and inclusive approach for exceptional students), and support services (e.g., guidance counseling, student assistance team, peer mediation, team teaching, speech/language, hearing and summer school). Additional support for elementary school includes Title 1 reading services, instructional support teachers and teams, and D.A.R.E.

Pedestrian and Bus Routes to Facilities:

Local transportation infrastructure is a key area of concern to providers of public education services. This infrastructure generally includes sidewalks and roadways. Safety is of primary concern particularly where pedestrians cross streets and mix with drop-off and pick-up locations on site. For students accessing the facility via school buses, safety issues deal with the location of bus stops and the condition of roadways, in general and during wet, icy and snow conditions, in particular. The District officials indicated few current pedestrian and bussing problems. One notable pedestrian problem is the conflict between pedestrian and vehicular traffic behind Lititz Elementary where the alley connects Broad to South Cedar Street. The current situation is monitored with adult crossing guards. The other pedestrian problem area is associated with congestion at Kissel Hill as students walk from Butterfly Acres.

Students are bussed to each of the schools in the district. Transportation services are also provided to non-public school students. The District monitors the trend in these services. The following table demonstrates the increase in number of vehicles and number of students served. The biggest increase in the number of public students transported by bus for the six-year period occurred in the year 1997/98. For non-public students the greatest increase occurred in 1995/96. What is important to note is the general increase in both the public and non-public sectors.

PUBLIC	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98
Number of Vehicles	23	24	28	28	28	29
Number of Pupils	3083	3101	3081	3090	3098	3126

PUBLIC	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98
NON-PUBLIC						
Number of Pupils	510	445	457	496	489	514

School District Planning Activities:

Public school districts are mandated by the Pennsylvania State Board of Education to plan for future school facilities and programming. Both the school districts and municipalities must be cognizant of each others planning activities and be amenable to the sharing of information. The Warwick School District's planning activities include strategic planning and facilities planning.

Warwick School District Strategic Plan: A Vision for the Future (1996 to 2002)

The planning process occurs every six years. The process includes the development of a mission statement, goal statements and action plans. The process included a Strategic Planning Committee comprised of representative from the community. Each representative also served on a one of seven subcommittees, including: career development, communications, fiscal, community and family involvement, curriculum, professional growth and development, and technology. The following objectives developed by the community and family subcommittee and the technology committee have a direct interface with the regional planning process. These objectives include from the community and family subcommittee:

1. *"Develop and nurture the partnerships between students and significant adults within their community.*
2. *Develop partnerships between the community and the school.*
3. *Utilize the effect of the home, community, and school learning environments to reinforce learning at each grade level —birth to K, 1st to 6th, 7th to 8th and 9th to 12th.*
4. *Assure that the expectations of the community, family, and school adhere to values, ethics, and a consistent code of conduct."*

and from the technology subcommittee:

"Create a program by which those in business and industry will understand why and how technology is being used in the school curriculum, as well as provide feedback to the TAC; cooperative community relationships are cultivated; and grants from business and industry in the form of technology, monetary donations, and manpower are pursued " (Excerpts from the Strategic Plan brochure).

Facility Planning

The district is undertaking a planning process to discover the impact of the development in the region on existing school facilities. This process will answer the question regarding renovations to existing facilities or the building of new facilities for the future. The district has uncovered an average growth of 90 to 125 new students per year. The goal of the development potential investigation is to help determine a realistic projection of future enrollments and the location of new students.

LIBRARY SERVICES

The Lititz Public Library represents an important service to the community. The service is a part of the Lancaster County Library System. The library services are not part of the services provided by the local government; however, local government does provide support to the service.

Mission of the Library Services:

The mission of the Lititz Public Library is to provide access to recreational and educational print and non-print materials for all citizens of Lititz Borough, Warwick Township and Elizabeth Township (service area of the Warwick Area School District). The Library has two primary focuses: (1) to serve as a "Gateway to Learning" for preschool children by providing programming and print and non-print materials (70% of the total book circulation is from the children's and juvenile collections) and (2) to serve as an "Adult Recreational Information Source" by providing print and non-print popular recreational and educational reading materials.

Location of the Service:

The Lititz Library is located in the Borough of Lititz at 302 S. Broad Street. The present library building was formerly a residential building, built in 1915. The building contains 2,275 square feet of useable space which is partially handicapped accessible (first-floor). The library will be moving into a new facility by the Summer of 1999 (see A Capital Campaign) located in Warwick Township at the corner of Kissel Hill Road and 6th Street. The 16,000 square feet facility will include a children's library including activity's room, story-time room, young adult reading room; a reference area and fiction and non-fiction area; work room; boardroom; director's office; community room with seating for approximately 200 persons (accessible when library is closed); kitchen; restroom facilities; and a small business office. The entire building will be handicapped accessible.

Staffing and Funding of the Service:

Thirteen paid staff and fourteen volunteers run the Library Service. The Library is managed by a eleven-person board with representatives from the school district and the three municipalities. The term for board members is three years. The board functions as policy group with fiduciary responsibilities.

The Library is supported financially from a variety of public and non-profit agencies and organizations. The State contributes approximately \$18,000 per year to the operating budget. Lancaster County contributes an estimated \$8,000/year. ACCESS PA averages \$3,500/year. Each of the service area municipalities contribute to the service. The Borough's donation is approximately \$10,000/year; whereas, the two township each contribute approximately \$7,000/year. The Warwick Area School District contributes \$.50/student (approximately \$2,000/year).

Recently, the Lancaster County Commissioners have made a new commitment to the Lancaster County Library System. This commitment included naming the Lancaster County Library System as their agent for delivering library services to County residents. This commitment brought with it two new initiatives including increased funding for technology and an incentive program. The County offered a \$2 to \$1 match for every new municipal dollar the library generates for its annual budget. Through an added contribution by Elizabeth Township, the library was able to obtain a grant of \$8,000 from the County to be paid over two years. Contributions to the capital fund for the library were not eligible for the incentive program.

A Capital Campaign – Lessons to be Learned for Future "Community-Building" Endeavors and the Planning Process:

The topic of community-building is a subject receiving a great deal of press in planning literature and community-oriented studies. The setting of many of the community-building articles is cities and urban-centers. The focus of community-building is techniques utilized to unite the community around a common issue and/or project. The public's willingness to embrace these projects and activities reveals a great deal about the civic capacity of the community or the ability of a community's citizens to work together over a sustained period to shape a collective future. The Library's Capital Fundraising Campaign for the new library is an example of a community-building

project. The methods and techniques utilized for this campaign are outlined below. These techniques should be carried forward into the next phases of the Strategic Comprehensive Planning Process as examples of techniques that worked for involving the public and gaining support for planned ideas.

- The Planning Process began in November 1996 with a community meeting. The entire community was invited with special invitations sent to 50 key individuals. The purpose of the meeting was to collect ideas regarding location options, the type of building and site requirements (a community facilitator was utilized).
- A consultant was hired to provide a feasibility study to determine if a new library facilities project would be supported and a fund raising campaign would be realistic. Through a series of interviews, the consultant uncovered the pulse of the community. The information became an important piece of the public relations campaign in the newspaper and at informal gatherings.
- Based on a positive response, the Board hired a building consultant to help find the best location for the library and to collect important demographic data.
- An Executive Committee for fund raising was formed. The committee was comprised of ten influential and experienced fund-raisers in the community. The fund raising campaign was kicked-off in September 1997. Fund raising activities included:
 - Advanced Gift Workers – trained fundraisers to target major contributors. The campaign began with a breakfast and rally attended by Michelle Ridge and key legislators.
 - Fund Fest – Campaign kick-off for the community with Doug Allen (television personality) as MC. The Fest showcased library program and services and unveiled the tile sale put together by the Friends of the Library.
 - Community Workers were organized to make contacts throughout the community (over 350 contacts were made).
 - A party was held in May, 1998 at the Heritage Map Museum for donors and potential donors (a cultivation event).
 - By the beginning of June over 10,000 letters had been sent for the community appeal.
 - The Friend of the Library conducted a monthly fundraising events.

Due to the success of the campaign and interest shown by the community other sources of funding and donations have become available. These funds include donations and grants from service organizations and foundations (e.g., Brossman Foundation, Lancaster County Foundation, Ronald McDonald House charities, and Steinman Foundation). In addition, local businesses have provided tremendous support with donated services, such as: architectural services, landscaping and landscaping design services, carpet, interior signs, and campaign headquarters. Municipal and state legislator support was evident throughout the process. Warwick Township and legislators helped to sponsor and secure a \$175,000 Keystone grant (the grant was only possible through the support of all municipalities and required matching funds generated from the fundraising campaign). The Township secured the land (lease to library) for the library facility.

The results of campaign are impressive. The campaign boasts over 920 donors to date. In less than a year, the fundraising campaign reached its target of \$1.49 million. The success of the Library's Fund Raising Campaign and the community's willingness to embrace that campaign speaks highly of the civic capacity of the Lititz-Warwick Region (including Elizabeth Township).