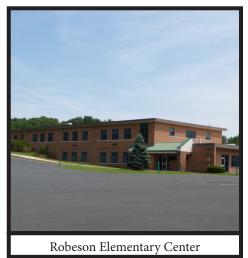
#### **COMMUNITY FACILITIES AND SERVICES**

Community facilities include schools, police and fire stations, municipal buildings, libraries, parks and similar facilities. Community services include police and fire protection, sewage and water services and municipal government.

#### Schools

The opportunity for a high quality education is commonly held as a top priority when choosing a place to live. Historically, school districts have planned in the short term when it came to forecasting future demands for school district facilities. This forecasting is what drives the decision making process with regard to building expansions, construction, consolidations, and closures. School district planning can both affect and be affected by the land use activities within an area. For instance, new or expanded schools may generate increased nearby residential development, and school closures may contribute to communities losing population. At the same time, long-range municipal land use planning may designate new growth areas that are not close to existing school facilities. It is for these reasons that it is very important that there is strong coordination between school district planning and the municipal comprehensive planning processes to assure that existing and future schools and planned community growth occur hand-in-hand.



The Southern Berks Region is served by two public school districts. The Daniel Boone School District serves Birdsboro Borough and Union Township within the Southern Berks Region, plus Amity Township within Berks County. The Twin Valley School District serves Caernarvon and Robeson Townships, plus other municipalities within Chester County. Both school districts are governed by a nine-member school board, and board members serve 4-year terms with no compensation. In addition, the High Point Baptist Academy is a private school that is located within Robeson Township. Another private school called Immaculate Conception Academy is located in Union Township just south of the Daniel Boone High School site. The Live N Learn Smile Center is a private school located within the Borough of Birdsboro on Main Street. The Community Facilities and Recreation Map (Figure 6) illustrates the location of Southern Berks Region's public and private school sites. The remainder of this section will focus upon conditions at the public schools within the Southern Berks Region.

Presently, Daniel Boone School District employs the following grade format:

Daniel Boone Area Primary Center: Kindergarten through Grade 2 Daniel Boone Area Intermediate Center: Grades 3 through 5 Daniel Boone Middle School: Grades 6 through 8 Daniel Boone High School: Grades 9 through 12

Presently, Twin Valley School District employs the following grade format:

Twin Valley Elementary Center: Kindergarten through Grade 4 Robeson Elementary Center: Kindergarten through Grade 4 Honey Brook Elementary Center: Kindergarten through Grade 4 Twin Valley Middle School: Grades 5 through 8 Twin Valley High School: Grades 9 through 12

| Summary of Daniel Boone District Facilities                  |               |                     |                      |                    |                  |                   |                         |
|--|---------------|---------------------|----------------------|--------------------|------------------|-------------------|-------------------------|
| School Name  | Year<br>Built | Renovation<br>Dates | Site Size<br>(acres) | Rated<br>Condition | Grades<br>Housed | Rated<br>Capacity | 2018-2019<br>Enrollment |
| Daniel Boone Area Primary Center                             | 2007          | -                   | N/A                  | Good               | K-2              | 600               | 623                     |
| Daniel Boone Area Intermediate Center                        | 2002          | -                   | N/A                  | Good               | 3-5              | 750               | 723                     |
| Daniel Boone Area Middle School*                             | 1967          | -                   | N/A                  | Good               | 6-8              | 1003              | 807                     |
| Daniel Boone Area High School*                               | 1966          | 1971,1997,2009      | N/A                  | Excellent          | 9-12             | 1442              | 1120                    |
| *located at one site<br>Source: Daniel Boone School District |               |                     |                      |                    |                  |                   | ^                       |

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

All of the above schools serve the Southern Berks Region. Furthermore, the 54-acre Daniel Boone Middle/High School Complex is located just east of Birdsboro Borough in Union Township along Chestnut Street; this facility serves students from the entire school district. Southern Berks Region's kindergarten and elementary-aged students attend Daniel Boone Primary Center. The Southern Berks Region's schools are depicted on Figure 6 (Community Facilities and Recreation Map).

As the previous table reveals, the following lists the residual capacity in each of the schools that serve the Southern Berks Region:

| Residual Capacity of Schools Serving Southern Berks Region   |      |      |     |  |  |  |
|--|------|------|-----|--|--|--|
| School Rated Capacity 2018-2019 Enrollment Residual Capacity |      |      |     |  |  |  |
| Daniel Boone Primary Center                                  | 600  | 623  | -25 |  |  |  |
| Daniel Boone Intermediate Center                             | 750  | 723  | 27  |  |  |  |
| Daniel Boone Middle School                                   | 1003 | 807  | 196 |  |  |  |
| High School  | 1442 | 1120 | 322 |  |  |  |
| Total Residual Capacity                                      | 520  |      |     |  |  |  |

Based upon the preceding figures, the schools serving the Southern Berks Region have very good residual capacity, with the exception of the Daniel Boone Primary Center.

# Goal: Municipalities should work with school districts to adequately plan for increased demands on the districts caused by large scale developments coming into the area.

The following tabulates conditions at each of the Twin Valley School District's five school sites:

|  | Summary of Twin Valley School District Facilities |                     |                         |                    |                  |                   |                         |
|--|---|---------------------|-------------------------|--------------------|------------------|-------------------|-------------------------|
| School Name  | Year<br>Built                                     | Renovation<br>Dates | Site<br>Size<br>(acres) | Rated<br>Condition | Grades<br>Housed | Rated<br>Capacity | 2018-2019<br>Enrollment |
| Twin Valley Elementary*                                      | 2005  | -                   | 118*                    | Good               | K-4              | 557               | 344                     |
| Robeson Elementary   | 1954  | 1993                | 15                      | Very Good          | K-4              | 475               | 386                     |
| Honey Brook Elementary                                       | 1995  | -                   | 25                      | Very Good          | K-4              | 550               | 385                     |
| Middle School*   | 1991  | 2008                | 118*                    | Very Good          | 5–8              | 1415              | 1027                    |
| High School*   | 1958  | 1966/2000/2007      | 118*                    | Very Good          | 9–12             | 1339              | 1063                    |
| * located at one site<br>Source: Twin Valley School District |   |                     |                         |                    |                  |                   |                         |

All of the Twin Valley School District's schools, except the Honey Brook Elementary School, are located within the Southern Berks Region. The largest facility combines the Twin Valley Elementary, Middle, and High Schools on a 118-acre campus prominently located atop Clymer Hill just northeast of Morgantown in Caernarvon Township. The Robeson Elementary School is located on the east side of White Bear Road in northern Robeson Township. This district covers a large geographic area and the vast majority of all students are bused to their schools.

Two separate elementary schools serve Caernarvon Township and Robeson Township. First, the Twin Valley Elementary School serves students from the small area southeast of State Route 82 and east of I-176. The larger area within the Southern Berks Region buses their elementary students to Robeson Elementary School. These service areas are depicted on Figure 6 (Community Facilities and Recreation Map).

From the previous table, the following lists the residual capacity in each of the schools that serve the Southern Berks Region:

| Residual Capacity of Schools Serving Region               |       |      |     |  |  |
|---|-------|------|-----|--|--|
| SchoolRated Capacity2018-2019 EnrollmentResidual Capacity |       |      |     |  |  |
| Twin Valley Elementary                                    | 557   | 344  | 213 |  |  |
| Robeson Elementary  | 475   | 386  | 89  |  |  |
| Middle School   | 1,415 | 1027 | 388 |  |  |
| High School   | 1,339 | 1063 | 276 |  |  |
| Total Residual Capacity                                   | 966   |      |     |  |  |

Based upon the preceding figures, the Twin Valley School District is generally in very good shape with regards to residual capacity. All facilities in the district are filled below their residual capacity.

Using 2017 population projections, the number of school-aged children within the Southern Berks Region totaled about 3,446, or 17.3% of the total population. Assuming a similar future ratio, the following tabulates the number of new school-aged students that are projected based upon population growth:

| Year          | Total Population | Total Children Ages 5-19 |
|---------------|------------------|--------------------------|
| 2000          | 17,698           | 3,610                    |
| 2010          | 19,888           | 4,201 (+591)             |
| 2017 Estimate | 20,134           | 3446 (-755)              |

The planning goals for this Plan suggest that Caernarvon Township and Robeson Township will bear most of the planned development potential within the Southern Berks Region. Therefore, it would appear that residual capacity within the existing schools can adequately accommodate planned growth for about the next decade; however, it may require grade shifting and redistricting that could prove difficult. Furthermore, the initiation of school expansion is a major project that often takes several years to undertake.

# Goal: In order to create a vibrant future for the Southern Berks Community, the School Districts should provide a high quality education for all students, regardless of social or economic status.

- It is apparent that both school districts could benefit from an improved process of residential development review. By learning of proposed developments early, the districts can better prepare for needed school expansion and bus routing.
- Each municipality within the Southern Berks Region should revise its subdivision and land development application requirements so that adequate and timely notification to the school districts is assured. Similarly,

the school districts should allocate manpower and resources so as to properly respond to such applications and provide meaningful feedback to the municipalities by coordinating development within the region with public school capacity.

 Finally, school districts should continue to cooperate with the municipalities in the delivery of parks and recreation opportunities, provided student use takes priority during the school year, adequate supervision is provided, and other administrative issues can be resolved. Clearly, the school districts have already contributed to the availability of parks and facilities within the Southern Berks Region to the benefit of all residents and municipalities. This represents savings in the amount of millions of dollars to local municipalities who would otherwise need to fulfill this need.

# Goal: The stakeholders of the Southern Berks Region should work together to create a new Regional Recreation Board (RRB). This RRB should include at least two voting members from each municipality/ school district who have demonstrated interest in parks and recreation.

 Recreation and parks boards play an important role as the "watchdog" and in many cases the administrator of the municipal recreation and parks services. As a function of municipal government, the board has a responsibility to review the total recreation and parks system including the services provided by all of the agencies in the community, to insure that all residents' needs are met.

A recreation and park board benefits your community by:

- Being aware of the needs and viewpoints of their neighbors, friends and fellow citizens. They help your municipality become more customer-driven by providing ongoing public input. As the eyes and ears of your community, they also know how and when to broach a subject with residents.
- Selling the worth of recreation and parks to elected officials. As citizens themselves, they carry clout and political influence. Elected officials listen to voters. Boards can gain financial support for parks and programs and can effectively negotiate with elected officials.
- Developing the recreation and parks vision of your community, helping your municipality become forward thinking and encouraging it to be proactive rather than reactive.
- Serving as an extension of elected officials, relieving them of day-to-day operations and concerns for recreation and parks, especially if your community has no staff.
- Enhancing the image and developing community pride in and support of your recreation and parks system.
- Monitoring the public expenditures of citizen tax dollars and raising funds to supplement budgeted funds.
- Serving as a buffer between citizens and elected officials on controversial issues.
- Providing continuity from year to year in the operation of your recreation and parks system.
- Helping to plan and conduct recreation programs and special events and involve more citizens as volunteers.

#### **Police Protection**

Police protection is an obvious public service benefiting residents and businesses. The traditional role of the police involves three functions: law enforcement, order maintenance, and community service. Law enforcement involves the application of legal sanctions, usually arrest, to persons who injure or deprive others of life or property. Order

maintenance involves the handling of disputes, or of behavior, which threatens to produce disputes. The third aspect of the police function, and the one most likely to occupy the major portion of an officer's time, varies from community to community according to tradition and local ordinances. These activities include such tasks as traffic control, rescue operations, animal control, and ambulance and first-aid services.

Police protection within the Southern Berks Region is provided by a mix of local and State Police coverage. In addition, all emergency police calls are dispatched through the Berks County "911" program. The Community Facilities and Recreation Map (Figure 6) illustrates the location of Southern Berks Region's police departments and service areas, which coincide with municipal boundaries.

#### **Birdsboro Police Department**

The following information was obtained from Robin Emerick (administrative assistant) of the Birdsboro Police Department via a telephone conversation.

This Department serves only the Borough. The department is presently housed at 200 East Main Street, Birdsboro, PA 19508. Specifications for this space include two offices, a squad room, one holding cell, and a secure garage with electric, remote control doors). Currently, the department consists of six full-time officers, one chief and one administrative assistant. The following summarizes this Department's activities over the last three years:



| Birdsboro Borough Police Department Activity |  |    |    |     |  |  |
|--|--|----|----|-----|--|--|
| Year   | Number ofNumber of TrafficNumber ofNumTotal ResponsesAccident ResponsesSerious OffensesCases |    |    |     |  |  |
| 2016   | 2,718  | 76 | 82 | 273 |  |  |
| 2017   | 2,752  | 81 | 40 | 314 |  |  |
| 2018   | 2,511  | 80 | 43 | 349 |  |  |

The Borough's Police Department provides round-the-clock coverage. The Pennsylvania State Police are only called in as back-up in a serious criminal investigation. The Department operates with three marked and one unmarked police vehicles. The Department has six computers and a server which assists officers in their daily reports, and the capability to download to, and link with, the County-wide police database. Cooperation among Southern Berks Region's emergency service providers is good. At this time, there has been no discussions to create a regional police force. The average response time is less than 5 minutes.

#### **Caernarvon Township Police Department**

The following information was obtained from Detective Corporal Chad Eberly and Teresa Peifer of the Caernarvon Township Police Department via a telephone conversation.

This Police Department serves only Caernarvon Township. The department is presently housed in the Municipal Office Building, located at 3307 Main Street, P.O. Box 52 Morgantown, PA 19543. This station contains four offices, two holding cells, one squad room, and one finger-print room, one evidence room, two interview rooms and one garage.

Currently, the department consists of a chief, sergeant, detective corporal, four full-time and two part-time officers and one office assistant. The Department calculates needed manpower based upon call statistics, and anticipated

demand based upon the conduct of nearby special events (e.g., drag races). The following summarizes this Department's activities over the last three years:

| Caernarvon Township Police Department Activity |   |     |     |    |  |  |
|--|---|-----|-----|----|--|--|
| Year   | Number ofNumber of TrafficNumber ofNumberTotal ResponsesAccident ResponsesSerious OffensesCases Cloperation |     |     |    |  |  |
| 2016   | 5,554   | 122 | 98  | 81 |  |  |
| 2017   | 3,848   | 133 | 127 | 85 |  |  |
| 2018   | 5,239   | 158 | 107 | 84 |  |  |

The Township's Police Department provides 24 hr. coverage. Typically, there is one patrol car assigned per shift; however, more officers could be on duty. The Pennsylvania State Police will offer emergency call coverage when the Department is already occupied, and is called in as back-up in serious criminal investigations. The Department has an average response time of 3 to 5 minutes.

The Department has six vehicles, including four SUV's. The department is in process of replacing two sedans with SUV's and also acquiring a pickup truck. Each vehicle has a radio, cell phone and laptop computer as well as NARCAN. In addition, each officer on patrol is equipped with an AED (Automated External Defibrillator) to assist in medical emergencies. There are 14 freestanding computers within the police station. Some are connected to the County-wide system.

Cooperation among the Township Police Department and other emergency service providers is described as excellent. Detective Corporal Eberly believes that the challenges confronting this department relate to a shortage of manpower as well as the potential for future increased demand due to the construction of a proposed casino in the township. This will force new hiring, which will, in turn, likely require expansion of the Police Station. He emphasizes the need for an "ever-present working relationship with local officials, advanced training, and up-to-date policing policies."

#### **Robeson Township Police Department**

The following information was obtained from Township Manager Colleen Easterday via a telephone conversation.

This Department serves only Robeson Township, but includes a large area (some 36.6 square miles). The Department is presently housed at 2689 Main Street, Birdsboro, PA 19508. Presently, this space provides three offices, a squad room, two holding cells, an interview room, an evidence room / fingerprint room. The Department provides for 24/7/365 police coverage, with two patrol shifts per day.

Currently, the Department consists of five full-time officers, one part-time officer and one full time office assistant. Currently, the police response times can vary up to 15 minutes; however, it is noted that the Department occasionally responds to police calls in adjoining municipalities due to mutual aid agreements. The Pennsylvania State Police are only called into Robeson Township as back-up in a serious criminal investigation.

The following summarizes this Department's activities over the last three years:

| Robeson Township Police Department Activity |                              |     |     |     |  |  |
|---|------------------------------|-----|-----|-----|--|--|
| Year  | Number of<br>Total Responses |     |     |     |  |  |
| 2016  | 7,336                        | 114 | 163 | 114 |  |  |
| 2017  | 5,710                        | 63  | 127 | 46  |  |  |
| 2018  | 6,304                        | 139 | 96  | 136 |  |  |

The Department utilizes five police vehicles. These vehicles consist of two SUV's and three sedans with four being marked and one being unmarked. All vehicles are equipped with radios, AED's and NARCAN. Three vehicles are equipped with laptops. Department communications are tied with the Berks County Communications Center which dispatches all police calls. Cooperation among Southern Berks Region's emergency service providers is described as "excellent." It is believed that the greatest police need within the Township is for additional manpower, followed by expanded office space.

#### Union Township – Pennsylvania State Police

The Pennsylvania State Police serves a large number of municipalities within Berks County. Specifically, the Reading station offers principal coverage for Union Township and New Morgan Borough, part-time coverage of Caernarvon Township, and upon-request back-up service to Birdsboro Borough and Robeson Township within the Southern Berks Region. The Southern Berks Region is situated at a convergence of several patrol zones, which means that any number of patrol vehicles could be called upon to respond to calls, depending upon which vehicles were the closest. Patrol shifts run around the clock with varying hours assigned based upon demand.

#### **Future Regional Police Protection**

Early discussions among the Plan Study Committee indicate that any regional police force proposed should require the conduct of a feasibility study by the Pennsylvania Department of Community and Economic Development as a prerequisite. This suggests a potential willingness to consider such a regional force; however, conversations with local police officials and municipal officials suggest otherwise. Furthermore, the future land use policies expressed for this Plan suggest focusing new growth in compact areas around planned utility service areas, and away from important natural features. These combined policies will likely preserve Union Township's rural character and make the expense of a local police force politically difficult to justify. On the other hand, officials from the Daniel Boone School District believe that a more local police presence is necessary within Union Township to safeguard the 2,000+ students who attend the Middle School and High School located here.

As rural areas develop, local officials find themselves torn between retaining low levels of taxation, and providing for increasing levels of public facilities and services that are usually expected by the "newcomers." This often pits long-time residents of the community who want things to remain as they were against new residents who move from more urbanized locations, and are often surprised and disappointed by the relative lack of public services. At some point, the new residents usually outnumber the existing inhabitants and the political winds change. At that time, new officials are elected on platforms of better delivery of more services, and real ill-will within the community develops.

Local officials need to know and understand these pressures if they are to persevere through the transition. The question is not **if** better services and higher taxes result, but **when**! Fortunately, state programs exist to assist municipalities with these difficult studies and decisions and offer independent expert advice. Some of these programs are free, while others are offered in the form of peer-to-peer grants. In any event, these programs and grants can provide invaluable assistance to the open-minded elected official who is trying to "cut through" all of the local politics and emotion.

If the participating municipalities express interest, local officials should engage the available programs to identify the best way to offer regionalized police protection. However, at this time, this Plan does not advocate the creation of a regional police force.



#### Fire Protection and Ambulance Service

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

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

# Goal: To create an environment of cooperation between the Municipalities in the Southern Berks Planning Region and the corresponding emergency service agencies to make sure that there is adequate coverage as municipalities continue to grow.

- There should be regular meetings between emergency service providers to make sure that adequate coverage to citizens is maintained.
- The municipalities should consider the creation of an Emergency Services Alliance to facilitate these meetings and to maintain an open line of communication between parties.
- There should be the formalization of a program to deliver specialized training to ensure a wide and uniform coverage of specialized skills and expertise throughout the Southern Berks Region

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

|   | Sur     | mmary Characteristics   | s of Fire Companies Lo  | cated Within Southe   | rn Berks County Reg   | gion  |
|---|---------|---|---|---|---|---|
| Fire Company                                  |         | Birdsboro Fire<br>Department  | Twin Valley Fire<br>DepartmentGeigertown Fire Co.   |   | Gibraltar Fire Co.  | Birdsboro / Union Fire<br>Co. – South Station   |
| First Call Service Areas<br>Within the Region |         | Birdsboro Borough   | Caernarvon Township<br>New Morgan Borough   | Southern Robeson<br>Township  | Northern Robeson<br>Township  | Union Township  |
| Mutual-Aid Service                            | Areas   | Amity/Exeter/Robeson/<br>Union/Mt. Penn   | Robeson/Elverson/<br>Warwick/Caernarvon/<br>Honey Brook/<br>West Nantmeal   | Birdsboro/Robeson /<br>Union/ Caernarvon/<br>Elverson   | Southeastern Berks  | Birdsboro/Robeson/Exeter/<br>Amity/Douglas/<br>North Coventry/Elverson/<br>Mt. Penn/anywhere who calls  |
| Year 2018 Contribution from Municipalities    |         | \$181,000   | \$118,749   | \$118,843   | \$45,000  | \$118,843   |
| Station Locations the Region                  | Within  | 214 W. First Street Street<br>Birdsboro, PA 19508   | 4456 Main Street<br>Morgantown, PA 19543  | 3433 Hay Creek Road<br>Birdsboro, PA 19508  | 3351 Main Street<br>Birdsboro, PA 19508   | 1082 Chestnut Street<br>Douglassville, PA 19518   |
| Average No. of Vol                            | unteers | 30 firefighters<br>6 fire police  | 40  | 26 firefighters<br>3 fire police  | 32 firefighters<br>6 fire police  | 25  |
| First Due Calls                               | 2016    | N/A   | 264   | 140   | 425   | 81  |
| 2016-2018                                     | 2017    | 100   | 248   | 110   | 375   | 85  |
|   | 2018    | 120   | 270   | 132   | 460   | 100   |
| Mutual-Aid Calls                              | 2016    | N/A   | 47  | N/A   | 220   | 26  |
| 2016-2018                                     | 2017    | 104   | 50  | N/A   | 230   | 35  |
|   | 2018    | 118   | 43  | N/A   | 260   | 46  |
| Average Emergend<br>Response Time*            | су      | 3-4 minutes   | 5 minutes   | 5 minutes   | 5-10 minutes  | 4 minutes   |
| Major Equipment                               |         | <ul> <li>2 engines</li> <li>1 rescue</li> <li>1 utility truck</li> <li>1 command truck</li> <li>1 ATV</li> <li>1 brush truck</li> </ul> | <ul> <li>75-foot ladder truck</li> <li>heavy rescue</li> <li>2 engines</li> <li>1 utility truck</li> <li>3 brush trucks</li> <li>3 special services / ATV</li> <li>1 each squad</li> <li>1 each chief and deputy</li> </ul> | <ul> <li>1 tanker</li> <li>1 pumper / engine</li> <li>1 ladder</li> <li>1 utility</li> <li>1 attack</li> <li>1 atv / special operations trailer</li> <li>1 brush truck</li> </ul> | <ul> <li>2 jeep brush trucks</li> <li>1 tanker</li> <li>1 engine/tanker</li> <li>1 rescue</li> <li>1 attack truck</li> <li>1 squad truck</li> <li>1 bobcat ATV with tank</li> </ul> | <ul> <li>1 engine</li> <li>1 rescue</li> <li>1 tower truck</li> <li>1 utility truck</li> <li>1 command truck</li> <li>1 ATV</li> <li>1 brush truck</li> </ul> |

\* Time that it takes the vehicle to leave the station.

| Su   | mmary Character                         | istics of Ambulance Cor                                       | npanies Located V  | Vithin Southern Berks County   | / Region   |  |
|--|---|---|--------------------|--|--|--|
| Ambulance Co                               | ompany                                  | Elverson / Honey Br   | ook Area EMS       | Southern Berks Regional EMS  |  |  |
| First Call Service Areas Within the Region |   | Caernarvon, Robeson and Union Townships<br>New Morgan Borough |                    | and Union Townships, Birdsboro,  | outhern reaches of both Robeson<br>Kenhorst, Mohnton, and Shillington<br>bughs |  |
| Mutual-Aid Service Areas                   |   | NA  |                    | Western Berks area, Exeter Tow   | nship, City of Reading, Caernarvon   |  |
| Year 2018 Contributions from               | n Municipalities                        | NA  |                    |  | 700, Kenhorst \$23,100, Shillington<br>cknock \$52,400                         |  |
| Station Locations Within the               | Region                                  | Station 189 - 671 Firehouse Lane, Honey Brook, PA S           |                    | Station 1 – 455 East Main Street, Birdsboro, PA 19508<br>Station 2 – 769 Mtn. View Rd, Reading, PA 19607 (MAIN)<br>Station 3 – 14 Church Lane, Douglassville, PA 19518 |  |  |
| Average Number of Voluntee                 | Average Number of Volunteers/Paid Staff |   | NA                 |  | 32 full-time paid staff<br>46 part-time paid staff                             |  |
| Coverage Periods                           |   | NA  |                    | 24/7/365   |  |  |
|  | Type of Response                        | Emergency Calls   | Routine Transports | Emergency Calls  | Routine Transports   |  |
| Number of Ambulance                        | 2016                                    |   |                    | 5,883  | 2,038  |  |
| Responses<br>(2016-2018)                   | 2017                                    | NA  |                    | 6,267  | 1,971  |  |
|  | 2018                                    |   |                    | 6,205  | 1,468  |  |
| Average Emergency R                        | Average Emergency Response Time*        |   | NA                 |  | Generally 2-3 minutes  |  |
| Major Equipment                            |   | NA  |                    | <ul> <li>10 ambulances</li> <li>6 paratransit vans</li> <li>2 EMS Squads</li> <li>special operations unit equipped with an all -terrain vehicle</li> </ul>             |  |  |
| Adequacy of Ambulance Sta                  | ation                                   | Exceller  | nt                 | Station 2&3 Good Condition. Station 1 need s renovation  |  |  |

\* Time that it takes the vehicle to leave the station.

#### Future Volunteer Manpower

Not unlike any other agency in the County, each of the fire and ambulance companies expressed a concern over declining numbers of volunteers. This is particularly true of "younger volunteers" who will become the next generation of emergency service providers. However, given the projected growth within the Southern Berks Region, future demands will rise and more manpower will be needed. Declining manpower response is most problematic during the day when many volunteers work outside of their first-due response area. Presently, 5 separate fire companies serve the Southern Berks County Region.

Goal: To enlist more volunteer firefighters/EMTs, particularly during the daytime. It is recommended that the Southern Berks Region create a new Emergency Services Alliance of local officials (say, one from each municipality), the fire chiefs from each fire company, and the ambulance chiefs from each ambulance company. The Alliance should seek to ensure that the following possible sources of daytime and other volunteers are put in place:

- 1. Recruit firefighters/EMTs who live within the Southern Berks Region and work for businesses located here;
- 2. Recruit firefighters/EMTs who live outside of the Southern Berks Region, but work for businesses located here;
- 3. Establish policies with local governments and businesses that enable their employees to respond to daytime emergencies;
- 4. Identify local volunteer firefighters/EMTs who may work for Berks County, and establish policies for their release from work duties to respond to daytime emergencies within the Southern Berks Region;
- 5. Design ongoing recruitment strategies for new resident volunteers and retention strategies for existing volunteers;
- 6. Explore the offering of a "junior" firefighting curriculum within the public school districts as a means of developing interest and expertise among potential future volunteers.

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

- 1. Determine the need by local fire/ambulance chiefs for more volunteers from any of the preceding sources within their respective companies;
- 2. Establish policies within the Southern Berks Region's fire and ambulance companies that allow for nonresidents to become members of their respective companies;
- 3. Identify those local and non-resident volunteers who work for companies within the Region who could potentially respond to daytime emergency calls;
- 4. Determine the level of competence of potential volunteers and/or training needed to "run" with local companies;
- 5. Establish ongoing working agreements with local businesses for the release of volunteer firefighters/EMTs during daytime emergencies;
- 6. Require the potential "daytime" employee volunteer firefighter to become an official member of the respective fire/ambulance company, so that they can be covered by the municipality's workmen's compensation insurance policy;
- 7. Establish an ongoing mechanism that periodically reinitializes the recruitment process.

Pennsylvania DCED's Shared Municipal Services Program offers matching grants for any two or more municipalities who jointly perform local government functions. Such grants have been awarded to fund paid administrators to oversee the preceding recruitment and training activities. The Southern Berks Region could benefit from the same type of position to carry out these same duties, as discussed in this section of the Plan.

There is a huge benefit to volunteerism when it comes to fire protection and emergency medical services. This saves each municipal tens of thousands of dollars or more each year in operating expenses. In addition, it creates a real sense of community when people work together for the common good of the area. This good will is known to spread to other areas of life such as recreation. It also helps when it comes to garnering donations for the Emergency Services as a whole. There seems to never be a surplus when it comes to the financials of fire departments and EMS. Undeniably, local volunteers have made, and continue to make, huge contributions to the safety and financial well-being of the Southern Berks Region. It is vital that their efforts continue!

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

# Goal: The Region must cultivate awareness among the newly-arrived residents of the need for their financial and manpower support to sustain volunteer firefighting and ambulance services.

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

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

The new campaign should be more of an "in-your-face" effort that presents specific findings and presents hard, "credible" facts about the cost of delivering these services and the foreseeable equipment needs of the various companies. It should explain the benefits of new equipment and what it can mean to the Southern Berks Region. It should also portray the competent plans of the local companies in their attempts to ensure an adequate level of protection in the near and long-range future. Schedules for equipment replacements and upgrades should be accompanied with target financial goals to which the public can respond. Citizens should gain an understanding that local companies really need this equipment, and that they are not just "after" the newest and shiniest truck on the market.

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

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

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

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

Even though local volunteer firefighters are described as strong-willed, determined and fiercely independent, most agree that difficult times lie ahead. Therefore, as a long-term strategy, local volunteer fire companies and municipal officials should begin to explore the partial and gradual use of other funding mechanisms (e.g., billing for responses, fire tax, etc.), so that these measures can be phased-in, in support of local volunteer efforts, rather than allowing for complete failure of the volunteer system which would then be replaced by a completely-paid force. It is worth repeating that this Plan does not recommend the creation of regional fire or ambulance companies at this time.

#### **Municipal Government**

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

#### **Birdsboro Borough**

Office Address: 202 East Main Street, Birdsboro, PA 19508

(TEL: 610 582-6030 FAX: 610 582-6039)

Office Hours: Monday–Friday; 8:00 a.m.–4:30 p.m.

**Description of Office and Facilities:** Current municipal building was constructed in 1991. The building contains 4,500 sq. ft. with 7+ offices, conference room, and a meeting room, which holds 50+ persons.

**Municipal Staff:** Staff currently consists of a Borough Manager (full-time), an administrative assistant (full-time), a Public Works Department (4 full-time), Water Department (4 full-time) and a Waste Water Department (3 full-time). The Borough Manager also serves as Environmental/Recycling Officer.

**Mayor:** The Mayor is an elected 4-year position who has a seat at the Council table and provides input into the functions reviewed by the Council.

**Borough Council:** Borough Council is the elected governing body of the Borough. The 7-member Council meets on the first and third Mondays of the month, at 7:00 in the Borough Hall. They review issues involved in operating a municipality, address resident concerns and set future policy standards, which are then followed through by Borough staff.

**Planning Commission:** Members are appointed by Borough Council for 4-year terms. The 6 members meet in the Borough Hall on the last Tuesday of each month, at 7:00 p.m on an as-needed basis (when a plan is submitted for review). The Planning Commission is an advisory body to borough council.

**Zoning Hearing Board:** Members are appointed by Borough Council for 3-year terms. The 3 members and 1 alternate meet in the Borough Hall on an as needed basis (when an application is submitted for a zoning hearing). The Board reviews and acts upon requests for zoning variances or special exceptions from property owners who want to build or use their properties, which do not follow the Zoning Ordinance.

**Municipal Authority:** The Birdsboro Municipal Authority oversees the Borough's water and sewer plants. Members are appointed for 5-year terms. The 5 members meet on the second Tuesday at 6:30 pm in the Borough Hall.

Other: Police Officers, Fire Marshall, Zoning Officer/Building Inspector, Auditors, Tax Collector.

#### **Caernarvon Township**

Office Address: 3307 Main Street, P. O. Box 294, Morgantown, PA 19543 (TEL: 610 286-1010 FAX: 610 286-1001)

Office Hours: Monday–Friday; 8:30 a.m.–4 p.m.

**Description of Office and Facilities:** Current municipal building was renovated in 2011. The building has offices for the Secretary, Police Department. The building is ADA compliant.

**Municipal Staff:** Staff currently consists of a Township Secretary (full-time), who performs all administrative functions, one parttime administrative assistant and a Maintenance Department (3 full-time and two occasional), who perform all maintenance duties in the Township including roads and lawns.

**Board of Supervisors:** The Board of Supervisors is the elected governing body of the Township. The 5-member Board with 6 year terms meets in the Municipal Building on the second and fourth Tuesdays of the month at 7:00 p.m.

**Planning Commission:** Members are appointed for 4-year terms. The 5 members meet in the Municipal Building (Main and Chestnut Streets) on the third Thursday of the month at 7:30 p.m.

**Zoning Hearing Board:** The 5 members are appointed for 5-year terms and meet when needed.

Recreation Board: Members are appointed for 5-year terms. The 6 members meet every fourth Monday of the month at 7:30 p.m.

**Other:** Police Chief, Fire Marshall, Solicitor, Engineer, Zoning Officer/Building Inspector, Sewage Enforcement Officer, Emergency Management Director, Tax Collector, Treasurer

#### **Robeson Township**

Office Address: 8 Boontown, Birdsboro, PA 19508 (TEL: 610 582-4636 FAX: 610 582-0032)

Office Hours: Monday-Friday; 7 a.m.-4 p.m.

**Description of Office and Facilities:** Current municipal building was purchased in 2010. The one-story building with 10 offices, 1 small conference room, a one large bay garage, and storage room. The building is ADA compliant.

**Municipal Staff:** Staff currently consists of a Township Manager (full-time), Administrative Assistant (full-time), Fiscal assistant and 5 road crew members (full-time).

**Board of Supervisors:** Board of Supervisors is the elected governing body for the Township. Members are elected for 6-year terms. The 5-member Board meets at the Township Office on the third Tuesday of every month, and the second Thursday before at 7:00 p.m. Duties include governing and execution of legislative, executive and administrative powers to ensure sound fiscal management and to secure the health, safety and welfare of the citizens of the Township.

**Planning Commission:** Members are appointed for 4-year terms. The 7 members meet at the Township Office on the first Monday of the month at 7:00 p.m. Duties include review of submitted subdivision and land development plans, recommendation of changes to Subdivision and Land Development Ordinance.

**Zoning Hearing Board:** The Board consists of 3 regular members and 3 alternate members, appointed to 3year terms. The Board meets at the as needed, to review variance and special exception applications submitted as per the Township's Zoning Ordinance.

**Municipal Authority:** The Authority consists of 5 members with 5-year terms. The Authority meets at the Township Office on the third Monday of each quarter at 7 p.m. Review issues that come before the Authority include treatment plant operation and sewage capacity for future development.

**Park and Recreation Board:** Members are appointed for 5-year terms. The 5-member Board meets quarterly, at 6:00 p.m., to review issues related to recreational activities for children and Township residents (i.e., playground activities, fund-raising for special projects, maintenance of park areas).

**Agricultural Zoning Advisory Committee:** Members are appointed by Board of Supervisors, with no set term limits. The 5-member Board meets on an as-needed basis to review zoning issues related to agribusiness.

#### **Union Township**

Office Address: 1445 East main Street, Douglassville, PA 19518 (TEL: 610 582-3769 FAX: 610 582-4737)

Office Hours: Monday-Friday; 8 a.m.-4:00 p.m.

**Description of Office and Facilities:** Built in approx. 1938. Purchased in 2008.Current municipal building has 5 offices, a meeting room. Three other offices are available for lease. Public Works Building (located off site) was renovated in 2014 with a 6 bay garage housing Township equipment.

**Municipal Staff:** Staff currently consists of a Manager / Secretary / Treasurer (full-time, who directs all phases of accounting, day-to-day office operations, utility billing) full administrative assistant and a road crew (4 full-time members (1 part time roadmaster) who are responsible for the day-to-day maintenance/repair of streets, vehicles, park area).

**Board of Supervisors:** Board of Supervisors is the elected governing body of the Township. Members are elected for 6-year terms. The 3-member Board meets at the Township Office on the third Monday of each month at 7 p.m. Duties include governing the day-to-day operation of the Township.

**Planning Commission:** Members are appointed for 5-year terms. The 5 members meet at the Township Office on the first Wednesday of every month at either 5:30 or 7 p.m. depending on time of year. Duties include review of submitted subdivision and land development plans.

**Zoning Hearing Board:** The Board consists of 3 regular members and 2 alternate members, appointed to 3 year terms. The Board meets at the Township Office, on an as-needed basis, to review hear requests for special exceptions and variances.

**Municipal Authority:** The Union Township Municipal Authority oversees the day-to day operation of the public water system. The Authority consists of 5 members with 5-year terms, and meets at the Township Office on the second Thursday of every month at 7 p.m.

**Park and Recreation Board:** Members are appointed for 5-year terms. The 5-member Board meets at the Township Office on the second Monday of every month, at 5 p.m., to review plans for land or fees in lieu of and operation of the recreation area.

Agricultural Security Area Advisory Committee: The 4-member Board, meets on an as-needed basis.

Environmental Advisory Council: Members are appointed - 5 members, 3 years. Second Wednesday of each month

**Geigertown Area Joint Authority:** This board consists of 2 members. They are elected to 5 year terms and meet on the second Wednesday of each month at 7:00

**Other:** Solicitor, Engineer, Zoning Officer/Building Inspector/Sewage Enforcement Officer, Road Master, Emergency Management Director, Tax Collector

#### **Boone Area Library**

**Location:** 129 n. Mill Street, Birdsboro, PA (See the *Public Facilities Map* for a graphic illustration of this location.)

#### Primary Service Areas (assigned by Berks County Public Library system):

Birdsboro Borough Amity Township Union Township

Hours of Operation: Monday, 10 a.m. to 8 p.m. Tuesday and Thursday, 1 p.m. to 8 p.m. Wednesday, Friday and Saturday, 9 a.m. to 4 p.m.

**Personnel:** This agency consists of the Library Director, Asst. Director, 1 Library Assistant, 4 Library Aides and 1 Child / Teen Coordinator.

**Facilities Inventory:** Books for children (board, non-fiction, paperback). Books for adults (large print, paperback, fiction, romance, mystery, Western, nonfiction). Books on tape. Videos. Magazines. 13 computers for public use, including internet and Microsoft Word. fax services, meeting room,

Major Problems: Limited parking is a current problem.

Funding: State (\$40,791), Local (\$58,713)

| Municipal Appropriations (2018) |          |  |  |  |
|---------------------------------|----------|--|--|--|
| Birdsboro Borough               | \$15,600 |  |  |  |
| Caernarvon Township             | \$0      |  |  |  |
| Robeson Township                | \$0      |  |  |  |
| Union Township                  | \$14,757 |  |  |  |

#### Access PA Payments: \$230.00

#### Villiage Library

Location: 207 North Walnut Street, Morgantown, PA (See the *Public Facilities Map* for a graphic illustration of this location.)

#### Primary Service Areas (assigned by Berks County Public Library system):

Caernarvon Township New Morgan Robeson Township

#### Hours of Operation: Monday, 9 a.m. to 7 p.m. Tuesday and Thursday, 9 a.m. to 5 pm Wednesday, 9 a.m. to 6 p.m. Friday 9 a.m. to 1 p.m. Saturday 9 a.m. to 4 p.m.

Personnel: This agency consists of a Library Director, a Children's Librarian, 4 Library Aides.

**Facilities Inventory:** Books for children, adults in paperback and hard back, magazines, Several thousand Audio and Visual items: Computers: 8 public internet, 5 split between public catalog, circulation and staff use.

Major Problems: Limited space is a current problem.

Funding: State (\$19,234), Local (\$58,913)

| Municipal Appropriations (2018)     |         |  |  |  |
|-------------------------------------|---------|--|--|--|
| Birdsboro Borough                   | \$0     |  |  |  |
| Caernarvon Township (Berks Co.)     | \$5,000 |  |  |  |
| Robeson Township                    | \$7,500 |  |  |  |
| Union Township                      | \$0     |  |  |  |
| New Morgan                          | \$0     |  |  |  |
| Caernarvon Township (Lancaster Co.) | \$0     |  |  |  |

Access PA Payments: \$295.00

#### **Parks and Recreation**

# Goal: Provide public parks and recreation facilities and services on a regional basis to be as efficient as possible and to avoid duplication

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

#### Parks and Recreation Administration

Presently each of the individual participants (municipalities and school districts) acquire, develop and program their parks independent from one another.

There has never been a better time to undertake park and recreation planning on a regional basis. Various Statefunded programs can help the Region design and operate a regional recreation agency fine-tuned to meet its specific needs.

Goal: The Region should appoint a Regional Recreation Board (RRB) made up of at least one representative from each municipality and school district (plus alternates) who have an understanding of the Region's recreation needs and resources. This RRB should then prepare and submit applications to the Pennsylvania Department of Conservation of Natural Resources for assistance in developing these park lands in a regional manner.

#### **Facilities Inventory**

The first step in a recreation analysis is an inventory of existing recreation facilities serving the Region's residents. The inventory on the following pages is a series of tables, which lists all identified recreation sites and their improvements within the Southern Berks County Region. This inventory indicates the site name, the site's ownership and maintenance responsibilities, the site type, and its total recreation acreage. Following this is a specific list of recreation improvements at each site. This list is broken out under several major subheadings, including playgrounds, fields and courts, picnic facilities, pools, trails, and support facilities. A final section at the bottom of the table allows for comments concerning a particular site, or the listing of any additional improvements. The Community Facilities and Recreation Map (Figure 6) utilizes the information from the inventory to illustrate the geographic distribution of all recreation sites within the Southern Berks County Region.

# **Facilities Inventory**

| ٥           |                                   | French Creek State Park   | Hopewell Village         | State Game Lands No. 43            |
|-------------|-----------------------------------|---|--------------------------|------------------------------------|
| N           | OWNERSHIP AND MAINTENANCE         | PA DCNR   | Federal Government       | State Government                   |
| RO          | SITE TYPE                         | Regional  | Regional                 | Regional                           |
| КG          | SITE CONDITION                    | Excellent   | Excellent                | Undeveloped                        |
| BACKGROUND  | TOTAL ACREAGE (DEVELOPED)         | 7,730 ac.   | 848 ac.                  | 97.3 ac.                           |
|             | Swing Sets                        |   |                          |                                    |
|             | Sliding Boards                    |   |                          |                                    |
| S           | Climbing Equipment                |   |                          |                                    |
| PLAYGROUNDS | Merry Go-Rounds                   |   |                          |                                    |
| l<br>0      | Seesaws                           |   |                          |                                    |
| Q<br>R      | Sand Boxes                        |   |                          |                                    |
|             | Rocking Toys                      |   |                          |                                    |
|             | Big Toys                          |   |                          |                                    |
|             | Hopscotch                         |   |                          |                                    |
|             | Four-Square                       |   |                          |                                    |
|             | Baseball/Softball Fields          |   |                          |                                    |
| TS          | Soccer/Hockey Fields              |   |                          |                                    |
| COURTS      | Football Fields                   |   |                          |                                    |
| ပ္ပ         | Basketball Courts (hoops)         |   |                          |                                    |
|             | Tennis Courts                     |   |                          |                                    |
| N N         | Volleyball Courts                 |   |                          |                                    |
| FIELDS AND  | Bleachers                         |   |                          |                                    |
|             | Track                             |   |                          |                                    |
|             | Media Booth                       |   |                          |                                    |
|             | Pavilions                         |   |                          |                                    |
| NC          | Total Picnic Tables (in pavilion) |   |                          |                                    |
| PICNIC      | Barbecue Pits and Grills          |   |                          |                                    |
| 1           | Benches                           |   |                          |                                    |
|             | Walking/Exercise Trails (length)  | 40 mi.  |                          |                                    |
| AILS        | Biking Trails (length)            |   |                          |                                    |
| TRA         | Fitness Trails (no. of stations)  |   |                          |                                    |
|             | Measured Path                     |   |                          |                                    |
|             | Parking Spaces                    |   |                          |                                    |
|             | Rest Rooms                        |   |                          |                                    |
| RT          | Water Fountains                   | 1   |                          |                                    |
| SUPPORT     | Snack Bar                         | 1   |                          |                                    |
| UP          | Waste Receptacles                 | 1   |                          |                                    |
| S           | Bike Rack                         | 1   | 1                        |                                    |
|             | Signs                             | 1   | 1                        |                                    |
|             | -                                 | * 200 sama sitas  | * National Historic Otto | * hu undin er /m edu un - 1 - un - |
| Oth         | ner/Comments                      | * 200 camp sites<br>* Hopewell Furnace National<br>Historic Site<br>* fishing, boating, swimming, cross<br>country skiing, disc golf, hunting | * National Historic Site | * hunting/natural area             |

#### **Facilities Inventory**

|                    | Allegheny Aqueduct | Twin Valley School Campus   | Daniel Boone School Campus   |
|--------------------|--------------------|-----------------------------|------------------------------|
| AND MAINTENANCE    | Berks County       | Twin Valley School District | Daniel Boone School District |
|                    | Regional           | Community                   | Community                    |
| ON                 |                    | Excellent                   | Excellent                    |
| GE (DEVELOPED)     | 42.1 ac.           | 80 ac.                      | 50 ac.*                      |
| ea                 |                    | 4                           |                              |
|                    |                    |                             |                              |
| oment              |                    |                             |                              |
| nds                |                    |                             |                              |
|                    |                    |                             |                              |
|                    |                    |                             |                              |
|                    |                    |                             | ĺ                            |
|                    |                    |                             | ĺ                            |
|                    |                    |                             |                              |
|                    |                    |                             |                              |
| all Fields         |                    | 7                           | 3                            |
| / Fields           |                    | 7                           | 2                            |
|                    |                    | 4                           | 1                            |
| ırts (hoops)       |                    | 7                           |                              |
|                    |                    | 1                           |                              |
| ts                 |                    |                             |                              |
|                    |                    | √                           | √                            |
|                    |                    | 1                           | √                            |
|                    |                    | √                           | √                            |
|                    |                    |                             |                              |
| oles (in pavilion) |                    |                             |                              |
| and Grills         |                    |                             |                              |
|                    |                    | 14                          |                              |
| se Trails (length) |                    |                             |                              |
| ength)             |                    |                             |                              |
| no. of stations)   |                    |                             |                              |
| 1                  |                    |                             | ĺ                            |
| s                  |                    | 600 approx.                 | ĺ                            |
|                    |                    | 2                           |                              |
| IS                 |                    |                             | İ                            |
|                    |                    | 1                           | İ                            |
| acles              |                    | 10                          | İ                            |
|                    |                    |                             | İ                            |
|                    |                    | 4                           |                              |
|                    |                    | * See Indoor Facilities.    | * See Indoor Facilities.     |
|                    |                    |                             |                              |

#### **Facilities Inventory**

| ą                 | SITE NAME                         | Union Meadows Park East<br>and West            | Robeson Township Municipal<br>Field | Rustic Park        |
|-------------------|-----------------------------------|--|-------------------------------------|--------------------|
| BACKGROUND        | OWNERSHIP AND MAINTENANCE         | Union Township                                 | Robeson Township                    | Birdsboro Borough  |
|                   | SITE TYPE                         | Community                                      | Neighborhood                        | Community          |
|                   | SITE CONDITION                    | Excellent and Undeveloped                      | Undeveloped                         | Good               |
| BA(               | TOTAL ACREAGE (DEVELOPED)         | 156 ac.  | 8 ac.                               | 4.8 ac.            |
|                   | Swing Sets                        |  |                                     | 16                 |
|                   | Sliding Boards                    |  |                                     | 3                  |
| 6                 | Climbing Equipment                |  |                                     | 5                  |
| Ő                 | Merry Go-Rounds                   |  |                                     |                    |
| OU                | Seesaws                           |  |                                     |                    |
| PLAYGROUNDS       | Sand Boxes                        |  |                                     |                    |
| ¥                 | Rocking Toys                      |  |                                     |                    |
| Ч                 | Big Toys                          |  |                                     | 3                  |
|                   | Hopscotch                         |  |                                     |                    |
|                   | Four-Square                       |  |                                     |                    |
|                   | Baseball/Softball Fields          | 2  | √                                   |                    |
|                   | Soccer/Hockey Fields              |  |                                     |                    |
| FIELDS AND COURTS | Multipurpose Field                | ✓  |                                     |                    |
| JU                | Basketball Courts (hoops)         |  |                                     | 1                  |
| ŏ                 | Tennis Courts                     |  |                                     |                    |
|                   | Volleyball Courts                 |  |                                     | 2                  |
| S                 | Bleachers                         | ✓  |                                     |                    |
|                   | Track                             |  |                                     |                    |
| Ē                 | Media Booth                       |  |                                     |                    |
|                   | Scoreboard                        | √  |                                     |                    |
|                   | Pavilions                         |  |                                     | 4                  |
| <u>0</u>          | Total Picnic Tables (in pavilion) |  |                                     | 40                 |
| PICNIC            | Barbecue Pits and Grills          |  |                                     | 4 and 2 fireplaces |
| ٩                 | Benches                           |  |                                     |                    |
|                   | Walking/Exercise Trails (length)  |  |                                     |                    |
| Ľ                 | Biking Trails (length)            |  |                                     |                    |
| TRAI              | Fitness Trails (no. of stations)  |  |                                     |                    |
| F                 | Measured Path                     |  |                                     |                    |
| SUPPORT           | Parking Spaces                    | gravel   |                                     |                    |
|                   | Rest Rooms                        | 2  |                                     | 4                  |
|                   | Water Fountains                   |  |                                     | 4                  |
|                   | Snack Bar                         | 1  |                                     |                    |
| UP                | Waste Receptacles                 | √  |                                     | 8                  |
| S                 | Bike Rack                         |  |                                     | -                  |
|                   | Signs                             | 1  |                                     |                    |
| Oth               | er/Comments                       | * dugouts<br>* storage shed<br>*wetlands basin |                                     | *wooden train      |

#### **Facilities Inventory**

|                   | SITE NAME                         | Birdsboro Elementary School  | Main / Bird Park        | Friendship Park                                      |
|-------------------|-----------------------------------|------------------------------|-------------------------|--|
| DNC               | OWNERSHIP AND                     | Daniel Boone School District | Birdsboro Borough       | Caernarvon Township                                  |
| ŝ                 | MAINTENANCE                       |                              |                         |  |
| BACKGROUND        | SITE TYPE                         | Neighborhood                 | Neighborhood            | Neighborhood   |
|                   | SITE CONDITION                    | Excellent                    | Excellent               | Good   |
| B                 | TOTAL ACREAGE (DEVELOPED)         | 4.6 ac.*                     | 2.78 ac.                | 5.4 ac.  |
|                   | Swing Sets                        |                              | 6                       |  |
|                   | Sliding Boards                    |                              |                         |  |
| S                 | Climbing Equipment                | 10                           | 1                       |  |
| PLAYGROUNDS       | Merry Go-Rounds                   |                              | 1                       |  |
| DO I              | Tot Lot                           |                              |                         | √  |
| GR                | Sand Boxes                        |                              |                         |  |
| A                 | Rocking Toys                      |                              |                         |  |
| Ē                 | Big Toys                          |                              | 1                       |  |
|                   | Hopscotch                         | 5                            |                         |  |
|                   | Four-Square                       |                              |                         |  |
|                   | Baseball/Softball Fields          | 32                           |                         | 2 lighted  |
| S                 | Soccer/Hockey Fields              |                              |                         |  |
| R                 | Football Fields                   |                              |                         |  |
| DO:               | Basketball Courts (hoops)         | 1 lighted                    |                         |  |
| 0                 | Tennis Courts                     |                              |                         |  |
| AN                | Volleyball Courts                 |                              |                         | $\checkmark$   |
| FIELDS AND COURTS | Bleachers                         |                              |                         | ✓  |
|                   | Track                             |                              |                         |  |
| ш                 | Media Booth                       |                              |                         | ✓  |
|                   | Scoreboard                        |                              |                         | ✓  |
|                   | Pavilions                         |                              | 1                       | 1  |
| PICNIC            | Total Picnic Tables (in pavilion) |                              |                         |  |
| PIC               | Barbecue Pits and Grills          |                              |                         |  |
|                   | Benches                           | 10                           | 2                       |  |
| S                 | Walking/Exercise Trails (length)  |                              |                         |  |
|                   | Biking Trails (length)            |                              |                         |  |
| TRAIL             | Fitness Trails (no. of stations)  |                              |                         |  |
|                   | Measured Path                     |                              |                         |  |
| SUPPORT           | Parking Spaces                    |                              | 20                      | paved  |
|                   | Rest Rooms                        |                              |                         | ✓  |
|                   | Water Fountains                   |                              |                         |  |
|                   | Snack Bar                         |                              |                         | $\checkmark$   |
| SU                | Waste Receptacles                 |                              |                         |  |
|                   | Bike Rack                         |                              |                         |  |
|                   | Signs                             |                              | 1                       |  |
| Oth               | er/Comments                       | * See Indoor Facilities.     | * Creekside<br>*fishing | * lighted fairgrounds<br>* dugouts<br>* storage shed |

# **Facilities Inventory**

| sboro / Union Fire |
|--------------------|
| Company            |
| Fire Company       |
| Neighborhood       |
| Good               |
| 2.4 ac.            |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
|                    |
| 1                  |
| (20)               |
| 1                  |
|                    |
|                    |
|                    |
|                    |
|                    |
| @ Fire Hall        |
|                    |
|                    |
|                    |
| 6                  |
|                    |
|                    |
|                    |
|                    |

# **Facilities Inventory**

|                   |                                   | 1                 |   |                          |                     |
|-------------------|-----------------------------------|-------------------|---|--------------------------|---------------------|
|                   | SITE NAME                         | Lincoln Park      | Union Township<br>Municipal Complex<br>Park | Highcroft Baseball Field | Morgan Circle Park  |
| BACKGROUND        | OWNERSHIP AND<br>MAINTENANCE      | Birdsboro Borough | Union Township                              | Caernarvon Township      | Caernarvon Township |
| N<br>N<br>N<br>N  | SITE TYPE                         | Neighborhood      | Neighborhood                                | Neighborhood             | Neighborhood        |
| MC                | SITE CONDITION                    | Poor              | Natural                                     | Excellent                | Good                |
| ľ                 | TOTAL ACREAGE<br>(DEVELOPED)      | 0.4 ac.           | 1.4 ac.                                     | 13.2                     | 2 ac.               |
|                   | Swing Sets                        | 7                 | ~   |                          |                     |
|                   | Sliding Boards                    |                   |   |                          |                     |
| S                 | Climbing Equipment                | 1                 |   |                          |                     |
| PLAYGROUNDS       | Tot Lot                           |                   | ✓   |                          |                     |
| NO N              | Seesaws                           | 1                 |   |                          |                     |
| 6<br>R            | Sand Boxes                        | ĺ                 |   |                          |                     |
| ₹                 | Rocking Toys                      | 1                 |   |                          |                     |
| 2                 | Big Toys                          |                   |   |                          |                     |
|                   | Hopscotch                         |                   |   |                          |                     |
|                   | Four-Square                       |                   |   |                          |                     |
|                   | Baseball/Softball Fields          |                   |   | 1                        |                     |
|                   | Soccer/Hockey Fields              |                   |   |                          |                     |
| LTS               | Football Fields                   |                   |   |                          |                     |
| IN IN             | Basketball Courts (hoops)         |                   |   |                          |                     |
| Ŭ                 | Tennis Courts                     |                   |   |                          |                     |
| FIELDS AND COURTS | Volleyball Courts                 |                   |   |                          |                     |
| SC.               | Bleachers                         |                   |   |                          |                     |
|                   | Track                             | İ                 |   |                          |                     |
|                   | Media Booth                       |                   |   |                          |                     |
|                   | Scoreboard                        |                   |   |                          |                     |
|                   | Pavilions                         |                   |   |                          |                     |
| PICNIC            | Total Picnic Tables (in pavilion) |                   |   |                          |                     |
| 10                | Barbecue Pits and Grills          |                   |   |                          |                     |
|                   | Benches                           | 1                 |   |                          |                     |
|                   | Walking/Exercise Trails (length)  |                   |   |                          |                     |
| TRAILS            | Biking Trails (length)            |                   |   |                          |                     |
| R I               | Fitness Trails (no. of stations)  |                   |   |                          |                     |
|                   | Measured Path                     |                   |   |                          |                     |
|                   | Parking Spaces                    |                   |   |                          |                     |
| .                 | Rest Rooms                        |                   |   |                          |                     |
| SUPPORT           | Water Fountains                   |                   |   |                          |                     |
| ١d                | Snack Bar                         |                   |   |                          |                     |
| SUI               | Waste Receptacles                 |                   |   |                          |                     |
|                   | Bike Rack                         |                   |   |                          |                     |
|                   | Signs                             |                   |   |                          |                     |
| Oth               | er/Comments                       |                   |   | * benches                | *open space         |
|                   |                                   |                   |   |                          |                     |
|                   |                                   |                   |   |                          |                     |

# **Facilities Inventory**

| ð           | SITE NAME                         | American Legion Post 626<br>Ball Field                             | Robeson Elementary School                  | Tennis and Basketball Courts |
|-------------|-----------------------------------|--|--|------------------------------|
| BACKGROUND  | OWNERSHIP AND<br>MAINTENANCE      | Birdsboro Borough  | Twin Valley School District                | Caernarvon Township          |
| U<br>U<br>U | SITE TYPE                         | Neighborhood   | Neighborhood                               | Neighborhood                 |
| AC          | SITE CONDITION                    | Excellent  | Excellent                                  | Excellent                    |
|             | TOTAL ACREAGE (DEVELOPED)         | 3.2 ac.  | 10 ac.*                                    | 0.3 ac.                      |
|             | Swing Sets                        |  | 13   |                              |
|             | Sliding Boards                    |  | 5  |                              |
| S           | Climbing Equipment                |  | 5  |                              |
| PLAYGROUNDS | Merry Go-Rounds                   |  |  |                              |
| NO N        | Seesaws                           |  |  |                              |
| GR          | Dodge Ball                        |  | 3  |                              |
| A           | Rocking Toys                      |  |  |                              |
| Ы           | Big Toys                          |  | 1  |                              |
|             | Hopscotch                         |  | 1  |                              |
|             | Four-Square                       |  | 2  |                              |
|             | Baseball/Softball Fields          | 1  | 1  |                              |
|             | Soccer/Hockey Fields              |  | 1  |                              |
| <b>R</b>    | Football Fields                   |  |  |                              |
| ١Ŋ          | Basketball Courts (hoops)         |  | (3)  | 2 lighted                    |
| AND COURTS  | Tennis Courts                     |  |  | 2 lighted                    |
| Z           | Volleyball Courts                 |  |  |                              |
| SA          | Bleachers                         | ✓  |  |                              |
| FIELDS      | Track                             |  |  |                              |
| Ē           | Media Booth                       | √  |  |                              |
|             | Scoreboard                        | ✓  |  |                              |
|             | Pavilions                         |  |  |                              |
| <u>ں</u>    | Total Picnic Tables (in pavilion) |  |  |                              |
| PICNIC      | Barbecue Pits and Grills          |  |  |                              |
| ∎           | Benches                           |  |  | 1                            |
|             | Walking/Exercise Trails (length)  |  |  | I<br>                        |
| N           | Biking Trails (length)            |  |  |                              |
| TRAIL       | Fitness Trails (no. of stations)  |  |  |                              |
| H۲.         | Measured Path                     |  |  |                              |
| -           | Parking Spaces                    |  |  | 24                           |
|             | Rest Rooms                        |  |  | 24                           |
| F           | Water Fountains                   |  |  |                              |
| SUPPORT     |                                   | ✓  |  |                              |
| I d         | Snack Bar                         | v  |  |                              |
| SI          | Waste Receptacles                 |  |  | 4                            |
|             | Bike Rack                         |  |  | 4                            |
|             | Signs                             |  |  | 1                            |
| Oth         | ner/Comments                      | * batting cage<br>* dugouts<br>* storage sheds<br>* open play area | * team benches<br>* See Indoor Facilities. | * occupy same space          |

# **Facilities Inventory**

| Q                 | SITE NAME                         | Texas Baseball<br>Field                       | Vest Pocket Park  | John Burdy Memorial<br>Park | Zach Saint Memorial<br>Park |
|-------------------|-----------------------------------|---|-------------------|-----------------------------|-----------------------------|
| BACKGROUND        | OWNERSHIP AND<br>MAINTENANCE      | Birdsboro Borough                             | Birdsboro Borough | Caernarvon Twp.             | Caernarvon Township         |
| N N               | SITE TYPE                         | Neighborhood                                  | Neighborhood      | Neighborhood                | Neighborhood                |
| AC                | SITE CONDITION                    | Excellent                                     | Good              | Good                        | Good                        |
|                   | TOTAL ACREAGE (DEVELOPED)         | 5.0   | 1.1               | 0.8                         | 0.4 ac.                     |
|                   | Swing Sets                        | $\checkmark$                                  | 9                 |                             |                             |
|                   | Sliding Boards                    | $\checkmark$                                  | 1                 |                             |                             |
| s                 | Climbing Equipment                | ✓   | 4                 |                             |                             |
| Q                 | Tot Lot                           |   |                   | ✓                           |                             |
| O                 | Seesaws                           |   | 5                 |                             |                             |
| GR                | Sand Boxes                        |   |                   | 1                           | 1                           |
| PLAYGROUNDS       | Rocking Toys                      |   | 2                 |                             |                             |
| Ы                 | Big Toys                          |   |                   |                             |                             |
|                   | Hopscotch                         |   |                   |                             |                             |
|                   | Four-Square                       |   |                   |                             |                             |
|                   | Baseball/Softball Fields          | 1 lighted                                     |                   |                             |                             |
| 6                 | Soccer/Hockey Fields              |   |                   |                             | 2                           |
| RT                | Football Fields                   |   |                   |                             |                             |
| 0                 | Basketball Courts (hoops)         |   |                   |                             |                             |
|                   | Tennis Courts                     |   | 2 lighted         |                             |                             |
| AN                | Volleyball Courts                 |   |                   |                             |                             |
| FIELDS AND COURTS | Bleachers                         | $\checkmark$                                  |                   |                             |                             |
|                   | Track                             |   |                   |                             |                             |
| "                 | Media Booth                       | ✓   |                   |                             |                             |
|                   | Scoreboard                        |   |                   |                             |                             |
|                   | Pavilions                         | 4   |                   |                             |                             |
| PICNIC            | Total Picnic Tables (in pavilion) | 80  | 1                 |                             |                             |
| NC N              | Barbecue Pits and Grills          | $\checkmark$                                  |                   |                             |                             |
|                   | Benches                           | ✓   | 6                 |                             | 1                           |
| s                 | Walking/Exercise Trails (length)  |   |                   |                             |                             |
|                   | Biking Trails (length)            |   |                   |                             |                             |
| TRAIL             | Fitness Trails (no. of stations)  |   |                   |                             |                             |
|                   | Measured Path                     |   |                   |                             |                             |
|                   | Parking Spaces                    | 50  |                   | Improved                    |                             |
|                   | Rest Rooms                        | $\checkmark$                                  |                   |                             |                             |
| RT                | Water Fountains                   |   |                   |                             |                             |
| SUPPORT           | Snack Bar                         | $\checkmark$                                  |                   |                             |                             |
| SUI               | Waste Receptacles                 |   |                   |                             |                             |
|                   | Bike Rack                         |   |                   |                             |                             |
|                   | Signs                             |   |                   |                             |                             |
| Otł               | ner/Comments                      | * batting cage<br>* dugouts<br>* storage shed | * ½ tennis wall   |                             | Storage Shed                |

| SITE NAME                   | Twin Valley Elementary Center | Robeson Elementary Center    | Honey Brook Elementary Center |
|-----------------------------|-------------------------------|------------------------------|-------------------------------|
| SITE TYPE                   | School                        | School                       | School                        |
| Gymnasium                   | ✓                             | ✓                            | ✓                             |
| Full Basketball Court       | ✓                             | ✓                            | ✓                             |
| Swimming Pool               |                               |                              |                               |
| Diving Pool                 |                               |                              |                               |
| Locker Rooms                |                               |                              |                               |
| Weight Room                 |                               |                              |                               |
| Wrestling Room              |                               |                              |                               |
| Multipurpose Room           |                               |                              |                               |
| Auditorium (no. of seats)   |                               |                              |                               |
| Music Room                  | ✓                             | $\checkmark$                 | ✓                             |
| Gymnastics Room (equipment) |                               |                              |                               |
| Library                     | ✓                             | ✓                            | ✓                             |
| Meeting Room                | √LGI                          | √LGI                         | ✓LGI                          |
| Indoor Track                |                               |                              |                               |
| Dark Room                   |                               |                              |                               |
| Planetarium                 |                               |                              |                               |
| Computer Lab                |                               |                              |                               |
| Industrial Arts             |                               |                              |                               |
| Large Group Instruction     | 40 Folding Chairs             | 40 Folding Chairs            | 40 Folding Chairs             |
| Other/Comments              | Consider LGI as Meeting Room  | Consider LGI as Meeting Room | Consider LGI as Meeting Room  |

# Indoor Facilities Inventory

# Indoor Facilities Inventory

| SITE NAME                   | Daniel Boone Primary Center | Daniel Boone Middle School | Daniel Boone High School |
|-----------------------------|-----------------------------|----------------------------|--------------------------|
| SITE TYPE                   | School                      | School                     | School                   |
| Gymnasium                   |                             | 2                          | 2                        |
| Full Basketball Court       | ✓                           | $\checkmark$               | 2                        |
| Swimming Pool               |                             |                            |                          |
| Diving Pool                 |                             |                            |                          |
| Locker Rooms                | √                           | 2                          | 2                        |
| Weight Room                 |                             |                            | $\checkmark$             |
| Wrestling Room              |                             |                            |                          |
| Multipurpose Room           | √                           | $\checkmark$               |                          |
| Auditorium (no. of seats)   |                             |                            | ✓ (1,070)                |
| Music Room                  | √                           | 1                          | 2                        |
| Gymnastics Room (equipment) |                             |                            |                          |
| Library                     | ~                           | $\checkmark$               | $\checkmark$             |
| Meeting Room                | √                           |                            |                          |
| Indoor Track                |                             |                            |                          |
| Dark Room                   |                             |                            | 2                        |
| Planetarium                 |                             |                            |                          |
| Computer Lab                | √                           | 2                          | 2                        |
| Industrial Arts             |                             | 1                          | 4                        |
| Large Group Instruction     |                             | ✓ (110 seats)              | ✓ (110 seats)            |
| Other/Comments              |                             |                            |                          |

#### **Spatial Park Analysis**

With a complete inventory of parks, it becomes possible to analyze the level of park service available within the Region. Within this analysis, every publicly-owned park and/or recreation facility (township, borough, and school district) is identified. Then, its size and service area is evaluated in relation to its intended service population. Conversely, this analysis also identifies those areas of the Region that lack close, convenient, and safe access to public parkland. Typically, these evaluations are based upon prescribed standards for park size per 1,000 persons being served and also for predetermined service radii. The National Recreation and Park Association (NRPA) generally assigns such standards for various park types. It is these standards that will be applied to evaluate the allocation and spatial distribution of Region's park system.

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

Within Berks County, several public organizations and private enterprises are involved with the provision of regional recreation facilities. Within the Region, three regional parks are located within Union Township. The table on the following page lists regional parks within Berks County, their ownership, acreage, and activities offered.

Because the size and cost usually associated with regional parks transcend the responsibilities of local government, this Plan does not recommend any specific actions associated with the acquisition and development of more regional parks. Instead, this Plan will focus upon the remaining park types within the Region beginning with community parks. However, the Berks County Greenway, Park and Recreation Plan (December 2007) designates a number of regional facilities as priorities within the Countywide system of parks. More discussion of these facilities will follow in the linear parks section of this Chapter.

| Facility                                | Acres   | Activities   |
|---|---------|--|
| Federal Facilities                      |         |  |
| Blue Marsh                              | 6,194.0 | boating, bike trail, camping, fishing, hunting, hiking, picnic, swimming, Old Dry Road Farm Complex  |
| Hopewell Furnace National Historic Site | 848.0   | horseback riding, hiking, nature study, picnic, museum   |
| Federal Total                           | 7,042.0 |  |
| State Facilities                        |         |  |
| Daniel Boone Homestead                  | 577.0   | museum, picnic   |
| Conrad Weiser Park                      | 26.0    | museum, ice skating, picnic  |
| Felix Access Area (DEP)                 | 7.5     | boating, fishing   |
| French Creek State Park                 | 7,730.0 | boating, bike trail, camping, fishing, hunting, horseback riding, hiking, picnic, swimming   |
| Kaercher Creek Dam                      | 185.0   | boating, fishing, hiking, ice skating, outdoor<br>concerts, nature study, picnic, tot lot/playground,<br>handicapped recreation facilities available |
| Kernsville Recreation Area (DEP)        | 44.0    | boating, camping, fishing  |

| Chapter 5 - Community | <b>Facilities and Services</b> |
|-----------------------|--------------------------------|
|-----------------------|--------------------------------|

| Facility  | Acres    | Activities  |
|---|----------|---|
| Nolde Forest Environmental<br>Education Center                  | 666.0    | hiking, nature study, Environmental Education<br>Center   |
| Schuylkill Canal – Five Locks                                   | 12.4     | boating, fishing  |
| State Game Lands #43, #52, #80,<br>#106, #110, #182, #274, #280 | 19,285.0 | hunting, hiking   |
| Weiser State Forest   | 1,100.0  | hunting   |
| State Total   | 29,632.9 |   |
| County Facilities   |          |   |
| Antietam Lake Park / Angora Fruit<br>Farm                       | 665.0    | Fishing, hiking, biking, horseback trails, environmental education center   |
| Tulpehocken Creek Valley Park                                   | 375.0    |   |
| Berks Leisure Area  |          | picnic, handicapped recreation facilities available   |
| Gring's Mill Recreation Area                                    |          | fishing, field sports (baseball, softball, soccer,<br>etc.), ice skating, nature study, outdoor concerts,<br>tennis, volleyball, handicapped recreation facilities<br>available, pavilion, picnic tables, restrooms, grills,<br>meeting space |
| Gruber Wagon Works and  |          | museum, fishing   |
| Red Bridge Picnic Area  |          | fishing, picnic   |
| Stonecliffe Recreation Area                                     |          | basketball, bike trail, fishing, field sports (baseball,<br>softball, soccer, etc.), ice skating, tennis, tot lot/<br>playground, volleyball, handicapped recreation<br>facilities available  |
| Union Canal and Tow Path  |          | bike trail, fishing, hiking   |
| Heritage Center   |          | museum, picnic, handicapped recreation facilities available   |
| Youth Recreation Facility and Educational Farm                  | 115.0    | field sports (baseball, softball, soccer, etc.), picnic, educational farm   |
| Allegheny Aqueduct/Schuylkill<br>Canal                          | 35.0     | fishing, historic aqueduct  |
| County Total  | 1190.0   |   |

**Community parks** usually contain 20± acres and are intended to serve a population within a 2mile service radius. They should be sized at the rate of 5 to 8 acres for 1,000 persons served. These parks generally involve a fairly high level of improvement with multiple sets of athletic fields and courts. Sometimes swimming pools and indoor recreation centers are situated on these community-wide parks. Larger school sites (usually middle and high schools) have the facilities to qualify as community-based parks, and represent valuable recreation resources that can significantly enhance the level of recreation services offered to a given area. Finally, sometimes smaller specialized facilities (e.g., Birdsboro's Rustic Picnic Area) qualify as community parks due to their use by a larger service area than that of a neighborhood park. The table below lists all publicly-owned community parks.

| Community Parks Within the Southern Berks Region          |             |           |  |  |  |
|---|-------------|-----------|--|--|--|
| Park Name Municipality Acreage                            |             |           |  |  |  |
| Twin Valley School Campus                                 | 75 acres    |           |  |  |  |
| Daniel Boone School Campus                                | 50 acres    |           |  |  |  |
| Robeson Township Municipal Field         Robeson Township |             | 4.8 acres |  |  |  |
| Union Meadows Park East and West                          | 156 acres   |           |  |  |  |
| Total Community Park                                      | 285.8 acres |           |  |  |  |

The Community Facilities and Recreation Map (Figure 6) illustrates the locations of all recreation areas within the Region.

Local officials need to know how much additional community parkland is needed to meet future demand. Based upon the NRPA guideline of 5 to 8 acres of community parkland for each 1,000 residents and the population projections provided in Chapter 3 of this Plan, the table below illustrates the community parkland area needed to adequately serve the Region now and in the future:

| E    | Existing and Projected Community Parkland Needed Within the Region |          |           |                   |                      |  |  |
|------|--|----------|-----------|-------------------|----------------------|--|--|
|      |  | Evicting | Drojected |                   |                      |  |  |
| Year | Population   |          |           | Existing<br>Acres | Projected<br>Surplus |  |  |
| 2010 | 17,698   | 99.4     | 159.1     | 285.8             | +186.4 to +126.7     |  |  |
| 2020 | 20,566   | 102.3    | 164.5     | 285.8             | +183.5 to +121.3     |  |  |
| 2030 | 21,300   | 106.5    | 170.4     | 285.8             | +179.3 to +115.4     |  |  |

From the preceding table, it is apparent that the Region enjoys a wealth of community parklands well in excess of the NRPA-recommended minimum standards. Nonetheless, acreage is only part of the park. The other part is the existing improvements. Even though the Region/School Districts have been successful in acquiring community parkland, they should continue efforts to make improvements to these parks as new revenues are collected.

**Neighborhood parks** are the third park type advocated by recreation experts. These parks are generally between 1 and 20 acres in size and meant to serve a population of 2,000 to 10,000. The recommended service area for these parks is a one-quarter to one-half mile radius. As implied by the name, these parks are intended to provide close-to-home areas for limited athletic activities, playgrounds, and passive pursuits. The NRPA recommends that one to two acres of publicly-owned land be devoted to neighborhood parks for each 1,000 residents. The following table shows all publicly-owned neighborhood parks by municipality within the Southern Berks Region:

| Neighborhood Parks Within the Southern Berks Region |         |  |  |
|---|---------|--|--|
| Park Name   | Acreage |  |  |
| Birdsboro Borough                                   | 14.44   |  |  |
| Birdsboro Elementary School                         | 4.6     |  |  |
| Main / Bird Park                                    | 0.14    |  |  |
| Lincoln Park  | 0.4     |  |  |
| American Legion Post 626 Ball Field                 | 3.2     |  |  |
| Texas Baseball Field                                | 5.0     |  |  |
| Vest Pocket Park                                    | 1.1     |  |  |

| Chapter 5 - | Community | Facilities | and Services |
|-------------|-----------|------------|--------------|
|-------------|-----------|------------|--------------|

| Caernarvon Township  | 20.3       |
|--|------------|
| Caernarvon Friendship Park   | 5.4        |
| Morgan Circle Park   | 0.2        |
| Highcroft Baseball Field   | 13.2       |
| Zack Saint Memorial Park   | 0.4        |
| John Burdy Memorial Park   | 0.8        |
| Tennis and Basketball Courts   | 0.3        |
| Robeson Township   | 24.6       |
| Geigertown Fire Company  | 2.9        |
| Gibraltar Playground Association                                     | 3.7        |
| Robeson Township Municipal Field                                     | 8.0        |
| Robeson Township Elementary School                                   | 10.0       |
| Union Township   | 159.8      |
| Birdsboro / Union Fire Company                                       | 2.4        |
| Union Meadows Park East and West<br>Union Township Municipal Complex | 156<br>1.4 |
| Southern Berks County Region   | 219.14     |

This analysis reveals that while many of the existing neighborhoods have adequate convenient access to nearby neighborhood parks, some don't. The overall planning goals for this Plan suggest that areas planned for future growth should have access to a full range of public facilities and services. Therefore, future planned growth areas and existing neighborhoods should each have sufficient access to neighborhood park facilities. Once planned residential growth areas are known, more specific recommendations for needed neighborhood parks can be provided.

Like for community parks, local officials need to know how much additional neighborhood parkland is needed to meet future demand. Based upon the population projections for the Region as a whole, the table below illustrates the neighborhood parkland area needed to adequately serve projected growth:

|      | Existing and Projected Neighborhood Parkland Needed Within the Region |           |                      |        |                    |  |
|------|---|-----------|----------------------|--------|--------------------|--|
| Voor | Bonulation  | Existing  | Projected<br>Surplus |        |                    |  |
| rear | Year Population 1 acre/1000 persons 2 acres/1000 persons              |           |                      |        | Acres              |  |
| 2010 | 19,888  | 19.9 39.6 |                      | 219.14 | +199.24 to +179.54 |  |
| 2020 | 20,566  | 20.5      | 41                   | 219.14 | +198.64 to +178.14 |  |
| 2030 | 21,300  | 21.3      | 42.6                 | 219.14 | +197.84 to +176.54 |  |

From an acreage standpoint, the Region has an adequate amount of neighborhood parkland now and in the projected future. However, its distribution does not cover all neighborhoods as suggested by NRPA standards. Hence, the Region will need to add neighborhood parklands to these existing and planned neighborhoods beyond one-half mile from an existing park. Once future residential growth areas have been identified, specific recommendations can be offered to ensure adequate service.

Again, parks comprise more than land; improvements to the parkland are equally important. The facilities located within the Region's neighborhood parks are somewhat similar. Many have the same list of facilities, suggesting unparalleled baseball popularity. Neighborhood parks should feature facilities in high demand; so if baseball continues to dominate local recreation preferences, then everything is fine. However, many municipalities are finding that the traditional "pastimes" of old are giving way to different activities. The Region should periodically gauge recreation preferences among all age groups and ensure that the then-current preferences are accommodated by local park improvements.

*Linear parks* are very popular throughout the nation as less and less open space remains within developing areas. The Region has an abundance of existing and planned linear parks. The Horseshoe Trail weaves about 16.7 miles in an east-west direction across Robeson and Union townships. French Creek State Park lists some 40 miles of trails that blanket their park. The Thun Trail generally follows an abandoned railroad right-of-way along the Schuylkill River just south of the Region's northern boundary for about 10 miles through Robeson, Birdsboro, and Union. In all, the Region has some 78 miles of existing linear park trails. The NRPA does not apply park size and service area standards to linear parks, recognizing their highly-diverse character and the often "opportunistic" ways that they are acquired.



Lenape Trail in French Creek State Park

<u>Horseshoe Trail</u> – The Region is fortunate to have a 16.7-mile segment of the 121-mile Horseshoe Trail cross its center, on its way between Valley Forge to the east and the Appalachian Trail on Stony Mountain in Dauphin County to the west. The trail enters Robeson Township close to Sleepy Hollow Road and generally follows roads in the western half of the Township. Then, at the intersection of Buck Hollow and Zion roads, the trail moves across the county through eastern Robeson and all of Union townships. The trail also interconnects with the extensive trail system located within French Creek State Park.

Goal: Local officials within the Region should seek ways to protect and incorporate this valuable resource within the Region's overall park and open space system and programs. Development plans proposed along this trail should protect the overland alignment of the trail by reflecting the trail use and designing developments that respect its integrity. Density bonuses through zoning and cluster developments can be used to incentivize this process.

<u>Thun Trail</u> – The Schuylkill River Greenway Association owns and operates the 11-mile Thun Trail, which is proposed to run between the City of Reading and the Montgomery County line, where it is to connect with the proposed 25-mile Schuylkill River Trail on its way to Philadelphia. Today, the Thun Trail is open from Lancaster Avenue near Reading through all of the SBC Region. Similar to the Horseshoe Trail, local officials should incorporate this trail into its developing landscape by requiring developers to "work around" the trail and provide for logical connections to it. Again, density bonuses for development plans with these features, plus flexible cluster design standards, can help developers and local government partners in the preservation of these features. In addition, local public facilities projects (e.g., roads, drainage, parks, etc.) should similarly include measures to protect and develop the trail with suitable use and access features.

#### Mandatory Dedication (or Fee-In-Lieu Thereof) of Recreation Land

Mandatory dedication of parkland has become a standard technique for local park systems to keep pace with growth since it was enabled by the Pennsylvania Municipalities Planning Code in the late 1980s. Each township within the Region has adopted mandatory dedication provisions within their respective subdivision and land

development ordinances. Birdsboro Borough's relative lack of undeveloped land has prevented the Borough from undertaking this approach in the past.

Given changing demographics, land values, and parkland needs, it is important for municipalities to periodically recalculate mandatory dedication standards and their related fees-in-lieu thereof. The following will provide a basis for such recalculations: The NRPA's recommended minimum standards is listed below:

| NRPA Local Park Acreage Standards                   |  |  |  |  |
|---|--|--|--|--|
| Park Type Minimum Acres Needed per 1,000 Population |  |  |  |  |
| Community Park 5 to 8 acres                         |  |  |  |  |
| Neighborhood Park 1 to 2 acres                      |  |  |  |  |
| Total 6 to 10 acres                                 |  |  |  |  |

To date, the Region has provided local parklands exceeding the NRPA standards listed above; however, much of this has been derived from sources other than the mandatory dedication regulations in effect. For this reason, this Plan will only calculate needed parklands on the higher of the NRPA standards – namely 10 acres per 1,000 people. To derive a perunit or perlot standard, the 1,000 population figure is divided by the average household size (year 2010) reported for each municipality as follows:

| Mandatory Parkland Dedication Calculations (for raw land)  |      |     |             |  |  |  |  |
|--|------|-----|-------------|--|--|--|--|
| 2010 AverageNo. of DwellingsRequired Park AcresMunicipalityHousehold Sizeper 1,000 Populationper Dwelling Unit |      |     |             |  |  |  |  |
| Birdsboro Borough  | 2.72 | 367 | 0.026 acres |  |  |  |  |
| Caernarvon Township  | 2.78 | 359 | 0.025 acres |  |  |  |  |
| Robeson Township   | 2.72 | 367 | 0.027acres  |  |  |  |  |
| Union Township   | 2.57 | 389 | 0.025 acres |  |  |  |  |
| Southern Berks Region 2.70 371 0.026 acres   |      |     |             |  |  |  |  |

Community and Neighborhood parks can require a high level of infrastructure and improvement. Generally, the value of these improvements equals the value of the parkland itself. Therefore, it is recommended that each municipality double the preceding acreage figures to derive needed mandatory dedication standards to effectively meet expected demand for developed parks, as listed below.

| Suggested Mandatory Parkland Dedication Standards (for improved parks) |            |  |  |
|--|------------|--|--|
| Municipality Required Park Acres per Dwelling Unit                     |            |  |  |
| Birdsboro Borough  | .052 acres |  |  |
| Caernarvon Township  | .050 acres |  |  |
| Robeson Township   | .054 acres |  |  |
| Union Township .050 acres  |            |  |  |
| Southern Berks Region .052 acres                                       |            |  |  |

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

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

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

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

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

Funds collected under this approach must be used to provide for recreation facilities that are accessible to residents of the proposed development. In determining accessibility to the park, local officials should be guided by the respective park service areas as listed in this Plan.

To estimate the value of fees-in-lieu of parkland dedication, an average value of \$40,000 per acre will be used to account for the value of improved, residentially-zoned land within the Region. The following lists estimated values for fees-in-lieu of parkland dedication by municipality.

| Suggested Mandatory Parkland Dedication/Fees-In-Lieu Standards             |             |                  |  |  |  |
|--|-------------|------------------|--|--|--|
| Municipality Required Park Acres per Dwelling Unit Fee-In-Lieu of Parkland |             |                  |  |  |  |
| Birdsboro Borough  | 0.052 acres | \$2,080 per unit |  |  |  |
| Caernarvon Township 0.050 acres  |             | \$2,000 per unit |  |  |  |
| Robeson Township 0.054 acres   |             | \$2,160 per unit |  |  |  |
| Union Township 0.050 acres   |             | \$2,000 per unit |  |  |  |
| Southern Berks Region 0.052 acres \$2,080 per unit                         |             |                  |  |  |  |

#### Utilities

# Goal: The Region should update public utility planning into a comprehensive strategy to serve the entire region to the extent possible.

Utilities provisions are essential components to support growth and development. A coordinated and cooperative approach will be essential in order to properly plan utilities within planned growth areas. This section shall focus upon the existing and planned utilities within the Southern Berks Region and evaluate their ability to adequately support future growth and development.

#### Sewage Facilities

# Goal: The Birdsboro Municipal Authority and the Union Township Municipal Authority should evaluate methods to comprehensively manage remaining capacity of both water and wastewater facilities.

- Establish sewer and water service areas, which are consistent with the Future Land Use Plan.
- Continue to monitor and correct inflow and infiltration problems.

• Evaluate expanding wastewater treatment plants and drinking water treatment plants where required to meet the growing needs of the region.

Domestic sewage and wastewater within the Southern Berks Region are treated and disposed of by various methods, ranging from large municipally owned sewage treatment plants to community systems and individual on-site septic systems. These systems are described below:

### Birdsboro Municipal Sewer System

The municipal wastewater treatment system within Birdsboro Borough is owned and operated by the Birdsboro Municipal Authority. The system consists of a wastewater treatment plant, two pumping stations and a series of gravity collection lines ranging between 8 inches to 24 inches, and a force main. The Birdsboro Wastewater Treatment Plant has a permitted capacity of 1.89 million gallons per day and an organic load capacity of 2,815 pounds per day. There is no planned upgrade within the next 5 years. The system serves all of Birdsboro and the northwestern portion of Union Township. Based upon the terms of an inter-municipal agreement between the Birdsboro Municipal Authority and Union Township Authority, Birdsboro Borough has 86 percent or 1,626,000 gallons per day of the reserved capacity and Union Township has 14 percent or 264,000 gallons per day of the reserved capacity and Union Township has 14 percent or 264,000 gallons per day of the reserved capacity and Union Township has 14 percent or 264,000 gallons per day of the reserved capacity and Union Township has 14 percent or 264,000 gallons per day of the reserved capacity and Union Township has 14 percent or 264,000 gallons per day of the reserved capacity and Union Township has 14 percent or 264,000 gallons per day of the reserved capacity and Union Township has 14 percent or 264,000 gallons per day of the reserved capacity. The Birdsboro Municipal Sewer System is operated and maintained by three (3) full time employees. The staff is responsible for daily operation and process testing of the system. The staff is also involved with routine maintenance and is capable of handling emergency situations and repairs. The limits of the service area for the Birdsboro Municipal Sewer System are depicted on Figure 7 of this Plan. The following table provides a summary of the hydraulic and organic loading data over the past five (5) years.

| Birdsboro WWTP Hydraulic and Organic Loading Data<br>(2013 – 2017)                                 |         |         |         |         |         |  |  |  |
|--|---------|---------|---------|---------|---------|--|--|--|
| Parameters 2013 2014 2015 2016 2017  |         |         |         |         |         |  |  |  |
| Average Daily Flow<br>(gallons per day)  | 503,000 | 584,000 | 526,000 | 534,000 | 537,000 |  |  |  |
| 3 Month Maximum Flow<br>(gallons per day)  | 558,000 | 788,000 | 657,000 | 717,000 | 616,000 |  |  |  |
| Ratio: 3 Month Max Flow<br>to Average Daily Flow   | 1.11    | 1.35    | 1.25    | 1.34    | 1.15    |  |  |  |
| Average Organic Load<br>BOD (pounds/day)216030041380901989   |         |         |         |         |         |  |  |  |
| Source: Birdsboro Municipal Authority Chapter 94 Municipal Wasteload Management 2017 Annual Report |         |         |         |         |         |  |  |  |

Hydraulic overloading was reported in January and December of 2013, January, February, April, May and June of 2014 and January of 2015 which prompted the Pennsylvania Department of Environmental Protection (PA DEP) to request a Corrective Action Plan from the Birdsboro Municipal Authority. The Corrective Action Plan was submitted to DEP and the Birdsboro Municipal Authority is monitoring inflow and infiltration into the municipal sewer system on a continuous basis.

According to the Municipal Wasteload Management 2017 Annual Report submitted by the Birdsboro Municipal Authority, the Birdsboro Municipal Sewer System is in fair to good condition and functions with no hydraulic overload conditions. There is some infow and infiltration issues. The Cocalico Pumping Station and River Road Pumping Station are currently working satisfactorily and can accommodate the existing flows. The capacity at the Birdsboro Wastewater Treatment Plant allows ample room for expansion. This is needed because of the Birdsboro Power LLC facility which connected to the collection system in December of 2017. There is

| Birdsboro WWTP Projected Hydraulic and Organic Loading Data<br>(2018 – 2022)                       |         |           |           |           |           |  |  |  |
|--|---------|-----------|-----------|-----------|-----------|--|--|--|
| Parameters   | 2018    | 2019      | 2020      | 2021      | 2022      |  |  |  |
| Average Daily Flow<br>(gallons per day)  | 539,000 | 912,100   | 919,200   | 920,100   | 921,000   |  |  |  |
| 3 Month Maximum Flow (gallons per day)   | 668,000 | 1,131,000 | 1,139,000 | 1,140,000 | 1,142,000 |  |  |  |
| Ratio: 3 Month Max Flow<br>to Average Daily Flow   | 1.24    | 1.24      | 1.24      | 1.24      | 1.24      |  |  |  |
| Average Organic Load<br>BOD (pounds/day)   | 1,693   | 1,864     | 1,886     | 1,889     | 1,891     |  |  |  |
| Source: Birdsboro Municipal Authority Chapter 94 Municipal Wasteload Management 2017 Annual Report |         |           |           |           |           |  |  |  |

an expected 350,000 gpd with a peak of 450,000 gpd. The Birdsboro Municipal Authority has projected the following hydraulic and organic loading projections for 2018 through 2022:

Based upon the existing and projected average daily flows, the Birdsboro Wastewater Treatment Plant is expected to accommodate an additional 384,000 gallons per day over the next five (5) years. Further, if additional inflow and infiltration problems continue to develop, the remaining available capacity at the Birdsboro Wastewater Treatment Plant will be lost.

These methods could be further addressed as part of a Joint Act 537 Plan between Birdsboro Borough and Union Township.

# Caernarvon Municipal Sewer System

The municipal wastewater treatment system within Caernarvon Township is owned and operated by the Caernarvon Township Municipal Sewer Authority. The system consists of a wastewater treatment plant, a pumping station, a series of gravity collection lines ranging between 8 inches to 24 inches, and a force main. There are 1,361 connections. The Caernarvon Wastewater Treatment Plant has a permitted capacity of 700,000 gallons per day and there is room to expand the plant to 950,000 gallons per day. The treatment plant has an organic capacity of 2,043 pounds per day. The system has been in operation since 1978 and presently serves approximately 1,221 customers within the Village of Morgantown and the surrounding developed areas, which are currently not zoned as Effective Agricultural Preservation (EAP) and Rural Conservation (R-1, R-2 and R-3). A small area in the



eastern portion of Caernarvon Township (Lancaster County) is serviced by this system and an area within the northeastern portion of Honey Brook Township (Chester County) could be serviced by this system. The existing customers consist of 56 percent residential, 44 percent commercial and industrial. The Caernarvon Municipal Sewer System is operated and maintained by three (3) full time employees and one (1) part time employee. The staff is responsible for daily operation and process testing of the system. The staff is also involved with routine maintenance and is capable of handling emergency situations and repairs. The limits of the service area for the Caernarvon Municipal Sewer System are depicted on Figure 7 of this Plan. The following table provides a summary of the hydraulic and organic loading data over the past five (5) years.

| Caernarvon WWTP Hydraulic and Organic Loading Data<br>(2013 – 2017) |         |         |         |         |         |  |  |  |
|---|---------|---------|---------|---------|---------|--|--|--|
| Parameters  | 2013    | 2014    | 2015    | 2016    | 2017    |  |  |  |
| Average Daily Flow<br>(gallons per day)                             | 278,000 | 295,000 | 273,000 | 287,000 | 288,000 |  |  |  |
| 3 Month Maximum Flow<br>(gallons per day)                           | 294,000 | 367,000 | 296,000 | 334,000 | 297,000 |  |  |  |
| Ratio: 3 Month Max Flow<br>to Average Daily Flow                    | 1.06    | 1.24    | 1.08    | 1.16    | 1.03    |  |  |  |
| Average Organic Load<br>BOD (pounds/day)                            | 504     | 460     | 590     | 590     | 807     |  |  |  |

Based upon the information contained in the chart, the Caernarvon Wastewater Treatment Plant is currently operating within the permitted capacity of 700,000 gallons per day and an organic capacity of 2,043 pounds per day. There are no reported problems associated with hydraulic overloading. In addition, the 3 month maximum flow to average daily flow ratio is very low indicating that there are no significant problems associated with inflow and infiltration. According to the Municipal Wasteload Management 2001 Annual Report, submitted by the Caernarvon Township Municipal Sewer Authority, the Caernarvon Municipal Sewer System is in good condition and functions with no hydraulic overload conditions. The Authority has established a program to monitor problems and flushes the system on an annual basis. In addition, the pumping station located within the Thousand Oaks Development is operating within its designed capacity and is currently working satisfactorily. This pumping station underwent a major renovation in 2017.

The Caernarvon Township Municipal Sewer Authority has projected the following hydraulic and organic loading projections for 2018 through 2022:

| Caernarvon WWTP Projected Hydraulic and Organic Loading Data<br>(2018 – 2022)                                |         |         |         |         |         |  |  |  |
|--|---------|---------|---------|---------|---------|--|--|--|
| Parameters   | 2018    | 2019    | 2020    | 2021    | 2022    |  |  |  |
| Average Daily Flow<br>(gallons per day)  | 367,000 | 428,000 | 478,700 | 508,700 | 524,900 |  |  |  |
| 3 Month Maximum Flow<br>(gallons per day)  | 410,000 | 478,000 | 534,000 | 568,000 | 586,000 |  |  |  |
| Ratio: 3 Month Max Flow<br>to Average Daily Flow   | 1.11    | 1.11    | 1.11    | 1.11    | 1.12    |  |  |  |
| Average Organic Load<br>BOD (pounds/day)   | 762     | 888     | 993     | 1055    | 1089    |  |  |  |
| Source: Caernarvon Twp. Municipal Sewer Auth., Chapter 94, Municipal Wasteload Management 2017 Annual Report |         |         |         |         |         |  |  |  |

Based upon the projected average hydraulic and organic loading data, the Caernarvon Wastewater Treatment Plant has ample capacity for the next five (5) years.

### Robeson Municipal Sewer System

The municipal wastewater treatment system within Robeson Township is owned and operated by the Robeson Township Municipal Authority. The system consists of a wastewater treatment plant, two pumping stations, a

series of gravity collection lines ranging between 6 inches to 15 inches, and force mains that are 2 inch diameter and 6 inch diameter. The Robeson Wastewater Treatment Plant has a permitted capacity of 300,000 gallons per day and an organic capacity of 580 pounds per day. The system has been in operation since 1987 and presently services the northern portion of Robeson Township. The operation and maintenance of the facilities is contracted to a consultant who is responsible for daily operation and process testing of the system. The consultant is also involved with routine maintenance and is capable of handling emergency situations and repairs. The limits of the service area for the Robeson Municipal Sewer System are depicted on Figure 7 of this Plan. The following table provides a summary of the hydraulic and organic loading data over the past five (5) years.

| Robeson WWTP Hydraulic and Organic Loading Data<br>(2013 – 2017)                                      |         |         |         |         |         |  |  |
|---|---------|---------|---------|---------|---------|--|--|
| Parameters  | 2013    | 2014    | 2015    | 2016    | 2017    |  |  |
| Average Daily Flow<br>(gallons per day)   | 137,000 | 146,000 | 104,000 | 104,000 | 107,000 |  |  |
| 3 Month Maximum Flow<br>(gallons per day)   | 175,000 | 233,000 | 149,000 | 137,000 | 140,000 |  |  |
| Ratio: 3 Month Max Flow to Average Daily Flow   | 1.28    | 1.60    | 1.43    | 1.32    | 1.31    |  |  |
| Average Organic Load<br>BOD (pounds/day)  | 157     | 144     | 111     | 122     | 130     |  |  |
| Source: Robeson Township Sewer Authority Chapter 94 Municipal Wasteload Management 2017 Annual Report |         |         |         |         |         |  |  |

Based upon the information contained above, the Robeson Wastewater Treatment Plant is currently operating well within the permitted capacity of 300,000 gallons per day and an organic capacity of 580 pounds per day. There are no reported problems associated with hydraulic overloading. In addition, the 3 month maximum flow to average daily flow ratio is considered average indicating that there are no significant problems associated with inflow and infiltration. According to the Municipal Wasteload Management 2017 Annual Report, submitted by the Robeson Township Municipal Authority, the Robeson Municipal Sewer System is in good condition and functions with no hydraulic overload conditions. In addition, both pumping stations are operating within its designed capacity and are currently working satisfactorily. The Robeson Township Municipal Authority has projected the following hydraulic and organic loading projections for 2018 through 2022:

| <b>2022</b><br>) 145,730 |
|--------------------------|
| ) 145,730                |
|                          |
| ) 202,140                |
| ) 1.65                   |
| 5 161                    |
| )                        |

Based upon the projected average hydraulic and organic loading data for both scenarios, the Robeson Wastewater

Treatment Plant should have sufficient capacity over the next 5 years. As part of the development of an Act 537 Plan, Robeson Township should consider establishing sewer districts, which are consistent with the Future Land Use Plan. The Robeson Township Municipal Authority should continue to monitor and correct inflow and infiltration problems.

## Green Hills Municipal Sewer Service Area

The Green Hills Corporate Center is located within the western portion of Robeson Township and the eastern portion of Cumru Township. This office complex includes a three (3) story office building occupied by Penske Truck Leasing and Worley Parsons within Robeson Township. The wastewater from this office building is conveyed into the collection facilities owned and operated by the Cumru Township Municipal Authority before it is conveyed to the City of Reading for final treatment. No future expansion within the Green Hills Corporate Center is contemplated within the near future. However, the Villages at Green Hills Development (800 Townhouses) is located within close proximity to this service area. If future wastewater flows are to be conveyed into the collection with Cumru Township Municipal Authority, Robeson Township in conjunction with Cumru Township should assess capacity related issues as well as the regional needs for establishing sewer districts as part of a joint Act 537 Plan.

## **Union-Birdsboro Municipal Sewer Service Area**

The Union-Birdsboro Municipal Sewer Service Area is located within the northwestern portion of Union Township. This service area primarily consists of the unincorporated areas of Monocacy and Kulptown, the Maple Springs Development, the Hopewell Estates Development, Monocacy Woods Development, the Joni Circle Development, the Walnut Ridge Development and the Arlington Place Development. The existing collection system (in Union Township) is comprised of sanitary sewage collection lines (8 inch diameter), two (2) pumping stations and 4,200 feet of force main, which have been in operation since 1979. The system currently services 700 EDU's in Union Township with an average daily flow of 93,785 gallons per day. Based upon the terms of an intermunicipal agreement between the Birdsboro Municipal Authority and Union, there is 264,000 gallons per day of the reserved capacity at the Birdsboro Wastewater Treatment Plant. The sanitary sewer system within Union Township is owned and maintained by the Union Township Municipal Authority. The Union-Birdsboro Municipal Sewer Service Area is depicted on Figure 7 of this Plan. The following table provides a summary of the hydraulic flows over the past five (5) years

| Union-Birdsboro Service Area Hydraulic Flow Data<br>(2013 – 2017)  |        |         |        |        |        |  |
|--|--------|---------|--------|--------|--------|--|
| Parameters   | 2013   | 2014    | 2015   | 2016   | 2017   |  |
| Metered Average Daily Flow<br>at Pump Station 2 (gal/day)  | 61,905 | 70,337  | 54,205 | 59,529 | 59,828 |  |
| 3 Month Maximum Flow at<br>at Pump Station 2 (gal/day)         71,043         104,717         70,044         89,538         74,115   |        |         |        |        |        |  |
| Ratio: 3 Month Max Flow to<br>Average Daily Flow   | 1.15   | 1.49    | 1.29   | 1.50   | 1.24   |  |
| Total Average Flow: Metered plus Non-Metered (gal/day)   | 97,937 | 106,524 | 89,923 | 95,851 | 93,785 |  |
| NOTE: Total Average Flow includes the Daniel Boone Area School District, Maple Springs Pool and the EDU's that are not presently metered, as identified by the Union Township Municipal Authority. |        |         |        |        |        |  |
| Source: Union Township Municipal Authority Chapter 94 Municipal Wasteload Management 2017 Annual Report  |        |         |        |        |        |  |

Based upon the information presented on the proceeding page concerning hydraulic flows, Union Township is well within the reserved capacity of 264,000 gallons per day. The collection and conveyance system has experienced problems associated with inflow and infiltration. However, steps have been taken to alleviate these issues. The Union Township Municipal Authority has undertaken an aggressive approach to identify the existing problems by installing flow meters, conducting home inspections, televising collection lines and repairing existing facilities. According to the Municipal Wasteload Management 2017 Annual Report, submitted by the Union Township Municipal Authority, the sanitary sewer collection and conveyance system is in good serviceable condition and functions in a satisfactory manner. Both pump stations are considered to be in good condition and are capable of operating within their designed capacity while meeting the projected demands for growth and development.

The Union Township Municipal Authority has projected the following hydraulic and organic loading projections for 2002 through 2006:

| Union-Birdsboro Service Area Projected Hydraulic Flow Data<br>(2018 – 2022)   |         |         |         |         |         |  |  |
|---|---------|---------|---------|---------|---------|--|--|
| Parameters  | 2018    | 2019    | 2020    | 2021    | 2022    |  |  |
| Average Daily Flow<br>(gallons per day)   | 98,202  | 118,007 | 125,463 | 126,162 | 126,861 |  |  |
| 3 Month Maximum Flow<br>(gallons per day)   | 130,609 | 156,949 | 166,866 | 167,795 | 164,735 |  |  |
| Ratio: 3 Month Max Flow<br>to Average Daily Flow  | 1.33    | 1.33    | 1.33    | 1.33    | 1.33    |  |  |
| NOTE: The Union Municipal Authority developed hydraulic projections utilizing different criteria for EDU values. The projections identified above are based upon the more conservative criteria of 233 gallons per day per EDU. |         |         |         |         |         |  |  |

Source: Union Township Municipal Authority Chapter 94 Municipal Wasteload Management 2017 Annual Report

Based upon the hydraulic projections presented in the chart, the Union-Birdsboro Service Area will be within its reserved capacity limits of 264,000 gallons per day. If additional inflow and infiltration problems continue to develop, the remaining available capacity at the Birdsboro Wastewater Treatment Plant could be lost. The Birdsboro Municipal Authority and the Union Township Municipal Authority should evaluate methods to comprehensively manage the remaining capacity by the following methods:

- 1. Establish sewer districts, which are consistent with the Future Land Use Plan;
- 2. Determine actual wastewater flows by installing meters at strategic locations;
- 3. Continuing to monitor and correct inflow and infiltration problems; and
- 4. Evaluate expanding or re-rating the Birdsboro Wastewater Treatment System.

These methods could be further addressed as part of a Joint Act 537 Plan between Birdsboro Borough and Union Township.

## **Union-Amity Municipal Sewer Service Area**

Union Township adopted a new 537 Plan in 2008. The Union-Amity Municipal Sewer Service Area is located within the northeastern portion of Union Township. This service area consists of the unincorporated areas of Unionville and Gramacy Gardens. This collection system (in Union Township) is comprised of sanitary sewage collection lines (8 inch diameter), a pumping station and 1,700 feet of force main (6 inch diameter), which have

been in operation since 1979. This system currently services approximately 248 EDU's with an average flow of 33,119 gallons per day. In 1989, Union Township reserved 200 EDU's with Amity Township to accommodate future growth and development within the immediate service area. According to the Municipal Wasteload Management 2017 Annual Report, the total reserved capacity (existing plus future flows) for Union Township at the Amity Township Wastewater Treatment Plant is 158,010 gallons per day. The sanitary sewer system within Union Township is owned and maintained by the Union Township Municipal Authority.

| Union-Amity Service Area Hydraulic Flow Data<br>(2013 – 2017) |                   |                  |                 |                  |        |  |
|---|-------------------|------------------|-----------------|------------------|--------|--|
| Parameters  | 2013              | 2014             | 2015            | 2016             | 2017   |  |
| Metered Average Daily Flow<br>at Pump Station 3 (gal/day)     | 47,620            | 39,450           | 35,661          | 33,600           | 33,119 |  |
| 3 Month Maximum Flow at at Pump Station 3 (gal/day)           | 73,048            | 58,636           | 43,334          | 47,182           | 37,283 |  |
| Ratio: 3 Month Max Flow to<br>Average Daily Flow              | 1.53              | 1.49             | 1.22            | 1.40             | 1.13   |  |
| Source: Union Township Municipal A                            | uthority. Chapter | 94. Municipal Wa | steload Managen | nent 2017 Annual | Report |  |

The following table provides a summary of the hydraulic flows over the past five (5) years:

Based upon the information presented on the proceeding page concerning hydraulic flows, Union Township is well within the reserved capacity of 158,010 gallons per day. The Union Township Municipal Authority has reported and corrected inflow and infiltration problems within certain segments of this collection and conveyance system. According to the Municipal Wasteload Management 2017 Annual Report, the sanitary sewer collection and conveyance system is in good serviceable condition and functions in a satisfactory manner. The pump station is considered to be in good condition and is capable of operating within its designed capacity while meeting the projected demands for growth and development. The Union Township Municipal Authority has projected the following hydraulic flow projections for 2017 through 2022:

| Union-Amity Service Area Projected Hydraulic Flow Data<br>(2018 – 2022)                                   |        |        |        |        |        |  |  |
|---|--------|--------|--------|--------|--------|--|--|
| Parameters  | 2018   | 2019   | 2020   | 2021   | 2022   |  |  |
| Average Daily Flow<br>(gallons per day)   | 42,928 | 47,996 | 54,149 | 59,187 | 64,225 |  |  |
| 3 Month Maximum Flow<br>(gallons per day)   | 57,953 | 64,754 | 73,101 | 79,902 | 86,704 |  |  |
| Ratio: 3 Month Max Flow<br>to Average Daily Flow  | 1.35   | 1.35   | 1.35   | 1.35   | 1.35   |  |  |
| Source: Union Township Municipal Authority, Chapter 94, Municipal Wasteload Management 2017 Annual Report |        |        |        |        |        |  |  |

Based upon the hydraulic projections presented in the chart, the Union-Birdsboro Service Area will be within its reserved capacity limits of 158,010 gallons per day with Amity Township.

## Geigertown Area Joint Sewer Authority

In March of 2018 work began to construct a six mile system which will connect approximately 115 properties in the Geigertown area to the Birdsboro Sewer Treatment Plant. The joint authority and subsequent project were

undertaken by Union and Robeson Townships in order to address failing septic systems in the Geigertown area. Properties within 150 feet of the sewer line will be required to connect to the system.

## **Private Sewage Treatment Systems**

There are four (4) private sewage treatment systems within the Southern Berks Region. These private systems are described below:

**French Creek State Park**: This system provides wastewater treatment and service to the French Creek State Park. The treatment facility is an extended aeration system with a spray irrigation discharge point along Mount Pleasure (Berks County and Chester County). This package treatment plant has the capacity to process and treat 1.164 million gallons per day. However, this treatment system does not utilize most of its available capacity.

**High Point Baptist Academy**: This system provides wastewater treatment and service to the High Point Baptist Academy and Chapel. The treatment facility is an extended aeration system with a stream discharge to a point along the Hay Creek. The average daily volumes of wastewater ranges between 1,200 gallons per day to 21,000 gallons per day with an average of 8,000 gallons per day. The system accommodates 400 students plus 50 staff members during the school year. This package treatment plant has the capacity to process and treat 27,000 gallons per day.

**Twin Valley Area School District**: This system provides wastewater treatment and service to the Twin Valley High School, Middle School, Elementary School and Administrative Offices. The treatment facility is an extended aeration system with a stream discharge to a point along the Conestoga River. The average daily volume of wastewater treated at the plant is approximately 6,000 gallons per day during the school year providing service to approximately 2,280 students and staff members. This package treatment plant has the capacity to process and treat 27,000 gallons per day.

#### **On-Site Sewage Treatment Systems**

The areas of the Southern Berks Region that are not serviced by municipal or private wastewater treatment facilities currently utilize on-site sewage disposal technology, through individual sewage systems, as the method of sewage treatment and disposal.

Each municipality within the Southern Berks Region administers all on-site sewage disposal regulations through the Pennsylvania Department of Environmental Protection through an appointed Sewage Enforcement Officer (SEO). All policies concerning review procedures are specified within municipal ordinances adopted by each municipality. The SEO's conform to all regulations specified by Pennsylvania Department of Environmental Protections guidelines, which are specified under Chapters 71, 72 and 73 under the Pennsylvania Sewage Facilities Act. In order to comprehensively manage the review, testing, permitting and operation of on-site sewage disposal systems within the Southern Berks Region, the following policies and programs are recommended:

- 1. Establish a field testing policy outlining specific parameters for notification, test procedures and permitting. The field testing policy could be adopted by resolution and attached to each sewage facilities permit application.
- 2. Each residential and non-residential lot should be provided with an approved primary on-site sewage disposal system and an approved alternate on-site sewage disposal system. The approved primary and alternate sites should be accurately depicted on all subdivision and/or land development plans. The primary and alternate sites should be protected by a perpetual land preservation easement to protect the sites from any encroachments, disturbances and/or land development activity. The preservation easement should be properly described and recorded with the approved plan.

- 3. Develop requirements for a detailed physical site analysis for all proposed subdivision or land development plans. This analysis may include an assessment of the topography, soils, geology, hydrology and groundwater of the developed area. This basis for the physical site analysis is to identify limitations and develop requirements for locating on-site sewage disposal systems.
- 4. Undertake an education program to improve public awareness of the causes of on-site sewage malfunctions and how the probability of a malfunction can be reduced. Information from the DEP could be distributed to residents as part of the occupancy permit for new residential construction or as part of the transfer of title for existing residential units.
- 5. Establish a mandatory pumping schedule requiring all residential and non-residential property owners with on-site sewage disposal systems to have their septic tanks pumped by a licensed hauler at least every three (3) years.
- 6. Each municipality has the legal authority to inspect on-site sewage disposal systems and order the repair of malfunctioning systems. Based upon the age of the residential homes within the Southern Berks Region, it is conceivable that there are a number of systems that were designed and installed prior to mandatory testing and permitting of on-site disposal systems. These older systems should be systematically inspected to determine if they are operating sufficiently.
- 7. Establish sewage management districts for the purposes of conducting periodic inspections for on-site sewage disposal systems by the SEO.
- 8. Develop regulations and specifications for the installation of a "capped sanitary sewer system" within developments located within planned sewer districts.
- 9. Conduct a periodic hydrogeological analysis of the groundwater for all areas that are dependent upon onsite sewage disposal and on-lot water supply in an effort to monitor groundwater in terms of supply, nitrates and bacteriological contaminants.
- 10. Adopt an Official Sewage Facilities Plan, which endorses the development of an effective "OnLot Sewage Management Program" for the purposes of monitoring the utilization of existing on-lot sewage disposal systems.

## Sewage Facilities Planning

The Pennsylvania Sewage Facilities Act (Pennsylvania Act 537, as amended), enacted by the Pennsylvania State Legislature in January of 1966 requires that every municipality within the Commonwealth of Pennsylvania develop and maintain an up-to-date Sewage Facilities Plan. The purpose of the Sewage Facilities Act is outlined as follows:

- To protect the public health, safety and welfare of its citizens through the development and implementation of plans for the sanitary disposal of sewage waste.
- To promote inter-municipal cooperation in the planning, implementation and administration of such plans by local government.
- To prevent and eliminate pollution of waters of the Commonwealth by coordinating planning for the sanitary disposal of sewage wastes with a comprehensive program of water quality management.
- To provide for the issuance of permits for on-lot sewage disposal systems by local government in accordance with uniform standards and to encourage inter-municipal cooperation to this end.

- To provide for and insure a high degree of technical competency in local government in the administration of this act.
- To encourage the use of the best available technology for on-site sewage disposal systems.
- To insure the rights of citizens on matters of sewage disposal as they may relate to this Act and the Constitution of this Commonwealth.

Pennsylvania Act 537 requires that the municipality review its Official Sewage Plan every five (5) years to determine effectiveness and/or determine the need for revisions. An update can be flexible to include the evaluation of on-site sewage disposal technology and/or the complexity of planning for the design and construction of a public sewage treatment system. An Official Sewage Plan must evaluate the existing and proposed wastewater treatment facilities to compensate the needs of the planning area.

# Goal: The Southern Berks Region should rely on the requirements set forth in the Pennsylvania Sewage Facilities and act to steer sewage facilities maintenance and development throughout the region.

- 1. Birdsboro Borough in conjunction with Union Township should evaluate methods to comprehensively manage the remaining capacity at the Birdsboro Wastewater Treatment Plant. As part of this effort, municipal sewer districts should be established to be consistent with the growth areas defined by this Plan; both municipalities should continue to monitor and correct inflow and infiltration problems; and alternatives for the expansion or re-rating of the Birdsboro Wastewater Treatment Plant should be investigated. A joint Act 537 Plan between Birdsboro Borough and Union Township should be undertaken.
- 2. Caernarvon Township should continue to pursue alternatives to resolve its projected hydraulic and organic loading capacities. Recent efforts included an investigation of treatment alternatives to increase the capacity at the Caernarvon Wastewater Treatment Plant. Caernarvon Township has received approval by the PA DEP in order to address these needs. As a result, the Caernarvon Wastewater Treatment Plant will be expanded and upgraded in the near future.
- 3. Caernarvon, Robeson and Union Townships should establish municipal sewer districts, which are consistent with the defined growth areas contained within this Plan. Each municipality should prepare an Act 537 Plan to address how the remaining capacities will be managed over the next 5 to 10 years.
- 4. Caernarvon, Robeson and Union Townships should develop effective policies and programs to manage the review, testing, permitting and operation of on-site sewage disposal systems within the Southern Berks Region. These policies and programs should be outlined in further detail as part of an Act 537 Plan for each municipality.

## Water Facilities

Goal: The Southern Berks Region should evaluate the needs for water service on a region wide basis and direct infrastructure development into those areas to best serve the population base where it is needed most. Also, there should be education on protection of on lot water service.

Water service within the Southern Berks Region is supplied by various methods, ranging from municipally owned systems to individual on-site wells. These systems are described below:

## Birdsboro Water Supply System

The Birdsboro Water Supply System is owned, operated and maintained by the Birdsboro Municipal Authority.

The system currently serves an estimated population of 6,000 residents with nearly 2,000 connections servicing residential, commercial, industrial and institutional uses. The service area includes all of Birdsboro, the northwestern portion of Union Township, a single multi-family connection within Robeson Township and an industrial and residential connection within Exeter Township. The average daily water consumption is approximately 520,000 gallons per day with peak volumes near 700,000 gallons per day. The water supply service areas are depicted on the Public Utilities map associated with this chapter.



The water supply sources include the Indian Run Reservoir, Stinson Run Reservoir, Dyers Quarry and Hay Creek. The surface water is fed to a 1.4 million gallon storage tank where it is chemically treated prior to distribution to the customers within the general service area. The existing water supply lines consist of a series of gravity, low pressure and high pressure lines ranging between 2 inches and 8 inches in diameter. In addition, the system consists of two (2) booster pumps, a series of release valves and fire hydrants. The water supply system within Birdsboro is considered to be in good condition.

The water supply system within Union Township provides water supply to the approximately 180 customers including the Maple Springs Development, Maple Springs Pool, Daniel Boone Area School District and the residential uses along State Route 724. This system is owned and maintained by the Birdsboro Municipal Authority. However, there is no inter-municipal agreement or franchise area established for municipal water supply in this region of Union Township. Based upon topographic constraints, an additional booster pump may be required to supply water to additional areas of Union Township.

In order to provide a dependable system of water supply to the existing and prospective customers of the Birdsboro Water Supply System, the following recommendations are provided:

- The available supply of surface water within the Indian Run Reservoir, Stinson Run Reservoir and Dyers Quarry appears to be sufficient to accommodate future growth and development. However, from a qualitative and quantitative perspective, surface water is not as dependable as a reliable production well source. The Birdsboro Municipal Authority should investigate the feasibility of drilling production wells to continue an adequate supply of water to its customers.
- 2. A surface water protection plan should be developed between Birdsboro, Robeson and Union. As part of this effort, zoning districts and regulations should be developed that would endorse conservation management and environmental protection practices within 2,500 feet of the Indian Run Reservoir, Stinson Run Reservoir and Dyers Quarry.
- 3. The Birdsboro Municipal Authority in conjunction with Robeson and Union Townships should establish municipal water supply service areas, which coincide with the planned growth areas identified on the Future Land Use Map. In addition, an inter-municipal agreement should be developed outlining specific terms for ownership and maintenance of the facilities.
- 4. The Birdsboro Municipal Authority should continue to maintain the functional components and infrastructure of the Birdsboro Water Supply System. The maintenance staff should continue to monitor the system for leaks and conduct a systematic flushing of the system.

#### Caernarvon Water Supply System

The Caernarvon Water Supply System is owned, operated and maintained by the Caernarvon Township Water Authority. The system has 1,270 connections servicing residential, commercial, industrial and institutional uses. The service area primarily includes the Village of Morgantown and the southeastern portion of Caernarvon Township. In addition, a small portion of Caernarvon Township (Lancaster County) and a small portion of Honey Brook Township (Chester County) are serviced by the Caernarvon Water Supply System. In 2018, the average daily water consumption was 350,000 gallons per day with peak volumes at 380,000 gallons per day.

The authority is permitted for 675,000 gpd. Sources include three (3) production wells #6, #7, #8. Well # 7 produces 525 gpm, Well #8 produces 500 gpm and well #6 produces 135 gpm. Well #7 produces 200,000 gpd. Well #8 produces 150,000 gpd and well #6 produces 6000 gpd. There are three (3) storage tanks including a 160,000 gallon underground storage tank near Well #8; a 300,000 gallon above ground storage tank; and a 100,000 gallon above ground storage tank. The water is chemically treated prior to distribution to the customers within the general service area.

The existing water supply lines consist of pressurized lines ranging between 2 inches and 12 inches in diameter. The most common line diameter being 8 inches. The system also contains a series of release valves and fire hydrants. The water supply system within Caernarvon Township is considered to be in good condition. In 2005, the Willow Glen Water Company. was acquired by the Caernarvon Township Water Authority. This was essentially an extension of the water supply system. This area includes the existing residential units and industrial use currently being serviced.

The water supply lines extend into the northeastern portion of Honey Brook Township (Chester County) and services the Morgantown Industrial Park. An inter-governmental agreement for water supply service has been executed with each municipality. There are no immediate plans for future water supply extensions or service within Caernarvon Township (Lancaster County) or Honey Brook Township (Chester County).

An emergency interconnect with New Morgan Borough is currently under construction. This project is nearing completion with an estimated finish date of Spring 2019.

In order to provide a dependable system of water supply to the existing and prospective customers of the Caernarvon Water Supply System, the following recommendations are provided:

- Based upon the carbonate geological characteristics (limestone and dolomite) of the Conestoga River Valley, the underlying rock formations are highly fractured allowing for rapid infiltration of surface waters into the groundwater system. Based upon recent testing conducted by the Caernarvon Township Water Authority, it has been determined that the production wells are not vulnerable to surface water influence. The Caernarvon Township Water Authority should continue to monitor the production wells and initiate a Wellhead Protection Program to protect and preserve the quality of its water supply.
- 2. As part of the Wellhead Protection Program, Caernarvon Township should develop a Wellhead Protection Plan to accomplish the following objectives:
  - Delineate hydrogeological protection zones considering infiltration, recharge, direct migration and interaquifer exchange.
  - Delineate wellhead protection zone limits considering pumping rates, bulk water consumption, hydrogeological modeling and surface water influences.
  - Identify existing and potential sources of groundwater contamination.

- Evaluate the purchase of land areas (fee simple, condemnation or protective easements) within wellhead protection zones.
- Develop conservation management guidelines and land use requirements for areas located within the wellhead protection zones. As part of this effort, adopt zoning amendments and recognize wellhead protection limits as an overlay zoning district.
- Establish a contingency plan for the provisions of alternative water supplies in the event of groundwater contamination and emergency responses to incidents that may have an impact on the water supply.
- Identify potential new water supply sources.
- 3. Caernarvon Township should establish municipal water supply service areas, which coincide with the planned growth areas identified on the Future Land Use Map.
- 4. Caernarvon Township (Berks County) in conjunction with Caernarvon Township (Lancaster County) and Honey Brook Township (Chester County) should establish municipal water supply service areas, which coincide with their planned growth areas.
- 5. The Caernarvon Township Water Authority should consider drilling addition production wells and constructing storage facilities to accommodate the projected water supply demand of future developments within the planned growth areas.

## New Morgan – Thousand Oaks Corporate Center

The Thousand Oaks Corporate Center is located within the northern portion of Caernarvon Township and to the east of New Morgan Borough. This complex contains a total of twelve (12) lots of which five (7) lots are occupied by existing non-residential uses. The water supply system serving the Thousand Oaks Corporate Center is owned, operated and maintained by Morgantown Properties. In 2018, the water supply system supplied 21,070 gallons of water per day to five (5) non-residential uses within the Thousand Oaks Corporate Center. Morgantown Properties operates under a non-transient permit with a surface water intake at the Mill Pond, where the surface water is pumped and treated prior to distribution to its non-residential customers.

In addition to the infill development within the undeveloped lots within the Thousand Oaks Corporate Center, there is some expansion of the water supply service area contemplated within the next 5 to 10 years. There is currently an emergency interconnect to the Caernarvon Township Water Authority System being constructed. This is set to be completed in the Spring of 2019 and will serve as a backup water supply in the event of a problem with the Caernarvon Water Authority system. In order to provide a dependable system of water supply to the existing and prospective customers within the Thousand Oaks Corporate Center, the following recommendations are provided:

- 1. Morgantown Properties in conjunction with Caernarvon Township should establish municipal water supply service areas, which coincide with the planned growth areas identified on the Future Land Use Map.
- 2. The available supply of water within the Mill Pond appears to be sufficient to accommodate future growth and development. However, from a qualitative and quantitative perspective, surface water is not as dependable as a reliable production well source. Morgantown Properties should investigate the feasibility of drilling a production well to continue an adequate supply of water to its existing and prospective customers within the planned growth areas.

3. Morgantown Properties should continue to maintain the functional components of the Thousand Oaks Corporate Center by monitoring the system for leaks and by conducting a systematic flushing of the system.

## Aqua American Incorporated – Geigertown Water Supply System

The Geigertown Water Supply System is owned, operated and maintained by Aqua America Incorporated. The system includes 80 connections servicing residential, commercial and institutional uses. The service area includes the Village of Geigertown, which is partially located within Robeson and Union Townships. In 2018, the average daily water consumption was approximately 11,500 gallons per day with peak volumes near 15,000 gallons per day. The capacity of the production well is 100,800 gallons per day. The groundwater is pumped to a treatment building where it is chemically treated prior to distribution to the customers within the general service area. The existing water supply lines consist of a series of gravity and low pressure lines ranging between 4 inch, 6 inch and 8 inches in diameter. The water supply system is considered to be in fair condition. The service area is depicted on Figure 7.

In order to provide a dependable system of water supply to the existing and prospective customers within the Village of Geigertown, the following recommendations are provided:

- 1. Aqua America in conjunction with Robeson and Union Townships should evaluate the need to initiate a Wellhead Protection Program to protect and preserve the quality of its water supply.
- 2. Aqua America in conjunction with Robeson and Union Townships should establish municipal water supply service areas, which coincide with the planned growth areas identified on the Future Land Use Map.
- 3. Aqua America should consider drilling an addition production well and/or constructing storage facilities to accommodate the projected water supply demand of future developments within the planned growth areas.
- 4. Aqua America should continue to maintain the functional components of the Geigertown Water Supply System. They should continue to monitor the system for leaks and conduct a systematic flushing of the system.

## Aqua America Incorporated – Green Hills Water Supply System

The Green Hills Corporate Center is located within the western portion of Robeson Township and the eastern portion of Cumru Township. This office complex includes a three (3) story office building occupied by Penske Truck Leasing and Worley Parsons within Robeson Township. The water supply system serving the Green Hills Corporate Center is owned, operated and maintained by Aqua America Incorporated. This system includes two (2) production wells, which have the capabilities to provide 30,000 gallons per day. In 2018 Aqua America supplied an average of 6,558 gallons per day to the existing office building located within Robeson Township. The existing Aqua America service area within Robeson Township is depicted on Figure 14 of this Plan.

No future expansion within the Green Hills Corporate Center is contemplated in the near future. There have been discussions regarding possibly abandoning use of these wells in the next few years. If this occurs, this system will be tied to the Villages at Green Hills water supply system. In order to provide a dependable system of water supply to the existing and prospective customers within the Village of Green Hills, the following recommendations are provided:

1. Aqua America in conjunction with Robeson and Cumru Townships should evaluate the need to initiate a Wellhead Protection Program to protect and preserve the quality of its water supply if it is determined that these wells are to be retained.

- 2. Aqua America in conjunction with Robeson Township should establish municipal water supply service areas which coincide with the planned growth areas identified on the Future Land Use Map.
- 3. Aqua America should consider drilling an additional production well and/or constructing storage facilities to accommodate the projected water supply demand of future developments within the planned growth areas.
- 4. Aqua America should continue to maintain the functional components of the Green Hills Water Supply System if it is determined that the system will be kept on line. They should also continue to monitor the system for leaks and conduct a systematic flushing of the system.

## Union Township Buckingham Preserve Development

The Union Township Municipal Authority operates a small water system that is present for one development within the Township. Two wells service the entire Buckingham Preserve Development. The system consists of two wells. They are well numbers 1 and 3. These wells have a combined allocation of 1.34 million gallons per month. Daily consumption ranges from .041 (mgd) to .062 (mgd). There is a permit present for groundwater withdrawl within the Delaware River Basin.

## Well Head Protection

Wellhead protection (WHP) is defined in section 1428 of the federal Safe Drinking Water Act (SDWA) as a comprehensive program to protect wellhead protection areas from man-induced contaminants which have an adverse effect on the health of persons. A wellhead protection area (WHPA) is "...*the surface and sub-surface area surrounding a water well or wellfield*, *supplying a public water system*, *through which contaminants are reasonably likely to move toward and reach such water well or wellfield*." The act requires the State Wellhead Protection areas, identify sources of contamination, develop management approaches, develop contingency plans, plan for new wells, and ensure public participation in the plan. In addition, the SDWA recognizes an approved State WHPP as fulfilling the requirements for ground-water sources under the Source Water Assessment Program.

The SDWA requires States to submit a Wellhead Protection Program to EPA for review and approval. To date, EPA has approved 47 State programs as well as programs for two U.S. territories. The Commonwealth of Pennsylvania has been actively developing a State program based on technical assistance, education and incentives for development of voluntary local WHP programs. As the forerunner of source water protection, WHP efforts have evolved proven techniques to realize the public health and economic benefits of the prevention of pollution over contamination, treatment and remediation. Consequently, a State WHPP will serve as the cornerstone of the Source Water Assessment Program for public drinking water sources which is also required under the SDWA.

The State WHPP builds upon the basic requirements for water purveyors to obtain the best available source and to take the appropriate actions to protect that source thereby ensuring a continual and safe water supply. The underlying concept of the WHPP is not new as most environmental protection programs recognize the importance of safeguarding existing and future sources of drinking water. The WHPP will also support and complement current initiatives such as pollution prevention, waste minimization, compliance assistance and public participation. As of this writing, over 150 public water systems (PWSs) and many more municipalities are developing or implementing local WHP programs in Pennsylvania. The growing success of wellhead protection in Pennsylvania is because of the recognition of the common sense and importance of pollution prevention in protecting public health and safety, and reducing the cost of compliance with the SDWA.

The Pennsylvania Department of Environmental Protection (DEP) has primacy for the SDWA in the State and is the primacy agency for the State WHPP. Responsibility for administering the primacy program and for developing the WHPP in Pennsylvania rests with the Division of Drinking Water Management (DWM) in the Bureau of Water Supply Management (BWSM). An implemented local WHP program will serve to protect the useful life of a water supply well or spring thereby giving full return on the investment, preventing the need for capital to construct a new source or provide treatment, preventing additional operating and maintenance costs for added treatment, and preventing costly ground-water remediation. A State WHP program allows Pennsylvania to extend to approved local WHP programs an opportunity to reduce certain monitoring requirements and to take advantage of potential future alternatives to treatment for compliance with some maximum contaminant levels (MCLs). Implementation of an approved local WHP program (as described in Appendix A, Minimum Elements for Local WHP Programs) may enable a water supplier to be eligible for a waiver of synthetic organic chemical monitoring requirements if DEP determines the chosen WHP area management measures are adequate to protect the water supply source. An approved State WHPP will also allow the Commonwealth to assist communities and define minimum elements for local WHP throughout Pennsylvania.

Much of the authority and responsibility to protect public health and safety through protection of the water supply source is already in place in Pennsylvania. Not all, but many of the WHP management approaches for a comprehensive local WHP program would require local government action, cooperation or support. In Pennsylvania, there are nearly 2600 municipalities and only about half of these municipalities have passed zoning ordinances for their jurisdictions.

However, the Municipal Planning Code and a local government's powers to protect public health and safety provides authority for local governments to plan and to act to protect water supplies and the environment. Therefore, local governments are in the best position to implement these protection measures. Currently this plan is not recommending the implementation of a local well head protection program but mentions it as a useful tool in ensuring safe drinking supply of water sourced from a public well for public consumption.

## Individual On-Site Wells

The areas of the Southern Berks Region that are not serviced by municipal or private water supply systems, currently utilize on-site wells for water supply. Based upon the geological and hydrological conditions within the Southern Berks Region, the continued use of on-site wells may not be the most advantageous method to support future growth and development. The capabilities and limitations for groundwater to supply an adequate supply of well water considering quantity and quality standards must be comprehensively understood since groundwater recharge rates and well yields cannot be consistently applied due to numerous variables. In order to comprehensively manage the review, testing, permitting and operation of on-site wells within the Southern Berks Region, the following policies and programs are recommended:

- 1. Consider the adoption of a Well Drillers Ordinance, which regulates the procedures, locations and construction of wells within the Southern Berks Region. The Well Drillers Ordinance may contain application procedures, design standards and specifications, flow requirements, well certification requirements and permit procedures.
- 2. Conduct a periodic hydrogeological analysis of the groundwater for all areas that are dependent upon onsite sewage disposal and on-lot water supply in an effort to monitor groundwater in terms of supply, nitrates and bacteriological contaminants.
- 3. Undertake an education program to improve public awareness of the importance of water conservation practices.

- 4. Consider a minimum lot size requirement of 1 acre for residential development located outside of the planned growth areas identified on the Future Land Use Map, which are dependent upon on-site wells and municipal sewage disposal service.
- 5. Establish parameters for requiring a preliminary hydrogeological site investigation and study for all proposed residential developments and/or non-residential developments in which the estimated average daily water demand will exceed 1,500 gallons per day. The study should be prepared by a professional hydrogeologist certifying that the proposed individual wells will be capable to supply each lot with a dependable water supply and that the proposed wells will not adversely affect the groundwater table or exiting wells near the project site. The study should also verify that the water supply is potable and free of contamination from adjacent influences.
- 6. Adopt effective growth management techniques, which promote the development of land areas that have the infrastructure and capabilities to support subdivision and land development activity, while preserving land areas considered environmentally sensitive, agriculturally significant and have the greatest potential for groundwater recharge.
- 7. Adopt effective stormwater management regulations, which promote groundwater recharge, establishing riparian buffer yards and best management practices.
- 8. Adopt effective floodplain management regulations, which promote the enhancement of groundwater quality and quantity.
- 9. Conduct periodic feasibility studies to determine if municipal water supply facilities should be extended to problem areas associated with low yields and/or contamination.

## **Other Utility Providers and Services**

In addition to the sewage disposal and water supply facilities, the Southern Berks Region is also serviced by the following utility providers:

## **Electrical Service**

Met-Ed (A First Energy Company formerly recognized as GPU Energy) provides electrical service to Birdsboro Borough, Robeson Township and Union Township. PPL Electric Utilities (PPL) provides electrical service to Caernarvon Township. All applications involving subdivision, land development or other major improvements should notify their electrical provider to inquire upon service, availability, land use restrictions and/or setback requirements.

## **Telephone Service**

Windstream provides telephone service to Birdsboro Borough, Robeson Township, Caernarvon Township and most of Union Township. Verizon provides telephone service to the eastern portion of Union Township. All applications involving subdivision, land development or other major improvements should notify their telephone provider to inquire upon service, availability, land use restrictions and/or setback requirements.

## Natural Gas Service

UGI Corporation provides natural gas service to each municipality in the Southern Berks Region. The service area is limited to areas with the highest concentration of development and all service lines are located below ground. All applications involving subdivision, land development or other improvements should notify UGI to inquire upon service, availability, land use restrictions and/or setback requirements.

#### **Cable Service**

Service Electric Cablevision provides cable television and high speed internet access to each municipality within the Southern Berks Region. Although the franchise areas include the total land area within each municipality, the service area is limited to areas with the highest concentration of development. All applications involving subdivision, land development or other major improvements should notify Service Electric Cablevision to inquire upon service, availability, land use restrictions and/or setback requirements.

#### Solid Waste Management

Solid waste management includes the collection, disposal and/or recycling of household waste, hazardous waste, sewage sludge, agricultural waste and/or industrial waste. In addition, the reclamation of contaminated areas, such as Superfund sites or Brownfield sites, are vital issues that must be addressed as part of a solid waste management plan. Although certain issues are typically addressed at the federal, state or county levels, each municipality within the Southern Berks Region must properly plan for the collection, storage, transport and disposal of solid waste.

## Solid Waste Disposal

The Pennsylvania Municipal Waste Planning, Recycling and Waste Reduction Act (Pennsylvania Act 101), enacted by the Pennsylvania State Legislature in 1988, placed greater emphasis upon county-wide solid waste management plans versus municipal solid waste management plans. The County of Berks updated their Act 101 Berks County Waste Management Plan in 2014.



There are no solid waste disposal facilities (landfills, resource recovery facilities or transfer stations) within the Southern Berks Region. However, there are numerous solid waste disposal facilities located within a few miles of the Southern Berks Region, including the Conestoga Landfill (New Morgan Borough), Western Berks Landfill (Cumru Township), Pioneer Landfill (Exeter Township), Pottstown Landfill (West Pottsgrove Township) and Lanchester Landfill (Caernarvon Township, Lancaster County). Based upon the combined capacity available at these facilities, there should be sufficient capacity to accommodate the municipal waste from the municipalities within the Southern Berks Region for the next 5 to 10 years.

Currently, the municipalities within the Southern Berks Region require each property owner or resident to contract with private waste haulers. Consequently, the municipalities have no control where the hauler ultimately disposes of the waste. In addition, there are no guarantees that the waste is disposed in a manner that is considered legal or within environmental guidelines. The following recommendations are provided for solid waste collection:

- Birdsboro Borough should continue to evaluate the economic feasibility and cost-benefit ratio of establishing a municipal solid waste collection program. The residential density of the Borough is projected to be 5,156 residents per square mile for the year 2017. The economies of scale and need for a systematic method for municipal solid waste collection program should eventually exceed the privatized program.
- Caernarvon, Robeson and Union Townships are considered rural municipalities with suburban characteristics. Higher residential densities are found within Morgantown, Gibraltar, Green Hills, Geigertown, Monocacy and Maple Springs. The municipalities (either collectively or individually) should consider selecting three (3) to five (5) licensed haulers to serve the areas with the highest residential densities.

## Recycling

The Pennsylvania Municipal Waste Planning, Recycling and Waste Reduction Act (Pennsylvania Act 101), established certain goals and objectives for recycling including: reduce the amount of municipal waste generated within the Commonwealth; recycle at least 25% of waste generated; procure and use recycled and recyclable materials in state governmental agencies; and educate the public as to the benefits of recycling and waste reduction. The benefits of recycling and waste reduction include reduced pollution risks; conservation of natural resources, energy and landfill space; and reduced disposal costs.

Pennsylvania Act 101 requires municipalities with populations of at least 10,000 residents or municipalities with populations between 5,000 and 10,000 residents and more than 300 persons per square mile to implement a mandatory curbside recycling program. Mandated municipalities must collect at least 3 of the following materials: clear glass; colored glass; plastics; aluminum; steel and bimetallic cans; high grade office paper; corrugated paper and newsprint. Commercial, municipal and institutional establishments within a mandated municipality are required to recycle aluminum, high-grade office paper and corrugated paper in addition to other materials chosen by the municipality. In order to provide financial assistance, planning grants are available to all municipalities to establish a mandatory recycling program. The following recommendations pertain to recycling programs within the Southern Berks Region:

- 1. Birdsboro Borough has a population of 5,163 residents (2010 Census). As a result, Birdsboro has initiated a recycling program that will include curbside collection of 3 to 5 materials. In addition, Birdsboro provides a municipal composting area.
- 2. Caernarvon Township currently does not have any type of recycling program or drop off facilities. Although, Caernarvon is not required by law to implement a recycling program, the economic feasibility to establish a mandatory curbside collection program should be investigated.
- 3. Robeson Township has a drop off center located behind the police station and they accept, glass, plastic and paper. There are no plans for any type of organized recycling program. Union Township has a paper drop off center at the township building. Presently, paper is the only material that is accepted at this facility. Like Robeson, there are currently no plans to implement any type of official recycling program. The three townships should initiate a volunteer recycling program with drop-off centers as part of this effort, a public education program should be considered in order to notify residents of the locations of the drop-off centers and inform them of the importance of a volunteer recycling program.

## Superfund Sites

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by the United States Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. The United States Environmental Protection Agency (EPA) administers the Superfund program in cooperation with individual state governments. The office that oversees management of the program is the Office of Emergency and Remedial Response (OERR).

There is one (1) recognized Superfund site within the Southern Berks Region. This site, known as the "Douglassville Disposal Site" is located in northern Union Township, between the Schuylkill River and State Route 724, approximately 1,500 feet west of Red Corner Road. This 50 acre site was a waste oil recycling facility that operated from 1941 to 1986. The on-site features included the former processing equipment, storage tanks,

and waste storage lagoons. From 1941 to 1972, waste oil sludge was placed in on-site lagoons. The contents of the lagoons were washed into the Schuylkill River during flooding in 1970 and 1972. After the 1972 flood (Hurricane Agnes), the lagoons were filled and the sludge generated in the oil recycling process. In addition, over 700 leaking drums were found on site. As result, the EPA has signed a consent decree with 14 parties responsible for the contamination at the Douglassville Disposal site, which requires them to stabilize the pile of oily filter cake on site with a lime-based treatment instead of incinerating the pile.

## Brownfields

The United States Environmental Protection Agency (EPA) has defined a "Brownfield site" as an area or portion thereof, which has actual or perceived contamination and an active potential for redevelopment or reuse. The EPA's Brownfields Economic Redevelopment Initiative is designed to empower states, communities, and other stakeholders in economic redevelopment to work together in a timely manner to prevent, assess, safely clean up, and reuse brownfields. The Land Recycling Program within the Commonwealth of Pennsylvania is helping to transform vacant brownfields into bustling job-producing sites, while still protecting our environment. Through the enactment of federal and state legislation, the opportunities to recycle abandoned buildings and land areas into productive properties, that not only strengthen the economic viability of a community, but also implements goals associated with conservation planning and watershed restoration. Based upon the number of abandoned and/or deteriorating industrial buildings within the Borough of Birdsboro, these programs may provide assistance for adaptive reuse and economic redevelopment efforts within the Region.

