



March 28, 2011

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

**BELL BEND NUCLEAR POWER PLANT
BBNPP PLOT PLAN CHANGE
COLA SUPPLEMENT, PART 3 (ER); SECTION 2.5, AND
RESPONSE TO ER RAI's CR 2.5-2, 2.5-3, & 2.5-4 & SE 2.5-2
BNP-2011-009 Docket No. 52-039**

- References: 1) BNP-2010-175, T. L. Harpster (PPL Bell Bend, LLC) to U.S. NRC, "July 2010 BBNPP Schedule Update," dated July 16, 2010
- 2) BNP-2010-231, R. R. Sgarro (PPL Bell Bend, LLC) to U.S. NRC, "Clarification of Schedule for COLA Part 11 Reports," dated September 10, 2010
- 3) BNP-2010-246, R. R. Sgarro (PPL Bell Bend, LLC) to U.S. NRC, "BBNPP Plot Plan Change Supplement Schedule Update," dated September 28, 2010
- 4) BNP-2009-217, R. R. Sgarro (PPL Bell Bend LLC) to U.S. NRC, "Response to Requests for Additional Information, Second Submittal," dated August 10, 2009
- 5) BNP-2009-342, R.R. Sgarro (PPL Bell Bend LLC) to U.S.NRC, "Response to Environmental Requests for Additional Information, Seventh Submittal," dated November 30, 2009.

In References 1, 2, and 3, PPL Bell Bend, LLC (PPL) provided the NRC with schedule information related to the intended revision of the Bell Bend Nuclear Power Plant (BBNPP) footprint within the existing project boundary, which has been characterized as the Plot Plan Change (PPC). As the NRC staff is aware, the plant footprint relocation will result in changes to the Combined License Application (COLA) and potentially to new and previously responded to Requests for Additional Information (RAIs). PPL declassified this docketed schedule information from regulatory commitment status in Reference 2, with an agreement to update the staff via weekly teleconferences as the project moves forward.

PPL has committed to provide the NRC with COLA supplements, consisting of revised COLA Sections and associated RAI responses/revisions, as they are developed. These COLA supplements will only include the changes related to that particular section of the COLA and will not include all conforming COLA changes. Conforming changes for each supplement necessary for other COLA sections will be integrated into the respective COLA supplements and provided in accordance with the schedule, unless the supplement has already been submitted. In the latter case, the COLA will be updated through the normal internal change process. The revised COLA supplements will also include other approved changes since the submittal of Revision 2. All COLA supplements and other approved changes will ultimately be incorporated into the next

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full COLA revision. No departures and/or exemptions from the U.S. EPR FSAR for this BBNPP COLA section have been created or revised as a result of the PPC.

Enclosure 1 provides the revised BBNPP COLA Supplement, Part 3 (Environmental Report), Section 2.5, Revision 2e. The revised BBNPP COLA section supersedes previously submitted information in its entirety.

No open RAIs are associated with the enclosed COLA section.

Previously submitted NRC RAI responses which refer directly to the enclosed COLA section were reviewed for impact from the PPC. The following previously submitted RAI responses were reviewed for impacts:

<u>RAI No.</u>	<u>Response Impacted? (Yes/No)</u>
CR 2.5-2	Yes
SE 2.5-1	No
SE 2.5-2	Yes
SE 2.5-3	No
SE 2.5-5	No
SE 2.5-6	No
SE 2.5-9	No
SE 2.5-10	No
SE 2.5-13	No

Previously submitted NRC RAI responses which contain commitments or schedule information directly relevant to the enclosed COLA section were also reviewed for impact from the PPC. The following previously submitted RAI responses were reviewed for impacts:

<u>RAI No.</u>	<u>Response Impacted? (Yes/No)</u>
CR 2.5-3	Yes
CR 2.5-4	Yes
CR 2.5-6	No
CR 2.5-7	No

Enclosure 2 provides the revised responses to NRC RAI CR 2.5-2, CR 2.5-3, CR 2.5-4, and SE 2.5-2 identified above as impacted by PPC. These responses supersede the previous responses (References 4 and 5) in their entirety. The following revised RAI responses are included with this submittal:

RAI No.
CR 2.5-2
CR 2.5-3
CR 2.5-4
SE 2.5-2

In Reference 2, PPL indicated that a Cultural Resources report (BBNPP COLA Part 11I) would be transmitted with ER Section 2.5. Instead, this report, "Addendum Report: BBNPP Second Supplemental Phase 1b Cultural Resources Investigation," has been placed in the reading room pending further discussions with NRC.

The only new regulatory commitment contained in this submittal is to include the revised COLA section (Enclosure 1) in the next COLA revision. The existing commitment to submit a Criteria of Effects report (RAI CR 2.5-4) is revised to submit the report in late 2011, subsequent to

receipt of Pennsylvania State Historic Preservation Office comments on the Phase I/II Technical report which was submitted to the SHPO in December 2010.


There is no regulatory commitment associated with the schedule information provided in the response to CR 2.5-3; however, the field work and report identified have been completed and the response and enclosed COLA section revised to incorporate the new information.

If you have any questions, please contact the undersigned at 570.802.8102.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on March 28, 2011

Respectfully,



Rocco R. Sgarro

RRS/kw

- Enclosures 1) Revised BBNPP COLA Part 3 (ER); Section 2.5, Revision 2e
- 2) Response to RAI CR 2.5-2 for COLA Part 3 (ER); Section 2.5
Response to RAI CR 2.5-3 for COLA Part 3 (ER); Section 2.5
Response to RAI CR 2.5-4 for COLA Part 3 (ER); Section 2.5
Response to RAI SE 2.5-2 for COLA Part 3 (ER); Section 2.5

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Enclosure 1

Revised BBNPP COLA Part 3 (ER); Section 2.5, Revision 2e

2.5 SOCIOECONOMICS

This section describes the socioeconomic characteristics of the areas that could potentially be impacted by the construction and operation of Bell Bend Nuclear Power Plant (BBNPP). This section contains four subsections: 1) Demography, 2) Community Characteristics, 3) Historic Properties, and 4) Environmental Justice. These sections include a discussion about the socioeconomic characteristics of the 50 mi (80 km) comparative geographic area and the two-county region of influence (ROI) that includes Luzerne County and Columbia County, which are the primary areas of concern for the socioeconomic impact assessment. In addition, socioeconomic characteristics are also described for the 10 mi (16 km) emergency planning zone and the 3 mi (4.8 km) low population zone (LPZ), which are consistent with NUREG-1555 (NRC, 1999).

The 50 mi (80 km) comparative geographic area was established by using the BBNPP site as the center point and drawing a 50 mi (80 km) radius circle around the BBNPP site. This comparative geographic area is consistent with NUREG-1555 (NRC, 1999), as a basis for conducting the socioeconomic analyses and evaluating the potential radiological and accident impacts.

The region of influence (ROI) for the socioeconomic analyses includes Luzerne County and Columbia County, Pennsylvania. The borders of these counties generally extend less than 30 mi (48 km) from the BBNPP site. These adjacent counties are located in the northeastern portion of the Commonwealth of Pennsylvania. Potential socioeconomic impacts, if any, arising from the proposed plant are likely to be confined to these two counties because a majority of the existing workforce for Susquehanna Steam Electric Station (SSES) Units 1 and 2 reside in these counties and it is assumed that the potential in-migrating construction and operational workforces for BBNPP are most likely to reside in this same two-county ROI. As of 2007, approximately 1,247 permanent and 260 contract employees worked at the SSES site. As shown in Table 2.5-1, more than 87% of the current workforce at SSES Units 1 and 2 resides in Luzerne County or Columbia County. Of the 1,247 SSES Units 1 and 2 employees at the site, approximately 528 (42.3%) of the workers had a home address in Luzerne County and approximately 559 (44.8%) of these workers had a home address in Columbia County.

2.5.1 Demography

2.5.1.1 Current Demographic and Economic Characteristics

The following sections describe the current demographic and economic characteristics for the 50 mi (80 km) comparative geographic area, the two-county region of influence, the 10 mi (16 km) emergency planning zone, and the 3 mi (4.8 km) LPZ. The 1.5 mi (2.4 km) LPZ radius from the BBNPP site is fully contained within this larger LPZ definition. The population surrounding the BBNPP site was projected based on the two most recent U.S. Census Bureau 1990 and 2000 decennial census data (USCB, 2000a) and additional five-year county population projections for 2000 to 2020 obtained from the Pennsylvania State Data Center which used a cohort-component demographic projection model (PA Census, 2008a) (PA Census, 2008b).

2.5.1.1.1 50 mi (80 km) Geographic Area of Comparison

Figure 2.5-1 presents geographical details of the area within a 50 mi (80 km) radius of the BBNPP site. The map shows overlaying circles which mark 10, 20, 30, 40, and 50 mi (16, 32, 48, 64, and 80 km) distances from the BBNPP site.

The nearest major population center within about 50 mi (80.5 km) of the BBNPP site is Allentown, PA, located approximately 75 driving miles (121 km) to the southeast. The other

large population center is Scranton, PA, which is approximately 40 driving miles (64 km) to the northeast of BBNPP. Other population centers include Wilkes-Barre, 20 driving miles (32 km) to the northeast and Hazleton, 15 driving miles (24 km) to the southeast, and Bloomsburg, 20 driving miles (32 km) to the southwest.

Table 2.5-2 (USCB, 2000a) presents demographic data for the residential population within each of the five 10 mi (16 km) circles radiating from the BBNPP site. These demographic characteristics - age and sex distributions, racial and ethnic distributions, and household income figures - are presented to familiarize the reader with the statistical profile of a portion of eastern Pennsylvania in 2000. Residential populations were estimated using U.S. census block group data and Arc GIS (ESRI, 2009). Any block group polygon boundary within or intersected by a radius was included in population estimates for concentric rings surrounding BBNPP. Population estimates employing this methodology are higher than SECPOP estimates (see Section 2.5.1.2) because of the inclusion of more block group population figures.

In 2000 over 50% of the ~~1,781,893~~ 1,760,217 people that resided within the 50 mi (80 km) buffer lived more than 30 mi (48 km) away from the BBNPP site. Within the 50 mi (80 km) buffer, ~~less than 5.5%~~ 5.4% were under 5 years old, ~~77%~~ 77.3% were 18 years old or older, and approximately 17% were aged 65 or older. Slightly over 51% of the population was female. The ethnic composition of the 50 mi (80 km) radius included: ~~94.6%~~ 94.7% Caucasian, 2.3% African Americans, and ~~2.9%~~ 2.8% were of Hispanic/Latino origin. Median household income in the area was ~~\$36,170~~ \$39,531 (USCB, 2000a).

Transient Population Levels

Transient populations within a 50 mi (80 km) radius of the BBNPP site are shown in Table 2.5-9. Additional information supporting these estimates is described in FSAR Section 2.1.3.1. Quantitative estimates of transients are provided for recreational, seasonal, and occasional housing, motels and hotels, and campgrounds within a 50 mi (80 km) radius. Transient populations associated with major employers and colleges and certain recreational facilities have also been estimated within a 10 mi (16 km) radius of the site. There are an estimated 47,740 transients within a 50 mi (80 km) radius of the BBNPP site. Of these, approximately 44,141 occur within the 10-50 mi (16-80 km) radii. The methods used to calculate these transient populations are discussed in Section 2.5.1.1.3.2 for the 0-10 mi (16 km) area. Transients were identified by distance and sector within a 50 mi (80 km) radius of the site. In order to avoid double counting individuals that are likely to have been captured as residents within the 10-50 mi (16-80 km) region, the transient analysis does not include populations at primary and secondary schools; hospitals, nursing homes, prisons and other institutions; workplaces and colleges; or recreational areas and local attractions. In contrast, it is assumed that all populations associated with seasonal housing, motels/hotels and campgrounds are transient and come from outside the 50 mi (80 km) area. Additionally, agricultural workers have been excluded from the analysis, as the Commonwealth of Pennsylvania does not collect data on migrant or seasonal agricultural workers.

Significant special events that generate large transient populations in the BBNPP 50 mi (80 km) area for short periods of time include the Pocono Raceway (NASCAR) in Long Pond, PA and the Little League World Series in Williamsport, PA. The Pocono Raceway, which is estimated to attract many visitors on race weekends, has a seating capacity of 76,812. Two NASCAR Sprint Cup races are held at this venue; one in June and another in August (NASCAR, 2009). Williamsport also hosts the Little League World Series. Seating capacity for the Lamade Stadium, where the Series is held, is approximately 40,000; 10,000 seats with additional space

for 30,000 spectators on the grass (Little League, 2009). The Little League World Series in Williamsport typically occurs in August.

Although both of these events feature large transient populations, as suggested in NRC Regulatory Guide 4.7 (NRC, 1998), transient populations of short duration should be weighted appropriately to reduce their significance relative to other permanent and transient populations. Therefore, transients associated with these special events have not been included with the other transient groups mentioned above in estimating cumulative total transient populations present in the 50 mi (80 km) area.

2.5.1.1.2 Two-County Region of Influence

The ROI, Columbia and Luzerne counties, has experienced a modest decline in population during the period from 1970 to 2000 (USCB, 2000a). Table 2.5-3 presents the population data for select years from 1970 to 2080 in these two Pennsylvania counties (USCB, 2004; 2005). The population in the ROI grew at an average annual rate of 0.19% from 1970 to 1980 and then declined at an average of ~~0.27%~~0.28% annually over the next two decades. By comparison, Pennsylvania's population grew at an average annual rate of ~~0.14%~~0.17%. The two counties in the ROI experienced population growth during the period between 1970 and 1980 with Columbia County having a higher average annual rate of growth (1.18%) than Luzerne (0.02%) County. Between 1980 and 2000, Luzerne County experienced population decline while Columbia had modest population growth.

The U.S. Census provided state-level population projections to 2030, subsequent calculations for the 2040-2080 period used the 2020-2030 growth rate. County-level population was projected based on the two most recent U.S. Census Bureau (1990 and 2000) decennial census data (USCB, 2000a) and additional five-year county population projections for 2000 to 2020 obtained from the Pennsylvania State Data Center, which used a cohort-component demographic projection model (PA Census, 2008a, 2008b).

Table 2.5-4 (USCB, 2008) presents data about selected demographic and economic characteristics for the years 2000 to 2006 for persons in Columbia and Luzerne counties. The population in the ROI shrank from 383,401 in 2000 to an estimated 378,034 in 2006, by an annual average of -0.26%. During that same period Columbia County's population grew from 64,151 to an estimated 65,014, an average annual growth rate of 0.22%. These growth rates are lower than the annual average of 1.04% for the U.S. Luzerne County's annual growth rate was lower than Pennsylvania's average annual growth rate of 0.22% and Columbia County's growth was approximately equal to the state average.

Population densities for Columbia County have not changed considerably over the period of 2000 to 2006: an increase from 132 to 134 persons per square mile. Population densities for Luzerne County decreased by small margins from 2000 to 2006 (358 to 351 persons per square mile). Nationally, the average population density was 85 persons per square mile in 2006 (USCB, 2008).

The age compositions for the ROI generally had slightly lower proportions of individuals under five years of age, and higher proportions of persons 65 and above, as compared with Pennsylvania and the U.S. The percentage of females was similar among the four jurisdictions (USCB 2008).

The ethnic composition of the two counties in the ROI was different from both the Commonwealth of Pennsylvania and the country as a whole. The proportion of Caucasians

was considerably higher than the rest of the state and the country. The proportions of both Hispanic- Latino and African Americans were lower than either Pennsylvania or the U.S. (USCB 2008).

In 2000, there were 32,403 workers in the labor force of which 2,370 were unemployed (7.3%) in Columbia County. Luzerne County had 156,404 workers in the labor force of which 8,678 were unemployed (5.5%) in 2000. In comparison, the Commonwealth of Pennsylvania had 5,992,886 worker in the labor force of which 339,386 were unemployed (3.5%) at the time of the 2000 U.S. Census. In 2000, 19,272 workers commuted from the ROI to other counties in the 50 mi (80 km) radius and 2,966 workers commuted to counties outside of the 50 mi (80 km) radius (Table 2.5-7). Worker commuting inflow from counties in the 50 mi (80 km) radius to the ROI was 20,231. An additional 8,250 workers entered the ROI from outside the 50 mi (80 km) radius. The result was a net inflow of 6,243 workers into the ROI in 2000 (USCB, 2000b). This commuting inflow represents a significant increase to the population base in these two rural counties.

PPL Susquehanna, LLC is the largest employer in Luzerne County, employing 1,247 workers to operate SSES Units 1 and 2. There are 528 workers residing in Luzerne County and 559 workers residing in Columbia County. Additional major employers include the Berwick Offray and Wise Foods, each with 600-700 workers that varies with seasonal labor requirements. Foods.

The median household income for the ROI was less than the state and national figures. Columbia County had the higher median income in the ROI: \$37,871 in 2004 versus Luzerne County's median income of \$36,968. In comparison the median income level for the U. S. was \$44,334 in 2004 (USCB 2000a).

Table 2.5-5 (USCB 2000a) presents the same demographic and economic information for several towns or communities within the ROI that includes Columbia and Luzerne Counties.

Prisons and Correctional Institutions

The Commonwealth of Pennsylvania maintains two prison facilities within the ROI, both located in Luzerne County. The State Correctional Institution (SCI) Retreat is located approximately 8 mi (13 km) north of the BBNPP and about 11 mi (18 km) south of Wilkes-Barre, PA. SCI Retreat is a medium-security prison housing adult males and held approximately 889 inmates as of December 2007. The state Department of Corrections listed its capacity as 806 inmates. Also located in Luzerne County is the SCI Dallas facility located about 20 mi (32 km) to the northeast of the BBNPP site. A total of approximately 2,090 adult males were incarcerated there as of December, 2007 compared to a capacity of 1,750 individuals (PA, 2008a). In addition to the state prisons identified within the ROI, both Luzerne and Columbia Counties maintain county correctional facilities. The Luzerne County Correctional Facility is located in Wilkes-Barre. In 2007, this facility had a capacity for housing 805 inmates and its daily population averaged about 717 inmates. The Columbia County Prison located in Bloomsburg had an average daily inmate population of about 126 and a capacity of about 190 (PA, 2008b).

Other state prisons located in the vicinity of BBNPP, but outside the ROI, include those in Schuylkill and Northumberland Counties. Schuylkill County contains two prisons, each located in Frackville over 22 mi (35 km) to the south of BBNPP. As of year end 2007, approximately 2,290 adult males were held in the SCI Mahoney facility and about 1,106 were held in the SCI Frackville prison. SCI Frackville is a maximum-security prison while SCI Mahoney is a medium security facility. Located southwest of BBNPP in Northumberland County is the medium

security SCI Coal Township prison that housed approximately 1,864 male inmates in 2007. Schuylkill and Northumberland Counties also maintained county prisons; average daily inmate populations in these facilities during 2007 were 296 and 185 individuals, respectively (PA, 2008a, 2008b).

2.5.1.1.3 10 mi (16 km) Emergency Evacuation Area

Figure 2.5-2 displays overlaying circles which mark 1, 2, 3, 4, 5, and 10 mi (1.6, 3.2, 4.8, 6.4, 8, and 16.1 km) distances from the BBNPP site. The area within a 10 mi (16 km) radius of the BBNPP site is dominated by forest and agricultural land cover/land use. The area is separated/bisected by the Susquehanna River. The BBNPP site is located 1.4 mi (2.3 km) north from the shore of the Susquehanna River. Cities and recognizable unincorporated but named communities within a 10 mi (16 km) driving distance of the BBNPP site include Conyngham, East Berwick, Berwick, Glen Lyon, Mifflinville, Nescopeck, and Shickshinny.

2.5.1.1.3.1 Overall Demographic and Economic Characteristics

Table 2.5-6 illustrates that an estimated ~~49,596~~49,787 people reside within the 10 mi (16.1 km) radius of the BBNPP site. Residential populations within each of sixteen geographic directional sectors were estimated using SECPop 2000, a code developed for the Nuclear Regulatory Commission to calculate populations by emergency planning sectors (NRC, 2003). According to data in the U.S. Census Bureau 2000 decennial census data (USCB, 2000a), Berwick is the largest community with a population of 10,744. Other major towns within the 10 mi (16.1 km) radius include Conyngham (population of 1,958), East Berwick (population of 1,998), Glen Lyon (population of 1,881), Mifflinville (population of 1,213), Nescopeck (population of 1,528), and Shickshinny (population of 959).

Detailed information about the distribution of racial minority populations and low income populations within a 10 mi (16 km) radius of the site is discussed in Section 2.5.4.

2.5.1.1.3.2 Transient Population Levels

The term "transient" is used in this analysis to mean persons who live (are domiciled) outside the referenced area, but may be predictably expected to be in the area at some point. In this analysis, "transient population" includes:

- ◆ ~~workers,~~ workers and college students, also referred to as commuters, who live permanently outside of the area but who commute to a worksite or college campus in Columbia and Luzerne Counties the area on a regular basis;
- ◆ persons who live outside the area but travel at least 50 mi (80 km) from their home to visit, shop, or tend to personal business or to conduct business within the region; region, including tourists and visitors recreating in the area; and
- ◆ ~~tourists and visitors recreating in the area; and~~
- ◆ seasonal workers employed in the agriculture sector.

A "visitor" in this study is considered to be a transient when the following definition is met: Individuals who simply travel through the area from a point outside the area to a destination outside the individual travels, at least 50 mi (80 km) each way, into the area for the day, area are not included in this definition. Also not included are primary and secondary school students, and seeks overnight accommodations. Individuals who simply travel through the area from a point outside hospital, prison and other institutional populations that are typically either captured by estimates of the area to a destination outside the area are not

included in this definition, resident population or would otherwise be expected to be residents within the referenced area.

SECPop 2000, a code developed for the Nuclear Regulatory Commission by Sandia National Laboratories to calculate populations by emergency planning zone sectors (NRC, 2003), was used to develop projections of the resident and transient populations by sectors, within the 10 mi (16 km) radius around the BBNPP site. Population projections for the years 2010 through 2080 were projected using the 1990 and 2000 U.S. Census data (USCB, 2000a) and additional five-year county population projections for 2000 to 2020 obtained from the Pennsylvania State Data Center which used a cohort-component demographic projection model (PA Census, 2008b). The population estimates were projected to 2080 by fitting quadratic or linear equations to county population trend lines for the time period 1990 through 2020. These data and growth rates were then used to develop subsequent population projections in SECPop 2000. The population distribution was computed in SECPop 2000 by overlaying the 2000 census block point data on the rosette grid defined by the user in this calculation package.

Table 2.5-6 presents population distributions, by residential ~~population~~ and transient ~~population~~ population, in 2000, within each of sixteen geographic directional sectors at radii of 0 to 1 mi (0 to 2 km), 1 to 2 mi (2 to 3 km), 2 to 3 mi (3 to 5 km), 3 to 4 mi (5 to 6 km), 4 to 5 mi (6 to 8 km), and 5 to 10 mi (8 to 16 km) from the BBNPP site. There are an estimated 3,599 transients within the 0-10 mi (16 km) area. Transient populations are described below:

Commuters

Table 2.5-7 summarizes the primary employers within the commuting patterns to and from 0-10 mi (16 km) radius of the ROI. The ROI has a net increase of 6,243 persons daily during the work week based on 2000 Census Bureau County to County Worker Flow survey data (USCB 2000b). This commuting inflow represents a significant increase to the population base in these two rural counties. BBNPP site are listed in FSAR Section 2.1.3. These employers include Berwick Hospital Center, Berwick Offray, Berwick Retirement Village, DeLuxe Building Systems, Luzerne Community College, PPL Susquehanna, SCI Retreat, and Wise Foods (PASS, 2008; PDC, 2010, 2009; BHC, 2009; HDC, 2009).

Visitors/Tourists

Data The visitor transient population estimates are based on the number of visitors seeking overnight hotel accommodations was estimated for Luzerne County based on hotel tax revenue. In 2007, Luzerne County had 29,773 annual overnight visitors in hotel accommodations, primarily in hotels located along Interstate 81. Geographic information on hotel locations motels/hotels, golf course attendance, available fishing and visitors at each location is not available. No data was available for Columbia County. Overnight hotel transient visitors traveling along Interstate 81 in Luzerne County represents the hunting, campground capacity and seasonal housing within the 10 mi (16 km) area. Motels, seasonal housing and campgrounds are among the largest identified contributor contributors to the visitor/tourist population transient category. The relative number of individuals in each of these categories is described in FSAR Section 2.1.3.

The number of motels/hotels was taken from the AAA Tour Book listings (AAA, 2010). Each facility was located within a sector based on its address and the proximate distance from the BBNPP site. The number of people occupying motel rooms was calculated using the most recently published 2007 average hotel occupancy for Pennsylvania (61.9%) (PTO, 2007). The number of people per room was assumed to be 1.57 (AHLA, 2009).

There are no major parks or recreational attractions in Columbia and Luzerne Counties. Private campgrounds and camps associated with small fresh water lakes provide the main recreational opportunities. Camp Louise, operated by the Girl Scouts in the Heart of Pennsylvania, and shared with Camp Setebaid is the largest campground in the ROI operated year-round. It receives 250-350 visitors per day during the period between June and August and has an average of 300 visitors on weekends throughout the year. From discussions with a representative of the Luzerne County Visitor Bureau, Counties include private campgrounds that accommodate tent and recreational vehicles include Acorn Acres (346 daily visitors from April to October), such as Council Cup Campground (250-300 daily year-round visitors and 295 additional daily visitors from April to October), Good's Campground (100-300 weekend visitors and 10 weekly visitors Campground, Camp Louise, Hidden Lake Campground, Paradise Campground, Moyers Grove Campground, and Whispering Pines Camping Estates. Information on the campsites was obtained directly from April to October), Hidden New Lake Campground (200-300 daily visitors from April to October), and Whispering Pines Camping Estates (250 daily visitors from April either the campground, the Luzerne County Visitor's Bureau, or the Pennsylvania Visitor's Network (PVN, 2009). To estimate the number of transients using Moyers Grove, Hidden Lake, Paradise Campground, and Whispering Pine, the average number of persons per site was estimated to be four, and the average occupancy for each site was assumed to be 47% based on a national survey (Woodall, 2004).

Seasonal housing occupancy was estimated using the 2000 U.S. Census data and allocating the distribution of facilities to radii using LandView 6 software (USCS, 2009a; USCS 2009b). The number of seasonal housing units was then multiplied by the Pennsylvania State average household size (2.48 persons) to arrive at a maximum population in recreational, seasonal, and occasional housing (USCB, 2000a). In order to account for the fact that these units are occupied for only a portion of the year, the estimated seasonal population for each segment was calculated by assuming that three quarters of the housing units would be occupied for three months of the year (Fermi, 2008). It was also assumed that all seasonal occupants typically reside outside the 10 mi (80 km) area. Thus, by multiplying the maximum population in recreational, seasonal, or occasional housing units by 0.1875 ($0.1875 = 0.75 \times 0.25$) an estimate of the equivalent transient housing population was determined for recreational, seasonal, or occasional use.

In order to calculate the transient housing population by sector and distance within the 10 mi (16 km) area, it was assumed that transient housing would be distributed in proportion to the resident population. Resident population for each sector and distance within the 10 mi (16 km) area was estimated by SECPop2000 (NRC, 2003) for the 2000 US Census.

The estimates of transients based on fishing, hunting and golfing are shown in FSAR Section 2.1.3. Four golf courses were located within the 10 mi (16 km) area. These included the Arnolds Golf Course, Blue Ridge Trail Golf Club, the Berwick Golf Club, and the Rolling Pines Golf Course. Hunting was assumed to occur on three nearby state game lands and fishing on two nearby lakes and on the Susquehanna River.

Seasonal Workers in Agriculture

The Commonwealth of Pennsylvania does not collect data regarding migrant or seasonal agriculture workers. The ~~2002~~2007 Census of Agriculture-County Data (USDA, ~~2002~~2007) estimated that there were 816 farms in Columbia County with migrant farm labor and 54 farms in Luzerne County with migrant farm labor.

Prisons and Correctional Institutions

The Commonwealth of Pennsylvania maintains two prison facilities within the ROI, both located in Luzerne County. The State Correctional Institution (SCI) Retreat is located approximately 8 mi (13 km) north of the BBNPP and about 11 mi (18 km) south of Wilkes-Barre, PA. SCI Retreat is a medium-security prison housing adult males and held approximately 889 inmates as of December 2007. The state Department of Corrections listed its capacity as 806 inmates. Also located in Luzerne County is the SCI Dallas facility located about 20 mi (32 km) to the northeast of the BBNPP site. A total of approximately 2,090 adult males were incarcerated there as of December, 2007 compared to a capacity of 1,750 individuals (PA, 2008a).

In addition to the state prisons identified within the ROI, both Luzerne and Columbia Counties maintain county correctional facilities. The Luzerne County Correctional Facility is located in Wilkes-Barre. In 2007, this facility had a capacity for housing 805 inmates and its daily population averaged about 717 inmates. The Columbia County Prison located in Bloomsburg had an average daily inmate population of about 126 and a capacity of about 190 (PA, 2008b) (PA, 2008c).

Other state prisons located in the vicinity of BBNPP, but outside the ROI, include those in Schuylkill and Northumberland Counties. Schuylkill County contains two prisons, each located in Frackville over 22 mi (35 km) to the south of BBNPP. As of year end 2007, approximately 2,290 adult males were held in the SCI Mahoney facility and about 1,106 were held in the SCI Frackville prison. SCI Frackville is a maximum-security prison while SCI Mahoney is a medium security facility. Located southwest of BBNPP in Northumberland County is the medium security SCI Coal Township prison that housed approximately male 1,864 inmates in 2007. Schuylkill and Northumberland Counties also maintained county prisons; average daily inmate populations in these facilities during 2007 were 296 and 185 individuals, respectively (PA, 2008a) (PA, 2008b) (PA, 2008c).

2.5.1.1.4 Low Population Zone

The LPZ is defined as a 3 mi (4.8 km) radius from the midpoint between the SSES Units 1 and 2 reactors. The 1.5 mi (2.4 km) LPZ radius from the BBNPP site is fully contained within this larger LPZ definition. Figure 2.5-3 illustrates the SSES and BBNPP LPZ extent.

2.5.1.1.4.1 Overall Population Levels

The 2000 US census reported 2,733 residents. There are approximately 2,434 residents and 1,822 transients in the 3 mi (4.8 km) radius that encompasses the LPZ (as detailed in Table 2.5-9). The communities of Beach Haven, East Berwick, Nescopeck, and Wapwallopen lie within the LPZ. There are no nursing homes, hospitals, prisons, or schools operating within the LPZ. The major employer within the LPZ is PPL Susquehanna with 1,247 SSES employees and approximately 260 contractors.

2.5.1.1.4.2 Transient Population Levels

There is considerable variation in peak daily and seasonal transient populations in Columbia and Luzerne Counties due to recreational camping and day/night shift workers at the SSES Units 1 and 2. Campground populations are at their highest peak during the months of April through October. Residents in the LPZ would have the highest population at night as workers return from commuting to job sites. Workers at the SSES Units 1 and 2 comprise ~~31%~~ 29.3% of the LPZ resident and transient population and represent a significant majority of the transient population during November through May when recreational camping is at its lowest peak.

2.5.1.2 Demographic Projections

As described above, SECPOP 2000, a code developed for transient population estimates, SECPOP 2000 the Nuclear Regulatory Commission by Sandia National Laboratories to calculate populations by emergency planning zone sectors (NRC, 2003), was used to calculate develop projections of the distribution of the resident population by sectors within a 50 mi (80 km) radius around the BBNPP site. The population distribution was computed in SECPOP 2000 by overlaying the 2000 census block point data on the rosette grid defined by the user in this calculation package. Population projections for the years 2010 through 2060, 2080 were projected using the 1990 and 2000 U.S. Census data (USCB, 2000a) and additional five-year county population projections for 2000 to 2030 obtained from the Pennsylvania State Data Center, which used a cohort-component demographic projection model (PA Census, 2008b). The population estimates were adjusted to take into account transient populations and then projected to 2080 by fitting quadratic or linear equations to county population trend lines for the time period 1990 through 2020. Comparing the resident population to the transient population levels presented in Sections 2.5.1.1.1 and 2.5.1.1.3.2, transient populations were estimated to be approximately 2.9% of the resident population within a 50 mi (80 km) radius of the site.

2.5.1.2.1 50 mi (80 km) Comparative Impact Area

Table 2.5-11 presents the 2000 estimated population total population, including both residents and transients, in concentric rings around the BBNPP site. Table 2.5-11 also displays the projected total population within those rings from 2010 to 2080 (USCB, (USCB 2000a). BBNPP is estimated to start operation in 2018 and operate for 40 years, years during the initial license period, within the span of this application, until 2058. Therefore, 2058 (ER Section 1.2.7). Therefore populations for 2018, the proposed startup year, and 2058, the end of the initial license period, have also been provided.

Within the 50 mi (80 km) radius of the site, the average annual percent change for the 10 year periods ranges from 0.47% 0.46% (for years 2000 to 2010) to 0.80% 0.77% (for years 2030 to 2040) (USCB, (USCB 2000a). The average annual change in population between the years 2000 and 2080 is projected to be 0.55%, an aggregate increase of approximately 55%.

Table 2.5-13 presents residential population projections-projections of the total population, including both residents and transients, from the years 2000 to 2060 2080 for each of the 16 geographic sectors to 50 mi (80 km) from the BBNPP site, with the exception of the 10 mi (16 km) segments which include transient populations. Demographic characteristics for the residential population in the years beyond 2000 are assumed to reflect the ratios found in year 2000.

2.5.1.2.2 Two-County Region of Influence

Within the ROI, which is comparable to the 20 mi (32 km) radius in Table 2.5-11, average annual population changes ranged from 0.41% 0.46% for the period 2000 to 2010 to 0.77% 0.59% for the 2030 to 2040 period. Population levels would increase from 315,026 323,135 in 2000 to 489,390 501,996 in 2080, an average annual increase of 0.55% (an aggregate increase of 55% over the 80 year period) (USCB, 2000a)

2.5.1.2.3 10 mi (16 km) Emergency Evacuation Area

The Total population projections in levels (resident Table 2.5-11 reflect an upper limit of the estimated projected population, at various points during the next several decades, because the figures include both the residential population and the estimated transient population for all years in the 0 to 10 mi (0 to 16 km) circle, and transient populations combined) in the 0-10

mi (16 km) area would increase from 53,386 in the year 2000 to 82,954 in 2080, an average annual increase of 0.55% (an aggregate of 55% over the 80 year period) (USCB, 2000a). Average annual population changes would range from 0.47%–0.48% for the 2000 to 2010 period to 0.80% for the 2030 to 2040 period. Population levels would increase from 49,598 to 77,036 an average annual increase of 0.55% (an aggregate of 55% over Demographic characteristics for the resident and transient populations in the years beyond 2000 are assumed to reflect the 80 ratios found in the year period) (USCB 2000a):2000.

2.5.1.2.4 Low Population Zone

The population-resident and transient populations within the LPZ, low population zone (LPZ), including years 2018, the proposed year that operations will initiate, and 2058, the year of license expiration, are provided in Table 2.5-9. Average annual population changes are projected to range from 0.47%, during the period of 2000 to 2010, to 0.79%–0.77% during the period 2030 to 2040. 2030-2040. Population levels would increase by an average annual rate of 0.55% (an aggregate of 55% over the 80 year period) (USCB, 2000a) (NRC, 2000a; NRC, 2003). It is conservatively assumed that the demographic characteristics for the resident and transient populations in the years beyond 2000 would continue to reflect the ratios found in the year 2000.

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2.5.2 Community Characteristics

A number of criteria are used to define community characteristics for the two county Region of Influence (ROI), Luzerne County and Columbia County, Pennsylvania. These characteristics include:

- ◆ The economy in the ROI,
- ◆ The political structure of the region,
- ◆ Social structure information,
- ◆ The housing in the area,
- ◆ Primary, secondary, and post secondary education in the region,

- ◆ Recreation activities near the BBNPP site,
- ◆ Tax structure in the region,
- ◆ Land use in Luzerne County and Columbia County,
- ◆ Community infrastructure and public services available to residents of the ROI including water, sewer, police, fire, emergency medical service, hospitals, and doctors,
- ◆ Transportation in the two county area, and
- ◆ A profile of any distinctive communities in the ROI.

As described in Section 2.5.1, the ROI is limited to Luzerne County and Columbia County where 87.1% of the existing Susquehanna Steam Electric Station (SSES) Units 1 and 2 operational workforces now reside. Luzerne County is included because it is the county in which the proposed BBNPP would be located and 42.3% of the existing SSES maintenance and operations workforces live there (Table 2.5-1). Columbia County is also included in the ROI because 44.8% of the SSES maintenance and operations workforces live there. A significant portion of the construction and maintenance/operations workforces for the proposed BBNPP are also expected to live in Luzerne County or Columbia County. The ROI is limited to these two counties, because any impacts to community infrastructure and services caused by changes in the workforce as a result of the proposed plant would be expected to occur in these two counties. No other county or urbanized area's community services are expected to be impacted by the proposed plant. Information about the construction industry's labor force in the Scranton-Wilkes-Barre-Hazleton Metropolitan Statistical Area (MSA) is included, because portions of the construction and operations workforce could be drawn from this area.

There are several municipalities/towns that are most likely to be affected by the potential in-migrating construction and operational workforces because of the size of the communities and their proximity to the BBNPP site, including Berwick in Luzerne County and Columbia County; Wilkes-Barre, Nanticoke, and Hazleton in Luzerne County; and Bloomsburg in Columbia County. The borough of Berwick is located not only partly in Luzerne County and Columbia County, but also partly in Salem Township where BBNPP would be located, and had a total population of 10,774 people in 2000. The population is primarily Caucasian, with 97.1% of the people identified as that race. (USCB, 2000f)

The city of Wilkes-Barre is the county seat of Luzerne County and is situated within the Wyoming Valley. The city occupies 7 mi² (18 km²) and had a population is 43,123 people in 2000. Of the total population, 92.3% was Caucasian and 5.1% were African-American (USCB, 2000j). The city of Nanticoke is located in Luzerne County, occupies 3.6 mi² (9.3 km²), and had a total population of 10,955 people in 2000. A majority of the Nanticoke population, 98.8%, were Caucasian (USCB, 2000i). The city of Hazleton had one of the largest populations within Luzerne County with 23,329 residents in 2000. Of the total population 94.7% is Caucasian (USCB, 2000h).

The town of Bloomsburg is the county seat for Columbia County and had a total population of 12,375 in 2000. The town is primarily Caucasian, with 94.4% of the people identified as that race, and the second largest racial group is 2.6% African-American (USCB, 2000g).

Figure 2.5-1 and Figure 2.5-2 are maps of the vicinity of the BBNPP site. Respectively, the maps display basic geographical features such as rivers, roads, cities, and airports within a 50 mi (80 km) and 10 mi (16 km) radius of the plant and display county boundaries.

Community characteristics of the general population in the ROI have been compared to data obtained on low income and racial minority populations in the ROI. The findings are presented in Section 2.5.4.

2.5.2.1 Area Economic Base

2.5.2.1.1 50 Mi (80 km) Geographic Area of Comparison

Table 2.5-14 (USCB, 2000a) (USCB, 2000b) (USCB, 2000c) (USCB, 2000d) (USCB, 2000e) (USCB, 2006a) (USCB, 2006b) (USCB, 2006c) (USCB, 2006d) displays data in 2000 and 2006 about: the population 16 years old and older; the individuals in the labor force, which consists of the total civilian labor force and the armed forces; and the number of individuals not in the labor force for the U.S., the Commonwealth of Pennsylvania, the Scranton-Wilkes-Barre-Hazleton MSA, Luzerne County, and Columbia County. The table also presents the total civilian labor force as the number of employed civilians, the number of unemployed civilians, and the rate of unemployment. The Scranton-Wilkes-Barre-Hazleton MSA consisted of Columbia, Lackawanna, Luzerne, and Wyoming counties. Columbia County was originally part of the MSA in 2000; however based on the latest information available on the MSA boundaries, Columbia County is no longer part of the Scranton-Wilkes-Barre-Hazleton MSA but is now part of an adjacent micropolitan area. Therefore, comparisons between 2000 and 2006 can not be made. The Scranton-Wilkes-Barre-Hazleton MSA had a total civilian labor force of 299,308 in 2000, of which 16,732 (5.6%) were unemployed. In comparison, the Commonwealth of Pennsylvania had a 2000 unemployment rate of 5.7% and in 2006 it was 6.2%. Also, the U.S. had an unemployment rate of 5.8% in 2000 and 6.4% in 2006. From 2000 to 2006, the total civilian labor force in the Commonwealth of Pennsylvania experienced an average annual increase of approximately 0.8%.

The Scranton-Wilkes-Barre-Hazleton MSA could provide construction, operations, and maintenance workers for the proposed BBNPP facility. According to the Bureau of Labor Statistics, the Scranton-Wilkes-Barre-Hazleton MSA had 9,000 people employed in the construction and extraction job industry in May 2006. These workers earned mean salaries of \$18.72 per hour and \$38,940 per year (BLS, 2008).

The potential availability of construction workers by job class within the 50 mile area was determined based on information obtained from the US Census Bureau industry and sector group database (USCB, 2006m) and discussions with local union representatives. Table 2.5-15 demonstrates that within the 50 mile radius of BBNPP, at least 49,179 paid employees were in the construction industry in 2006. Of this amount, 12,735 were involved in the construction of buildings, 4,404 were involved in heavy and civil engineering construction, and 31,347 were involved in specialty trade construction. Local unions in the 50-mile area representing construction trades were contacted to obtain information on the size and availability of the local workforce. Among the unions that provided data in August 2009, there were 4,698 members, including 3,383 electricians and line workers, 600 pipefitters and plumbers, and 715 iron workers. There were a total of 1,374 unemployed union workers.

2.5.2.1.2 Two-County Region of Influence

As presented in Table 2.5-16 (USCB, 2000a) (USCB, 2000b) (USCB, 2006a) (USCB, 2006b), the top five industry sectors in the ROI in 2006 include educational, health, and social services (23.8%); manufacturing (14.4%); retail trade (13.9%); arts, entertainment, recreation,

accommodation, and food services (8.0%); and professional, scientific, management, administrative, and waste services (7.2%). These five industry sectors accounted for 66% and 67% of the employment in the ROI in both 2000 and 2006, respectively.

The construction industry makes up a relatively small portion of total employment in the ROI, representing about 5.8% of the workforce in 2000 and 2006 for the ROI (USCB, 2000a) (USCB, 2000b) (USCB, 2006a) (USCB, 2006b).

2.5.2.1.3 Luzerne County

As shown in Table 2.5-14, Luzerne County had a total civilian labor force of 151,748 people in 2000, of which 143,492 were employed and 8,256 (5.4%) were unemployed. During the same year, the Scranton-Wilkes-Barre-Hazleton MSA's unemployment rate was 5.6%, the Commonwealth of Pennsylvania's rate was 5.7%, and the national unemployment rate was 5.8%. In 2006, Luzerne County had a civilian labor force of 156,352 people, of which 147,674 were employed and 8,678 (5.6%) were unemployed. During the same year, the Commonwealth of Pennsylvania's was 6.2%, and the national unemployment rate was 6.4%. From 2000 to 2006, the total civilian labor force increased at a slow average annual rate of 0.5% (USCB, 2000a) (USCB, 2000b) (USCB, 2000c) (USCB, 2000d) (USCB, 2000e) (USCB, 2006a) (USCB, 2006b) (USCB, 2006c) (USCB, 2006d).

Table 2.5-16 presents total, governmental, and private sector employment data by industrial sector and class of workers, within Luzerne County, Columbia County, and the ROI. A total of 143,492 people were employed in Luzerne County in 2000 with more than 17,300 people employed in the governmental sector and over 117,600 people employed in the private sector. In 2006, Luzerne County had a total of 147,674 employed people with about 17,900 people employed in the governmental sector and about 120,500 people employed in the private sector. The largest industrial sector in 2000 and 2006 was the education, health and social service sector with more than 30,000 employees (21.5% and 22.9%, respectively). Luzerne County had an average annual increase of 0.5% over the six year period to the total number employed in all industry sectors. The private sector saw an increase of about 2,835 people employed and the government sector saw an increase of about 584 employees from 2000 to 2006 (USCB, 2000a) (USCB, 2000b) (USCB, 2006a) (USCB, 2006b).

The construction industry made up a relatively small portion of total employment in Luzerne County, representing 5.9% of the workforce in 2000 and about 5.5% in 2006 (USCB, 2000a) (USCB, 2000b) (USCB, 2006a) (USCB, 2006b).

Table 2.5-17 shows the top 10 employers in Luzerne County in the second quarter of 2006 (PASS, 2008).

The growth of the Berwick area is dependent on its location within the Poconos and its physical setting. The area initially grew as part of a large manufacturing complex that built tanks, railroads, and subway cars during World War II. The manufacturing tradition continues today. (BPA, 2008)

Wilkes-Barre originally grew as a result of the discovery of coal. More recently, manufacturing and retail have dominated the economy of this city. Over 680 businesses are located within downtown Wilkes-Barre; included within this number are 76 institutions that employ over 3,200 people. Each workday, approximately 14,000 people work in Wilkes-Barre. (GWBC, 2008)

The city of Hazleton is an entitlement community, receiving funding through the U.S. Department of Housing and Urban Development (HUD). These funds are administered by the Office of Community and Economic Development. This program allows for continued economic development within the community and provides assistance to businesses wishing to locate in the city (HAZ, 2008).

2.5.2.1.4 Columbia County

As shown in Table 2.5-14, Columbia County had a total civilian labor force of 32,376 people in 2000, of which 30,006 were employed and 2,370 (7.3%) were unemployed. During the same year, the Scranton-Wilkes-Barre-Hazleton MSA's unemployment rate was 5.6%, the Commonwealth of Pennsylvania's was 5.7%, and the national unemployment rate was 5.8%. In 2006, Columbia County had a total civilian labor force of 33,211 people, of which 31,398 were employed and 1,813 (5.5%) were unemployed. During the same year the Commonwealth of Pennsylvania's unemployment rate was 6.2%, and the national unemployment rate was 6.4%. From 2000 to 2006, the total civilian labor force in Columbia County increased at a slow average annual rate of 0.4% (USCB, 2000a) (USCB, 2000b) (USCB, 2000c) (USCB, 2000d) (USCB, 2000e) (USCB, 2006a) (USCB, 2006b) (USCB, 2006c) (USCB, 2006d).

Table 2.5-16 presents total, governmental, and private sector employment data by industrial sector and class of workers, within Luzerne County, Columbia County, and the ROI. A total of 30,006 people were employed in Columbia County in 2000 with more than 3,700 people employed in the governmental sector and over 24,100 people employed in the private sector. The largest industrial sector in 2000 was the manufacturing sector with more than 7,200 employees (24.1%) and the largest industry sector in 2006 was the education, health, and social services sector with about 8,800 employees (28.2%). In 2006, Columbia County had a total of 31,398 people with about 3,900 people (12.7%) employed in the governmental sector and almost 25,500 people (81.2%) employed in the private sector. Columbia County had an average annual increase of 0.8% over the six year period in the total employed in all industrial sectors. The government sector only saw a small increase in the number of employed while the private sector saw an increase of about 1,400 employees from 2000 to 2006 (USCB, 2000a) (USCB, 2000b) (USCB, 2006a) (USCB, 2006b).

The construction industry made up a relatively small portion of total employment in Columbia County, representing about 5.4% (1,624) in 2000 and about 6.8% (2,134) in 2006 (USCB, 2000a) (USCB, 2000b) (USCB, 2006a) (USCB, 2006b).

Table 2.5-17 (PASS, 2008) shows the top 10 employers in Columbia County in the second quarter of 2006.

The town of Bloomsburg is home to Bloomsburg University, part of the Pennsylvania State system and one of the top employers within Columbia County. (CWIA, 2008)

2.5.2.2 Area Political Structure

2.5.2.2.1 50 Mi (80 km) Comparative Geographic Area

The 50 mi (80 km) radius centered at the BBNPP site includes all or parts of 22 counties in Pennsylvania. Data gathering and planning agencies within the 50 mi (80 km) radius of the BBNPP site include the various Pennsylvania Departments, county departments, and the U.S. Census Bureau. Individual cities, towns, and counties within the 50 mi (80 km) radius, but outside of the ROI, are represented by their respective, previously mentioned state planning/

economic departments because no impacts would be expected to occur to community services in those areas.

2.5.2.2.2 Two-County Region of Influence

Luzerne County was established in 1786 and occupies 891 mi² (2,308 km²) of land in northeastern Pennsylvania. The county seat of Luzerne County is the City of Wilkes-Barre. The County Legislature includes three commissioners that make up the Board (NACO, 2008). Luzerne County is comprised of the cities of Wilkes-Barre, Hazleton, Pittston, and Nanticoke, 36 boroughs, and 36 townships. The county is located in the 10th and 11th Congressional Districts; the 14th, 20th, 22nd, and 27th Senatorial Districts; and the 114th, 116th, 117th, 118th, 119th, 120th, and 121st Legislative Districts (LCBE, 2008).

Salem Township is located in the southern part of Luzerne County, along the Susquehanna River. It is classified as a second class township, typically defined by its rural character. The township encompasses approximately 36 mi² (93 km²) with a population of 4,300 people. This township is part of the 11th Congressional District and 117th Legislative District (LC, 2008).

The township is governed by three supervisors, who are elected at-large. The supervisors are elected for six year terms. The positions are further divided into chair, vice-chair/roadmaster, and supervisor. These officers comprise the Board of Supervisors (the Board). The Board meets twice a month to discuss issues pertinent to the business of the township. (STS, 2008)

The Board also oversees two primary committees, the Planning Commission and the Zoning Hearing Board. Recently, the Board expanded the Planning Commission to include five members. Additional committees/commissions are part of the governing structure, including the Shade Tree Commission. The sole purpose of this body is to advise residents and interested people about which tree plantings are permitted. A Park and Recreation Board also has been formed to address park planning within the township (STS, 2008).

Columbia County was established in 1813 and occupies 486 mi² (1,259 km²) of land in northeastern Pennsylvania. The county seat of Columbia County is the Town of Bloomsburg. The County Legislature includes three commissioners that make up the Board (NACO, 2008). Columbia County is comprised of the Town of Bloomsburg, 8 boroughs, and 24 townships. The county is located in the 11th Congressional District (PADOS, 2008); the 27th Senatorial District; and the 107th, 109th, and 117th Legislative Districts (PAGA, 2008).

2.5.2.3 Area Social Structure

2.5.2.3.1 Luzerne County

As shown in Table 2.5-18, the 2000 median household income in Luzerne County was \$33,771, somewhat lower than the Scranton-Wilkes-Barre-Hazleton MSA (\$34,161) and significantly lower than the Commonwealth of Pennsylvania (\$40,106) and the U.S. (\$41,994) median household income. The 2006 median household income in Luzerne County was \$39,687, significantly lower than the \$46,259 median household income for the Commonwealth of Pennsylvania and the \$48,451 for the U.S. (USCB, 2000a) (USCB, 2000b) (USCB, 2000c) (USCB, 2000d) (USCB, 2000e)

As shown in Table 2.5-18, in 2000, Luzerne County's 11.1% of individuals living below the U.S. Census Bureau poverty level was equal with the 11.1% for the Scranton-Wilkes-Barre-Hazleton MSA and approximately equal with the 11.1% for the Commonwealth of Pennsylvania and lower than the 12.4% for the U.S. In 2006, Luzerne County's 13.3% of individuals living below the U.S. Census Bureau poverty level was higher than the 12.1% for the Commonwealth of

Pennsylvania and equal to the 13.3% for the U.S. (USCB, 2000a) (USCB, 2000b) (USCB, 2000c) (USCB, 2000d) (USCB, 2000e) (USCB, 2006a) (USCB, 2006b) (USCB, 2006c) (USCB, 2006d)

Table 2.5-19 provides similar information about mean earnings in Luzerne County for 2000 and 2006. (USCB, 2000a) (USCB, 2000b) (USCB, 2000c) (USCB, 2000d) (USCB, 2000e) (USCB, 2006a) (USCB, 2006b) (USCB, 2006c) (USCB, 2006d)

The population of Luzerne County is aging, as represented by their rising median ages. In 2000, Luzerne County had a median age of 40.8 years and the 2006 median age was 42.3. These medians were higher than the median age of 38.0 years and 39.6 years in 2000 and 2006 for the Commonwealth of Pennsylvania and the national median of 35.3 years and 36.4 years in 2000 and 2006, respectively. (USCB, 2000k) (USCB, 2000m) (USCB, 2000n) (USCB, 2006e) (USCB, 2006g) (USCB, 2006h)

2.5.2.3.2 Columbia County

As shown in Table 2.5-18, the 2000 median household income in Columbia County was \$34,094 significantly lower than the Commonwealth of Pennsylvania (\$40,106) and the U.S. (\$41,994) median household income and about equal with the Scranton-Wilkes-Barre-Hazleton MSA (\$34,161). The 2006 median household income in Columbia County was \$39,135, lower than the \$46,259 for the Commonwealth of Pennsylvania and the \$48,451 for the U.S. (USCB, 2000a) (USCB, 2000b) (USCB, 2000c) (USCB, 2000d) (USCB, 2000e) (USCB, 2006a) (USCB, 2006b) (USCB, 2006c) (USCB, 2006d)

As shown in Table 2.5-18, in 2000, Columbia County's 13.1% of individuals living below the U.S. Census Bureau poverty level was higher than the 11.0% for the Scranton-Wilkes-Barre-Hazleton MSA, the 11.0% for the Commonwealth of Pennsylvania, and the 12.4% for the U.S. In 2006, Columbia County's 10.7% of individuals living below the U.S. Census Bureau poverty level was lower than the 12.1% for the Commonwealth of Pennsylvania and the 13.3% for the U.S. (USCB, 2000a) (USCB, 2000b) (USCB, 2000c) (USCB, 2000d) (USCB, 2000e) (USCB, 2006a) (USCB, 2006b) (USCB, 2006c) (USCB, 2006d)

Table 2.5-19 provides similar information about mean earnings in Columbia County for 2000 and 2006. (USCB, 2000a) (USCB, 2000b) (USCB, 2000c) (USCB, 2000d) (USCB, 2000e) (USCB, 2006a) (USCB, 2006b) (USCB, 2006c) (USCB, 2006d)

The population of Columbia County is aging, as represented by their rising median ages. In 2000, Columbia County had a median age of 37.5 years and the 2006 median age was 38.3. These medians were similar to the median age of 38.0 years and 39.6 years in 2000 and 2006 for the Commonwealth of Pennsylvania and higher than the national median of 35.3 years and 36.4 years in 2000 and 2006, respectively. (USCB, 2000l) (USCB, 2000m) (USCB, 2000n) (USCB, 2006f) (USCB, 2006g) (USCB, 2006h)

2.5.2.4 Housing

Table 2.5-20 presents information gathered by the U.S. Census Bureau about the residential and rental housing markets in Luzerne County and Columbia County in 2000 and 2006. The ROI had a total of 172,419 housing units in 2000. Of these units, 155,602 were occupied and 16,817 (9.8%) were unoccupied. Of the total number of occupied units in the ROI, 29.3% were occupied by renters. There were significantly more year-around units available than seasonal or occasional units, with 12,996 units available year-around and 3,821 units available seasonally. The ROI had a total of 176,132 housing units in 2006. Of these units, 155,336 were occupied and 20,796 (11.8%) were unoccupied. Of the total number of occupied units in the

ROI, 26.3% were occupied by renters. There were significantly more year-around units available than seasonal or occasional units, with 16,390 units available year-around and 4,406 units available seasonally. (USCB, 2000k) (USCB, 2000l) (USCB, 2006i) (USCB, 2006j) (USCB, 2006k)

The ROI total housing units had an increase of 0.4%, of which the total occupied units decreased 0.03% and the total unoccupied increased by 3.9% on an average annual basis over the six year period. The small decrease of the total occupied units is due to a decrease of 1.7% of renter-occupied units on an average annual basis over the six year period.

Future housing needs will be determined by population growth, vacancy rates, and persons per household trends. As shown in Table 2.5-22, the number of single and multifamily residential building permits issued annually in the ROI increased from 613 permits in 2000 to 1,011 permits issued in 2003. The number of permits issued from 2004 to 2005 decreased but began to show an increase in 2006. In 2000, there were a reported 172, 419 existing units in the total ROI. The building permits issued in 2000 were for 678 units for a construction cost of \$68.9 million which peaked in 2003 with 1,126 units for a construction cost of \$145.7 million. Both the number of units built and the amount construction costs from 2004 to 2005 decreased but showed signs of an increase in 2006 (USCB, 2008).

In addition to the single family housing units in the ROI, rental units include 30 apartment/townhouse complexes (Table 2.5-21), and 96 hotel, motels, and bed and breakfasts with 3,674 units (Table 2.5-23) in the two-county ROI. Within the greater roughly 30 mi (48 km) radius, an additional four apartment and five hotels and motels are available in additional counties (Schuylkill, Northumberland, and Carbon Counties) (Apartments, 2008) (AS, 2008) (BBD, 2008) (DOT, 2008) (ED, 2008) (HG, 2008) (IAF, 2008) (Move, 2008) (MTG, 2008) (PAMR, 2008) (Rent, 2008) (SB, 2008) (TH, 2008) (TL, 2008).

2.5.2.4.1 Luzerne County

As shown in Table 2.5-20, Luzerne County had a total of 144,686 housing units in 2000. Of the total units, 130,687 were occupied and almost 14,000 (9.7%) were unoccupied. Of the total number of occupied units in Luzerne County, 29.7% were occupied by renters. There were significantly more year-around units available than seasonal or occasional units, with 11,482 units available year-around and 2,517 units available seasonally. Of the available housing units in 2000, the vast majority of the units had plumbing and kitchen facilities, with the exception of 583 units and 496 units lacking plumbing and kitchen facilities, respectively. (USCB, 2000k) (USCB, 2000o) (USCB, 2006i) (USCB, 2006k)

Luzerne County had a total of 147,321 housing units in 2006. Of the total units, 130,034 were occupied and 17,287 (11.7%) were unoccupied. Of the total number of occupied units in Luzerne County, 27.1% were occupied by renters. There were significantly more year-around units available than seasonal or occasional units, with 13,948 units available year-around and 3,339 units available seasonally. Of the available housing units in 2006, the vast majority of the units had plumbing and kitchen facilities, with the exception of 205 units and 315 units lacking plumbing and kitchen facilities, respectively (USCB, 2006i).

The Luzerne County total housing units had an average annual increase of 0.3%, from 2000 to 2006, of which the total occupied units decreased 0.1% and the total unoccupied units increased by 3.9%.

The borough of Berwick had a total of 4,992 housing units in 2000 with 397 vacant, the City of Wilkes-Barre had 20,294 housing units with 2,333 vacant, the city of Nanticoke had 5,487 housing units with 637 vacant, and the city of Hazleton had 11,556 housing units with 1,275 vacant (USCB, 2000k) (USCB, 2000m) (USCB, 2000n) (USCB, 2000o).

As shown in Table 2.5-21, the number of single and multifamily residential building permits issued annually in Luzerne County increased over three years, from 471 permits issued in 2000 to 829 permits issued in 2003. From 2004 to 2005, the number of approved permits for construction began to decrease from 673 in 2004 to 403 in 2005, a decrease of 426 permits or 51.4% from 2003. However, in 2006, the number of approved permits began to increase when 480 permits were issued. In 2000, there were a reported 144,686 existing units in the Luzerne County. The number of units permitted in 2000 included 490 units with a construction cost of \$56.3 million, followed by annual increases that peaked in 2003 with 935 units for a construction cost of \$123.2 million. Both the number of units to be built and the amount of construction costs decreased in 2004 and 2005, but began to show an increase in 2006. In 2006, 536 units were permitted for a construction cost of \$98.9 million (USCB, 2008).

The median value of an owner-occupied unit in Luzerne County in 2000 was \$84,800 (USCB, 2000o - Table DP-4), which increased to \$102,800 in 2006 (USCB, 2006i).

In 2000, the gross median rent was \$434 per month in Luzerne County (USCB, 2000o) and increased to \$546 per month in 2006 (USCB, 2006i).

In addition to the single family housing units in Luzerne County, rental units included 25 apartment/townhouse complexes (Table 2.5-22 and Table 2.5-23) (Apartments, 2008) (IAF, 2008) (Move, 2008) (Rent, 2008) (SB, 2008) (YP, 2008). Based on conversations with various rental agencies and individual apartment complexes, lease terms varied with a majority requiring one year rentals. For some communities, short term leases were available in 3, 6, 7, or 9 month terms. At times, communities charged an additional percentage of the rent for short-term leases. Corporate housing was available in some individual communities.

Luzerne County also had 49 hotel, motels, and bed and breakfasts with 2,353 units within 30 miles (48 km) of Berwick (Table 2.5-23) (AS, 2008) (BBD, 2008) (DOT, 2008) (ED, 2008) (HG, 2008) (MTG, 2008) (PAMR, 2008) (SB, 2008) (TH, 2008) (TL, 2008). Based on conversations, hotels and motels indicated varying levels of use of capacity. Several indicated that they were generally booked up on weekends during the summer months, particularly during major recreational events, but were slower during the winter and tended to be busier on weekdays with business travelers.

2.5.2.4.2 Columbia County

As shown in Table 2.5-20 (USCB, 2000l) (USCB, 2006j) (USCB, 2006k), Columbia County had a total of 27,733 housing units in 2000. Of the total units, 24,915 were occupied and 2,818 (10.2%) were unoccupied. Of the total number of occupied units in Columbia County, 27.6% were occupied by renters. The unoccupied units were relatively equally comprised of units available year-around and those available only seasonally or occasionally, with 1,514 units available year-around and 1,304 units available seasonally. Of the available housing units in 2000, the vast majority of the units had plumbing and kitchen facilities, with the exception of 131 units and 115, respectively (USCB, 2000p).

Columbia County had a total of 28,811 housing units in 2006. Of the total units, 25,302 were occupied and 3,509 (12.2%) were unoccupied. Of the total number of occupied units in

Columbia County, 22.7% were occupied by renters. The unoccupied units were greater for units available year-around than those available only seasonally or occasionally, with 2,442 units available year-around and 1,067 units available seasonally. Of the available housing units in 2006, the vast majority of the units had plumbing and kitchen facilities, with the exception of 115 units and 157 units lacking plumbing and kitchen facilities, respectively (USCB, 2006j).

The Columbia County total housing units had an average annual increase of 0.6% from 2000 to 2006, of which the total occupied units increased 0.3% and the total unoccupied units increased by 4.1%.

The town of Bloomsburg had 4,399 occupied housing units and 319 vacant units in 2000 (USCB, 2000l).

As shown in Table 2.5-21 (USCB, 2008), the number of single and multifamily residential building permits issued annually in Columbia County increased over three years, from 142 permits issued in 2000 to 182 permits issued in 2003. From 2004 to 2006, the number of approved permits for construction began to decrease from 156 in 2004 to 65 in 2006, a decrease of 117 permits or 64.3% from 2003. In 2000, there were a reported 27,733 existing units in the Columbia County. The number of units permitted from 2000 to 2004 varied but peaked in 2004 with 263 units with a construction cost of \$28.8 million. Both the number of units to be built and the amount of construction costs decreased over the next two years.

The median value of an owner-occupied unit in Columbia County in 2000 was \$87,300 (USCB, 2000p), which increased to \$98,900 in 2006 (USCB, 2006j).

In 2000, the gross median rent was \$448 per month in Columbia County (USCB, 2000p) and increased to \$575 per month in 2006 (USCB, 2006j).

In addition to the single family housing units in Columbia County, rental units included 5 apartment/townhouse complexes (Table 2.5-22) (Apartments, 2008) (IAF, 2008) (Move, 2008) (Rent, 2008) (SB, 2008) (YP, 2008). Based on conversations with various rental agencies and individual apartment complexes, lease terms varied with a majority requiring one year rentals. For some communities, short term leases were available in 3, 6, 7, or 9 month terms. At times, communities charged an additional percentage of the rent for short-term leases. Corporate housing was available in some individual communities.

Columbia County also had 47 hotel, motels, and bed and breakfasts with 1,321 units available within 30 mi (48 km) of Berwick (Table 2.5-23) (AS, 2008) (BBD, 2008) (DOT, 2008) (ED, 2008) (HG, 2008) (MTG, 2008) (PAMR, 2008) (SB, 2008) (TH, 2008) (TL, 2008). Based on conversations, hotels and motels indicated varying levels of use of capacity. Several indicated that they were generally booked up on weekends during the summer months, particularly during major recreational events, but were slower during the winter and tended to be busier on weekdays with business travelers.

2.5.2.5 Local Educational System

Pennsylvania currently has a student-teacher ratio of 15.2 students per full time equivalent (FTE) teacher (NCES, 2009). According to the Pennsylvania Code for Academic Standards, pre-kindergarten programs must have a student-teacher ratio of no more than 20 students for one teacher and one teacher aide in a classroom (i.e., 20 students in a classroom for every 2 adults). Programs of high quality ordinarily have a student-teacher ratio of 17 students for one teacher and one teacher aide in a classroom (i.e., 17 students for every 2 adults). Programs

operating under contract with community providers must comply with staffing qualifications as required by 22 Pa Code § 49.85(c) (relating to limitations) (PA Code, 2009).

~~This section describes~~ The following sections describe the school district facilities and enrollment levels in the two counties comprising the ROI. ROI and, where appropriate, compare the student teacher ratios to the above state ratio. The two counties in the ROI have a total of 23 school districts with a total of 91 public schools plus one youth forestry camp school (juvenile justice service) with about 53,000 students enrolled during the 2005-2006 school year (NCES, 2008). There are also a total of 65 private schools in the ROI, with about 12,500 students enrolled (GS, 2008) (ST, 2008).

2.5.2.5.1 Luzerne County Public and Private Schools

The Luzerne County Public School System, which includes all of Luzerne County plus one school in Schuylkill County, has 16 school districts which includes 13 high schools, six middle schools, 45 elementary schools, one Intermediate Unit School, one Alternative School, and three Vocational Schools (which are high school level) (Table 2.5-24) (NCES, 2008). For the 2004-2005 fiscal year total revenues for the school districts was \$452.1 million and the total expenditures for the school districts was \$446.8 million (NCES, 2008). The public school system employed a total of 4,772 full-time equivalents (FTEs) FTEs in the 2005-2006 school year, of which 2,581 FTEs were teachers (NCES, 2008). The schools had a student/teacher ratio range of 13.0 to 27.2 students per FTE teacher (NCES, 2008). In the 2005-2006 school year, there were about 42,000 students enrolled in the Luzerne County public schools (NCES, 2008).

~~The 2004-2005 fiscal year total revenues for all of the school districts was \$452.1 million and the total expenditures for the school districts was \$446.8 million (NCES, 2008).~~

In addition to the public school system, Luzerne County has 57 private schools with about 11,000 students. ~~Student/teacher~~ Student-teacher ratios ranged from 3 to 35 students per FTE teacher in the private schools (see Table 2.5-25) (GS, 2008; ST, 2008).

For Luzerne County, the student-teacher ratio for both public and private schools both exceeded and fell below the state average of 15.2 students per FTE teacher. In some schools, the student teacher ratio was as low as 3 and in others as high as 35 students per FTE teacher. Ratios within the nearby towns of Nanticoke and Shickshinny were generally above the state average.

In addition, a number of the public school districts were operating at capacity or above capacity for the individual buildings. Within the Hazleton Area School District, the capacity within each of the school buildings was evaluated by Highland Associates in 2007. Their study demonstrated that four of 10 schools had exceeded their capacity when compared against 2007/2008 enrollment projections. Capacity for this study was based on the assumption of approximately 25 students per classroom. In addition, a representative from the Greater Nanticoke Area School District identified five schools within the district as operating at 100 percent capacity. The superintendent from the Crestwood School District stated that the high school and middle school were operating at 112 percent capacity, while the elementary schools were operating at 96 percent of capacity.

2.5.2.5.2 Columbia County Public and Private Schools

The Columbia County Public School System, which includes all of Columbia County plus one school in Luzerne County, has seven school districts which include 12 elementary schools, five middle high schools, five high schools, and one vocational school (Table 2.5-24) (NCES, 2008).

For the 2004-2005 fiscal year, total revenues for the school districts was \$117.4 million and the total expenditures for the school districts was \$110.8 million (NCES, 2008). The public school system employed a total of 1,489 FTEs in the 2005-2006 school year, of which 768 FTEs were teachers (NCES, 2008). The 2005-2006 school year had a student/teacher ratio range of 10.9 to 16.4 students per FTE (NCES, 2008). There were about 10,800 students enrolled in the 2005-2006 school year in Columbia County (NCES, 2008).

In addition to the public school system, Columbia County has eight private schools with about 1,500 students. The student-teacher ratio ranges from 5 to 33 students per FTE teacher (Table 2.5-25) (GS, 2008) (ST, 2008).

For Columbia County, the student-teacher ratio for both public and private schools both exceeded and fell below the state average of 15.2 students per FTE teacher. In some schools, the student teacher ratio was as low as 5 and in others as high as 33 students per FTE teacher. The private schools tended to have a larger range than the public schools within Columbia County. The student-teacher ratios in Berwick during the 2005-2006 school year ranged between 13.3 and 15.9 students per FTE teacher. All but one of the 7 schools listed were below the state average (when compared to the 2006-2007 state average). Ratios within the Bloomsburg Schools system were below the state average during the 2005-2006 school year.

The Berwick Area School District is the primary school district within Columbia County, as well as one of the major employers. The school system accounts for grades kindergarten through 12th grade within 4 elementary schools, 1 middle school, and 1 high school. District wide enrollment for public schools is 3,160 and an additional 429 are enrolled in private school. Approximately 16 children are assigned to every one teacher depending on the class taught. The district employs 680 people, of which 279 are certified teaching professionals.

A Berwick Area School District representative also stated that the district is concerned over the age and condition of the existing school buildings. The representative felt that if capacity were reached, the district would face additional challenges with regard to maintenance and upkeep of existing physical structures since at least three of the buildings within the district are over 75 years of age. Classroom capacity within the buildings varies from 350 students in the elementary schools to 1,150 students in the high school.

Within However, within the Berwick Area School District, overall enrollment has dropped over the last 10 years. Future plans for the district suggest that enrollment may rise due to its unique position of being located within both Luzerne and Columbia Counties. Funding for the school district has been stable based on the 2007-2008 annual budget of \$41 million.

The 2004-2005 fiscal year total revenues for all the school districts was \$117.4 million and the total expenditures for the school districts was \$110.8 million (NCES, 2008).

In addition to the public school system, Columbia County has eight private schools with about 1,500 students. The student/teacher ratio ranges from 5 to 33 students per FTE (Table 2.5-25) (GS, 2008) (ST, 2008).

2.5.2.5.3 Colleges and Higher Education

There are seven colleges in the ROI, King's College, Luzerne County Community College, Misericordia University, Penn State Hazleton Campus, Penn State Wilkes-Barre Campus, Wilkes University, and Bloomsburg University.

Wilkes University offers more than 35 majors and concentrations, including education, engineering, biology, and nursing; 13 pre-professional programs including preparation for entry into a number of health professional fields like medicine, dentistry, optometry, podiatry, and more; and the six-year doctor of pharmacy program in the Nesbitt College of Pharmacy and Nursing. The enrollment was about 2,200 full-time undergraduate students (LC, 2008).

Luzerne County Community College is a public, two-year comprehensive community college for residents of Luzerne County and the surrounding areas throughout northeastern Pennsylvania. Its 167 acre main campus is located in Nanticoke in the center of Luzerne County. The College currently offers degree programs in the liberal arts and sciences, technical-career programs; certificate programs, and diploma programs (LC, 2008).

Misericordia University is a liberal arts based co-educational Catholic university. Total enrollment was more than 2,100 students, including full and part-time undergraduates and graduate students. Misericordia University's academic emphasis focuses on liberal arts, professional, and pre-professional studies. Misericordia University offers 30 majors in four academic divisions: behavioral sciences, education and business, health sciences, humanities, and mathematical and natural sciences (LC, 2008).

King's College is an independent four-year liberal arts college founded by the Congregation of Holy Cross in 1946, with an enrollment of 2,200 students in 2005 (LC, 2008).

Pennsylvania State (PSU) Hazleton and Wilkes-Barre students can complete the first two years of most of the 160 majors offered by Penn State University, and then transfer to the main campus to complete their bachelor's degrees. In addition, PSU Hazleton offers a limited number of bachelor's degrees, and an extensive list of associate's degrees - business administration; electrical engineering technology; information sciences and technology; letters, arts, and sciences; mechanical engineering technology; medical laboratory technology; nanofabrication manufacturing technology; and physical therapist assistant. The enrollment was about 1,100 full- and part-time students (LC, 2008).

PSU Wilkes-Barre offers two satellite centers to extend the resources of the university - the Northern Tier Center in Bradford County and the Kingston Center located at the Wyoming Valley West Middle School. These centers provide courses for a certificate, associate, and a baccalaureate degree in Business Administration. Students can begin any one of over 160 Penn State majors at Penn State Wilkes-Barre and then complete a degree at another Penn State campus, including the main campus at University Park. Students can also earn one of eight Bachelor's degrees or seven Associate's degrees at the Penn State Wilkes-Barre campus. The enrollment was about 780 students (LC, 2008).

Bloomsburg University offers 63 undergraduate degree programs and several health care programs involving clinical study elsewhere. Several programs offer concentrations within the major, such as biology (BU, 2008).

2.5.2.6 Area Recreational Opportunities

The area surrounding the BBNPP site offers a considerable array of open space and recreational opportunities. There are numerous state, county, and local parks; trust lands; game lands; wildlife management units; state forests; hiking trails; and water courses.

Based upon the acreage of the state parks located in the ROI (22,183 acres), the existing ratio for parkland is 58.7 acres per 1,000 people, which is much greater than a suggested standard

of 10 acres for every 1,000 people (Williams and Dyke, 1997). Additional capacity is provided by county, local parks, trust lands and game lands not included in the state parkland inventory.

2.5.2.6.1 Luzerne County

In Luzerne County there are four state parks, six state game lands, one state forest area, and three county parks. Each is unique in its own way and offers a multitude of outdoor activities to visitors. They are managed by the PA Department of Conservation and Natural Resources, PA Game Commission, and the Luzerne County Division of Parks. These areas provide ample opportunities for birdwatching, snowmobiling, skiing, cross country skiing, fishing, hunting, camping, canoeing, kayaking, walking, running, bike riding, hiking, horseback riding, rock climbing, golfing, swimming, and exploring cultural and historic areas. In addition, there are opportunities for picnicking, outdoor performances, areas to rent for company or family gatherings, historic sites, playgrounds, athletic fields, and much more.

The Luzerne County state game lands (SGL) include the following designated routes: SGL 57 approximately 8 mi (12.9 km); SGL 91 approximately 6 mi (9.7 km), SGL 91 approximately 2 mi (3.2 km), SGL 119 approximately 8.5 mi (13.7 km), SGL 207 approximately 1 mi (1.6 km), SGL 260 approximately 4.5 mi (7.2 km), and SGL 292 approximately 5 mi (8.0 km). These areas offer recreational activities that include but are not limited to hiking, horse back riding, biking, hunting, and snowmobiling (PAGC, 2008).

The state forest located in Luzerne County is Lackawanna State Forest, which has diverse recreational opportunities. The state forest is approximately 8,115 ac (3,284 ha) of land in two separate tracts. The two tracts are the Thornhurst tract in Lackawanna County and the West Nanticoke tract in Luzerne County. The West Nanticoke tract offers over 1,400 ac (567 ha) of hunting fishing, hiking, and nature study (PADCNr, 2008).

The four state parks located in Luzerne County include Lehigh Gorge, Frances Slocum, Ricketts Glen, and Nescopeck. Lehigh Gorge is located in Luzerne and Carbon Counties. The Lehigh Gorge State Park is approximately 4,548 ac (1,841 ha) of park land that follows the Lehigh River from Francis E. Walter Dam in the north to Jim Thorpe, PA, in the south. The Lehigh Gorge Trail follows over 20 mi (32 km) of abandoned railroad grade along the river, providing many recreational opportunities. Recreational opportunities include hiking, biking, whitewater boating, fishing, hunting, wildlife watching, and winter activities. Frances Slocum state park consists of 1,035 ac (419 ha) in northeastern Luzerne County. Recreational opportunities include hiking, trail biking, picnicking, swimming, boating, fishing, hunting, sledding, ice fishing, ice skating, organized group tenting, and camping. Nescopeck State Park is bordered on the south by steep Mount Yeager and on the north by Nescopeck Mountain. The state park is 3,550 ac (1,416 ha) encompassing wetlands, rich forests, and diverse habitats. Recreational opportunities include hiking, fishing, hunting, wildlife watching, and cross country skiing. Ricketts Glen State Park harbors Glens Natural Area, a national natural landmark. Ricketts Glen is comprised of 13,050 acres (5,281 ha) in Luzerne, Sullivan, and Columbia counties. Recreational opportunities include hiking, horseback riding, picnicking, swimming, boating, fishing, hunting, waterfalls, winter activities, organized group tenting, cabins, and camping (PADCNr, 2008).

Luzerne County has three county parks, Moon Lake Park, Luzerne County Sports Complex, and The Tubs Nature Area (LC, 2008). The 76 local municipalities in Luzerne County provide a number and variety of parks and recreation areas. One example is the Wilkes-Barre Riverfront

Park which the City of Wilkes-Barre owns and maintains. The park has 91 acres (37 ha) of open space and floodplain forest along the Susquehanna River.

The Susquehanna Riverlands Environmental Preserve is a 1,200 ac (486 ha) preserve encompassing a wide variety of upland and wetland habitats along both sides of the Susquehanna River. The Riverlands Recreation Area includes natural and recreational areas including the Riverlands Nature Center, the Riverlands Recreation Area, Lake Took-A-While (a 30 ac (12 ha) fishing lake and a restored section of the North Branch Canal), and the Wetlands Nature Area (Section 2.2.1).

As shown in Table 2.5-26 (MLP, 2008) (PADCNr, 2008) (PAFBC, 2008), Luzerne County has 13 boat launch sites. The lakes and ponds have different requirements as to the type of watercraft that is allowed on the water. Some of the lakes are non-motorized waterbodies, while others prohibit internal combustion motors, certain size horsepower motors, or implement speed restrictions. As shown in Table 2.5-27 (PAFBC, 2008), there are only three charter boat/fishing guides in Luzerne County.

There are 13 campgrounds within Luzerne County within a 30-mi radius (48 km) of Berwick providing various types of facilities and experiences (Table 2.5-28) (CPA, 2008) (CU, 2008) (GC, 2008) (HC, 2008) (HLC, 2008) (MLP, 2008) (PADCNr, 2008) (RVPR, 2008) (WG, 2008). There are about 1,389 camp sites at these facilities.

For over 15 years, Luzerne County also has been developing an out-of-park trail system. The county system now includes over 35 miles of multi-use trails; 1.5 miles of town heritage trails/sidewalk improvements; 17 miles of riverfront and out-of-park hiking and mountain biking trails; and approximately 105 additional miles of multi-use trails or in-town trail systems in the planning stages (Luzerne County, 2008).

Trails located within Luzerne County include the following:

- ◆ Susquehanna Levee Trail: Luzerne County created a 14-mile network of trails from Wyoming to Plymouth on the west side of the river, and from Wilkes-Barre to Hanover on the east side. Walkers, joggers, in-line skaters, and cyclists can use the paved trails, which are 100% handicap accessible. Parking lots are strategically located along the length of the trail. Trailheads are present at Forty- Fort County Recreation Park, off of Route 11; Kingston Recreation Facility, off of 3rd Street; the far west end of Delaney Street in Hanover Township; and off of Powell Street in Plymouth Borough.
- ◆ Back Mountain Trail: This Suburban trail has a stone surface and runs from Luzerne Borough to Carverton Road in Trucksville. The trailhead is located at Parry Street in Luzerne Borough. The trail can be accessed by parking at the Knights of Columbus Parking lot and walking west on Parry Street.
- ◆ The Mocanaqua Loop Trail: This trail consists of four inter-connecting looping trails, which is approximately 9 miles of varying terrain along the northern reach of Penobscot Mountain. This trail has a natural earth surface and a hilly character. The trailhead is in Mocanaqua, on the east side of the Susquehanna River from Route 11 and Shickshinny Borough.
- ◆ Kirby Park Trails: These trails include four miles of marked trails that are located in the Kirby Park Natural Area, between the levee and the Susquehanna River.

- ◆ Lehigh Gorge Trail: This trail is 26 miles long and follows an abandoned rail line adjacent to the Lehigh River, from north of White Haven to Jim Thorpe. The trail is relatively flat, with a smooth stone surface. White Haven is the northern access area and can be reached via Exit 273 off of Interstate 80.
- ◆ Luzerne County National Recreation Trail: This is a 13-mile long rail trail along the east bank of the Susquehanna River, between Wilkes-Barre and Old Forge. Access is located at Pittston Riverfront Park on Water Street.
- ◆ The Tubs Nature Area: This trail consists of 2 miles in a preserved area highlighting scenic geological water features (STHPLC, 2009).

2.5.2.6.2 Columbia County

In Columbia County there is one state park, 3 state game lands, and two county parks. The state park is Rickett's Glen State Park, which also lies within Luzerne County. Rickett's Glen is described in Section 2.5.2.6.1.

The Columbia County state game lands (SGL) include the following designated routes: SGL 58 approximately 11.3 miles (18.2 km), SGL 226 approximately 4.3 mi (6.9 km), SGL 226 approximately 3 mi (4.8 km), and SGL 329 approximately 0.9 mi (1.4 km). These areas offer recreational activities that include but are not limited to hiking, horse back riding, biking, hunting, and snowmobiling (PAGC, 2008). The two county parks include Bloomsburg Town Park and Twin Bridges Park, currently under construction (CC, 2008).

As shown in Table 2.5-26 (MLP, 2008) (PADCNR, 2008) (PAFBC, 2008), Columbia County has three boat launch sites. The lakes and ponds have different requirements as to the type of watercraft that are allowed on the water. Some of the lakes are non-motorized waterbodies, while others prohibit internal combustion motors, certain size horsepower motors, or implement speed restrictions. As shown in Table 2.5-27 (PAFBC, 2008), there are only two charter boat/fishing guides in Columbia County.

There are 15 campgrounds in Columbia County within a 30 mi (48 km) radius of Berwick providing various different types of facilities and experiences (Table 2.5-28) (CPA, 2008) (CU, 2008) (GC, 2008) (HC, 2008) (HLC, 2008) (MLP, 2008) (PADCNR, 2008) (RVPR, 2008) (WG, 2008). There are about 1,509 camp sites at these facilities.

In addition, Rails to Trails Conservancy lists approximately 23 trails occurring within 50 miles of Berwick, PA (RTTC, 2009). Many of these are abandoned railroad beds converted into bike and walking trails. The Pennsylvania Boat and Fish Commission also provides a guide for water trails, the closest to the BBNPP being the North Branch Susquehanna River Water Trail that extends from New York to Sunbury, PA (PAFBC, 2009).

2.5.2.7 Region Tax Structure and Distribution

The types of taxes and the associated rates that are levied in each county and the Commonwealth of Pennsylvania are presented in Table 2.5-29 (Bankrate, 2008) (PDR, 2008a) (PDR, 2008b) (PDR, 2008c) (PDECD, 2008c) (PDECD, 2008d). In general, the Commonwealth of Pennsylvania relies substantially upon income and sales tax revenues and the counties rely upon property tax and hotel tax revenues.

2.5.2.7.1 Commonwealth of Pennsylvania

In 2008, the Commonwealth of Pennsylvania levied a state income tax at a flat rate of 3.07% on individual income, with no exemptions allowed (Bankrate, 2008). However, residents who

live on a reduced income can qualify for the state's Tax Forgiveness Credit, depending on their income levels and family size (PDR, 2008c).

The state also levies a 6.0% sales tax on taxable goods and services. Major items exempted from the sales tax include food (not ready-to-eat), most apparel, drugs, textbooks, sales for resale, and residential heating fuel (Bankrate, 2008).

Real property taxes are not levied by the Commonwealth of Pennsylvania, and instead are imposed by counties, cities, townships, and school districts. However, a real estate transfer tax is levied that includes 1.0% for the State and 1.0% for the county. The rate imposed at the local level cannot exceed 1.0%, and thus if the both a municipality and a school district levy a tax, they must share the 1.0% maximum (GHC, 2008).

2.5.2.7.2 Luzerne County

Luzerne County does not levy a sales tax on goods and services. However, in 2008, the County did levy a 5.0% tax on hotel room rentals (PDECD, 2008d).

Within Luzerne County, all real estate, unless specifically exempt, is taxable. The county imposed a rate of 94.9 mills on residential real property (PDECD, 2008d). The County splits the real estate transfer tax with the school districts, with 0.5% allocated to the County and 0.5% allocated to the school districts (GHC, 2008).

As shown in Table 2.5-30 (LC, 2008), in 2007 Luzerne County had a total of \$140.8 million in revenues and \$142.0 million in expenditures. Of the total revenues, about 52% (\$72.4 million) came from real estate taxes, 37% (\$52.4 million) came from departmental earnings, and 10% (\$13.8 million) came from claims taxes.

2.5.2.7.3 Columbia County

As with Luzerne County, Columbia County does not levy a sales tax on goods and services. However, in 2008, the County did levy a 3.0% tax on hotel room rentals (PDECD, 2008c).

All real estate within Columbia County is taxable, unless specifically exempt. The county imposes a rate of 7.4910 mills on real property (PDECD, 2008c).

The borough of Berwick imposes the following tax rates: 10.6 mills for the General Fund, 1.25 mills for fire protection, and 1.75 mills for street lighting.

As shown in Table 2.5-31 (CC, 2008), in 2006 Columbia County had a total of \$16.7 million in revenues and \$16.4 million in expenditures. Of the total revenues, about 35% (\$5.9 million) came from state grants, 33% (\$5.5 million) came from real estate taxes, 18% (\$0.3 million) came from departmental earnings.

2.5.2.8 Local Land Use Plans

2.5.2.8.1 50 Mi (80 km) Comparative Geographic Area

There are six major land uses within the 50 mi (80 km) region that account for about 5 million acres (2 million ha) of land. The major land uses are urban/built-up (9%), barren (1%), wetlands (2%), water (2%), forest (65%), and agricultural (21%). For additional information about land use, refer to Section 2.2.

2.5.2.8.2 Two County Region of Influence

Luzerne County

The three classifications of barren, wetlands, and water together account for 6% of the total county lands for Luzerne County. Urban or built-up lands occupy little of the county's land, with Luzerne County having only 11%. The majority of the land use is dominated by forest and agricultural lands. Luzerne County is comprised of 71% forest land and 11% agricultural lands.

The BBNPP site is characterized by forests, open, undeveloped, agricultural, mined, and developed lands. The developed portions of this area are located in and around the city of Hazleton and the eastern outskirts of the borough of Berwick. As shown in Table 2.2-1, most of the BBNPP site is zoned as an agricultural district with a much smaller portion zoned as a conservation district. Small areas of the site to the north and east adjacent to SSES are zoned heavy industrial. For additional information about land use, refer to Section 2.2.

A representative of the Luzerne County Planning Commission stated that the department had been downsized from 13 to 5 staff, and was now understaffed. Because of the downsizing, the department no longer collects information about housing starts and other issues.

Columbia County

The three classifications of barren, wetlands, and water together account for 2% of the total county lands for Columbia County. Urban or built-up lands occupy little of the county's land, with Columbia County having only 7%. The majority of the land use is dominated by forest and agricultural lands. Columbia County is comprised of 62% forest land and 29% agricultural lands.

According to a representative from the Columbia County Commissioners' Office of Planning and Development, many of the smaller townships and municipalities do not have professional planning staffs. For this reason, he suggested the overall needs of the county are difficult to assess. Within Columbia County, most residential development is small scale with subdivisions generally having 10 to 20 lots. Two large scale developments have been approved near Scott Township and Orange Township. Commercial development, on the other hand, typically follows the large transportation corridors. The representative noted larger commercial developments along Interstate 80 and Route 11.

2.5.2.9 Area Public Facilities and Social Services

Public services consist of schools and colleges or universities; social services; water and sewer services; police protection, fire suppression, and emergency medical service (public safety); and hospitals and doctors. In both counties, most of these services are located near economic centers.

Schools and post-secondary education are discussed in Section 2.5.2.5.

2.5.2.9.1 Social Services

The Luzerne County Office of Human Services' Personnel Department provides recruitment and other personnel services for the Luzerne/Wyoming Counties Transportation Department, Luzerne County Commission for Women, and four County Civil Service Agencies: Luzerne County Children & Youth Services, Luzerne-Wyoming Counties Mental Health / Mental Retardation program, Luzerne-Wyoming Counties Drug & Alcohol Program, and the Area Agency on Aging for Luzerne-Wyoming Counties (LC, 2008).

Residents of Pennsylvania can seek assistance and a range of services for themselves and their families from professionally trained staff members at their County Assistance Office. The County Assistance Office provides the following types of services: child welfare services, food stamps, health care/medical assistance, heating assistance, mental health/substance abuse services, a homeless assistance program, integrated children's services plan, legal services, domestic violence crisis and prevention, and many more services (PADOH, 2008).

2.5.2.9.2 Water and Sewer Services

Two general types of aquifers occur in the region. The first consists of the sandstone and occasional limestone strata that occur within the predominant shales of the Paleozoic rock. The second exists in the unconsolidated overburden material that is for the most part Pleistocene stratified drift, till, or kames (laid down within the last 70 million years). Within two miles (3 km) of BBNPP, most groundwater wells are completed in the bedrock shales (SSES, 2006).

BBNPP is not located in a recharge area for any aquifer; however, recharge to the unconsolidated sand and gravel does occur over the site. Groundwater movement on the site is generally in an easterly direction and ultimately discharges to the Susquehanna River (SSES, 2006).

Water demand for urbanized areas can vary from 50 to 180 gpd (189 to 681 lpd) per capita, depending on individual activities and weather conditions. When planning for water demand, current and future supplies of water, the capacity of the water treatment facility, water pressure and velocity in the supply system, the potential for emergency use, and the location and capacity of wastewater are important factors of consideration. The cost and need for infrastructure is dependent on these characteristics (APA, 2005).

Residents of urbanized areas typically create about 150 gpd (568 lpd) of waste water per capita for a public sewage system to handle. Wastewater facilities should be planned to meet these potential needs. Combined sewer systems can be used to convey domestic and industrial wastewater, and during wet weather, rainfall runoff. (APA, 2005).

Because the BBNPP site is in Salem Township (in Luzerne County) and most of the existing SSES Units 1 and 2 employees reside in Luzerne County or Columbia County, the discussion of public water supply systems are limited to these two counties. SSES obtains potable water for drinking, pump seal cooling, sanitation, and fire protection through the onsite groundwater well system. Three additional wells provide water to the Energy Information Center, Riverlands Recreation Area, and the West Building (former Emergency Operations Facility). SSES does not use municipal water (SSES, 2006). There are also other SSES wells that are either used infrequently or not used at all.

2.5.2.9.2.1 Luzerne County

Table 2.5-32 lists the largest municipal water suppliers (serving greater than 4,500 people) in Luzerne County (SSES, 2006). Of these water systems, the Crystal Lake system is operating at 83% of capacity during maximum production, Nesbitt is operating at 92% of capacity, and the Watres system is operating at 100% of capacity. Use of average capacity is only high for the Nesbitt system, with 83% use of capacity.

Based on reviewing the Environmental Protection Agency's (EPA) Safe Drinking Water Information System (SDWIS) which provides information about public water systems and their violations of EPA's drinking water regulations, there were 317 listings serving a population of

319,227 (EPA, 2008) (Table 2.5-33). EPA regulates public water systems; it does not have the authority to regulate private drinking water wells.

Surface water is the primary source of potable water for the majority of Luzerne County residents. Sources include lakes, rivers, reservoirs, and their tributaries, but not the Susquehanna River. The Susquehanna River is a source for drinking water for residents south of Danville Borough in Montour County, PA. Currently, both surface and groundwater sources in the county provide adequate supply for the population (SSES, 2006).

At times, water quality issues have been identified in selected surface water bodies and groundwater sources from both point source and non-point source pollution. These issues have included excessive metals concentrations, acid mine drainage, turbidity, excessive sedimentation, sewage contamination, landfill leachate, and excessive volatile chemicals, nitrates/nitrites, pesticides, petroleum products, and underground storage tank contamination. Although water quality has been an issue at some source locations, most sources and municipal water suppliers are able to provide water yields capable of sustaining both domestic and non-domestic uses (SSES, 2006).

According to a representative of the Pennsylvania Department of Environmental Protection, Northeast Region, Luzerne County has a number of sewer authorities. The largest is the Wyoming Valley Sanitary Authority (WVSA), which has a capacity of over 32 million gpd, while the Greater Hazleton Joint Sewer Authority (GHJSA) has a permitted average of 8.9 million gpd at the treatment facility (GHJSA, 2008) (WVSA, 2008). The Mountaintop Area Joint Sewer Authority and the Lower Lackawanna Valley Sewer Authority (LLVSA) also have capacities of over 1 million gpd. Several smaller authorities operate in Luzerne County, including but not limited to the Conyngham Borough Authority, the Butler Township Sewer Authority, the Freeland Sewer Authority, the Shickshinny Sewer Authority, and the Nescopeck Sewer Authority. The smaller authorities typically can handle 100,000 to 1 million gpd.

A representative of the Wyoming Valley Sewer Authority (WVSA) stated that the overall license capacity for this facility was 50 million gallons per day (mgd). On average, this Authority receives approximately 26 mgd. This amount can fluctuate depending upon the weather conditions. During dry weather, WVSA may receive and treat 13-15 mgd, and during wet weather over 100 mgd. This Authority currently has over 100,000 accounts. The Authority does not have any current staffing or facility needs.

A representative from the Greater Hazleton Sewer Authority (GHSA) stated that the local capacity is approximately 9-10 million gallons of water flow per day. The representative stated that the Authority would be taking in less water, but he believed that clean water was entering the system; this is referred to as inflow and infiltration (INI). The INI distorts the amount of water actually received. On dry days, they tend to receive 4-4.5 mgd.

By 2011, the GHSA plans to have numerous system upgrades in place. The GHSA was approved for \$44 million worth of upgrades to the system by the Commonwealth of Pennsylvania. This would allow for an increase in approximately 20% capacity (some estimates suggest 25-30%, but the representative provided the 20% as a conservative amount). According to this representative, there currently is sufficient capacity for the existing population, but due to the age of the system and the INI, he feels that the upgrade is necessary.

Combined sewer outfalls also are present in Luzerne County. These systems carry both rain water and sewage in the same pipe. The WWSA operates 54 outfalls, the LLWSA has 26, the GHWSA has 15, and the Freeland Authority has one. The NPDES permits provided information regarding the overall accepted flow at each facility. Additional information regarding the individual sewer authorities was limited due to the lack of content on the internet. (USEPA, 2008b)

2.5.2.9.2.2 Columbia County

Table 2.5-32 lists the largest municipal water suppliers (serving greater than 4,500 people) in Columbia County (SSES, 2006). Of these water systems, the Bloomsburg system is operating at 84% of capacity during maximum production but 62% of capacity during average production.

Based on reviewing the EPA SDWIS, there were 106 listings serving a population of 55,909 (EPA, 2008) (Table 2.5-33). EPA regulates public water systems; it does not have the authority to regulate private drinking water wells. Columbia County has 13 surface water sources and 11 groundwater sources.

Water quality issues have been identified in two surface water bodies and some groundwater sources. These include excessive metals concentrations, acid mine drainage, sedimentation, sewage contamination, landfill leachate, and underground storage tank contamination. Columbia County's Comprehensive Plan states that, although water quality has been an issue in some source locations, most sources are able to provide water yields capable of sustaining both domestic and nondomestic uses through 2010 estimates of need (SSES, 2006).

Columbia County's primary sewer authority is the Berwick Area Joint Sewer Authority (BAJSA). In its current configuration, the BAJSA plant is permitted for 3.64 million gpd from the borough of Berwick and five adjoining municipalities (BOOK, 2008). This Authority operates four combined sewer outfalls. Thirteen additional public sewer authorities operate in Columbia County. A listing of these authorities was provided by the Pennsylvania Department of Environmental Protection-North Central office. The NPDES permits provided information regarding the overall accepted flow at each facility. Additional information regarding the individual sewer authorities was limited due to the lack of content on the internet (USEPA, 2008b).

2.5.2.9.3 Police and Sheriff Services

The two-county ROI receives law enforcement services from the Pennsylvania Department of State Police, the Luzerne County Sheriff's Department, Columbia County Sheriff's Department, and the local cities, towns, township, or borough police departments.

2.5.2.9.3.1 Luzerne County

The Luzerne County Sheriff's Office law enforcement division includes road patrol, the civil division, community service division, gun permit division, protection from abuse division, real estate division, the search and rescue division, sheriffs sales, and the warrants division (LC, 2008). In addition, there are 37 police departments in the County (USAC, 2008).

Luzerne County also operates a jail with 303 security officers, 9 administration staff members, 19 treatment staff members, and 23 support staff members. The county jail has an average daily population of 717 people (PADOC, 2007) (PADOC, 2008).

Local police departments assist in the overall law enforcement efforts in the County. Based on conversations with the Salem Township Police Department (STPD), the office is staffed by 3

full-time and 4 part-time officers and operates on a shortened schedule, when compared to other departments in Luzerne County. In 2007, the Department handled 2,536 calls. In the prior two years, the department had 4,487 total calls. The STPD had an approximate \$170,000 operating budget.

The Pennsylvania State Police handles all calls when local officers are not on duty. The Pennsylvania State Police also have an office located in Hazleton and a second station in Wyoming. These stations house Troop N with 244 enlisted and civilian personnel. The troop service area covers 1,766 mi² (4,574 km²) and includes service for approximately 600,000 people. In 2006, Troop N handled 47,311 incidents. The Troop P Shickshinny Station, which also serves Luzerne County, is located in Berwick (PSP, 2008a) (PSP, 2008b).

According to the 2007 Crime in Pennsylvania Annual Uniform Crime Report, 621 total full-time law enforcement employees (officers and civilian staff) were working within Luzerne County (PSP, 2007). This amounts to 1.99 per 1,000 people in Luzerne County. Of these total employees, 550 are officers (state, county, and local; 1.77 per 1,000 people); 336 of the total are local officers (1.08 per 1,000 people).

If a standard of 1.5 officers per 1,000 people is used, as is suggested by some national organizations, Luzerne County had a sufficient number of officers. Approximately 469.5 officers were needed to meet the enforcement needs of the population in 2006 (Layton and Gloor, 2007).

2.5.2.9.3.2 Columbia County

The Columbia County Sheriff's Office law enforcement division includes firearms, the civil division, warrants, protection from abuse, courtroom security, training, and prisoner transport (CC, 2008). The primary function of the Columbia County Sheriff's Department (CCSD) is to transport prisoners, serve as courtroom security, and to serve/administer Protection from Abuse (PFA) orders, along with responsibilities for physical service within civil processes. A departmental representative stated that deputies within the CCSD do not typically respond to calls within the County; public calls are handled by the local authority or State Police. For this reason, the total number of calls handled by this department is not available. The CCSD was staffed by 7 full-time and 6 part-time deputies in FY 2008. The representative indicated that they currently are headquartered in an office within a municipal building, where their jail is also located. The existing staff is operating at capacity, and the representative stated that they have additional staff and capital/facility needs, such as a new headquarters, improvements to the jail, and vehicle purchases.

The average inmate population in the Columbia County jail is 126 inmates per day. The annual prison budget for 2007 was about \$2.86 million. This budget allowed for 54 full-time security staff, 4 full-time administrative staff, 1 treatment staff member, and 1 additional support member (PADOC, 2007) (PADOC, 2008).

There are eight local police departments that assist with law enforcement efforts within Columbia County (USAC, 2008). According to a department representative, the Berwick Police Department has a staff of 15 full-time officers and 4 part-time officers supported by 2 civilian staff members. In 2007, the department received 5,694 calls. The department has holding cells for processing, as well. The Berwick Police Department operates on a budget of approximately \$1.3 million. The representative suggested that current needs called for 1 to 2 additional patrol officers and updates to the current vehicle fleet and computer equipment. Troops P and N of

the Pennsylvania State Police serve the Columbia County area. Troop N has a station located in Bloomsburg (PSP, 2008a) (PSP, 2008b).

According to the 2007 Crime in Pennsylvania Annual Uniform Crime Report, 117 total full-time law enforcement employees (1.80 per 1,000 people) were working in Columbia County. Of this amount, 106 are officers (1.63 per 1,000 people); while of the total, 71 are local officers (1.09 per 1,000 people) (PSP, 2007).

If a standard of 1.5 officers per 1,000 people is used, as is suggested by some national organizations, Columbia County had a sufficient number of officers. Approximately 97.5 officers were needed to meet the enforcement needs of the population in 2006 (Layton and Gloor, 2007).

2.5.2.9.4 Fire Suppression Services

In 2005, the United States had a rate of 3.82 firefighters per 1,000 people. This rate was divided into 1.05 career firefighters and 2.77 volunteer firefighters (Karter, 2006). These figures do not represent recommended rates or a defined fire protection standard, and different communities may need varying amounts of firefighters to cover the hours within a day (Karter, 2006).

One available standard, however, suggests that 1 firefighter is needed for every 1,000 people (CCS, 2009).

2.5.2.9.4.1 Luzerne County

According to the U.S. Fire Administration, there are 68 fire departments with 87 fire stations in Luzerne County with 2,391 active firefighters that are either career, volunteer, or paid per call firefighters. In addition, there are 970 non-firefighter civilians or volunteers within the fire departments (USFA, 2008). The number of stations and an indication of the general distribution of volunteers are provided in Table 2.5-35.

The Salem Township Volunteer Fire Company is one of several companies that provides service within Luzerne County. The township has one fire station with 25 to 30 volunteer firefighters. According to a representative of the Company, no paid personnel are present. Because the Company is staffed only by volunteers, dedicated search and rescue capabilities are not available. The Company's equipment consists of five vehicles, including two brush trucks, one tanker, one engine, and one rescue vehicle. An average of 140 calls are taken per year. According to the representative, the Company has agreements with East Berwick, Mocanaqua, Summer Hill, Shickshinny, and Nescopeck Township to assist in the provision of services. Current needs for the Company include the replacement of the engine and additional volunteers. The building, which houses the engines, also may require updates because the new vehicle sizes are difficult to accommodate with the older station. Discussions also have occurred regarding potentially merging the Salem Township Volunteer Fire Company with the East Berwick Hose Company.

As shown in Table 2.5-4, the population in Luzerne County was 319,250 in 2000 and 313,020 in 2006. This would provide an existing ratio of 7.49 firefighters per 1,000 people in 2000 and 7.64 firefighters per 1,000 people in 2006. These numbers are greater than the typical ratio for career and volunteer firefighters within the U.S., as well as far exceeding the available standard. The number of firefighters that the county would need to meet its needs, based upon the 1:1,000 standard and the 2006 population level, would be approximately 313 firefighters.

2.5.2.9.4.2 Columbia County

According to the U.S. Fire Administration, there are 23 fire departments with 27 fire stations in Columbia County with 967 active firefighters that are either volunteer or paid per call firefighters. In addition, there are 353 non-firefighter civilians or volunteers within the fire departments (USFA, 2008). The number of stations and an indication of the general distribution of volunteers are provided in Table 2.5-35.

The size and staff characteristics of the fire stations vary throughout the county. One of the largest municipal fire departments is the Berwick Fire Department. According to a representative of the Berwick Fire Department, their services consist of five operating buildings and a volunteer force of 100 firefighters. The stations have a total of four engines dating between 2003 and 2008, one ladder truck (1998), one cascade, one heavy rescue, and one water rescue vehicles. Of the 100 firefighters, 25 to 30 can operate as search and rescue personnel. In 2007, the Berwick Fire Department answered 369 calls, of which 10 were for search and rescue operations. The representative stated that the department does not have additional existing staff or equipment needs.

As shown in ER Table 2.5-4, the population in Columbia County was 64,151 in 2000 and 65,014 in 2006. This would provide a ratio of 15.07 firefighters per 1,000 people in 2000 and 14.87 firefighters per 1,000 people in 2006. These numbers are greater than the typical ratio for career and volunteer firefighters within the U.S., as well as far exceeding the available standard. The number of firefighters that the county would need to meet its needs, based upon the 1:1,000 standard and the 2006 population level, would be approximately 65 firefighters.

2.5.2.9.5 Emergency Medical Services

The Department of Health is the lead agency for emergency medical services (EMS) in the Commonwealth. The Department's Bureau of Emergency Medical Services is responsible for the statewide development and coordination of a comprehensive system to prevent and reduce premature death and disability. The Bureau also interfaces with the State Health Improvement Plan (SHIP) and Healthy People 2010 objectives for the Commonwealth.

The State's EMS system includes 16 Regional EMS Councils, the Statewide Advisory Council, and the Pennsylvania Trauma Systems Foundation. Approximately 50,000 EMS personnel and over 1,000 licensed ground and air ambulance services respond to over one million patients each year in Pennsylvania's EMS delivery system (PADOH, 2008).

Ambulance services are licensed to provide care at two levels in the Commonwealth of Pennsylvania: Basic Life Support (BLS) and Advanced Life Support (ALS) (PADOH, 2008).

Luzerne County is part of the EMS of Northeastern PA, Inc. and Columbia County is part of the Susquehanna EHS Council, Inc.

2.5.2.9.6 Hospitals and Doctors

In 2007, Pennsylvania had approximately 3.2 hospital beds per 1,000 people, and the United States ratio was 2.7 in the same year (Kaiser 2007). In 2004, Pennsylvania had 329 physicians per 100,000 people (3.29 per 1,000) (USCB, 2008b).

50 mi (80 km) Comparative Geographic Area

In 2003, the U.S. Census Bureau determined that the Scranton-Wilkes-Barre MSA had 1,404 doctors, or 254 physicians for every 100,000 persons. There also were 14 community hospitals with 2,140 beds, or 387 beds for every 100,000 persons in the MSA (USCB, 2006l).

There are 11 hospitals in the ROI: Geisinger South Wilkes-Barre in Wilkes-Barre, Geisinger Wyoming Valley Medical Center in Wilkes-Barre, Hazleton General Hospital in Hazleton, Wyoming Valley Health Care System-Hospital Inc in Wilkes-Barre, First Hospital Wyoming Valley in Wilkes-Barre, John Heinz Institute of Rehabilitation in Wilkes-Barre, Kindred Hospital -Wyoming Valley, Mercy Special Care Hospital in Nanticoke, VA Medical Center - Wilkes-Barre, Berwick Hospital Center in Berwick, and Bloomsburg Hospital in Bloomsburg (PADOH, 2008). These facilities and other medical services are described below.

2.5.2.9.6.1 Luzerne County

Luzerne County has nine hospitals, Geisinger South Wilkes-Barre, Geisinger Wyoming Valley Medical Center, Hazleton General Hospital, Wyoming Valley Health Care System-Hospital Inc, First Hospital Wyoming Valley, John Heinz Institute of Rehabilitation, Kindred Hospital - Wyoming Valley, Mercy Special Care Hospital, and VA Medical Center - Wilkes-Barre.

Geisinger South Wilkes-Barre (GSWB) is a non-governmental, general acute care hospital with Joint Commission on Accreditation of Healthcare Organizations (JCAHO) accreditation (PADOH, 2008) (JC, 2008). Geisinger acquired South Wilkes-Barre in December 2005. Originally opened in 1898, GSWB is a fully accredited hospital licensed for 210 beds, including 20 skilled nursing beds, 10 adolescent psychiatry beds, and 180 medical-surgical beds. GSWB offers a wide range of services, including a 24-hour-a-day emergency room, a fully accredited sleep disorders center, and a heart center that features comprehensive diagnostics, cardiac catheterization, surgical, and cardiac rehabilitation services (Geisinger, 2006). There were 3,642 admissions, with an average length of stay of 5.33 days in 2005-2006 (PADOH, 2008).

Geisinger Wyoming Valley Medical Center (GWV) is a non-governmental, general acute/tertiary care hospital with JCAHO accreditation (PADOH, 2008) (JC, 2008). Geisinger Wyoming has 177 acute care licensed beds with 148 beds set up and staffed in 2005-2006. There were 8,975 admissions, with an average length of stay of 4.44 days in 2005-2006 (PADOH, 2008). GWV provides comprehensive healthcare services including pediatrics, sleep disorders, cardiology services, orthopedics, and cancer care. The GWV emergency department offers fast-track care for those patients not requiring full trauma treatment (Geisinger, 2006).

Hazleton General Hospital is a non-governmental, general acute care hospital with JCAHO accreditation (PADOH, 2008) (JC, 2008). Hazleton General has 150 acute care licensed beds with 120 beds set up and staffed in 2005-2006. There were 6,886 admissions, with an average length of stay of 5.2 days in 2005-2006 (PADOH, 2008). Hazleton General underwent an \$18 million construction and renovation project from 2005 to 2006, which included a two-story Annex building constructed at the back of the hospital to house a new, state-of-the-art laboratory, medical records department, medical library, physician staff office and lounge, quality management and administrative offices. A Step-Down Unit was also constructed to serve patients who were transitioning from the Intensive Care Unit. The Emergency Department was expanded to double its size to better accommodate the growing community population in one central location. The hospital also formed a partnership with Lehigh Valley Hospital to provide physician staffing to the new Emergency Department, allowing Hazleton Hospital to have access to specialists and technologies only found at larger medical facilities. A new Surgical Suite and Short Procedure Unit rounded out major medical service renovations

and expansions within the hospital. The hospital constructed a 72,000 ft² (6689 m²) Health & Wellness Center in 2005 (GHHA, 2008).

Wyoming Valley Health Care System-Hospital, Inc (WVHCS) is a non-governmental, general acute care hospital with JCAHO accreditation (PADOH, 2008) (JC, 2008). WVHCS had 412 acute care licensed beds, with 333 beds set up and staffed in 2005-2006. The hospital also has a long-term care unit. There were 17,926 admissions, with an average length of stay of 4.87 days (PADOH, 2008).

First Hospital Wyoming Valley is a non-governmental, specialty care hospital with JCAHO accreditation (PADOH, 2008) (JC, 2008). The hospital had 96 licensed beds set up and staffed in 2005-2006. There were 3,030 admissions, with an average length of stay of 8.71 days (PADOH, 2008).

John Heinz Institute of Rehabilitation is a non-governmental, specialty care hospital with JCAHO accreditation (PADOH, 2008) (JC, 2008). The hospital had 94 licensed beds set up and staffed in 2005-2006. There were 2,007 admissions, with an average length of stay of 13.2 days (PADOH, 2008).

Kindred Hospital - Wyoming Valley is a non-governmental, specialty care hospital with JCAHO accreditation (PADOH, 2008) (JC, 2008). The hospital had 36 acute care licensed beds set up and staffed in 2005-2006. There were 369 admissions, with an average length of stay of 25.21 days (PADOH, 2008).

Mercy Special Care Hospital is a non-governmental, long-term acute care hospital and had 67 acute care licensed beds set up and staffed in 2005-2006. There were 631 admissions, with an average length of stay of 28.28 days (PADOH, 2008).

VA Medical Center - Wilkes-Barre is a federal general care hospital with JCAHO accreditation (PADOH, 2008) (JC, 2008). The VA Medical Center serves 19 counties in Pennsylvania and one county in New York. The Wilkes-Barre VA Medical Center is a general medical and surgical facility consisting of 79 operating hospital beds, 105 operating nursing home beds, and 10 substance abuse residential rehabilitation treatment program beds (USDVA, 2008). There were 2,410 admissions, with an average length of stay of 6.35 days (PADOH, 2008).

In addition to the above hospitals, Luzerne County has 26 nursing homes with 2,912 licensed/ approved beds (PADOH, 2008).

In 2004, Luzerne County had 252 physicians per 100,000 people (2.52 per 1,000) and 311 beds per 100,000 people (3.11 per 1,000). The ratio of physicians and hospital beds for the population was less than the state ratios. However, the ratio of hospital beds was greater than the US ratio (USCB, 2008b).

2.5.2.9.6.2 Columbia County

Columbia County has two hospitals, Berwick Hospital Center and Bloomsburg Hospital. Berwick Hospital is a non-governmental, general acute care hospital with JCAHO accreditation. The facility has 101 acute care licensed beds and 240 long-term care licensed beds. There are 50 active physicians and 21 courtesy physicians at Berwick Hospital (BHC, 2008). Berwick Hospital had 3,326 admissions from 2005 to 2006, with an average length of stay of 4.59 days (PADOH, 2008). The Berwick Hospital Center (BHC) is staffed by 71 physicians and a total of 600 hospital employees. Approximately, 101 acute care and 240 long-term care

licensed beds are available (BHC, 2008). Bloomsburg Hospital is non-governmental, general acute care hospital and has 72 acute care licensed beds. There were 3,161 admissions with an average length of stay of 3.55 days (PADOH, 2008).

In addition to the above hospitals, Columbia County has five nursing homes with 685 licensed/approved beds (PADOH, 2008).

In 2004, Columbia County had 156 physicians per 100,000 people (1.56 per 1,000) and 630 beds per 100,000 people (6.30 per 1,000). The ratio of physicians was less than the state ratio. However, the ratio of hospital beds was greater than the state and US ratios (USCB, 2008b).

2.5.2.9.7 Correctional Institutions

The Commonwealth of Pennsylvania maintains two prison facilities within the ROI, both located in Luzerne County. The State Correctional Institution (SCI) Retreat is located approximately 8 mi (13 km) north of the BBNPP and about 11 mi (18 km) south of Wilkes-Barre, PA. SCI Retreat is a medium-security prison housing adult males and held approximately 889 inmates as of December 2007. The state Department of Corrections listed its capacity as 806 inmates. Also located in Luzerne County is the SCI Dallas facility located about 20 mi (32 km) to the northeast of the BBNPP site. A total of approximately 2,090 adult males were incarcerated there as of December, 2007 compared to a capacity of 1,750 individuals (PA, 2008a).

In addition to the state prisons identified within the ROI, both Luzerne and Columbia Counties maintain county correctional facilities. The Luzerne County Correctional Facility is located in Wilkes-Barre. In 2007, this facility had a capacity for housing 805 inmates and its daily population averaged about 717 inmates. The Columbia County Prison located in Bloomsburg had an average daily inmate population of about 126 and a capacity of about 190 (PA, 2008b) (PA, 2008c).

Other state prisons located in the vicinity of BBNPP, but outside the ROI, include those in Schuylkill and Northumberland Counties. Schuylkill County contains two prisons, each located in Frackville over 22 mi (35 km) to the south of BBNPP. As of year end 2007, approximately 2,290 adult males were held in the SCI Mahoney facility and about 1,106 were held in the SCI Frackville prison. SCI Frackville is a maximum-security prison while SCI Mahoney is a medium security facility. Located southwest of BBNPP in Northumberland County is the medium security SCI Coal Township prison that housed approximately male 1,864 inmates in 2007. Schuylkill and Northumberland Counties also maintained county prisons; average daily inmate populations in these facilities during 2007 were 296 and 185 individuals, respectively (PA, 2008a) (PA, 2008b) (PA, 2008c).

2.5.2.10 Transportation

2.5.2.10.1 Airports

50 mi (80 km) Comparative Geographic Area

There is one major airport in the Luzerne-Columbia County area, Wilkes-Barre/Scranton International Airport. Wilkes-Barre/Scranton International Airport is located in Avoca on the county line between Luzerne and Lackawanna County. The airport offers approximately 60 daily arrivals and departures to nine major hubs with one-stop service to over 450 destinations worldwide. The airport is served by six major airlines. All of the major air cargo companies provide service at the Airport. The Airport opened a new \$41.5 million 130,000 ft² (12,077 m²) terminal in May 2006 (LC, 2008).

Two-County Region of Influence

In addition to the Wilkes-Barre/Scranton International Airport, Luzerne County and Columbia County have several public municipal airports, including Bloomsburg Municipal Airport, Hazleton Municipal Airport, and Wilkes-Barre-Wyoming Valley Airport (PADOT, 2008).

2.5.2.10.2 Public Transportation (Bus)

50 mi (80 km) Comparative Geographic Area

Luzerne County has inter-city and interstate bus service through Martz Trailways. Martz provides direct service from Public Square in Wilkes-Barre (and several other locations in the county) to King of Prussia, Philadelphia, Atlantic City, and New York City. Susquehanna Trailways provides service via Berwick and Hazleton to Philadelphia and New York City. Greyhound provides service from several points in the county to most points in the U.S. Amtrak currently does not provide service to northeastern Pennsylvania; however a major initiative is underway to bring high speed rail service to Scranton and Wilkes-Barre (LC, 2008).

Two-County Region of Influence

Public transit in the Luzerne County Area is based in the cities of Hazleton and Kingston Borough (with the hub located in Wilkes-Barre). The Luzerne County Transportation Authority and the City of Hazleton manage these systems (SSES, 2006), which are fixed route bus services. Fixed bus services are provided on a repetitive, fixed schedule along a specific route with vehicles stopping to pick-up and deliver passengers to specific locations (PADOT, 2008). Hazleton Public Transit, a service of the City of Hazleton's Department of Public Services, operates nine routes in the City of Hazleton and surrounding townships and boroughs on weekdays, with limited service on the weekends. The Luzerne County Transportation Authority (LCTA) serves the city of Wilkes-Barre and surrounding areas Monday through Saturday. LCTA operates 16 routes throughout the county (LC, 2008).

As mentioned above, Luzerne County has inter-city and interstate bus service through Martz Trailways, Susquehanna Trailways, and Greyhound to several destination points (LC, 2008).

Luzerne-Wyoming County Transportation Department and MTR Transportation Company provide Shared-Ride/Demand Response in Luzerne and Columbia Counties, respectively. Shared-Ride/Demand Response service offers the community door-to-door transportation services throughout Pennsylvania and subsidizes the cost of that service for senior citizens. Passengers must make trip requests at least one working day in advance of the trip, and must be willing to share the vehicle with other passengers (PADOT, 2008).

2.5.2.10.3 Roads and Highways

Road access to the BBNPP site is via US Route 11, a two-lane paved road with a northeast-southwest orientation. The BBNPP site lies to the west of US Route 11 and the Susquehanna River. Approximately 4 mi (6.4 km) north of BBNPP, US Route 11 intersects with State Route (SR) 239, which travels in a northwest-southeast direction. East of this intersection, SR 239 crosses the Susquehanna River. Several miles (kilometers) south of the BBNPP site, US Route 11 intersects with SR 93. East of this intersection, SR 93 crosses the Susquehanna River. East of the intersection of SR 93 and the Susquehanna River, SR 93 intersects SR 339, which has a northeast-southwest orientation. Five to ten miles (8 to 16 km) south of BBNPP, SR 93 and SR 339 intersect with Interstate 80, which has an east-west orientation. Five to ten miles (8 to 16 km) southeast of BBNPP, Interstate 80 intersects with Interstate 81, which has a northeast-southwest orientation.

Employees traveling from the north or northwest of BBNPP would use SR 239 and US Route 11 to reach the station. Employees traveling from the northeast would use US Route 11. Employees traveling from the south or southwest of BBNPP could use varying combinations of the following roads to reach the station: Interstate 80, SR 339, SR 93, and US Route 11. Employees traveling from the east and southeast could use SR 239, Interstates 80 and 81, SR 93, and US Route 11. When nearing BBNPP, all employees must use US Route 11 (SSES, 2006).

A study of traffic on US Route 11 in the vicinity of BBNPP was performed to assess the impacts on the highway's capacity and level of service (LOS) and to identify potential mitigation actions, if needed, that would be associated with the construction and operation of the plant (KLD, 2008). LOS is defined on an ordinal scale from A to F with "A" being the best level of service. The study indicates that existing LOS at key intersections are primarily either at level "A" (free flow) or "B" (reasonably free flow). Following construction, these service levels could be maintained by implementing limited mitigation measures that would only entail optimizing the signal timing plan at the Route 11 and Orange Street (SR 93) intersection in downtown Berwick. Construction related impacts on LOS would be more pronounced, and are discussed in more detail in Section 4.4.1.

The existing Luzerne County highway system provides local access to Scranton, Wilkes-Barre, Hazleton, and regional access to New York City, Philadelphia, and other major northeast cities. Luzerne County is host to a diverse highway network. Interstate 80 runs east-west through the southern half of Luzerne County providing direct access east to New Jersey and New York City, less than 100 mi (160 km) away, and access to Ohio and the western states. Interstate 80 is a four-lane divided highway built to accommodate large volumes of passenger vehicles and motor freight. Oriented north-south are Interstate 81 and Interstate 476 (the Pennsylvania Turnpike Northeast Extension). Interstate 81 runs north through Hazleton and Wilkes-Barre into upstate New York and south to Harrisburg and the Maryland border. The Pennsylvania Turnpike Northeast Extension is a direct route from Interstate 80 north to Wilkes-Barre and Scranton terminating at Interstate 81. The Extension provides access to regional centers to the south, including Allentown and Philadelphia. US Route 11 runs northeast-southwest through Wilkes-Barre, connecting it with Harrisburg and New York State (SSES, 2006).

Traffic volumes are measured in terms of Average Annual Daily Traffic (AADT), which is an average of daily traffic for every day of the year. In Luzerne County, traffic volumes are highest on the interstate highways such as Interstate 81, Interstate 80, and Interstate 476. Heavier traffic volumes are especially concentrated around the cities of Wilkes-Barre and Hazleton. Between 1992 and 2001, traffic has grown on all interstate highways in Luzerne County. Between 1992 and 2001, increases in traffic volumes on Interstate 80 have ranged from 24% to 110%, or from 4,550 to over 15,000 AADT. On some roadway segments, truck traffic has increased at a greater rate than passenger vehicle traffic. Historic traffic volume data have shown that this is the case on sections of Interstate 80 in Luzerne County. In an effort to maintain the ability to accommodate an ever-increasing number of vehicles, state and local authorities have implemented a number of maintenance and improvement projects to alleviate problems with traffic congestion (SSES, 2006).

Columbia County is well-served by its existing roadways. The two primary east-west corridors are US Route 11 and Interstate 80, which travel through Columbia County's midsection. These primary roadways are intersected by several north-south corridors that provide immediate access to Bloomsburg and Berwick. Interstate 80 is a four-lane divided highway built to accommodate large volumes of passenger vehicles and motor freight. Since the mid-1970s, Columbia County's primary roadway network has experienced a substantial increase in traffic

volumes. In an effort to maintain the ability to accommodate an increasing number of vehicles, state and local authorities have implemented a number of maintenance and improvement projects (SSES, 2006).

2.5.2.10.4 Rail

According to PADOT, there are several railroads operating in Luzerne and/or Columbia Counties: Canadian Pacific Railway, Luzerne and Susquehanna Railroad Company, Norfolk Southern Railway Company, Reading Blue Mountain and Northern Railroad, the North Shore Railroad, and Steamtown USA (tourist). There are also several non-operator-owner lines in the county: Luzerne County Redevelopment Authority, National Park Service, and Pennsylvania Northeast Regional Railroad Authority (PADOT, 2008). The North Shore Railroad is located along US Route 11 and goes from the Norfolk Southern Railroad line in Northumberland, through Bloomsburg and Berwick, to Beach Haven (NSRR, 2008).

Norfolk Southern and the Canadian Pacific provide freight carrier rail services for many of the county's major manufacturing and distributing companies. The Reading and Northern provides several communities in the county with feeder service to larger carriers as well as the railroad operated by Luzerne County Rail Authority (LC, 2008).

2.5.2.10.5 Freight Carriers

There are 40 motor freight common carriers that serve Luzerne County (WBH, 2008).

2.5.2.10.6 Deep Water Ports

There are no deep water ports in Luzerne County or Columbia County.

2.5.2.11 References

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2.5.3 Historical Properties

2.5.3.1 Overview

Detailed archeological and historical surveys of the BBNPP site and associated onsite transmission corridors supporting BBNPP have been conducted. The cultural resources investigation consisted of Phase Ia reconnaissance, three separate Phase Ib surveys, and ~~surveys that were conducted~~ Phase II National Register site evaluations of the proposed project area that were conducted between June 2007 and November 2008. ~~The May 2010.~~ Phase Ia studies were performed to: 1) identify previously-recorded cultural resources (archaeological sites and architectural/historical resources) in the project vicinity; 2) evaluate the eligibility of architectural and historical resources in the project viewshed for listing in the National Register of Historic Places (NRHP); and 3) assess archaeological potential within the project footprint. A subsequent Phase Ib survey was conducted in portions of the project area characterized as having moderate to identify previously-recorded or surface-visible archeological resources and architectural resources, and high archaeological potential. The goals of the Phase Ib survey were to identify these areas with archeological unrecorded archeological resources, evaluate their potential that would require a Phase Ib survey. The Phase Ib eligibility for listing in the NRHP, reexamine known cultural resources (where appropriate), and provide recommendations on the need for further investigations. A supplemental architectural survey was conducted to identify subsurface archeological resources, record all known archeological and architectural resources in concurrently with Phase Ib archaeological studies. Phase II National Register site evaluations were conducted of seven potentially-eligible sites identified within the BBNPP project area that could not be avoided by proposed project area, and impacts. The purpose of the Phase II study was to evaluate the recorded resources NRHP eligibility for eligibility each of these sites and to the National Register of Historic Places; provide recommendations for further investigations.

There are two Areas ~~The Area~~ of Potential Effect (APE) for cultural resources that could potentially be affected by the proposed project. ~~The project was redefined during the course of the project due to selection of a preferred project alternative, project redesign, and proposed power block relocation (Figures 2.5-4 and 2.5-5).~~ Phase Ia archeological investigations were conducted in two stages (June 2007 and January 2008) and comprised of approximately 1,272 ac (515 ha) of proposed project development alternatives east and west of the North Branch of the Susquehanna River. Subsequent to completion of the June 2007 Phase Ia study, the west alternative ~~West Alternative~~ was selected as the preferred alternative and the project APE was modified to exclude all project localities east of the North Branch of the Susquehanna River. The APE for physical disturbance is approximately 630 ac (255 ha) ~~archaeological resources consists of the initial limits of physical disturbance.~~ Phase Ib survey ~~plus of approximately 263 ac (106 ha) from the supplemental survey.~~ 1,078 acres (436 hectares) west of the Susquehanna River and was based on river, representing the proposed location and extent of areas required for all project-related construction activities. ~~project-related construction activities, was conducted in three stages (e.g. Initial, Supplemental, and Second Supplemental Phase Ib surveys).~~ The APE for visual effects ~~the initial Phase Ib survey, conducted between May and June 2008, consisted of approximately 639 acres (259 hectares) (600 acres (243 hectares) initial survey plus 39 acres (16 hectares) supplemental survey).~~ The supplemental Phase Ib survey, performed between August and November 2008, included

approximately 263 acres (106 hectares) of new project areas adjacent to architectural resources includes Area 6 and the West Alternative. Phase II investigations of seven potentially-eligible archaeological sites (all identified during initial Phase I survey) occurred between July and November, 2009. A Second Supplemental Phase I survey, encompassing approximately 919 ac (372 ha) proposed 176 acres (71 hectares) of additional project footprint west of the Susquehanna River areas bordering previously surveyed localities, was conducted between April and extends approximately 0.5 mi (0.8 km) beyond May 2010, subsequent to the project boundary completion of Phase II testing.

The APE for visual effects to architectural and historical resources was defined as the project construction footprint plus the surrounding viewshed, extending at least 0.5 mi (0.8 km) beyond the project footprint.

2.5.3.2 Survey Methodologies

The Phase Ia and Ib survey methodologies were developed and conducted in accordance with Federal and State laws, regulations, and guidelines, including: Section 106 of the National Historic Preservation Act (USC, 2007), guidelines developed by the Advisory Council on Historic Preservation, the amended Procedures for the Protection of Historic and Cultural Properties as set forth in 36 CFR 800 (CFR, 2007a), the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (NPS, 1983), National Register Bulletin 15 - How to Apply the National Register Criteria for Evaluation (NPS, 1992a), National Register Bulletin 21 - Defining Boundaries for National Register Properties (NPS, 1992b), and guidelines of the Pennsylvania Historical and Museum Commission/Bureau for Historic Preservation (PHMC/BHP, 2001), State Historic Preservation Office (~~SHPO~~ SHPO).

2.5.3.3 Qualification of Surveyors

The Phase Ia cultural resource investigation included background research, ~~geomorphologic~~ geomorphological and archeological reconnaissance, and an architectural survey. Phase Ib studies consisted of archeological fieldwork (subsurface investigations or pedestrian surface survey) in portions of the project area with a moderate to high potential for archeological resources. In addition, further architectural and historic investigations were conducted to define and/or conclusively recommend the NRHP eligibility status of architectural resources. Phase II National Register Evaluations included site-specific archival research, fieldwork (shovel testing, test unit excavations, and, where appropriate, mechanical stripping of the plowzone) and laboratory analysis. The surveyors meet and exceed the professional qualifications as stipulated in 36 CFR Part 61 (CFR, 2007b).

2.5.3.4 Phase Ia Investigation

Phase Ia cultural resources investigations included a preliminary background research, a geomorphological and archeological reconnaissance, and an architectural survey (GAI, 2007) (~~GAI, 2008~~ 2008a). These studies were conducted in June 2007 and January 2008 and encompassed approximately 1,272 ac (515 ha):

- ◆ 408 ac (165 ha) ~~was within West Alternative comprising~~ two alternative sites west of the North Branch of the Susquehanna River and is referred (referred to as 1A and 1B (1C represented with 1C representing the two areas combined);
- ◆ a southeast alternative consisting of approximately 353 ac (143 ha) east of the Susquehanna River and,

- ◆ a 511 ac (207 ha) area (Areas 6, 7, 8 and Confers Lane Parcel) located primarily between the existing Susquehanna Steam Electric Station (SSES) Units 1 and 2 plant site and the west bank of the Susquehanna River (Figure 2.5-4).

For Phase Ia archeological resources the project APE consisted of the 1,272 ac (515 ha) proposed project footprint, representing the potential location and extent of areas required for project-related construction activities (Figure 2.5-4). The APE for initial survey of architectural resources included the approximately 919 ac (372 ha) proposed project footprint west of the Susquehanna River, in addition to the surrounding viewshed, extending approximately at least 0.5 mi (0.8 km) beyond the project footprint, as illustrated in Figure 2.5-4.

Background research was conducted to identify previously-recorded cultural resources located within the proposed project area and its vicinity in order to: 1) assess the project area's potential for unrecorded archeological resources; and, 2) provide a context for evaluating resources identified within the project APE. Examination of Pennsylvania Archeological Site Survey (PASS) files, historic structure files, National Register of Historic Places listings, and cultural resource reports was conducted at the PHMC/BHP in Harrisburg, PA. Historic maps of the project vicinity were also examined.

Phase Ia background research identified 24 previously-recorded archeological sites within 1.0 mi (1.6 km) of the project area and five architectural resources within a 0.5 mi (0.8 km) radius of the project. The archeological sites include 13 locations west of the river and 11 locations mapped to the east. Of the 24 previously-recorded sites, six sites (all prehistoric) are located within the Phase Ia study area and are situated on the low terrace/floodplain west of the river. These sites represent Late Archaic through Late Woodland prehistoric occupations. Four of these sites are had been recommended as NRHP eligible, one is ineligible was recommended Not Eligible and the eligibility of one site is was undetermined (Table 2.5-37 and Figure 2.5-6).

The five previously-recorded architectural resources identified within the project viewshed (an approximately 0.5 mi (0.8 km) radius of the project footprint) include the NRHP-eligible North Branch Pennsylvania Canal; the Union Reformed & Lutheran Church (Old River Church-NRHP eligibility undetermined); and three bridges (not eligible for NRHP listing) (Table 2.5-38). The North Branch Pennsylvania Canal extends through the project area on the floodplain/low terrace west of the river while the Union Reformed & Lutheran Church is situated in the footprint of the project's Southeast Alternative, east of the river (an area subsequently excluded from the proposed project).

The architectural and historical survey recorded 52 resources within the proposed project viewshed. Ten of these surveyed resources are were initially recommended eligible for NRHP listing (Table 2.5-39). One of ~~the~~ these ten eligible resources is a potential historic district (Wapwallopen Historic District) composed of ten individually-identified resources. ~~The Pennsylvania SHPO (PHMC/BHP) has requested. As requested by the PHMC/BHP (PHMC/BHP, 2008b),~~ Pennsylvania Historic Resource Survey (PHRS) forms for ~~these~~ the ten NRHP-eligible resources, resources recommended eligible to the NRHP, as well as for 12 additional resources recommended ineligible for NRHP listing ~~(PHMC/BHP, 2008b)~~. listing, have been submitted (GAI 2008a). The remaining 21 resources require no further study (Table 2.5-39). (Note that based on the results of subsequent research and PA SHPO review and comment, three of the ten resources initially recommended as NRHP eligible were subsequently determined Not Eligible to the NRHP (GAI, 2009a and PHMC/BHP, 2010a).)

Five of the original 52 surveyed architectural resources are located within the Phase Ia project study area west of the river, ~~including~~including three resources that ~~are~~were initially recommended ~~NRHP-eligible, NRHP-eligible~~; i.e., portions of the previously-recorded NRHP-eligible North Branch Pennsylvania Canal (~~GAI-10~~), (~~141673/GAI-10~~), the Canadian Pacific/ Bloomsburg Division of the Delaware, Lackawanna & Western Railway (~~GAI-11~~), (~~155053/GAI-11~~), and the Susquehanna and Tioga Turnpike (~~GAI-12~~), (~~155056/GAI-12~~) (Table 2.5-40 and Figure 2.5-7). (Note that based on further research and PA SHPO review and comment, (155053/GAI-11) and (155056/GAI-12) were subsequently determined Not Eligible to the NRHP (GAI, 2009a and PHMC/BHP, 2010a).)

Geomorphological and archeological reconnaissance of the project area was performed to identify surface-visible cultural resources, evaluate surface disturbances and landform age, assess the potential for deeply buried archeological sites, and refine preliminary estimates of archeological sensitivity derived from background research. The field reconnaissance included a walk-over of the project area and judgmental auger probing to evaluate soil profiles. A cursory inspection of the possible intake structure locations along the river bank was also performed.

The results of Phase Ia investigations indicated that undisturbed, relatively level, well-drained portions of the project area have a high to moderate archeological potential, requiring a subsequent Phase Ib archeological survey to identify archeological sites. Portions of the project characterized by wetlands or slopes in excess of 15% were considered to have a low archeological potential and would not require systematic testing during subsequent Phase Ib investigations. Disturbed localities were determined to have no archeological potential and were excluded from further investigation. Phase Ia reconnaissance of the 1,272 ac (515 ha) project APE identified 562 ac (228 ha) (44.2%) of high to moderate archeological potential, 446 ac (181 ha) (35.1%) of low archeological potential and 264 ac (107 ha) (20.7%) that had been physically disturbed (Table 2.5-36).

2.5.3.5 Phase Ib Investigation

A~~Initial~~ Phase Ib cultural resources investigation of the ~~630~~639 ac (~~255~~259 ha) BBNPP project area (Figure 2.5-5) was performed between May 2008 and July ~~2008~~, 2008 (GAI, 2008b). (Final calculation of the Switchyard 2 area, added during the course of initial Phase Ib fieldwork resulted in a change in project size from 630 acres/255 hectares (GAI, 2008b) to 639 acres/259 hectares (GAI, 2010a)). This study included an archaeological field survey and supplemental architectural and historical survey. Systematic Phase Ib archeological fieldwork was conducted on approximately 350 ac (142 ha) of the project area identified during the Phase Ia investigation as having moderate to high potential for containing archeological resources (Figure 2.5-8). Testing localities included uplands (311 ac (126 ha)) and low terrace/floodplain settings (39 ac (16 ha)). The remaining ~~260~~289 ac (~~106~~117 ha) of the project area were excluded from Phase Ib survey due to prior disturbances (115 ac (47 ha)) or to low archeological potential (slopes in excess of 15%, wetlands or recent ~~deposits~~deposits-~~174~~174 ac (~~67~~70 ha)).

In upland portions of the project area with a moderate to high archeological potential, the Phase Ib survey consisted of a pedestrian ground survey or systematic shovel testing to identify near-surface archeological sites. The pedestrian ground survey was conducted in approximately 96 ac (39 ha) of previously cultivated fields that had been recently plowed and disked to provide good ground surface visibility. Archaeologists systematically walked these areas along transects spaced at 16 ft (5 m) intervals. Diagnostic artifacts and a representative sample of non-diagnostic artifacts observed on the surface were plotted on project maps,

bagged, and provenienced according to appropriate surface collection unit. Judgmental shovel test pits were excavated in select localities within these fields to document soil stratigraphy and assess the presence of sub-plowzone cultural deposits.

Shovel testing was required in approximately 215 ac (87 ha) of upland fields and woodlands with poor ground surface visibility. Systematic shovel test pits (STPs) were excavated at 50 ft (15 m) intervals within transects spaced 50 ft (15 m) apart. Additional STPs were excavated in select areas to confirm the presence of cultural artifacts, disturbed soils or recent deposits. A total of 3,482 STPs were excavated in these upland settings. Excavated soils were screened through 0.25 in (0.6 cm) wire mesh for systematic artifact recovery.

Moderate to high potential portions of the project APE in low terrace/floodplain settings may contain both near-surface and deeply-buried archeological sites. Phone consultation with the Pennsylvania SHPO (PHMC/BHP) resulted in concurrence on restricting deep testing to assess the potential for deeply-buried archeological resources to those localities with proposed deep project impacts (i.e., Area 6 floodplain). Deep testing was not required in portions of the low terrace/floodplain with shallow proposed project impacts (i.e., Area 7 lay down area).

Low terrace/floodplain settings with proposed shallow project impacts were investigated by pedestrian survey or systematic shovel testing. Approximately 18 ac (7 ha) of recently plowed and disked low terrace/floodplain fields with good ground surface visibility were subject to pedestrian ground survey; judgmental STPs were excavated in select locations within these fields. Systematic shovel testing was conducted in approximately 13 ac (5 ha) of poor ground surface visibility in the shallow-impact, low terrace/floodplain settings. A total of 295 STPs were excavated in low terrace/floodplain portions of the project.

Deep testing (mechanical trenching, soil borings and 3x3 ft (1x1 m) test unit column samples) was conducted in one approximately 8 ac (3.2 ha) field (Area 6) with proposed deep project impacts. Eleven trenches (six with soil borings in their base) were mechanically excavated to expose soil stratigraphy and to permit an assessment of the locality's potential for deeply-buried cultural deposits. The first five trenches extended to a maximum depth of approximately 13 ft (4.0 m) or, in one trench, to bedrock (encountered at 3.9 ft (1.2 m) below surface). These trenches exposed an unanticipated 3.3 to 13.1 ft (1.0 to 4.0 m) thick surface fill deposit above natural soils. Because of the depth necessary to expose natural soils and evaluate the depth of Pleistocene deposits, a second set of six trenches was excavated to approximately 13 ft (4 m) and a drill rig was used to obtain a soil boring in the base of each trench. As documented in the soil borings, the natural soils underlying the surface fill deposit consisted of a single soil profile, Ab-(BE)-Bt(x)-BC, which had developed on an alluvial terrace (GW, 1982). No buried soils were observed below the surface of the terrace. Pleistocene deposits were not found in any of the cores. The depth to bedrock, encountered at the base of the soil borings, ranged from 19.4 ft (5.9 m) to 27.9 ft (8.5 m). Based on the results of phone consultation with the Pennsylvania SHPO (PHMC/BHP), natural soils below the surface fill were sampled with eight mechanically-excavated 1x1 m test unit column samples situated along a proposed 100 ft (30 m) wide right-of-way corridor across the field. Each unit was positioned along side of a mechanically-excavated trench. Within each test location, the surface fill deposit was mechanically removed as a single layer and the 3x3 ft (1x1 m) column sample was then mechanically-excavated in 8 in (20 cm) levels from the lower portion of the fill deposit to the BC horizon (GW, 1982) or bedrock (approximately 3 ft (1.0 m) of excavation). Soils from each level were hand-screened and recovered artifacts were bagged by provenience.

Prehistoric and historic artifacts recovered during the initial Phase Ib survey were bagged and labeled with appropriate provenience information. Testing locations were recorded on project maps and subsurface tests were backfilled upon completion. Identified archeological resources were recorded on standardized forms, plotted on maps, documented with photographs, and their locations were recorded using mapping grade Global Positioning System (GPS) equipment.

~~Based on preliminary field results,~~ In total, Phase Ib survey of the project area (defined as a ~~630639~~ 255 ~~(259~~ 259 ha) area west of the Susquehanna River) consisted of pedestrian ground survey of 114 ac (46 ha) and excavation of 3,777 STPs, eleven trenches and eight 3x3 ft (1x1 m) test units (column samples). The initial Phase Ib survey yielded ~~2,0472,167~~ 1,970 ~~(2,085~~ 2,085 historic artifacts and ~~7982~~ 7982 prehistoric artifacts) and resulted in the identification of eleven archeological sites (three prehistoric and eight historic) and ~~2625~~ 2625 prehistoric isolated finds, as well as dispersed historic/modern surface artifacts representing non-site field scatters. Figure 2.5-8 illustrates the location of identified archeological sites. Table 2.5-42 summarizes the eleven sites. Table 2.5-43 summarizes the ~~2625~~ 2625 isolated finds and both tables provide recommendations on potential NRHP eligibility for these resources.

~~Preliminary review of~~ Based on initial Phase Ib field data indicates that results and SHPO consultation (GAI, 2008b and PHMC/BHP, 2009a) seven of the eleven identified sites are were recommended as potentially eligible for listing in the NRHP. These include six historic period sites (Sites ~~2, 3, 4, 7,~~ 936LU279, 36LU280, 36LU281, 36LU283, 36LU285, and 10)36LU286) and one prehistoric site (Site ~~5),~~ 36LU288). All six potentially-eligible historic sites are located in upland settings within the West Alternative. The single potentially-eligible prehistoric site occupies a low terrace/floodplain setting in Area ~~7-7~~ 7-7 (GAI, 2008b).

~~Additional A Phase Ib cultural resource investigations were~~ II National Register Site Evaluation or site avoidance by proposed for a ~~235 ac (95 ha)~~ 235 ac (95 ha) upland project area, located adjacent to Area 6 and the Western Alternative. Of these ~~235 ac (95 ha),~~ 197 ac (80 ha) are considered to have moderate to high archeological potential, ~~30 ac (12 ha)~~ 30 ac (12 ha) have low archeological potential (slopes in excess construction was recommended for each of 15%) and ~~8 ac (3 ha)~~ 8 ac (3 ha) are characterized by disturbance/no archeological potential. Of the ~~197 ac (80 ha),~~ approximately 124 ac (50 ha) are in corn fields seven sites. The remaining four sites (~~36LU278, 36LU282, 36LU284~~ and 73 ac (29 ha) are typified by grass fields ~~36LU287~~ 36LU287) were recommended Not Eligible to the NRHP and woodlands; no further work was recommended at these sites.

Supplemental Phase Ib fieldwork, performed between August 5 and November 13, 2008, investigated approximately 115 acres (46.5 hectares) of moderate to high archaeological potential within the ~~262.6 acre (106.3 hectare)~~ 262.6 acre (106.3 hectare) project area. Phase Ib fieldwork consisted of the excavation of ~~1,937~~ 1,937 shovel test pits.

A supplemental architectural and historical survey, conducted in August 2008, in conjunction with the initial Phase Ib survey, collected additional information requested by the SHPO consultation for 22 of the 52 resources recorded during the previous architectural survey (PHMC/BHP, 2008b). Results of this investigation, presented in the Phase Ib Management Summary (GAI, 2008b) recommended that ten of the surveyed resources were NRHP-eligible. Additional research and fieldwork was conducted in 2009 at the request of the SHPO (GAI, 2009a). Based on the Phase Ib results of this study is pending. This consultation could result and on subsequent SHPO review and comments (PHMC/BHP, 2010a) three of the initial ten resources were determined Not Eligible. The remaining seven resources include three properties that have been determined NRHP eligible by PHMC/BHP North Branch

Pennsylvania Canal ((141673/GAI-10); Union Reformed and Lutheran Church (155049/GAI-03); and Woodcrest Farmstead (155052/GAI-04)), two properties recommended as NRHP-eligible House/Red Brick Studios ((155064/GAI-26) and Wapwallopen Historic District (155070/GAI-36 to GAI-45)), and two properties recommended as potentially-eligible Stone Arch Bridge ((155054/GAI-06) and North Market Street Bridge (155055/GAI-09)). These resources are described in changes to recommendations regarding the National Register the Phase I/II Technical Report (GAI, 2010a). Figure 2.5-7 illustrates the location of Historic Places eligibility these resources. Table 2.5-48 presents a summary of on-site these resources.

Pending SHPO concurrence on the remaining eligibility recommendations, an assessment of effects study is recommended for NRHP-eligible architectural and historical resources to evaluate physical impacts, as well as secondary effects from the proposed project.

2.5.3.6 Supplemental Phase Ib Investigation

Following completion of the initial Phase Ib survey, a Supplemental Phase Ib survey was conducted of approximately 263 acres (106-hectares) of new upland project areas located adjacent to Area 6 and the West Alternative (GAI, 2008c) (Figure 2.5-5). Supplemental Phase Ib field investigations were performed between August 5 and November 13, 2008. The Supplemental Phase Ib project area comprised seven lots—Lots 4, 64, 93F, 95, 96, 97/97C and 100—varying from large cultivated fields (e.g., Lot 100) to small residential parcels (e.g., Lots 96 and 97/97C). Based on refinements in assessments of archaeological potential, resulting from detailed field observations and results of a wetlands survey, the project area was concluded to contain approximately 115 acres (46.5 hectares) of moderate to high archaeological potential (GAI, 2008c). The remainder of the project area comprised areas of low archaeological potential (slopes in excess of 15 percent and wetlands) or disturbance/no archaeological potential.

The Supplemental Phase Ib survey was conducted within the moderate to high archaeological potential portions of the project area. Due to poor ground surface visibility throughout these localities, fieldwork consisted of systematic shovel testing. As previously cultivated fields (whether fallow or planted in corn) could not be plowed and disked, pedestrian ground survey of these areas was not possible. At the time of fieldwork, the majority of cultivated fields in the Supplemental project APE were planted in corn, which reached heights of 2.4 to 3.0 meters (8 to 10 feet). Accordingly, it was necessary to clear transects through the cornfields to permit access for shovel testing. Hand-clearing was attempted but when this was found to be infeasible, transects were cleared mechanically (using a bobcat with brush hog attachment). Cleared transects were spaced at approximately 15-meter (50-foot) intervals, averaged 1.5 meters (5 feet) in width, and extended for the length of the field. Following completion of clearing activities, shovel testing was conducted within these transects. Phase Ib fieldwork consisted of the excavation of 1,937 shovel test pits (GAI, 2008c). Sampling and reporting methodologies for supplemental Phase Ib investigations were the same as for initial Phase Ib investigations, described above (GAI, 2008b).

The Supplemental Phase Ib survey identified no archaeological sites or isolated finds within the project area. Shovel testing produced just four historic artifacts, all representing non-site field or roadway scatters. Based on these preliminary results, it is recommended that results and SHPO consultation (PHMC/BHP, 2009b) no further archaeological investigations of are required for the supplemental BBNPP project are be performed. area.

The Supplemental Phase Ib project area includes seven architectural and historical resources identified during previous architectural survey, two of which have been were initially

recommended as eligible for listing in the NRHP (Munford (the Stone Arch Bridge (155054/GAI-06) and Tuk, 2008); the Susquehanna and Tioga Turnpike (155056/GAI-12)) (GAI, 2008c). Based on subsequent architectural studies and SHPO review only one of these resources (155054/GAI-06) is currently recommended as potentially eligible for listing in the NRHP (GAI, 2009a and PHMC/BHP, 2010a). Proposed project impacts to this resource will be addressed by a Criteria of Effects Report to be submitted subsequent to receipt of SHPO comments on the Phase I/II Technical Report.

2.5.3.7 Phase II National Register Evaluations

Based on the results of initial Phase I survey and SHPO consultation, Phase II National Register Evaluation or site avoidance was recommended for seven potentially-eligible archaeological sites (GAI, 2008b and PHMC/BHP, 2009c). It was initially thought that potentially-eligible Site 36LU288 might be avoided by proposed project impacts.

Potentially NRHP-eligible Site 5 impacts may be avoided by proposed project activities. Avoidance measures for Site 5, 36LU288 developed in consultation with the PA SHPO, may include would have included placement of geotextile fabric and fill on the surface of the cultivated field within the site boundary prior to its use as a temporary laydown area, as well as periodic archaeological monitoring during installation and removal of the geotextile fabric and fill, or Phase II investigations may be performed instead, as described in the Phase II scope fill. Subsequently, it was determined that avoidance of work, to conclusively evaluate site eligibility. Upon completion of any Site 36LU288 was not feasible and Phase II investigations and assessment of effects, in consultation with the SHPO, BBNPP will identify measures to avoid, minimize, or mitigate any adverse effects to NRHP-eligible resources, per Section 106 of the National Historic Preservation Act (USC, 2007); this site were performed.

Phase II National Register Site Evaluations of seven sites (36LU279, 36LU280, 36LU281, 36LU283, 36LU285, 36LU286, and 36LU288) that could not be avoided by project impacts were conducted between July 5 and November 4, 2009, to conclusively evaluate site eligibility (GAI, 2010a). Of the seven sites, six were historic period sites and one (36LU288) was a prehistoric site. The Phase II study included site-specific archival research, fieldwork and laboratory analysis. Field methods included close-interval and/or judgmental shovel testing and test unit excavations. Sites located within cultivated fields were also subject to controlled surface collection and mechanical stripping of the plowzone within trenches. Figure 2.5-8 illustrates the location of Phase II sites. Table 2.5-46 summarizes the results of Phase II investigations at the seven sites and provides recommendations on NRHP eligibility and the need for further work.

Phase II investigations included the excavation of 80 test units and 1,169 shovel tests, as well as pedestrian survey of cultivated fields and mechanical stripping of the plowzone in trenches at four sites. This work produced 63,169 artifacts (62,841 historic specimens and 328 prehistoric lithics) and resulted in the documentation of 30 cultural features (GAI, 2010a).

Based on the results of the Phase II study, all seven sites are recommended as Not Eligible for listing in the NRHP. Based on this assessment and pending SHPO review and concurrence, proposed project impacts will constitute a "No Effect" to these sites. Accordingly, no further archaeological investigations are recommended for Sites 36LU279, 36LU280, 36LU281, 36LU283, 36LU285, 36LU286, and 36LU288. The results of this study have been provided in a Phase I/Phase II Technical Report (GAI, 2010a).

SHPO consultation on the Phase II study is pending. This consultation could result in changes to recommendations regarding the NRHP eligibility of these onsite resources.

Upon receipt of SHPO concurrence on NRHP eligibility recommendations for archaeological sites and architectural and historical resources, and completion of the assessment of effects study, in consultation with the SHPO, BBNPP will identify measures to avoid, minimize, or mitigate any adverse effects to NRHP-eligible resources, per Section 106 of the National Historic Preservation Act (USC, 2007).

2.5.3.8 Second Supplemental Phase Ib Investigation

Following the completion of the above Phase II study, a Second Supplemental Phase Ib survey was conducted of additional upland project areas associated with the proposed BBNPP Power Block Relocation (GAI, 2010b). The Upland Section of the Power Block Relocation area totaled approximately 215 acres (87 hectares) and encompassed the approximately 39-acre (15.8-hectare) previously-surveyed Switchyard 2 Parcel, which was excluded from further investigations. The Second Supplemental Phase Ib APE comprised approximately 176 acres (71-hectares) and consisted of 13 lots located adjacent to previously-surveyed parcels--Lots 54, 6, 6A, 6B, 7, 8, 31, 23, 0, 3, 41 and 93D, as well as the previously-surveyed Rail Spur Corridor which was reevaluated due to a redefinition of proposed project impacts (Figure 2.5-5). Second Supplemental Phase Ib field investigations were conducted between April 27 and May 23, 2010. The project APE included approximately 109.05 acres (44.1 hectares) of moderate to high archaeological potential. The remainder of the project APE comprised areas of low archaeological potential (slopes in excess of 15 percent or wetlands) or disturbance/no archaeological potential (Figure 2.5-8).

The Second Supplemental Phase Ib survey, consisting of pedestrian ground survey or systematic shovel testing to identify near-surface archaeological sites, was conducted within moderate to high archaeological potential portions of the project area. Pedestrian ground survey was performed within approximately 14.95 acres (6.05 hectares) of previously cultivated fields that had been plowed and disked in advance of fieldwork to provide good ground surface visibility. Shovel testing was conducted in approximately 94.1 acres (38.08 hectares) of upland fields and woodlands with poor ground surface visibility. A total of 1,358 STPs were excavated during the Second Supplemental Phase I study. Sampling and reporting methodologies for the Second Supplemental Phase Ib investigation were the same as for initial Phase Ib investigations, described above.

The Second Supplemental Phase Ib survey yielded 261 artifacts (246 historic artifacts and 15 prehistoric lithic artifacts) and resulted in the identification of two archaeological sites (prehistoric Site 36LU301 and historic period Site 36LU302) and one prehistoric isolated find (IF 28), as well as dispersed historic/modern surface artifacts representing non-site field scatters. Figure 2.5-8 illustrates the location of identified archaeological sites. Table 2.5-47 summarizes the identified cultural resources (archaeological sites and isolated find) and provides recommendations on potential NRHP eligibility for these resources (GAI, 2010b).

Based on Second Supplemental Phase Ib results, Site 36LU301 is recommended as potentially eligible for listing in the NRHP. Pending SHPO review and concurrence on eligibility recommendations, site avoidance or Phase II investigations are recommended for Site 36LU301. Site 36LU302 and IF 28 are recommended as Not Eligible to the NRHP. No further investigations are recommended for Site 36LU302 and IF 28. The results of this study have been provided in a Second Supplemental Phase Ib Addendum Report (GAI, 2010b).

SHPO consultation on results of the Second Supplemental Phase Ib survey is pending. This consultation could result in changes to recommendations regarding the NRHP eligibility of these onsite resources.

Pending concurrence from the PA SHPO, potentially NRHP-eligible Site 36LU301 may be avoided by proposed project activities. If required, avoidance measures for this site will be developed in consultation with the PA SHPO and are anticipated to be similar to those described above for Site 36LU288 (i.e., placement of geotextile fabric and fill, periodic archaeological monitoring, and removal of the geotextile fabric and fill). If avoidance measures are not feasible, Phase II investigations may be performed to conclusively evaluate site eligibility. Upon completion of any Phase II investigations, in consultation with the PA SHPO, BBNPP will identify measures to avoid, minimize, or mitigate adverse effects to NRHP-eligible resources, per Section 106 of the National Historic Preservation Act (USC, 2007).

Based on Phase Ib and Phase II assessments conducted to date, in conjunction with review of applicable state and federal guidelines, adverse impacts may occur to historic resources from proposed construction. Measures will be developed to limit impacts to historic resources during construction activities.

2.5.3.9 Consultation

The Pennsylvania Historical and Museum Commission/Bureau for Historic Preservation (PHMC/BHP) (SHPO) ~~had~~has been consulted throughout completion of the Phase Ia, Phase Ib, and ~~the~~Phase II investigations to ensure compliance with requirements. Initial consultation was initiated in a February 15, 2008, letter to the Pennsylvania SHPO requesting cultural resource information (UniStar, 2008a). A project review letter was received from the Pennsylvania SHPO on April 8, 2008 (PHMC/BHP, 2008a). The results of the Phase Ia studies were documented in June 2007 and February 2008 ~~reports-~~reports (GAI, 2007 and GAI, 2008a). On April 15, 2008 (UniStar, 2008b), these reports were submitted to the Pennsylvania SHPO for review and consultation under Section 106 of the National Historic Preservation Act. Comments on the Phase Ia reports were received from the Pennsylvania SHPO in a letter dated June 5, 2008 (PHMC/BHP, 2008b). The Pennsylvania SHPO ~~had been~~was consulted by phone conferencing during the course of Phase Ib fieldwork. ~~Consultation with the SHPO on the results of Phase Ib studies is pending.~~

Results of Phase Ib investigations were provided in a September 2008 Management Summary (GAI, 2008b) and results of Supplemental Phase Ib studies were presented in a November 2008 Management Summary (GAI, 2008c), both of which were submitted to the SHPO for review and consultation. The SHPO provided comments on Phase Ib architectural investigation in an October 28, 2008 letter (PHMC/BHP, 2008c). Comments on the initial Phase Ib archaeological study were received from the SHPO in a letter dated March 2, 2009 (PHMC/BHP, 2009a). The SHPO commented on Supplemental Phase Ib cultural resources investigations in a March 23, 2009 letter (PHMC/BHP, 2009b). A scope of work for Phase II National Register Site Evaluations (seven potentially-eligible sites) and an Assessment of Effects for Historic Resources (ten NRHP-eligible resources), dated May 29, 2009, was submitted to the SHPO for review and comment. SHPO concurrence on this scope of work was received in a June 11, 2009 review letter (PHMC/BHP, 2009c). The SHPO was consulted to develop appropriate avoidance measures for one potentially-eligible site (Site 36LU288) for which avoidance was initially considered. Consultation with the SHPO continued during the course of Phase II investigations. Results of Phase II National Register Site Evaluations are presented in a Phase I/II Technical Report, dated June 2, 2010 (GAI, 2010a). Consultation with the SHPO on the results of Phase II investigations is pending. Results of the Second Supplemental Phase Ib study are

provided in a October 8, 2010, Addendum Report (GAI, 2010b) Consultation with the SHPO on the Second Supplemental Phase Ib results is pending.

Consultation with potentially interested Native American tribes is ongoing. Consultation was initiated in a June 10, 2008 letter to the following eight groups: Absentee-Shawnee Tribe of Oklahoma; Delaware Nation, Oklahoma; Eastern Shawnee Tribe of Oklahoma; Oneida Indian Nation; Oneida Nation of Wisconsin; Shawnee Tribe (of Oklahoma); St. Regis Mohawk Tribe; and Tuscarora Nation (UniStar, 2008c). One response has been received to date--a June 19, 2008, review letter from the Oneida Indian Nation indicating that they have no culturally significant resources within the project area (Oneida Indian Nation, 2008).

Information from the tribal consultation could influence the National Register of Historic Places status of any of the recorded resources.

~~In addition, consultation with potentially interested Native American tribes is pending. Information from the tribal consultation could influence the National Register of Historic Places status of any of the recorded resources. As project design and layout are finalized, any additions to the APE would be surveyed and evaluated for potential impacts to historic properties in consultation with the Pennsylvania SHPO, prior to activities taking place in the additional APE.~~

2.5.3.10 Site National Register Eligibility

Table 2.5-45 lists the seven archaeological sites determined potentially-eligible to the NRHP based on initial Phase Ib results and SHPO review. Table 2.5-46 lists summarizes the results of Phase II National Register Site Evaluations and NRHP eligibility recommendations for each of these seven sites. Table 2.5-47 lists the single site recommended as potentially eligible archeological sites to the NRHP based on results of the Second Supplemental Phase Ib survey. Table 2.5-48 summarizes the seven eligible or potentially eligible architectural and historical resources identified in the project viewshed. Table 2.5-50 lists the two NRHP-eligible or potentially eligible architectural resources located within the Phase Ib project APE's footprint. These tables are based on the results of architectural survey and survey, Phase Ib archeological investigations. To date, evaluations of NRHP-eligibility for archeological sites have not been reviewed by the Pennsylvania SHPO (PHMC/BHP). Following archeological investigations, Pennsylvania SHPO (PHMC/BHP) concurrence on Phase Ib NRHP eligibility recommendations, and the results of Phase II National Register Site Evaluations, SHPO concurrence on NRHP recommendations, the results of Phase II archeological investigations will be conducted for potentially eligible archeological sites that cannot be and Second Supplemental Phase Ib studies is pending. Upon concurrence from the SHPO on the potential eligibility of Site 36LU301, this site may be avoided by project construction or a Phase II National Register Site Evaluation of the site may be conducted in order to conclusively determine their eligibility for listing on the NRHP. its NRHP eligibility. Consultation with the Pennsylvania SHPO will continue throughout Phase II the course of subsequent cultural resource studies.

2.5.3.11 Offsite National Register Eligibility

Research was conducted to identify previously recorded cultural resources located within 10 mi (16 km) of the proposed project site that are listed in the National Register of Historic Places; that have been determined eligible or determined potentially eligible for listing on the National Register of Historic Places; that have not been evaluated for National Register of Historic Places listing; and/or that are listed in the Luzerne County or Columbia County registers or inventories. Research was conducted at the Pennsylvania Historical and Museum

Commission/Bureau for Historic Preservation (PHMC/BHP) in Harrisburg, and through the PHMC/BHP's on-line CRGIS data base (PHMC/BHP, 2001).

Table 2.5-53 through Table 2.5-58 identify the 723 previously recorded cultural resources within a 10 mi (16 km) radius of the proposed project APE. This number includes historic districts, buildings, sites, bridges, and other structures. Resource types range from historic districts with numerous contributing resources to archeological sites and individual architectural features. The resources are located in the Pennsylvania counties of Luzerne, Columbia, and Schuylkill.

Of the 723 previously-recorded cultural resources, seven were listed on the NRHP and 51 were eligible for listing on the NRHP. Most of the remaining resources were ineligible (126) or undetermined (494). As detailed in Table 2.5-53 through Table 2.5-58, an additional 45 resources were identified as unmapped.

As summarized in Table 2.5-51 and Table 2.5-52, the NRHP lists a total of 32 cultural resources within Luzerne County and 30 cultural resources within Columbia County (NPS, 2008). Collectively these historic resources encompass town and county buildings, churches, colonial homes, bridges (including several covered bridges), and districts.

In addition to these previously-recorded resources, the Phase 1a and 1b architectural surveys identified 52 architectural and historic resources within the project viewshed (Table 2.5-39). Ten Based on the results of supplemental architectural research and fieldwork and subsequent SHPO review and comment, seven of these resources have either been determined NRHP eligible by the SHPO or are recommended as eligible or potentially-eligible for listing on the NRHP. SHPO concurrence on these eligibility evaluations is pending. NRHP (GAI, 2009a and PHMC/BHP, 2010a). Following SHPO concurrence, an assessment of effects to NRHP-eligible architectural and historical resources will be conducted.

2.5.3.12 References

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PHMC/BHP, 2008b. Letter from Doug McLearn (PHMC/BHP) to John Price (UniStar), NRC: Proposed Bell Bend Nuclear Power Plant, salem Township, Luzerne County, Pennsylvania, Phase Ia Cultural resources Survey, June 5, 2008.

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2.5.4 Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (EO, 1994), directs Federal agencies to identify and address, as appropriate, disproportionately high and adverse health or environmental effects of their programs, policies, and activities on minority populations and low-income populations. Environmental justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (EPA, 2007). The Council on Environmental Quality (CEQ) has provided guidance for addressing environmental justice (CEQ, 1997). NUREG-1555, Section 2.5.4 (NRC, 1999), the Nuclear Regulatory Commission (NRC) Policy Statement on the treatment of environmental justice in licensing matters (FR, 2004), and the NRC Office Instruction LIC-203, Revision 1, regarding procedural guidance for preparing environmental assessments (NRC, 2004) were used to develop the following analysis. Project impacts are discussed in Chapter 4 and Chapter 5 for any minority or low-income populations identified in this section.

Similar to Section 2.5.1 and Section 2.5.2, this section describes the minority and low income populations residing within a 50 mi (80 km) comparative geographic area and the two-county region of influence (ROI) that includes Luzerne County and Columbia County. The 50 mi (80

km) comparative geographic area was selected based upon the guidance provided by NUREG-1555 (NRC, 1999) and was established by using the Bell Bend Nuclear Power Plant (BBNPP) site as the center point and drawing a 50 mi (80 km) radius circle around the BBNPP site. This area only includes portions of the Commonwealth of Pennsylvania.

The region of influence (ROI) includes Luzerne County and Columbia County in northeastern Pennsylvania. Potential socioeconomic impacts, if any, arising from the proposed plant are likely to be confined to these two counties because a majority of the existing workforce for Susquehanna Steam Electric Station (SSES) Units 1 and 2 reside in these counties and it is assumed that the potential in-migrating construction and operational workforces for BBNPP are most likely to reside in this same two-county ROI. More than 87% of the current workforce at SSES Units 1 and 2 resides in Luzerne County or Columbia County. Of the 1,247 employees at SSES Units 1 and 2 in June 2007, approximately 528 (42.3%) of the workers had a home address in Luzerne County and approximately 559 (44.8%) of these workers had a home address in Columbia County.

2.5.4.1 Methodology to Identify and Locate Minority and Low Income Populations

Using ArcView® GIS software, U.S. Census Bureau's 2000 census data (USCB, 2000a; USCB, 2000b), all census block groups within a 50 mi (80 km) radius were identified. A census block group was included in the 50 mi comparative geographic area if its boundaries were fully contained in the area, or if any part of the census block group was contained in the area. The ArcView® GIS software and U.S. Census Bureau's 2000 census data were then used to determine the minority and low-income characteristics, by census block group, within 50 mi (80 km) of the BBNPP site and within each county.

As shown in Table 2.5-60, the 50 mi (80 km) radius contains a total of ~~1,483,463~~ 1,463 census block groups. Within the 50 mi (80 km) radius, there are 22 Pennsylvania counties within the region of interest. counties.

Within the ROI, there are a total of 369 census block groups. Luzerne County has a total of 314 census block groups and Columbia County has 55 census block groups.

2.5.4.1.1 Minority Populations

A "minority" racial population is defined as: American Indian or Alaskan Native; Asian, Native Hawaiian, or other Pacific Islander; Black (African-American) races; and multi-racial, or "some other race" (NRC, 2004). The racial population is expressed in terms of the number and/or percentage of people that are minorities in an area. The sum of these racial minority populations is referred to, within this section, as the aggregate racial minority population. Persons of Hispanic/Latino origin are ~~the~~ an ethnic minority, may be of any race including the identified racial populations, and thus are identified as a separate subcategory.

The NRC guidance indicates that a minority population exists if either of the following two criteria is met:

1. The minority population of the census block group or environmental impact area (in this case the 50 mi (80 km) comparative geographic area) exceeds 50%; or
2. The minority population percentage of the environmental impact area is significantly greater (typically at least 20 percentage points) than the minority population percentage in the geographic area chosen for comparative analysis (in this case the 50-mile comparative geographic area).

For each of the ~~1,483~~1,463 census block groups within the 50 mi (80 km) radius, the percent of the census block group's population represented by each minority classification (each race, aggregate minority population, and Hispanic/Latino origin) was calculated and compared to the two criteria listed above. If any census block group minority percentage exceeded 50%, then the block group was identified as containing a minority population. If any census block group percentage exceeded the applicable percentage in the 50 mi (80 km) geographical area by more than 20 percentage points, then the census block group was identified as containing a minority population.

Table 2.5-60 and Figure 2.5-9 through Figure 2.5-13 identify the various minority block groups. Within the 50 mi (80 km) comparative geographic area there are a total of ~~126~~40 instances where a racial minority population within a census block group exceeds the "20 percentage points" or the "50%" criteria; 63 census block groups where aggregate (total) racial minority populations meet either criteria; and 34 census block groups that are classified/classify as having minority populations: ethnic Hispanic/Latino.

There are no Native American tribal lands within 50 mi (80 km) of SSES (NRC, 2008). PPL Susquehanna's community outreach has identified small yet growing Hispanic populations in the Hazleton, Bethlehem, and Berwick areas. Consultation about the Phase I cultural resource surveys is pending with Native American tribes. Additional consultation will be conducted with the SHPO during Phase II investigations.

Luzerne County and Columbia County host relatively small numbers of migrant workers. According to the 2002 Census of Agriculture estimates (USDA, 2002), there were 5 farms with hired migrant farm workers in Luzerne County, and there were 8 farms in Columbia County. Another potential indicator of migrant or transient workers is the number of workers that were employed for less than 150 days on area farms. In 2002, 409 workers were employed less than 150 days on 59 farms in Luzerne County and 1,408 were employed on 196 farms in Columbia County.

Within the ROI, there are two state prisons and two county prisons. Both state institutions are located within Luzerne County. The State Correctional Institution (SCI) Retreat was found to be the facility nearest the BBNPP site, approximately 8 mi (13 km) to the north. Of the 889 inmates housed there in 2007, approximately 40.0% were white, 47.1% black and 12.3% Hispanic. The SCI Dallas prison also located in Luzerne County is about 20 mi (32 km) to the northwest of the BBNPP site. Its inmate population in 2007 was approximately 2,090 individuals. Of these, 32.2% were white, 55.6% were black and 11.6% were Hispanic. The Pennsylvania Department of Corrections state-wide average distribution of inmates by ethnic group as of year end 2007 was 38.2% white, 50.0% black and 11.1% Hispanic (PA, 2008a). Among these facilities, the SCI Dallas Prison had slightly more black inmates than either the SCI Retreat or the PA State average. The SCI retreat contained slightly fewer black inmates than the state average. Based on these statistics, there does not appear to be a disproportionate distribution among minority classes in state prisons nearest the BBNPP site compared to similar populations found across the State.

2.5.4.1.2 Low Income Populations

One of the common means of tracking income levels is by total income for a household, rather than by the total number of people in an area (as was done for minority populations, above). The Census Bureau's definition of a low income household is based on governmental statistical poverty thresholds. For the purposes of conducting this analysis, a block group is considered to be low income if either of the following two criteria are met:

1. The number of low income households in the census block group or the environmental impact site (in this case the 50 mi (80 km) geographic area) exceeds 50%; or
2. The percentage of households below the poverty level in an environmental impact area is significantly greater (typically at least 20 percentage points) than the low income population percentage in the geographic area chosen for comparative analysis (in this case, the 50 mi (80 km) comparative geographic area).

As determined by the 2000 Census survey (USCB, 2000b), low income households in each census block group were divided by the total households for that census block group to obtain the percentage of low income households per block group. If any census block group low income percentage exceeded 50%, then the block group was identified as containing a low income population. If any census block group percentage exceeded the applicable percentage in the geographical area by more than 20 percentage points, then the census block group was identified as containing a low income population.

Table 2.5-60 and Table 2.5-63 present low income census block group information, and Figure 2.5-14 shows the locations of the low income block groups. Within the 50 mi (80 km) comparative geographic area there are a total of ~~53~~51 census block groups that are classified as having low income populations. There are 13 census blocks located in Luzerne County, ~~13~~12 located in Lehigh County, 9 located in Lycoming County, and the remainder located throughout 6 counties.

2.5.4.2 Analysis

2.5.4.2.1 Minority Populations

50 mi (80 km) Comparative Geographic Area

50 mi (80 km) Comparative Geographic Area

Table 2.5-61 summarizes minority populations by the portion of the state of Pennsylvania located within the 50 mi (80 km) radius of the site. There are ~~19~~ census block groups within Based on the 50 mi (80 km) radius that have an African-American race population that meets at least one of the two criteria defined as a minority population; 1 of the census block groups is defined as Asian; 19 census block groups as "Some Other Race;" and 16 census block groups as Hispanic. "20 percentage points" or the "exceeded 50%" criteria, no American Indian or Alaskan Native, Native Hawaiian or other Pacific Islander, or multi-racial minority populations exist in the 50 mi (80 km) radius comparative geographic area.

No census blocks within Within the 50 mi (80 km) radius had American Indian or Alaskan Native; Asian; Native Hawaiian or other Pacific Islander; or multi-racial minority radius, 19 census block groups have African-American racial populations that exceeded the State average by meet at least one of the "20 percentage points" criterion; two criteria that define a minority population, 21 census block groups have "Some Other Race," 63 census block groups have total (aggregate) races that meet the criteria, and 34 census block groups have Hispanic or Latino ethnic populations that meet the criteria.

As shown in All of the Figure 2.5-9, 19 census block groups within 19 African-American racial minority populations in the 50 mi (80 km) radius have African-American minority populations that exceed the State average by 20% or more. comparative geographic area meet the 20 percentage point criterion and none meets the 50% criterion. As shown in Figure 2.5-9 Of these 19 census blocks, 8, of these 19 census block groups, eight are located in Lycoming

~~County; 4~~County, four are located in Luzerne County; ~~2-two~~ each are located in each of Schuylkill ~~Union~~ and ~~Union~~Schuylkill counties; and ~~1-one~~ each is located in each of Lehigh, Monroe, and Northumberland counties. All ~~19~~ of these census blocks meets the 20% criterion; none meet the 50% criterion.

~~There is 1 census block group that meets the criteria of being an Asian minority; this census block is in Lehigh County and meets the 20% criterion. Figure 2.5-10 presents this information and shows the locations of Asian minority populations.~~

~~There are 19As shown in Table 2.5-60 and Figure 2.5-11, of the 21 census block groups of persons that are "Somehave "Some Other-Race" that meet the criteria; Race" minority populations, all of those census block groups them are located in Lehigh County and meet the 20% 20 percentage point criterion. None meet the 50% criterion.~~

~~Figure 2.5-11 presents this information and shows the locations of Other Minority Populations.~~

~~The aggregate (i.e., total) A total of 8763 census block groups within the 50 mi (80 km) radius are defined as having aggregate (i.e., total) racial minority populations. The aggregate racial minority populations are shown on (Figure 2.5-11. Of these 87 census blocks, 54 are), with 39 located in Lehigh County; 8 are located in Lycoming County; 64 each are located in Lackawanna and Monroe counties; 5 are located in Luzerne County; counties; 2 each are located in Northumberland, Monroe, Schuylkill, and Union counties; and 1 each are is located in BerksNorthumberland and Wayne counties. Eight Of those, seven census block groups in Lehigh County, two in Luzerne County, and one in Lycoming County meetsmeet the 50% criterion. All of the other 7663 census block groups meet the 20% 20 percentage point criterion.~~

~~There As shown in Figure 2.5-12, there are 1634 census block groups that have a population of persons of Hispanic origin. Hispanic populations within the 50 mi (80 km) of the BBNPP site are primarily radius, all in Lehigh County. County, Figure 2.5-13 locates the census block groups with significant Hispanic that have Hispanic or Latino ethnic minority populations. All Eight of these census block groups meet the 20% 50 percentage point criterion; none the remaining 26 only meet the 50% 20% criterion.~~

Two-County Region of Influence

Two-County Region of Influence

As shown in Table 2.5-62, (USCB, 2000c) (USCB, 2000d) (USCB, 2000e) (USCB, 2000f) (USCB, 2006a) (USCB, 2006b) (USCB, 2006c), overall the 2006 census data shows that only 5.2% of the population in Luzerne County was minorities, more than found in Columbia County (3.0%) but significantly less than the 16.2% of the Commonwealth of Pennsylvania population that was comprised of minorities. African-Americans made up the greatest proportion of these minority populations, comprising 2.4% of the total population in Luzerne County. In comparison, African-Americans comprised 10.4% of the total Commonwealth of Pennsylvania population and Asians comprised 2.3% of the total state population.

As described above, of the 314 total census block groups in Luzerne County, 4 are defined as being African-American and 54 have aggregate racial minority populations. As shown in Figure 2.5-9, these African-American census block groups are located in the Wilkes-Barre and Nanticoke areas. All of the African-American census block groups and three of the aggregate

racial minority populations meet the 20% criterion. The remaining two aggregate (i.e., total) minority population census block groups meet the 50% criterion.

None of the 55 census block groups in Columbia County is defined as meeting the definition of having a racial minority or Hispanic/Latino ethnic minority population, or having an aggregate (i.e., total) minority population.

2.5.4.2.2 Low Income Populations

50 mi (80 km) Comparative Geographic Area

50 mi (80 km) Comparative Geographic Area

As shown in Table 2.5-61, there are 51 census block groups that exceed the 50 mi (80 km) radius average number of low-income households by 20 percentage points or more.

~~As shown in Figure 2.5-13, there are very few concentrations of low income populations within 50 mi (80 km) of the site. Figure 2.5-14 shows the locations of low income census block groups within a 50 mi (80 km) radius of the BBNPP site. There are 53 census block groups that exceed the 50 mi (80 km) radius' average number of low income households by 20 percentage points or more. Of those 53 51 census block groups, 13 are located in each of Lehigh and Luzerne counties, Luzerne County, 12 are located in Lehigh County, 9 are located in Lycoming County, 6 are located in Lackawanna County, 54 are in Northumberland County, 3 are in Columbia County, 2 are in Schuylkill County, and 1 is located in Berks and Union counties. Of the total census block groups, 87 meet the 50% criterion and 4544 meet the 20% 20 percentage point criterion.~~

Two-County Region of Influence

Two-County Region of Influence

As shown in Table 2.5-64 (USCB, 2000g) (USCB, 2000h) (USCB, 2000i) (USCB, 2000j) (USCB, 2006d) (USCB, 2006e) (USCB, 2006f) (USCB, 2008a) (USCB, 2008b) (USCB, 2008c) (USCB, 2008d) (USCB, 2008e) (USCB, 2008f) (USCB, 2008g), overall the 2006 census data shows that 13.1% of individuals in Luzerne County lived below the U.S. Census Bureau's poverty level which is higher than the 12.1% of individuals in the Commonwealth of Pennsylvania and Columbia County (10.7%). There are 13 low-income census block groups in Luzerne County, out of a total of 314 census block groups located there. As shown in Figure 2.5-14, these low-income census block groups are located in the Wilkes-Barre, Nanticoke, Pittston, and Hazleton areas. Of these, 12 census block groups meet the 20% criterion and 1 meets the 50% criterion.

~~There is only 3 are three~~ low-income census block group groups in Columbia County, out of a total of 55 census block groups located there. As shown in Figure 2.5-14, these low-income census block groups are located in the west Berwick and Bloomsburg areas. Of these, 1 census block group meets the 20% criterion and 2 meet the 50% criterion.

2.5.4.3 Subsistence Uses

Subsistence is the use of natural resources as food for consumption and for ceremonial and traditional cultural purposes. Often these types of activities are discussed for minority populations, but sometimes also for low income populations. Subsistence information is often difficult to collect, partially because it is relatively site specific and because it is difficult to differentiate between subsistence uses and recreational uses of natural resources. Often, a number of different informational sources have to be relied upon that collect data via different

methods, for different classifications of groups, and for differing types of uses. Thus, it is not possible to present this information for the 50 mi (80 km) and ROI study areas that have been used in previous sections. Common major classifications of subsistence uses include gathering plants for consumption, for medicinal purposes, and use in ceremonial activities; fishing; ~~hunting~~; and ~~hunting~~-subsistence farming. These activities are in addition to or replace portions of the foods that might be bought from businesses, and thus can represent reduced costs of living. They also often represent an important part of the cultural identity or lifestyle of the participants. This section presents the subsistence/recreational information that is available from a variety of sources obtained through an internet search.

None of the BBNPP site is currently developed. For safety and security reasons the general public is not allowed uncontrolled access to the BBNPP site. Thus, no ceremonial or subsistence gathering of culturally significant plants, berries, or other vegetation occurs on the site.

2.5.4.3.1 Plant Gathering

Although no information could be found, it is assumed that collection of plants for ceremonial and food purposes (i.e., culturally significant plants, berries, or other vegetation) could be occurring in the two-county region of influence. Again, minority and low-income populations might be conducting these collection activities at a greater frequency, or could be harvesting greater quantities of plants, than the general population.

2.5.4.3.2 Hunting

As stated in Section 2.4.1.2.1 and Section 4.3.1.2, white-tail deer, turkey, and waterfowl populations are abundant throughout Pennsylvania and on or near the BBNPP site.

Prior to 2004, the Pennsylvania Game Commission (PGC) recorded deer harvests by county. However, since then, wildlife management units (WMUs) have been established and deer harvest levels are now tracked by those WMUs. Thus, deer harvest levels cannot be compared between these time periods. Luzerne County is now included, along with other counties, almost equally in WMUs 3B, 3D, 4C, and 4E. Columbia County is now included, along with other counties, in WMUs 4C and 4E. As shown in Table 2.5-65 (PGC, 2005) (PGC, 2006) (PGC, 2008), deer harvest levels have generally been decreasing from 2004 through the 2007-08 period, from about 66,700 to 52,300. As shown in Table 2.5-66 (PGC, 2003a) (PGC, 2003b) (PGC, 2003c) (PGC, 2003d) (PGC, 2003e) (PGC, 2003f) (PGC, 2003g) (PGC, 2003h) (PGC, 2003i) (PGC, 2003j) (PGC, 2003k) (PGC, 2003l) (PGC, 2003m) (PGC, 2003n) (PGC, 2003o) (PGC, 2004a) (PGC, 2004b) (PGC, 2004c), within the two-county study area deer harvests generally increased from 1998 through 2001, and then declined through 2003. There were over 12,700 deer harvested in 1998, up to almost 19,400 in 2001, and then down to about 17,600 in 2003. These populations represent a valuable resource for hunters. Harvest levels were somewhat to moderately greater in Luzerne County than in Columbia County. While hunting for deer and waterfowl occurs in the ROI, no hunting is allowed on the BBNPP site.

Like deer hunting, spring and fall turkey hunting also represent relatively important parts of the hunting experiences in this part of Pennsylvania. As shown in Table 2.5-67 (PGC, 2003p) (PGC, 2003q) (PGC, 2003r) (PGC, 2003s), harvest levels varied significantly depending upon the year, from a low of about 14,900 turkeys harvested in 2001 to a high of about 21,600 in 2002.

As shown in Table 2.5-68 (PGC, 2003t) (PGC, 2003u) (PGC, 2003v) (PGC, 2003w) (PGC, 2003x) (PGC, 2004d) (PGC, 2007b), black bear harvests were small in the two-county area, ranging from a low of 34 bear in 1999 to a maximum of 145 bear in 2003. Yearly variations in bear

harvest levels did not follow any particular pattern. The vast majority of this harvesting occurred in Luzerne County during any given year.

Similar to black bear harvests, beaver harvests from trapping represent a small part of the recreation occurring in the study area. As shown in Table 2.5-69 (PGC, 2003y), within the two-county study area, beaver harvests ranged from a low of 122 in 1993 to a high of 407 in 1997. The vast majority of this harvesting occurred in Luzerne County during any given year.

Pheasants can be hunted statewide, but the PGC also conducts specialized youth pheasant hunt stocking as a means of providing hunt training and harvesting opportunities for youth. To this end, in 2007 the state stocked pheasants in Luzerne County in state game lands area (SGL) 187, located south of Mt. Top about 2 mi (1.2 km) west of SR 437. It also stocked pheasants in Columbia County in SGL 58, located about 4 mi (2.4 km) south of Mainville on SR 339, and in SGL 226, located in Madison Township about 2 mi (1.2 km) west of Millville (PGC, 2007a).

2.5.4.3.3 Fishing

Within Luzerne County, primary waterbodies used to harvest fish include Harris Pond, Lily Lake, Mountain Springs Lake, Frances Slocum Lake, Frances E. Walter Reservoir, Moon Lake, Lake Frances, Nescopeck Creek, Lake Jean, and the Susquehanna River (PFBC, 2008b). These fishing opportunities are described in greater detail, below:

- ◆ Harris Pond - a 30 ac (12 ha) impoundment managed by the Pennsylvania Fish and Boat Commission (PFBC) that provides public fishing and boating opportunities, including fishing for largemouth bass, black crappie, bluegill, sunfish (i.e., pumpkinseed), and chain pickerel.
- ◆ Lily Lake - a 160 ac (65 ha) impoundment that is also managed by the PFBC to provide public fishing and boating opportunities, including fishing for largemouth bass, northern pike, rainbow trout, black crappie, yellow perch, bluegill, sunfish (i.e., pumpkinseed), brown bullhead, and chain pickerel. The lake is stocked with trout and northern pike fingerlings to enhance those fish stocks.
- ◆ Mountain Springs Lake - a 40 ac (16 ha) impoundment, but has been drawn down and will remain so until the dam is rebuilt. The lake is managed by the PFBC to provide public warmwater fishing and boating opportunities.
- ◆ Frances Slocum Lake - an 165 ac (67 ha) impoundment that is managed by the PFBC and provides year-around public fishing and boating opportunities, including fishing for largemouth bass, brown bullhead, yellow bullhead, bluegill, sunfish (i.e., pumpkinseed), black crappie, muskellunge, chain pickerel, walleye, yellow perch, and brook and rainbow trout. The lake is stocked with brook and rainbow trout on a regular basis.
- ◆ Frances E. Walter Reservoir - an 80 ac (32 ha) reservoir managed by the U.S. Army Corps of Engineers and provides public access for fishing.
- ◆ Moon Lake - a 48 ac (19 ha) lake owned and operated by Luzerne County that provides public fishing opportunities during the summer.
- ◆ Lake Frances - a 9 acre (4 ha) lake that provides trout, bass, and panfish angling opportunities. The PFBC stocks the lake.

- ◆ Nescopeck Creek - has 6 mi (10 km) of high-quality cold water fishing for brown trout and native brook trout. The PFBC stocks the creek.
- ◆ Lake Jean - a 245 ac (99 ha) lake that is part of Ricketts Glen State Park and provides public fishing access for warmwater game fisheries, panfish, and trout. The 13,050 ac (5,281 ha) park is located in Luzerne, Sullivan, and Columbia counties.
- ◆ Susquehanna River - the north branch of the river flows near the SSES site, and overall is 444 mi (715 km) long. Depending on the part of the river that one is fishing, it has muskellunge, northern pike, walleye, yellow perch, largemouth bass, smallmouth bass, native brook trout, striped bass, American shad, herring, catfish, carp, and other fisheries in it (PFBC, 2008c) (MDNR, 2008).

Within Columbia County, Briar Creek Lake is identified as the primary water body used to harvest fish. It is a 51 ac (21 ha) impoundment managed by the PFBC that provides public fishing and boating opportunities, including fishing for largemouth bass and rainbow trout. The lake is stocked with trout to enhance that fishery (PFBC, 2008a).

2.5.4.3.4 Agriculture

Subsistence farming primarily refers to self-sufficient farming in which producers grow only enough food to feed their family rather than farming for commercial ventures. For purposes of this evaluation, it was assumed that the distribution of farms among minority groups and according to farm size and income may provide some insights as to the relative importance of subsistence farming.

According to the Pennsylvania Farm Link, minority farm operators accounted for only 2.5% of the total farm "operators" in Pennsylvania in 1997 (PA Farm Link, 2009). Fewer than 600 Pennsylvania state farmers, or one percent, are members of minority groups (CRPA, 2004). The term operator designates a person who operates a farm, either doing the work or making day-to-day decisions about such things as planting, harvesting, feeding, and marketing. The operator may be the owner, a member of the owner's household, a hired manager, a tenant, a renter, or a sharecropper. If a person rents land to others or has land worked on by others, he/she is considered the operator only of the land which is retained for his/her own operation (USDA, 2002b).

In 2002, Luzerne County had a total of 548 farms with 809 operators. Of the total number of operators, 776 were white; two were black or African American; two were American Indian or Alaska Natives; two were of Hispanic descent; and three were more than one race. No operators were of Asian, Native Hawaiian, or Pacific Islander descent (USDA, 2002b).

Within Luzerne County, the average farm size was 134 acres, while the median was 80 acres. In the 2002 Agricultural Census, 59 farms were comprised of one to nine acres each (USDA, 2002b).

In 2002, there were 884 farms with 1,221 operators within Columbia County. Of the total operators, 1,201 were white; two were American Indian or Alaska Natives; two were of Hispanic descent; and two were more than one race. No operators were of black, African American, Asian, Native Hawaiian, or Pacific Islander descent (USDA, 2002b).

Within Columbia County, the average farm size was 140 acres, while the median was 86 acres. In the 2002 Agricultural Census, 49 farms were comprised of one to nine acres each (USDA, 2002b).

2.5.4.4 Subsistence Uses by Minority Populations

Although no information could be found, it is assumed that hunting and fishing for subsistence by some minorities could be occurring in the two-county region of influence.

2.5.4.5 Subsistence Uses by Low Income Populations

Although no information could be found, it is assumed that hunting and fishing for subsistence by some low income groups could be occurring in the two-county region of influence.

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**Table 2.5-1— The Counties of Residence for Existing SSES
Units 1 and 2 Operational Employees**

County of Residence	Employees	
	Number	%
Berks	1	0.1%
Carbon	13	1.0%
Columbia	559	44.8%
Lackawanna	5	0.4%
Lancaster	1	0.1%
Lebanon	1	0.1%
Lehigh	5	0.4%
Luzerne	528	42.3%
Lycoming	8	0.6%
Monroe	1	0.1%
Montour	27	2.2%
Northampton	2	0.2%
Northumberland	47	3.8%
Schuylkill	35	2.8%
Snyder	2	0.2%
Union	3	0.2%
Wyoming	1	0.1%
York	5	0.4%
Out-of-State	3	0.2%
Total	1,247	100.0%

Table 2.5-2— Select Demographic and Economic Characteristics of Residential Population By Distance from the BBNPP Site, 2000

Demographic and Economic Characteristics	Radii/Distance mi (km)					
	0 - 10 mi (0 - 16 km) ⁽⁴⁾	10 - 20 mi (16 - 32 km) ⁽⁴⁾	20 - 30 mi (32 - 48 km) ⁽⁴⁾	30 - 40 mi (48 - 60 km) ⁽⁴⁾	40 - 50 mi (60 - 80 km) ⁽⁴⁾	0 - 50 mi (0 - 80 km) ⁽⁴⁾
Total Population	68,732	<u>319,950</u> <u>320,44</u>	<u>366,087</u> <u>364,47</u>	<u>551,552</u> <u>552,93</u>	<u>845,542</u> <u>822,67</u>	<u>1,781,893</u> <u>1,760,217</u>
Age Composition						
Persons under 5 years old	<u>3,353</u>	<u>15,730</u>	<u>17,981</u>	<u>29,511</u>	<u>48,170</u>	<u>95,576</u>
Persons 18 years and over	<u>53,402</u>	<u>252,889</u>	<u>288,327</u>	<u>424,224</u>	<u>642,710</u>	<u>1,378,065</u>
Persons 65 years and over	<u>11,688</u>	<u>61,389</u>	<u>71,010</u>	<u>88,651</u>	<u>130,717</u>	<u>307,115</u>
Gender Composition						
Females	34,628	<u>165,817</u>	<u>186,807</u>	<u>278,877</u>	<u>428,071</u>	<u>911,974</u>
Ethnic Composition						
Caucasians ⁽¹⁾	<u>66,766</u>	<u>308,767</u>	<u>355,955</u>	<u>525,690</u>	<u>781,458</u>	<u>1,686,637</u>
African-Americans ⁽²⁾	<u>1,026</u>	<u>5,433</u>	<u>5,426</u>	<u>13,084</u>	<u>25,436</u>	<u>40,351</u>
Persons of Hispanic/Latino origins ⁽³⁾	<u>680</u>	<u>4,057</u>	<u>3,401</u>	<u>11,801</u>	<u>40,004</u>	<u>51,826</u>
Income Characteristics						
Median Household Income 1999 ⁽⁵⁾	<u>37,863</u>	<u>32,393</u>	<u>35,000</u>	<u>36,923</u>	<u>40,014</u>	<u>36,170</u>
	<u>\$38,164</u>	<u>\$35,279</u>	<u>\$35,821</u>	<u>\$39,431</u>	<u>\$44,289</u>	<u>\$39,531</u>
<p>(1)Resident population excludes transient populations. (2)Persons describing themselves as one race only. (3)Persons of Hispanic or Latino origin may be of any race. (4)Block group totals were added to column figures whether all or part of the block group was contained by the radii/radii. (5)Median household income (1999) calculated by summing block group median income weighted by population and then dividing by the total population.</p>						

Table 2.5-3— Historical and Projected Population in Columbia and Luzerne Counties and Pennsylvania from 1970 to 2080

Year	Columbia County		Luzerne County		Region of Influence-Columbia and Luzerne Counties		Commonwealth of Pennsylvania	
	Population	Average Annual Growth Percent	Population	Average Annual Growth Percent	Population	Average Annual Growth Percent	Population	Average Annual Growth Percent
1970	55,114	--	342,301	--	397,415	--	11,793,909	--
1980	61,967	1.18%(a)	343,079	0.02%	405,046	0.19%	11,863,895	0.06%
1990	63,202	0.20%	328,149	-0.44%	391,351	-0.34%	11,881,643	0.01%
2000	64,151	0.15%	319,250	-0.27%	383,401	-0.21%	12,281,054	0.33%
2010	64,573	0.07%	306,900	-0.39%	371,473	-0.32%	12,584,487	0.24%
2018	66,586	0.38%	300,094	-0.28%	366,680	-0.16%	12,746,200	0.16%
2020	67,233	0.13%	297,473	-0.11%	364,706	-0.06%	12,787,354	0.06%
2030 ^(b)	69,944	0.40%	288,847	-0.29%	358,791	-0.16%	12,768,184	-0.02%
2040	73,672	0.52%	279,743	-0.32%	353,415	-0.15%	12,749,014	-0.02%
2050	78,209	0.60%	271,440	-0.30%	349,649	-0.11%	12,729,844	-0.02%
2058	82,432	0.66%	265,154	-0.29%	347,586	-0.07%	12,711,800	-0.02%
2060	83,570	0.67%	263,632	-0.29%	347,202	-0.07%	12,710,674	-0.02%
2070	89,754	0.72%	256,319	-0.28%	346,073	-0.03%	12,691,504	-0.02%
2080	96,751	0.75%	249,502	-0.27%	346,253	0.01%	12,672,334	-0.02%

Notes:
(a) Average Annual Growth Rate from previously noted year (example, 1.18% change in Columbia County from 1970 to 1980)
(b) Population Projections 2010- 2030 from U.S. Census estimates available at <http://www.census.gov/population/projections/SummaryTabA1.xls>; Projections after 2030 for Pennsylvania used the same rate of change that occurred 2020-2030

Table 2.5-4— Select Demographic and Economic Characteristics of Persons in Columbia Luzerne Counties, the Commonwealth of Pennsylvania, and the U.S. 2000 to 2006

Demographic and Economic Characteristics	Columbia County	Luzerne County	Commonwealth of Pennsylvania	U.S.
Total Population, 2000	64,151	319,250	12,281,054	281,421,906
Total Population Estimate 2006	65,014	313,020	12,440,621	299,398,484
Average Annual Percent Change	0.22%	-0.33%	0.22%	1.04%
Population per square mile, 2000	132	358	274	79.6
Population per square mile, 2006	134	351	85	79.6
Persons under 5 years old	4.70%	5.00%	5.80%	6.80%
Persons 18 years and over	18.60%	20.00%	22.50%	24.60%
Persons 65 years and over	16.00%	18.20%	15.20%	12.40%
Gender Composition				
Females, 2006	52.10%	51.40%	51.40%	50.70%
Caucasians, 2006	97.30%	95.90%	85.70%	80.10%
African-Americans, 2006	1.10%	2.50%	10.70%	12.80%
Persons of Hispanic/Latino origin, 2006	1.40%	3.30%	4.20%	14.80%
Median Household Income, 2004	37,871	36,968	43,714	44,334
Persons Below Poverty, 2004	11.50%	11.50%	11.20%	12.70%

Table 2.5-5— Demographic and Economic Characteristics of Residential Populations in Select Cities and Communities within Luzerne County and Columbia County, 2000

Demographic Characteristic	Cities or Communities								
	Berwick	Bloomsburg	Dallas	Freeland	Hazleton	Kingston	Nanticoke	Pittston	Wilkes-Barre
Total Population	10774	12448	2557	3643	23264	13855	10981	8104	43123
Age Composition									
Persons under 5 years old	595	405	118	184	1307	623	553	422	2056
Persons 18 years and over	8289	10935	2000	2852	18243	11112	8792	6349	34546
Persons 65 years and over	2229	1400	455	831	5135	3378	2515	1797	8898
Gender Composition									
Females	5737	6985	1322	1959	12514	7521	5848	4401	22254
Ethnic Composition									
Caucasians ⁽¹⁾	10462	11830	2507	3597	21880	13618	10829	7967	39682
African-Americans ⁽¹⁾	95	333	14	0	113	34	44	56	2494
Persons of Hispanic/Latino origin ⁽²⁾	175	106	3	21	339	31	38	40	511
Income Characteristics									
Median Household Income 1999	27442	24868	48696	31891	28082	33611	26169	27103	26711
Persons below poverty	1546	2961	146	473	3262	1514	1712	1248	7051
(1) Persons describing themselves as of one race only									
(2) Persons of Hispanic/Latino origin may be of any race or combination of races									

Table 2.5-6— Resident and Transient Populations, by Sector and Distance from BBNPP Site, 2000

(Page 1 of 3)

Sector/Type of Population	Population by Radii/Distance mi (km)						
	0 to 1 mi (0 to 2 km)	1 to 2 mi (2 to 3 km)	2 to 3 mi (3 to 5 km)	3 to 4 mi (5 to 6 km)	4 to 5 mi (6 to 8 km)	5 to 10 mi (8 to 16 km)	0 to 10 mi (0 to 16 km)
N Total N Total							
Transient Population	0 <u>0</u>	0 <u>16</u>	0 <u>0</u>	0 <u>1</u>	0 <u>1</u>	1,120 <u>256</u>	1,120 <u>274</u>
Resident Population	35 <u>35</u>	79 <u>79</u>	0 <u>0</u>	0 <u>0</u>	989 <u>854</u>	1,558 <u>1,671</u>	2,661 <u>2,639</u>
NNE Total NNE Total							
Transient Population	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>	0 <u>4</u>	0 <u>1</u>	0 <u>18</u>	0 <u>23</u>
Resident Population	0 <u>0</u>	0 <u>0</u>	0 <u>5</u>	469 <u>602</u>	271 <u>338</u>	1,825 <u>2,030</u>	2,565 <u>2,975</u>
NE Total NE Total							
Transient Population	0 <u>0</u>	0 <u>2</u>	0 <u>0</u>	0 <u>1</u>	0 <u>1</u>	0 <u>170</u>	0 <u>174</u>
Resident Population	0 <u>0</u>	79 <u>101</u>	23 <u>1</u>	49 <u>49</u>	169 <u>169</u>	2,787 <u>3,006</u>	3,107 <u>3,326</u>
ENE Total ENE Total							
Transient Population	1,460 <u>0</u>	0 <u>159</u>	0 <u>0</u>	0 <u>276</u>	0 <u>1</u>	0 <u>4</u>	1,460 <u>440</u>
Resident Population	0 <u>0</u>	0 <u>0</u>	8 <u>0</u>	80 <u>65</u>	68 <u>68</u>	1,524 <u>1,580</u>	1,680 <u>1,713</u>
E Total E Total							
Transient Population	0 <u>360</u>	0 <u>1</u>	0 <u>0</u>	0 <u>1</u>	0 <u>1</u>	0 <u>48</u>	0 <u>411</u>
Resident Population	0 <u>0</u>	54 <u>54</u>	105 <u>113</u>	163 <u>15</u>	223 <u>142</u>	1,352 <u>1,366</u>	1,897 <u>1,690</u>
ESE Total ESE Total							
Transient Population	0 <u>0</u>	0 <u>2</u>	0 <u>0</u>	0 <u>3</u>	0 <u>1</u>	0 <u>325</u>	0 <u>331</u>

Table 2.5-6— Resident and Transient Populations, by Sector and Distance from BBNPP Site, 2000

(Page 2 of 3)

Sector/Type of Population	Population by Radii/Distance mi (km)						
	0 to 1 mi (0 to 2 km)	1 to 2 mi (2 to 3 km)	2 to 3 mi (3 to 5 km)	3 to 4 mi (5 to 6 km)	4 to 5 mi (6 to 8 km)	5 to 10 mi (8 to 16 km)	0 to 10 mi (0 to 16 km)
Resident Population	76	10	88	176	162	1,763	2,275
<u>SE Total</u>	<u>0</u>	<u>86</u>	<u>88</u>	<u>283</u>	<u>299</u>	<u>1,611</u>	<u>2,367</u>
Transient Population	0	0	0	0	0	0	0
<u>SE Total</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>198</u>	<u>201</u>
Resident Population	0	38	0	182	49	4,527	4,796
<u>SSE Total</u>	<u>0</u>	<u>34</u>	<u>4</u>	<u>102</u>	<u>127</u>	<u>4,385</u>	<u>4,652</u>
Transient Population	0	0	0	0	0	0	0
<u>SSE Total</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>2</u>	<u>1</u>	<u>4</u>	<u>9</u>
Resident Population	0	148	73	90	60	1,437	1,808
<u>S Total</u>	<u>0</u>	<u>148</u>	<u>64</u>	<u>99</u>	<u>60</u>	<u>1,405</u>	<u>1,776</u>
Transient Population	0	0	0	0	0	0	0
<u>S Total</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>3</u>	<u>1</u>	<u>3</u>	<u>8</u>
Resident Population	118	113	60	164	9	1,033	1,497
<u>SSW Total</u>	<u>118</u>	<u>81</u>	<u>106</u>	<u>137</u>	<u>52</u>	<u>893</u>	<u>1,387</u>
Transient Population	0	0	0	0	0	0	0
<u>SSW Total</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>7</u>
Resident Population	0	80	0	245	146	466	937
<u>SW Total</u>	<u>1</u>	<u>98</u>	<u>0</u>	<u>168</u>	<u>147</u>	<u>534</u>	<u>948</u>
Transient Population	0	0	0	0	0	0	0
<u>SW Total</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>13</u>	<u>31</u>	<u>9</u>	<u>54</u>
Resident Population	11	76	153	1,428	43	852	2,563
<u>WSW Total</u>	<u>50</u>	<u>40</u>	<u>200</u>	<u>1,953</u>	<u>736</u>	<u>990</u>	<u>3,969</u>
Transient Population	0	0	0	0	0	0	0
<u>WSW Total</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

Table 2.5-6— Resident and Transient Populations, by Sector and Distance from BBNPP Site, 2000
(Page 3 of 3)

Sector/Type of Population	Population by Radii/Distance mi (km)						
	0 to 1 mi (0 to 2 km)	1 to 2 mi (2 to 3 km)	2 to 3 mi (3 to 5 km)	3 to 4 mi (5 to 6 km)	4 to 5 mi (6 to 8 km)	5 to 10 mi (8 to 16 km)	0 to 10 mi (0 to 16 km)
Transient Population	0	0	0	731	300	1,400	2,431
	<u>0</u>	<u>3</u>	<u>0</u>	<u>195</u>	<u>269</u>	<u>586</u>	<u>1,053</u>
Resident Population	40	12	502	3,971	5,871	6,673	17,069
	<u>0</u>	<u>236</u>	<u>132</u>	<u>3,471</u>	<u>5,219</u>	<u>6,985</u>	<u>16,043</u>
W Total							
W Total							
Transient Population	0	0	0	595	0	0	595
	<u>0</u>	<u>0</u>	<u>0</u>	<u>3</u>	<u>1</u>	<u>6</u>	<u>10</u>
Resident Population	0	224	132	127	522	1,729	2,734
	<u>0</u>	<u>0</u>	<u>183</u>	<u>301</u>	<u>443</u>	<u>1,657</u>	<u>2,584</u>
WNW Total							
WNW Total							
Transient Population	0	0	0	0	0	0	0
	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>519</u>	<u>522</u>
Resident Population	0	51	25	52	0	928	1,056
	<u>0</u>	<u>51</u>	<u>72</u>	<u>1</u>	<u>0</u>	<u>723</u>	<u>847</u>
NW Total							
NW Total							
Transient Population	0	0	0	0	0	0	0
	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>3</u>	<u>6</u>
Resident Population	0	35	47	0	139	1,133	1,354
	<u>0</u>	<u>35</u>	<u>0</u>	<u>85</u>	<u>127</u>	<u>998</u>	<u>1,245</u>
NWW Total							
NNW Total							
Transient Population	0	0	0	0	0	596	596
	<u>0</u>	<u>1</u>	<u>0</u>	<u>70</u>	<u>1</u>	<u>4</u>	<u>76</u>
Resident Population	0	55	183	6	35	1,318	1,597
	<u>0</u>	<u>55</u>	<u>183</u>	<u>41</u>	<u>31</u>	<u>1,316</u>	<u>1,626</u>
Total Population	564	1,291	1,151	7,949	9,126	33,305	53,386
Total Population							
Transient Population	1,460	0	0	1,326	300	3,116	6,202
	<u>360</u>	<u>193</u>	<u>0</u>	<u>577</u>	<u>314</u>	<u>2,155</u>	<u>3,599</u>
Resident Population	280	1,054	1,399	7,202	8,756	30,905	49,596
	<u>204</u>	<u>1,098</u>	<u>1,151</u>	<u>7,372</u>	<u>8,812</u>	<u>31,150</u>	<u>49,787</u>

Table 2.5-7— Commuting Patterns to and from the Region of Interest (Columbia and Luzerne Counties

(Page 1 of 2)

Parameter	County	Count
Worker Outflow from ROI (Columbia and Luzerne Counties) to Counties in 50 mi (80 km) Radius	Berks	196
	Bradford	39
	Carbon	653
	Dauphin	271
	Lackawanna	8,190
	Lebanon	81
	Lehigh	828
	Lycoming	431
	Monroe	1,706
	Montour	2,146
	Northampton	159
	Northumberland	1,117
	Pike	306
	Schuylkill	1,582
	Snyder	69
	Sullivan	114
	Susquehanna	71
	Union	240
	Wayne	163
Wyoming	910	
	Total	19,272
Worker Outflow from ROI (Columbia and Luzerne Counties) to Areas Outside 50 mi (80 km) Radius	Total	2,966
Worker Inflow to ROI (Columbia and Luzerne Counties) from Counties in 50 mi (80 km) Radius	Berks	78
	Bradford	91
	Carbon	2,242
	Dauphin	54
	Lackawanna	6,993
	Lebanon	45
	Lehigh	245
	Lycoming	469
	Monroe	667
	Montour	1,056
	Northampton	116
	Northumberland	1,290
	Pike	133
	Schuylkill	3,750
	Snyder	96
	Sullivan	75
	Susquehanna	234
	Union	56
	Wayne	327
Wyoming	2,214	
	Total	20,231
Worker Inflow to ROI (Columbia and Luzerne Counties) from Areas Outside 50 mi (80 km) Radius	Total	8,250

Table 2.5-7— Commuting Patterns to and from the Region of Interest (Columbia and Luzerne Counties)
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Parameter	County	Count
Net Worker Inflow to ROI (Columbia and Luzerne Counties)	Total	6,243

Table 2.5-8—Current Population and Population Projections For the BBNPP Low Population Zone

Year	LPZ Population	Average Annual Percent Change for the 10-Year Period
2000	2,733	NA
2010	2,863	0.47%
2018	3,030	NA
2020	3,034	0.60%
2030	3,200	0.55%
2040	3,453	0.79%
2050	3,644	0.55%
2058	3,806	NA
2060	3,840	0.54%
2070	4,038	0.52%
2080	4,245	0.51%

Table 2.5-9— Current Population and Population Projections (Resident and Transient) For the 3 mi (4.8 km) Low Population Zone

<u>Year</u>	<u>LPZ Population</u>			<u>Average Annual Percent Change for the 10 Year Period</u>
	<u>Resident</u>	<u>Transient⁽¹⁾</u>	<u>Total</u>	
<u>2000</u>	<u>2,434</u>	<u>1,822</u>	<u>4,256</u>	<u>NA</u>
<u>2010</u>	<u>2,550</u>	<u>1,909</u>	<u>4,459</u>	<u>0.47%</u>
<u>2018</u>	<u>2,672</u>	<u>2,002</u>	<u>4,674</u>	<u>NA</u>
<u>2020</u>	<u>2,702</u>	<u>2,025</u>	<u>4,727</u>	<u>0.59%</u>
<u>2030</u>	<u>2,849</u>	<u>2,132</u>	<u>4,981</u>	<u>0.52%</u>
<u>2040</u>	<u>3,075</u>	<u>2,303</u>	<u>5,378</u>	<u>0.77%</u>
<u>2050</u>	<u>3,245</u>	<u>2,431</u>	<u>5,676</u>	<u>0.54%</u>
<u>2058</u>	<u>3,389</u>	<u>2,535</u>	<u>5,924</u>	<u>NA</u>
<u>2060</u>	<u>3,418</u>	<u>2,561</u>	<u>5,979</u>	<u>0.52%</u>
<u>2070</u>	<u>3,596</u>	<u>2,694</u>	<u>6,290</u>	<u>0.51%</u>
<u>2080</u>	<u>3,780</u>	<u>2,830</u>	<u>6,610</u>	<u>0.50%</u>

Notes: (1) Transient population includes the total SSES workforce (1,247), the peak capacity of Susquehanna Riverlands (300), and the peak capacity of Council Cup Campground (275).

Table 2.5-10—The Population Projections from 2000 to 2080 Within 50 mi (80 km) of the BBNPP Site

Year	Population Projections within Radii/Distances mi (km)						Annual Average Percent Change For the 10-Year Period
	0 to 10 mi (0 to 16 km)	10 to 20 mi (16 to 32 km)	20 to 30 mi (32 to 48 km)	30 to 40 mi (48 to 60 km)	40 to 50 mi (60 to 80 km)	Total 0 to 50 mi (0 to 80 km)	
2000	49,578	265,448	288,591	419,390	638,968	1,661,993	NA
2010	51,942	276,238	302,026	438,913	669,293	1,739,722	0.47%
2018	54,987	294,343	319,995	464,971	708,605	1,842,901	NA
2020	55,087	294,865	320,942	465,823	709,827	1,846,147	0.61%
2030	58,047	310,729	337,809	490,895	747,932	1,945,412	0.54%
2040	62,685	335,557	364,876	530,251	807,924	2,101,293	0.80%
2050	66,124	353,947	384,816	559,239	852,083	2,216,209	0.55%
2058	69,027	369,375	401,572	583,598	889,114	2,312,686	NA
2060	69,687	373,065	405,537	589,364	897,933	2,335,586	0.54%
2070	73,297	392,350	426,405	619,755	944,303	2,456,110	0.52%
2080	77,036	412,354	448,348	651,477	992,608	2,581,823	0.51%

Table 2.5-11— Total Population Projections (Resident and Transient) from 2000 to 2080 Within 50 mi (80 km) of the BBNPP Site

Year	Population Projections within Radii/Distances mi (km)									Annual Average Percent Change For the 10 Year Period
	0 to 10 mi (0 to 16 km)			10 to 20 mi (16 to 32 km)			20 to 30 mi (32 to 48 km)			
	Resident	Transient	Total	Resident	Transient	Total	Resident	Transient	Total	
2000	49,787	3,599	53,386	265,930	3,819	269,749	286,197	7,042	293,239	NA
2010	52,142	3,821	55,963	278,439	4,012	282,451	299,518	7,388	306,906	0.46%
2018	54,680	4,000	58,680	292,013	4,204	296,217	314,175	7,746	321,921	NA
2020	55,296	4,045	59,341	295,405	4,254	299,659	317,889	7,836	325,725	0.60%
2030	58,272	4,253	62,525	311,292	4,470	315,762	335,008	8,240	343,248	0.52%
2040	62,925	4,587	67,512	336,167	4,834	341,001	361,850	8,909	370,759	0.77%
2050	66,377	4,843	71,220	354,592	5,103	359,695	381,624	9,404	391,028	0.53%
2058	69,292	5,044	74,336	370,047	5,320	375,367	398,238	9,804	408,042	NA
2060	69,956	5,092	75,048	373,744	5,377	379,121	402,178	9,904	412,082	0.53%
2070	73,578	5,349	78,927	393,062	5,383	398,445	422,865	9,905	432,770	0.49%
2080	77,332	5,622	82,954	413,104	5,938	419,042	444,630	10,943	455,573	0.51%
Year	30 to 40 mi (48 to 60 km)			40 to 50 mi (60 to 80 km)			Total 0 to 50 mi (0 to 80 km)			Annual Average Percent Change For the 10 Year Period
	Resident	Transient	Total	Resident	Transient	Total	Resident	Transient	Total	
	2000	420,152	14,824	434,976	629,843	18,456	648,299	1,651,909	47,740	
2010	439,712	15,540	455,252	659,349	19,343	678,692	1,729,160	50,104	1,779,264	0.46%
2018	461,241	16,295	477,536	691,502	20,284	711,786	1,813,611	52,529	1,866,140	NA
2020	466,667	16,484	483,151	699,684	20,518	720,202	1,834,941	53,137	1,888,078	0.60%
2030	491,788	17,347	509,135	737,256	21,600	758,856	1,933,616	55,910	1,989,526	0.52%
2040	531,212	18,745	549,957	796,391	23,337	819,728	2,088,545	60,412	2,148,957	0.77%
2050	560,249	19,786	580,035	839,915	24,629	864,544	2,202,757	63,765	2,266,522	0.53%
2058	584,660	20,632	605,292	876,425	25,685	902,110	2,298,662	66,485	2,365,147	NA
2060	590,425	20,844	611,269	885,113	25,951	911,064	2,321,416	67,168	2,388,584	0.53%
2070	620,879	20,845	641,724	930,819	25,951	956,770	2,441,203	67,433	2,508,636	0.49%
2080	652,656	23,032	675,688	978,440	28,671	1,007,111	2,566,162	74,206	2,640,368	0.51%

Table 2.5-12 Population Projections by Sector and Distance from the BBNPP Site from 2000 to 2080
 (Page 1 of 12)

Population Projection by Year													
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080	
N	0-1 mi (0-2 km)	35	37	39	39	41	44	47	49	49	52	54	
NNE		0	0	0	0	0	0	0	0	0	0	0	
NE		0	0	0	0	0	0	0	0	0	0	0	
ENE		0	0	0	0	0	0	0	0	0	0	0	
E		0	0	0	0	0	0	0	0	0	0	0	
ESE		76	80	84	84	89	96	101	106	106	107	112	118
SE		0	0	0	0	0	0	0	0	0	0	0	0
SSE		0	0	0	0	0	0	0	0	0	0	0	0
S		118	124	131	131	138	149	157	164	164	166	174	183
SSW		0	0	0	0	0	0	0	0	0	0	0	0
SW		11	11	12	12	12	14	15	15	15	15	16	17
WSW		40	42	44	44	47	51	53	56	56	56	59	62
W		0	0	0	0	0	0	0	0	0	0	0	0
WNW		0	0	0	0	0	0	0	0	0	0	0	0
NW		0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	
Total		280	294	310	310	327	354	373	390	393	413	434	

Table 2.5-12 Population Projections by Sector and Distance from the BBNPP Site from 2000 to 2080

(Page 2 of 12)

Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	1-2 mi (2-3 km)	37	83	88	88	92	100	105	110	111	117	123
NNE		0	0	0	0	0	0	0	0	0	0	0
NE		79	83	88	88	93	100	105	110	111	117	122
ENE		0	0	0	0	0	0	0	0	0	0	0
E		54	56	60	60	64	68	72	76	76	80	84
ESE		10	10	11	11	12	13	13	14	14	15	16
SE		38	40	42	42	45	48	50	53	54	56	59
SSE		148	155	165	165	173	187	198	205	208	219	230
S		113	118	125	126	133	142	151	158	158	167	175
SSW		80	84	89	89	94	102	107	111	111	119	125
SW		76	80	84	84	89	97	101	106	107	112	118
WSW		12	13	13	13	14	15	16	17	17	18	19
W		224	235	248	249	262	283	299	312	315	331	348
WNW		51	53	57	57	60	64	68	71	72	75	79
NW		35	37	39	39	41	44	47	49	49	52	54
NNW		35	58	61	61	64	70	73	77	77	81	85
Total			992	1,105	1,170	1,172	1,236	1,333	1,405	1,469	1,480	1,559

Table 2.5-12—Population Projections by Sector and Distance from the BBNPP Site from 2000 to 2080

(Page 3 of 12)

Population Projection by Year													
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080	
N	2-3 mi (3-5 km)	0	0	0	0	0	0	0	0	0	0	0	
NNE		0	0	0	0	0	0	0	0	0	0	0	
NE		23	24	25	25	27	29	30	32	32	34	36	
ENE		8	8	9	9	9	10	11	11	11	12	12	
E		105	110	116	116	123	132	140	146	146	148	155	163
ESE		88	92	98	98	102	111	117	122	122	124	129	137
SE		0	0	0	0	0	0	0	0	0	0	0	0
SSE		73	75	81	81	86	91	98	102	102	103	107	113
S		60	63	65	65	71	76	80	84	84	85	89	94
SSW		0	0	0	0	0	0	0	0	0	0	0	0
SW		153	160	170	170	179	193	205	213	213	214	226	238
WSW		502	526	557	558	588	634	669	698	698	706	742	780
W		132	138	146	147	154	167	176	184	184	186	195	205
WNW		25	26	28	28	29	32	33	35	35	35	37	39
NW		47	50	52	52	55	60	63	65	65	66	69	73
NNW		183	192	203	203	214	231	244	244	255	257	271	284
Total		1,399	1,464	1,550	1,552	1,637	1,766	1,866	1,947	1,967	2,066	2,174	

Table 2.5-12 Population Projections by Sector and Distance from the BBNPP Site from 2000 to 2080
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Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	3-4 mi (5-6 km)	0	0	0	0	0	0	0	0	0	0	0
NNE		469	491	520	521	550	593	624	651	658	695	728
NE		49	51	54	54	57	62	65	68	69	72	76
ENE		80	84	89	89	94	101	107	111	112	118	124
E		163	171	181	181	191	206	217	227	229	241	253
ESE		176	184	195	197	206	223	235	245	247	260	273
SE		182	191	202	202	213	230	243	253	256	269	282
SSE		90	94	101	101	105	114	120	125	126	133	140
S		164	172	182	182	192	207	218	228	230	243	255
SSW		245	257	272	272	286	309	326	341	345	362	381
SW		1,428	1,493	1,581	1,583	1,668	1,806	1,907	1,987	2,006	2,110	2,223
WSW		3,971	4,164	4,402	4,406	4,646	5,015	5,294	5,527	5,584	5,869	6,162
W		127	132	142	142	149	160	169	177	178	187	198
WNW		52	54	58	58	61	65	69	72	73	76	81
NW		0	0	0	0	0	0	0	0	0	0	0
NNW		6	6	7	7	7	8	8	8	8	9	9
Total		7,202	7,544	7,986	7,995	8,425	9,099	9,602	10,020	10,121	10,644	11,185

Table 2.5-12—Population Projections by Sector and Distance from the BBNPP Site from 2000 to 2080

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Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	4-5 mi (6-8 km)	989	1,035	1,095	1,098	1,156	1,248	1,318	1,380	1,390	1,461	1,537
NNE		271	282	301	301	317	343	360	378	381	401	422
NE		169	177	188	188	198	213	225	235	237	250	262
ENE		68	71	76	76	80	86	91	95	95	101	106
E		223	233	246	247	261	281	297	310	313	330	347
ESE		162	170	180	180	190	205	216	226	228	241	251
SE		49	51	54	54	57	63	66	68	69	72	76
SSE		60	63	67	67	71	76	80	84	84	89	93
S		9	9	10	10	11	11	12	13	13	13	14
SSW		146	153	161	163	171	184	195	204	205	216	227
SW		43	44	49	49	51	53	58	60	60	63	67
WSW		5,871	6,147	6,511	6,526	6,869	7,425	7,824	8,170	8,248	8,683	9,122
W		522	547	579	580	611	660	696	727	733	771	810
WNW		0	0	0	0	0	0	0	0	0	0	0
NW		139	145	154	154	162	176	185	194	195	206	216
NNW		35	37	39	39	41	44	47	49	49	52	54
Total		8,756	9,164	9,710	9,732	10,246	11,068	11,670	12,193	12,300	12,949	13,604

Table 2.5-12—Population Projections by Sector and Distance from the BBNPP Site from 2000 to 2080

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Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	5-10 mi (8-16 km)	1,558	1,631	1,727	1,730	1,828	1,967	2,079	2,166	2,187	2,300	2,420
NNE		1,825	1,913	2,023	2,027	2,136	2,307	2,433	2,538	2,565	2,698	2,836
NE		2,787	2,920	3,088	3,093	3,264	3,522	3,720	3,877	3,915	4,121	4,329
ENE		1,524	1,595	1,691	1,693	1,782	1,929	2,033	2,122	2,141	2,252	2,365
E		1,352	1,418	1,497	1,500	1,584	1,711	1,801	1,882	1,899	1,999	2,102
ESE		1,763	1,847	1,953	1,959	2,060	2,229	2,351	2,457	2,478	2,607	2,739
SE		4,527	4,741	5,018	5,028	5,300	5,722	6,031	6,302	6,365	6,690	7,031
SSE		1,437	1,505	1,594	1,596	1,683	1,818	1,916	1,999	2,019	2,123	2,231
S		1,033	1,083	1,144	1,149	1,206	1,303	1,374	1,436	1,453	1,525	1,607
SSW		466	488	516	516	546	591	620	648	654	687	723
SW		852	892	943	946	998	1,075	1,136	1,185	1,195	1,255	1,325
WSW		6,673	6,989	7,405	7,416	7,808	8,434	8,900	9,288	9,376	9,865	10,362
W		1,729	1,810	1,918	1,922	2,023	2,186	2,308	2,405	2,428	2,553	2,688
WNW		928	972	1,029	1,031	1,084	1,176	1,240	1,293	1,305	1,374	1,440
NW		1,133	1,184	1,255	1,256	1,329	1,432	1,509	1,578	1,593	1,672	1,758
NNW		1,318	1,383	1,460	1,464	1,545	1,663	1,757	1,823	1,853	1,945	2,046
Total			30,905	32,371	34,261	34,326	36,176	39,065	41,208	43,008	43,426	45,666

Table 2.5-12—Population Projections by Sector and Distance from the BBNPP Site from 2000 to 2080

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Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	0-10 mi (0-16 km)	2,661	2,786	2,949	2,955	3,117	3,359	3,549	3,705	3,737	3,930	4,134
NNE		2,565	2,686	2,844	2,849	3,003	3,243	3,417	3,567	3,604	3,794	3,986
NE		3,107	3,255	3,443	3,448	3,639	3,926	4,145	4,322	4,364	4,594	4,825
ENE		1,680	1,758	1,865	1,867	1,965	2,126	2,242	2,339	2,359	2,483	2,607
E		1,897	1,988	2,100	2,104	2,223	2,398	2,527	2,641	2,665	2,805	2,949
ESE		2,275	2,383	2,521	2,529	2,659	2,877	3,033	3,170	3,198	3,364	3,534
SE		4,796	5,023	5,316	5,326	5,615	6,063	6,390	6,676	6,744	7,087	7,448
SSE		1,808	1,892	2,008	2,010	2,118	2,286	2,412	2,515	2,540	2,671	2,807
S		1,479	1,569	1,657	1,663	1,751	1,888	1,992	2,083	2,105	2,211	2,328
SSW		937	982	1,038	1,040	1,097	1,186	1,248	1,304	1,315	1,384	1,456
SW		2,563	2,680	2,839	2,844	2,997	3,238	3,422	3,566	3,597	3,782	3,988
WSW		17,069	17,881	18,932	18,963	19,972	21,574	22,756	23,756	23,987	25,236	26,507
W		2,734	2,862	3,033	3,040	3,199	3,456	3,648	3,805	3,840	4,037	4,249
WNW		1,056	1,105	1,172	1,174	1,234	1,337	1,410	1,471	1,485	1,562	1,639
NW		1,354	1,416	1,500	1,501	1,587	1,712	1,804	1,886	1,903	1,999	2,101
NNW		1,597	1,676	1,770	1,774	1,871	2,016	2,129	2,221	2,244	2,358	2,478
Total		49,578	51,942	54,987	55,087	58,047	62,685	66,124	68,655	69,687	73,297	77,036

Table 2.5-12—Population Projections by Sector and Distance from the BBNPP Site from 2000 to 2080

(Page 8 of 12)

Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	10-20 mi (16-32 km)	4,256	4,454	4,720	4,727	4,979	5,379	5,672	5,924	5,983	6,292	6,608
NNE		12,301	12,882	13,634	13,662	14,396	15,547	16,405	17,114	17,290	18,182	19,103
NE		103,367	108,259	114,609	114,834	120,980	130,655	137,819	143,819	145,289	152,809	160,539
ENE		20,059	21,012	22,235	22,290	23,485	25,361	26,750	27,919	28,200	29,663	31,167
E		6,013	6,291	6,664	6,677	7,041	7,602	8,019	8,369	8,454	8,888	9,339
ESE		13,671	14,316	15,167	15,194	16,004	17,292	18,240	19,021	19,214	20,206	21,233
SE		39,155	41,018	43,434	43,494	45,858	49,478	52,191	54,490	55,012	57,870	60,828
SSE		5,149	5,386	5,708	5,715	6,025	6,508	6,862	7,163	7,241	7,609	8,008
S		16,481	17,254	18,273	18,302	19,288	20,826	21,973	22,945	23,158	24,367	25,604
SSW		2,776	2,898	3,076	3,081	3,247	3,512	3,704	3,866	3,902	4,095	4,317
SW		2,917	3,045	3,224	3,230	3,416	3,695	3,886	4,063	4,100	4,312	4,536
WSW		25,408	26,607	28,185	28,230	29,735	32,116	33,892	35,339	35,706	37,550	39,474
W		6,362	6,655	7,060	7,067	7,447	8,050	8,483	8,854	8,931	9,395	9,881
WNW		3,155	3,299	3,496	3,498	3,696	3,998	4,209	4,387	4,433	4,653	4,911
NW		2,751	2,862	3,053	3,055	3,224	3,482	3,670	3,834	3,866	4,054	4,276
NNW		1,627	16,98	1,805	1,809	1,908	2,056	2,172	2,268	2,286	2,405	2,530
Total		265,448	276,238	294,343	294,865	310,729	335,557	353,947	369,375	373,065	392,350	412,354

Table 2.5-12—Population Projections by Sector and Distance from the BBNPP Site from 2000 to 2080

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Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	20-30 mi (32-48 km)	323	337	355	356	376	413	433	451	454	478	500
NNE		13,807	14,441	15,310	15,327	16,156	17,453	18,411	19,217	19,407	20,400	21,459
NE		87,261	91,375	96,733	96,944	102,122	110,302	116,334	121,408	122,640	128,969	135,534
ENE		5,753	6,015	6,376	6,387	6,730	7,279	7,668	8,006	8,086	8,507	8,934
E		4,106	4,286	4,552	4,556	4,817	5,193	5,476	5,715	5,769	6,056	6,381
ESE		8,529	8,916	9,463	9,479	9,990	10,785	11,373	11,871	11,988	12,599	13,245
SE		26,201	27,430	29,040	29,098	30,659	33,133	34,940	36,464	36,824	38,728	40,710
SSE		14,784	15,467	16,392	16,816	17,317	18,693	19,726	20,566	20,774	21,839	22,961
S		47,385	49,606	52,550	52,639	55,455	59,899	63,178	65,935	66,575	70,037	73,617
SSW		21,961	22,984	24,354	24,397	25,711	27,761	29,280	30,550	30,850	32,431	34,139
SW		29,417	30,799	32,607	32,670	34,434	37,192	39,224	40,941	41,336	43,460	45,709
WSW		16,693	17,465	18,516	18,543	19,546	21,106	22,266	23,226	23,458	24,658	25,932
W		5,634	5,886	6,245	6,250	6,597	7,132	7,513	7,838	7,920	8,320	8,754
WNW		4,221	4,403	4,681	4,687	4,943	5,345	5,635	5,875	5,929	6,218	6,560
NW		1,600	1,664	1,775	1,776	1,878	2,029	2,139	2,230	2,246	2,354	2,487
NNW		916	952	1,015	1,017	1,078	1,161	1,220	1,279	1,284	1,351	1,426
Total		288,591	302,026	319,995	320,942	337,809	364,876	384,816	401,572	405,537	426,405	448,348

Table 2.5-12 Population Projections by Sector and Distance from the BBNPP Site from 2000 to 2080
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Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	30-40 mi (48-64 km)	6,136	6,420	6,796	6,805	7,187	7,761	8,183	8,540	8,619	9,056	9,537
NNE		16,668	17,445	18,479	18,522	19,511	21,087	22,230	23,192	23,426	24,625	25,886
NE		143,505	150,301	159,111	159,421	167,931	181,407	191,377	199,640	201,675	212,136	222,876
ENE		12,938	13,533	14,348	14,377	15,149	16,347	17,252	18,009	18,184	19,113	20,104
E		18,453	19,270	20,454	20,481	21,616	23,337	24,602	25,685	25,920	27,248	28,668
ESE		26,302	27,503	29,113	29,220	30,796	33,250	35,062	36,614	36,969	38,853	40,860
SE		33,974	35,561	37,671	37,745	39,772	42,954	45,315	47,285	47,755	50,229	52,775
SSE		15,144	15,847	16,794	16,816	17,723	19,155	20,203	21,066	21,279	22,369	23,525
S		24,366	25,499	26,996	27,049	28,516	30,811	32,480	33,900	34,242	35,997	37,856
SSW		15,276	15,984	16,931	16,955	17,880	19,316	20,365	21,256	21,459	22,572	23,729
SW		8,628	9,006	9,561	9,571	10,101	10,903	11,500	12,021	12,125	12,730	13,395
WSW		42,913	44,912	47,590	47,681	50,230	54,258	57,212	59,706	60,304	63,428	66,660
W		31,426	32,897	34,851	34,912	36,790	39,726	41,900	43,741	44,159	46,439	48,826
WNW		18,108	18,945	20,075	20,119	21,192	22,902	24,148	25,200	25,454	26,766	28,149
NW		1,417	1,477	1,568	1,571	1,659	1,801	1,889	1,973	1,985	2,095	2,203
NNW		4,136	4,313	4,573	4,578	4,842	5,236	5,521	5,770	5,809	6,099	6,428
Total		419,390	438,913	464,683	465,823	490,895	530,251	559,239	583,598	589,364	619,755	651,477

Table 2.5-12—Population Projections by Sector and Distance from the BBNPP Site from 2000 to 2080

(Page 11 of 12)

Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	40-50 mi (64-80 km)	6,949	7,259	7,697	7,707	8,145	8,801	9,262	9,674	9,762	10,257	10,806
NNE		9,068	9,484	10,051	10,070	10,623	11,463	12,095	12,616	12,744	13,365	14,102
NE		46,617	48,809	51,698	51,790	54,577	58,932	62,160	64,877	65,508	68,893	72,421
ENE		19,841	20,759	21,996	22,021	23,230	25,101	26,457	27,617	27,873	29,297	30,822
E		46,235	48,809	51,261	51,356	54,111	58,456	61,671	64,343	64,962	68,332	71,816
ESE		47,995	50,246	53,235	53,320	56,182	60,677	64,002	66,785	67,464	70,941	74,544
SE		213,653	223,707	236,984	237,411	250,071	270,117	284,913	297,248	300,261	315,787	331,914
SSE		65,624	68,710	72,772	72,903	76,833	82,991	87,516	91,329	92,212	97,028	101,916
S		31,873	33,371	35,331	35,397	37,293	40,303	42,491	44,345	44,800	47,101	49,517
SSW		16,435	17,192	18,232	18,251	19,239	20,804	21,911	22,865	23,097	24,288	25,542
SW		15,273	15,973	16,946	16,963	17,895	19,314	20,365	21,243	21,445	22,544	23,724
WSW		28,875	30,199	32,023	32,081	33,787	36,508	38,510	40,200	40,572	42,670	44,860
W		12,115	12,688	13,431	13,458	14,175	15,319	16,164	16,864	17,024	17,904	18,821
WNW		67,806	70,992	75,193	75,325	79,353	85,708	90,415	94,344	95,302	100,222	105,310
NW		1,320	1,376	1,457	1,459	1,546	1,674	1,760	1,835	1,854	1,948	2,056
NNW		9,289	9,719	10,298	10,315	10,872	11,756	12,391	12,929	13,053	13,726	14,437
Total		338,968	669,293	708,605	709,827	747,932	807,924	852,083	884,597	897,933	944,303	992,608

Table 2.5-12—Population Projections by Sector and Distance from the BBNPP Site from 2000 to 2080

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Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	0-50 mi (0-80 km)	20,325	21,256	22,517	22,550	23,804	25,713	27,099	28,294	28,555	30,013	31,585
NNE		54,409	56,938	60,309	60,430	63,689	68,793	72,558	75,706	76,471	80,366	84,536
NE		383,857	401,999	425,634	426,437	449,249	485,222	511,835	534,066	539,476	567,401	596,195
ENE		60,271	63,077	66,820	66,942	70,559	76,214	80,369	83,890	84,702	89,401	93,634
E		76,704	80,256	85,031	85,174	89,808	96,986	102,295	106,753	107,770	113,329	119,153
ESE		98,772	103,364	109,559	109,742	115,631	124,881	131,710	137,461	138,833	145,963	153,416
SE		317,779	332,739	352,445	353,074	371,975	401,745	423,749	442,163	446,596	469,701	493,675
SSE		102,509	107,302	113,674	113,863	120,016	129,633	136,719	142,639	144,046	151,516	159,217
S		121,602	127,299	134,807	135,050	142,303	153,727	162,114	169,208	170,880	179,713	188,922
SSW		57,385	60,040	63,631	63,724	67,174	72,579	76,508	79,841	80,623	84,770	89,183
SW		58,798	61,503	65,177	65,278	68,843	74,342	78,397	81,834	82,603	86,828	91,352
WSW		130,958	137,064	145,246	145,498	153,270	165,562	174,636	182,227	184,027	193,542	203,433
W		58,271	60,988	64,620	64,727	68,208	73,683	77,708	81,102	81,874	86,095	90,531
WNW		94,346	98,744	104,617	104,803	110,418	119,290	125,817	131,277	132,600	139,421	146,569
NW		8,442	8,795	9,353	9,362	9,894	10,698	11,262	11,758	11,854	12,450	13,123
NNW		17,565	18,358	19,461	19,493	20,571	22,225	23,433	24,467	24,676	25,939	27,299
Total		1,661,993	1,739,722	1,842,901	1,846,147	1,945,412	2,101,293	2,216,209	2,312,686	2,335,586	2,456,110	2,581,823

Table 2.5-13— Total Population Projections (Resident and Transient) by Sector and Distance from the BBNPP Site from 2000 to 2080

(Page 1 of 12)

Population Projection by Year													
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080	
N	0-1 mi (0-2 km)	35	37	38	39	41	44	47	49	49	52	54	
NNE		0	0	0	0	0	0	0	0	0	0	0	
NE		0	0	0	0	0	0	0	0	0	0	0	
ENE		0	0	0	0	0	0	0	0	0	0	0	
E		360	378	396	401	422	456	481	501	501	507	533	560
ESE		0	0	0	0	0	0	0	0	0	0	0	0
SE		0	0	0	0	0	0	0	0	0	0	0	0
SSE		0	0	0	0	0	0	0	0	0	0	0	0
S		118	124	130	131	138	149	157	164	164	166	174	183
SSW		1	1	1	1	1	1	1	1	1	1	1	2
SW		50	52	55	55	58	64	67	70	70	70	74	77
WSW		0	0	0	0	0	0	0	0	0	0	0	0
W		0	0	0	0	0	0	0	0	0	0	0	0
WNW		0	0	0	0	0	0	0	0	0	0	0	0
NW		0	0	0	0	0	0	0	0	0	0	0	0
NNW		0	0	0	0	0	0	0	0	0	0	0	0
Total			564	592	620	627	660	714	753	785	793	834	876

Table 2.5-13— Total Population Projections (Resident and Transient) by Sector and Distance from the BBNPP Site from 2000 to 2080
 (Page 2 of 12)

Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	1-2 mi (2-3 km)	95	100	105	106	111	121	127	133	134	141	148
NNE		0	0	0	0	0	0	0	0	0	0	0
NE		103	109	114	115	122	131	137	144	145	153	160
ENE		159	167	175	177	187	201	213	222	224	236	247
E		55	58	61	62	66	70	74	78	78	82	86
ESE		88	93	98	98	104	112	117	123	124	130	138
SE		35	38	39	40	42	45	47	49	50	52	55
SSE		150	158	165	168	176	190	201	208	211	222	234
S		82	87	91	92	97	104	110	115	115	122	127
SSW		100	106	111	112	118	128	134	139	140	148	157
SW		41	44	46	46	49	53	55	58	58	61	64
WSW		239	252	263	266	280	302	320	334	337	354	372
W		0	0	0	0	0	0	0	0	0	0	0
WNW		52	55	58	59	62	66	70	73	74	77	81
NW		36	39	40	41	43	46	49	51	51	54	56
NNW		56	60	62	63	66	72	75	79	79	83	87
Total		1,291	1,366	1,428	1,445	1,523	1,641	1,729	1,806	1,820	1,915	2,012

Table 2.5-13— Total Population Projections (Resident and Transient) by Sector and Distance from the BBNPP Site from 2000 to 2080
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Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	2-3 mi (3-5 km)	0	0	0	0	0	0	0	0	0	0	0
NNE		5	5	5	6	6	6	7	7	7	7	8
NE		1	1	1	1	1	1	1	1	1	1	2
ENE		0	0	0	0	0	0	0	0	0	0	0
E		113	118	125	125	132	142	151	157	159	167	175
ESE		88	92	97	98	102	111	117	122	124	129	137
SE		4	4	4	4	5	5	5	6	6	6	6
SSE		64	66	71	71	75	80	86	89	90	94	99
S		106	111	116	117	125	134	142	148	149	157	166
SSW		0	0	0	0	0	0	0	0	0	0	0
SW		200	209	220	222	234	253	267	279	281	296	311
WSW		132	138	145	147	155	166	176	184	185	195	205
W		183	191	201	204	214	231	244	255	258	270	284
WNW		72	76	79	80	84	92	96	100	101	106	112
NW		0	0	0	0	0	0	0	0	0	0	0
NNW		183	192	201	203	214	231	244	255	257	271	284
Total			1,151	1,203	1,265	1,278	1,347	1,452	1,536	1,603	1,618	1,699

Table 2.5-13— Total Population Projections (Resident and Transient) by Sector and Distance from the BBNPP Site from 2000 to 2080

(Page 4 of 12)

Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	3-4 mi (5-6 km)	1	2	2	2	2	2	2	2	2	2	2
NNE		606	635	668	673	711	768	806	842	851	898	942
NE		50	53	56	56	59	64	67	70	71	74	78
ENE		341	358	375	379	399	431	456	474	479	505	530
E		16	18	18	19	20	21	22	23	23	24	25
ESE		286	301	315	319	335	362	382	399	403	423	444
SE		103	109	115	115	122	131	138	144	146	153	160
SSE		101	106	112	114	119	128	135	141	142	149	158
S		140	148	154	155	165	177	187	196	198	208	218
SSW		170	179	187	190	199	215	226	237	240	251	265
SW		1,966	2,060	2,157	2,182	2,299	2,485	2,624	2,736	2,763	2,907	3,061
WSW		3,666	3,843	4,029	4,067	4,290	4,632	4,889	5,103	5,155	5,419	5,689
W		304	319	334	340	357	384	406	424	428	450	473
WNW		2	3	3	3	3	3	3	3	3	3	4
NW		86	91	95	96	101	109	115	120	121	128	134
NNW	111	117	122	124	130	141	149	155	156	165	172	
Total		7,949	8,342	8,742	8,834	9,311	10,053	10,607	11,069	11,181	11,759	12,355

Table 2.5-13— Total Population Projections (Resident and Transient) by Sector and Distance from the BBNPP Site from 2000 to 2080

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Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	4-5 mi (6-8 km)	855	895	941	949	999	1,080	1,140	1,194	1,203	1,263	1,329
NNE		339	355	374	378	398	428	452	473	477	503	528
NE		170	179	189	190	200	215	227	237	239	252	264
ENE		69	73	76	78	82	88	93	97	97	103	108
E		143	151	158	159	168	181	191	199	201	212	223
ESE		300	314	330	335	353	380	401	419	422	446	466
SE		128	135	141	143	150	163	172	178	180	189	199
SSE		61	65	67	69	73	78	82	86	86	91	95
S		53	56	59	60	63	67	71	75	75	79	83
SSW		148	156	163	166	174	187	199	207	208	219	231
SW		767	803	842	853	897	971	1,025	1,070	1,079	1,133	1,191
WSW		5,488	5,746	6,030	6,101	6,423	6,940	7,314	7,635	7,711	8,115	8,527
W		444	466	488	494	520	562	593	619	624	656	689
WNW		1	2	2	2	2	2	2	2	2	2	2
NW		128	134	141	143	150	163	171	180	181	190	199
NNW		32	34	36	36	38	41	43	45	46	48	50
Total		9,126	9,564	10,037	10,156	10,690	11,546	12,176	12,716	12,831	13,501	14,184

Table 2.5-13— Total Population Projections (Resident and Transient) by Sector and Distance from the BBNPP Site from 2000 to 2080

(Page 6 of 12)

Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	5-10 mi (8-16 km)	1,927	2,021	2,118	2,141	2,261	2,433	2,571	2,679	2,706	2,846	2,994
NNE		2,048	2,145	2,252	2,276	2,397	2,590	2,731	2,850	2,878	3,027	3,181
NE		3,176	3,328	3,491	3,526	3,720	4,014	4,240	4,419	4,462	4,697	4,934
ENE		1,584	1,659	1,742	1,759	1,853	2,006	2,113	2,206	2,227	2,340	2,460
E		1,414	1,484	1,553	1,570	1,657	1,790	1,885	1,968	1,986	2,091	2,199
ESE		1,936	2,028	2,128	2,151	2,264	2,447	2,582	2,699	2,721	2,864	3,007
SE		4,583	4,799	5,036	5,090	5,365	5,794	6,107	6,381	6,445	6,772	7,117
SSE		1,409	1,477	1,547	1,566	1,650	1,783	1,879	1,960	1,980	2,082	2,189
S		896	942	985	997	1,046	1,129	1,193	1,247	1,261	1,323	1,394
SSW		536	562	590	594	629	680	713	746	753	791	832
SW		999	1,047	1,097	1,109	1,169	1,261	1,332	1,390	1,402	1,474	1,553
WSW		7,571	7,929	8,320	8,416	8,859	9,569	10,099	10,538	10,638	11,192	11,757
W		1,663	1,742	1,828	1,849	1,948	2,104	2,220	2,314	2,336	2,457	2,587
WNW		1,242	1,300	1,359	1,380	1,453	1,573	1,659	1,730	1,747	1,837	1,929
NW		1,001	1,047	1,099	1,110	1,175	1,267	1,334	1,395	1,407	1,478	1,554
NNW		1,320	1,386	1,443	1,467	1,548	1,666	1,761	1,835	1,856	1,948	2,051
Total		33,305	34,896	36,588	37,001	38,994	42,106	44,419	46,357	46,805	49,219	51,738

Table 2.5-13— Total Population Projections (Resident and Transient) by Sector and Distance from the BBNPP Site from 2000 to 2080
 (Page 7 of 12)

Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	0-10 mi (0-16 km)	2,913	3,055	3,204	3,237	3,414	3,680	3,887	4,057	4,094	4,304	4,527
NNE		2,998	3,140	3,299	3,333	3,512	3,792	3,996	4,172	4,213	4,435	4,659
NE		3,500	3,670	3,851	3,888	4,102	4,425	4,672	4,871	4,918	5,177	5,438
ENE		2,153	2,257	2,368	2,393	2,521	2,726	2,875	2,999	3,027	3,184	3,345
E		2,101	2,207	2,311	2,336	2,465	2,660	2,804	2,926	2,954	3,109	3,268
ESE		2,698	2,828	2,968	3,001	3,158	3,412	3,599	3,762	3,794	3,992	4,192
SE		4,853	5,085	5,335	5,392	5,684	6,138	6,469	6,758	6,827	7,172	7,537
SSE		1,785	1,872	1,962	1,988	2,093	2,259	2,383	2,484	2,509	2,638	2,775
S		1,395	1,468	1,535	1,552	1,634	1,760	1,860	1,945	1,964	2,063	2,171
SSW		955	1,004	1,052	1,063	1,121	1,211	1,273	1,330	1,342	1,410	1,487
SW		4,023	4,215	4,417	4,467	4,706	5,087	5,370	5,603	5,653	5,945	6,257
WSW		17,096	17,908	18,787	18,997	20,007	21,609	22,798	23,794	24,026	25,275	26,550
W		2,594	2,718	2,851	2,887	3,039	3,281	3,463	3,612	3,646	3,833	4,033
WNW		1,369	1,436	1,501	1,524	1,604	1,736	1,830	1,908	1,927	2,025	2,128
NW		1,251	1,311	1,375	1,390	1,469	1,585	1,669	1,746	1,760	1,850	1,943
NNW		1,702	1,789	1,864	1,893	1,996	2,151	2,272	2,369	2,394	2,515	2,644
Total		53,386	55,963	58,680	59,341	62,525	67,512	71,220	74,336	75,048	78,927	82,954

Table 2.5-13— Total Population Projections (Resident and Transient) by Sector and Distance from the BBNPP Site from 2000 to 2080
 (Page 8 of 12)

Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	10-20 mi (16-32 km)	4,033	4,221	4,430	4,481	4,718	5,098	5,377	5,615	5,669	5,963	6,263
NNE		12,766	13,366	14,023	14,177	14,940	16,138	17,025	17,761	17,947	18,857	19,826
NE		99,334	104,035	109,121	110,351	116,255	125,560	132,440	138,210	139,622	146,841	154,276
ENE		25,052	26,245	27,515	27,839	29,332	31,667	33,411	34,864	35,217	37,040	38,921
E		6,019	6,298	6,608	6,684	7,048	7,609	8,029	8,379	8,465	8,894	9,347
ESE		13,799	14,450	15,163	15,340	16,154	17,456	18,410	19,199	19,393	20,383	21,436
SE		39,818	41,714	43,712	44,231	46,633	50,317	53,076	55,412	55,944	58,806	61,858
SSE		5,386	5,635	5,905	5,981	6,303	6,808	7,179	7,494	7,574	7,956	8,374
S		16,825	17,615	18,471	18,685	19,692	21,263	22,430	23,423	23,643	24,851	26,141
SSW		2,486	2,595	2,728	2,761	2,908	3,144	3,320	3,463	3,495	3,667	3,867
SW		2,895	3,021	3,172	3,206	3,391	3,668	3,856	4,033	4,071	4,271	4,502
WSW		26,867	28,136	29,507	29,853	31,440	33,960	35,839	37,370	37,756	39,623	41,741
W		6,211	6,497	6,814	6,900	7,273	7,859	8,283	8,645	8,719	9,168	9,647
WNW		3,747	3,918	4,103	4,158	4,390	4,747	4,997	5,210	5,265	5,498	5,831
NW		2,913	3,036	3,189	3,234	3,412	3,686	3,889	4,061	4,096	4,267	4,528
NNW		1,598	1,669	1,756	1,778	1,873	2,021	2,134	2,228	2,245	2,360	2,484
Total			269,749	282,451	296,217	299,659	315,762	341,001	359,695	375,367	379,121	398,445

Table 2.5-13— Total Population Projections (Resident and Transient) by Sector and Distance from the BBNPP Site from 2000 to 2080

(Page 9 of 12)

Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	20-30 mi (32-48 km)	366	383	400	404	426	468	491	511	514	539	567
NNE		13,390	14,006	14,708	14,867	15,668	16,925	17,855	18,635	18,819	19,773	20,811
NE		87,862	92,005	96,500	97,612	102,829	111,060	117,138	122,243	123,487	129,756	136,468
ENE		6,515	6,813	7,152	7,235	7,620	8,243	8,684	9,069	9,157	9,615	10,117
E		4,112	4,293	4,497	4,564	4,826	5,201	5,483	5,724	5,778	6,061	6,392
ESE		9,332	9,760	10,241	10,371	10,928	11,799	12,446	12,988	13,117	13,725	14,493
SE		26,233	27,463	28,804	29,134	30,696	33,174	34,982	36,509	36,869	38,747	40,759
SSE		15,144	15,846	16,622	16,819	17,738	19,150	20,207	21,068	21,283	22,353	23,523
S		47,649	49,882	52,330	52,933	55,764	60,233	63,531	66,302	66,949	70,361	74,028
SSW		22,819	23,883	25,053	25,350	26,715	28,849	30,425	31,745	32,055	33,673	35,472
SW		28,674	30,020	31,467	31,849	33,564	36,251	38,235	39,906	40,294	42,345	44,553
WSW		17,395	18,203	19,091	19,322	20,367	21,994	23,204	24,204	24,447	25,648	27,022
W		5,633	5,885	6,174	6,250	6,596	7,132	7,513	7,836	7,918	8,314	8,754
WNW		5,233	5,462	5,733	5,813	6,127	6,626	6,985	7,282	7,348	7,645	8,131
NW		1,669	1,738	1,821	1,853	1,959	2,116	2,231	2,327	2,345	2,442	2,595
NNW		1,213	1,264	1,328	1,349	1,425	1,538	1,618	1,693	1,702	1,773	1,888
Total		293,239	306,906	321,921	325,725	343,248	370,759	391,028	408,042	412,082	432,770	455,573

Table 2.5-13— Total Population Projections (Resident and Transient) by Sector and Distance from the BBNPP Site from 2000 to 2080

(Page 10 of 12)

Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	30-40 mi (48-64 km)	6,219	6,508	6,820	6,897	7,284	7,867	8,294	8,656	8,735	9,179	9,666
NNE		16,608	17,384	18,229	18,457	19,441	21,013	22,152	23,109	23,342	24,516	25,793
NE		147,705	154,701	162,241	164,090	172,844	186,716	196,981	205,483	207,577	218,070	229,401
ENE		13,050	13,651	14,313	14,502	15,280	16,489	17,402	18,165	18,342	19,269	20,278
E		18,233	19,040	20,000	20,239	21,357	23,060	24,311	25,378	25,610	26,917	28,325
ESE		27,330	28,579	29,996	30,361	32,002	34,551	36,435	38,044	38,417	40,242	42,456
SE		35,385	37,042	38,854	39,315	41,424	44,737	47,196	49,250	49,738	52,271	54,967
SSE		16,373	17,134	17,966	18,182	19,163	20,707	21,842	22,776	23,006	24,095	25,435
S		27,570	28,854	30,267	30,608	32,266	34,861	36,751	38,358	38,743	40,551	42,832
SSW		16,182	16,935	17,764	17,964	18,938	20,460	21,574	22,520	22,731	23,833	25,136
SW		9,754	10,189	10,692	10,821	11,420	12,329	13,002	13,588	13,707	14,349	15,145
WSW		45,214	47,324	49,647	50,239	52,922	57,166	60,282	62,908	63,537	66,661	70,234
W		31,399	32,869	34,472	34,882	36,759	39,691	41,864	43,704	44,123	46,390	48,785
WNW		18,348	19,196	20,136	20,386	21,472	23,206	24,469	25,534	25,791	27,114	28,521
NW		1,478	1,542	1,621	1,638	1,730	1,878	1,970	2,059	2,071	2,182	2,298
NNW		4,128	4,304	4,518	4,570	4,833	5,226	5,510	5,760	5,799	6,085	6,416
Total		434,976	455,252	477,536	483,151	509,135	549,957	580,035	605,292	611,269	641,724	675,688

Table 2.5-13— Total Population Projections (Resident and Transient) by Sector and Distance from the BBNPP Site from 2000 to 2080
 (Page 11 of 12)

Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	40-50 mi (64-80 km)	7,072	7,388	7,751	7,845	8,290	8,956	9,426	9,847	9,937	10,430	10,998
NNE		9,771	10,223	10,701	10,850	11,445	12,355	13,032	13,595	13,731	14,368	15,193
NE		48,183	50,450	52,925	53,530	56,412	60,911	64,251	67,058	67,711	71,025	74,855
ENE		19,438	20,336	21,319	21,573	22,761	24,591	25,919	27,056	27,307	28,686	30,195
E		47,086	49,311	51,696	52,301	55,107	59,532	62,805	65,530	66,157	69,569	73,141
ESE		51,099	53,503	56,115	56,772	59,814	64,599	68,147	71,104	71,826	75,214	79,364
SE		211,830	221,801	232,622	235,386	247,939	267,812	282,483	294,714	297,699	312,833	329,084
SSE		64,569	67,606	70,911	71,731	75,597	81,661	86,109	89,863	90,733	95,441	100,278
S		31,875	33,371	34,991	35,401	37,295	40,304	42,497	44,351	44,810	47,066	49,517
SSW		17,148	17,940	18,820	19,042	20,074	21,706	22,862	23,854	24,100	25,301	26,652
SW		15,376	16,082	16,855	17,078	18,016	19,445	20,503	21,387	21,591	22,685	23,886
WSW		32,972	34,490	36,202	36,635	38,581	41,688	43,975	45,900	46,331	48,439	51,224
W		12,989	13,604	14,255	14,428	15,197	16,423	17,331	18,081	18,253	19,160	20,178
WNW		67,720	70,903	74,372	75,230	79,253	85,601	90,301	94,226	95,182	100,057	105,179
NW		1,487	1,552	1,628	1,646	1,742	1,886	1,984	2,067	2,088	2,193	2,317
NNW		9,684	10,132	10,623	10,754	11,333	12,258	12,919	13,477	13,608	14,303	15,050
Total			648,299	678,692	711,786	720,202	758,856	819,728	864,544	902,110	911,064	956,770

Table 2.5-13— Total Population Projections (Resident and Transient) by Sector and Distance from the BBNPP Site from 2000 to 2080
 (Page 12 of 12)

Population Projection by Year												
Sector	Radius in mi (km)	2000	2010	2018	2020	2030	2040	2050	2058	2060	2070	2080
N	0-50 mi (0-80 km)	20,603	21,555	22,605	22,864	24,132	26,069	27,475	28,686	28,949	30,415	32,021
NNE		55,533	58,119	60,960	61,684	65,006	70,223	74,060	77,272	78,052	81,949	86,282
NE		386,584	404,861	424,638	429,471	452,442	488,672	515,482	537,865	543,315	570,869	600,438
ENE		66,208	69,302	72,667	73,542	77,514	83,716	88,291	92,153	93,050	97,794	102,856
E		77,551	81,149	85,112	86,124	90,803	98,062	103,432	107,937	108,964	114,550	120,473
ESE		104,258	109,120	114,483	115,845	122,056	131,817	139,037	145,097	146,547	153,556	161,941
SE		318,119	333,105	349,327	353,458	372,376	402,178	424,206	442,643	447,077	469,829	494,205
SSE		103,257	108,093	113,366	114,701	120,894	130,585	137,720	143,685	145,105	152,483	160,385
S		125,314	131,190	137,594	139,179	146,651	158,421	167,069	174,379	176,109	184,892	194,689
SSW		59,590	62,357	65,417	66,180	69,756	75,370	79,454	82,912	83,723	87,884	92,614
SW		60,722	63,527	66,603	67,421	71,097	76,780	80,966	84,517	85,316	89,595	94,343
WSW		139,544	146,061	153,234	155,046	163,317	176,417	186,098	194,176	196,097	205,646	216,771
W		58,826	61,573	64,566	65,347	68,864	74,386	78,454	81,878	82,659	86,865	91,397
WNW		96,417	100,915	105,845	107,111	112,846	121,916	128,582	134,160	135,513	142,339	149,790
NW		8,798	9,179	9,634	9,761	10,312	11,151	11,743	12,260	12,360	12,934	13,681
NNW		18,325	19,158	20,089	20,344	21,460	23,194	24,453	25,527	25,748	27,036	28,482
Total		1,699,649	1,779,264	1,866,140	1,888,078	1,989,526	2,148,957	2,266,522	2,365,147	2,388,584	2,508,636	2,640,368

Table 2.5-14— Civilian Labor Force Data for Luzerne County, Columbia County, Scranton-Wilkes-Barre-Hazleton Metropolitan Statistical Area, Pennsylvania, and the U.S., 2000 and 2006
(Page 1 of 2)

Labor Force	County/Location									
	Luzerne County		Columbia County		Scranton-Wilkes-Barre-Hazleton Metropolitan Statistical Area		Commonwealth of Pennsylvania		U.S.	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
2000 Labor Force										
Population 16 years old & older:	260,412	100.0%	52,499	100.0%	507,034	100.0%	9,693,040	100.0%	217,168,077	100.0%
Individuals In Labor Force:	151,869	58.3%	32,403	61.7%	299,569	59.1%	6,000,512	61.9%	138,820,935	63.9%
Civilian Labor Force	151,748	58.3%	32,376	61.7%	299,308	59.0%	5,992,886	61.8%	137,668,798	63.4%
Employed	143,492	55.1%	30,006	57.2%	282,576	55.7%	5,653,500	58.3%	129,721,512	59.7%
Unemployed	8,256	3.2%	2,370	4.5%	16,732	3.3%	339,386	3.5%	7,947,286	3.7%
Percent of Civilian Labor Force Unemployed		5.4%		7.3%		5.6%		5.7%		5.8%
Armed Forces	121	0.05%	27	0.1%	261	0.1%	7,626	0.1%	1,152,137	0.5%
Individuals Not in Labor Force:	108,543	41.7%	20,096	38.3%	207,465	40.9%	3,692,528	38.1%	78,347,142	36.1%
2006 Labor Force										
Population 16 years old & older:	258,114	100.0%	54,445	100.0%	n/a	n/a	9,987,926	100.0%	234,243,963	100.0%
Individuals In Labor Force	156,404	60.6%	33,251	61.1%	n/a	n/a	6,277,605	62.9%	152,193,214	65.0%
Civilian Labor Force	156,352	60.6%	33,211	61.0%	n/a	n/a	6,269,806	62.8%	151,203,992	64.5%
Employed	147,674	57.2%	31,398	57.7%	n/a	n/a	5,881,115	58.9%	141,501,434	60.4%
Unemployed	8,678	3.4%	1,813	3.3%	n/a	n/a	388,691	3.9%	9,702,558	4.1%
Percent of Civilian Labor Force Unemployed		5.6%		5.5%		n/a		6.2%		6.4%
Armed Forces	52	0.02%	40	0.1%	n/a	n/a	7,799	0.1%	989,222	0.4%
					n/a	n/a				
Individuals Not in Labor Force:	101,710	39.4%	21,194	38.9%	n/a	n/a	3,710,321	37.1%	82,050,749	35.0%
2000-2006 Average Annual Percent Change Labor Force										

Table 2.5-14— Civilian Labor Force Data for Luzerne County, Columbia County, Scranton-Wilkes-Barre-Hazleton Metropolitan Statistical Area, Pennsylvania, and the U.S., 2000 and 2006

(Page 2 of 2)

Labor Force	County/Location				
	Luzerne County	Columbia County	Scranton-Wilkes-Barre-Hazleton Metropolitan Statistical Area	Commonwealth of Pennsylvania	U.S.
Population 16 years old & older:	-0.2%	0.6%	n/a	0.5%	1.3%
Individuals In Labor Force:					
Civilian Labor Force	0.5%	0.4%	n/a	0.8%	1.6%
Employed	0.5%	0.8%	n/a	0.7%	1.5%
Unemployed	0.9%	-3.9%	n/a	2.4%	3.7%
Armed Forces	-9.5%	8.0%	n/a	0.4%	-2.4%
Individuals Not in Labor Force:	-1.1%	0.9%	n/a	0.1%	0.8%
<p>Note: Columbia County was originally part of the MSA in 2000; however based on the latest information available on the MSA boundaries, Columbia County is no longer part of the Scranton-Wilkes-Bare-Hazleton MSA but is now part of a micropolitan. Therefore, comparisons between 2000 and 2006 can not be made.</p>					

Table 2.5-15— County Employment for the 50-mile Area by Economic Sector, Sub-Sector, Industry Group, and Industry: Construction, 2006

(Page 1 of 3)

County	Construction (23)	Construction of Buildings (236)	Industrial Building Construction (23621)	Heavy and Civil Engineering Construction (237)	Highway, Street, and Bridge Construction (2373)	Specialty Trade Contractors (238)	Building Foundation and Exterior Contractors (2381)	Poured Concrete Structure Contractors (23811)
Berks	7,385	1,520	62	508	249	5,357	1,082	198
Bradford	463	172		9	a	282	83	30
Carbon	565	c		b	a	348	92	20
Columbia	1,027	273	a	229	75	525	183	4
Dauphin	6,041	2,031	c	304	120	3,706	657	83
Lackawanna	2,784	890	28	149	a	1,745	430	55
Lebanon	1,910	427	21	125	b	1,358	171	4
Lehigh	7,022	1,815	246	360	152	4,847	1,028	299
Luzerne	5,348	1,624	b	677	260	3,047	503	100
Lycoming	2,085	436		464	290	1,185	215	85
Monroe	2,683	918	a	136	102	1,629	403	78
Montour	138	66		20	a	52	b	a
Northampton	5,175	950		662	311	3,563	1,098	258
Northumberland	1,048	440		33	a	575	184	82
Pike	478	183		49	a	246	32	a
Schuylkill	1,679	532	20	262	110	885	321	17
Snyder	622	168	a	25	25	429	b	a
Sullivan	78	b				b		
Susquehanna	322	b		a	a	232	85	2
Union	671	c	a	a	a	502	95	a
Wayne	1,352	290		392	b	670	124	a
Wyoming	303	c		a		164	b	a
Totals *	49,179	12,735	377	4,404	1,694	31,347	6,786	1,315

Table 2.5-15— County Employment for the 50-mile Area by Economic Sector, Sub-Sector, Industry Group, and Industry: Construction, 2006

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County	Steel and Precast Concrete Contractors (23812)	Masonry Contractors (23814)	Building Equipment Contractors (2382)	Electrical Contractors (23821)	Plumbing and HVAC Contractors (23822)	Drywall and Insulation Contractors (23831)	Painting and Wall Covering Contractors (23832)	Finish Carpentry Contractors (23835)	Site Preparation Contractors (23891)
Berks	b	401	2,315	830	1,283	201	207	157	831
Bradford		a	91	14	77	a		a	49
Carbon	a	21	133	71	b		18	15	55
Columbia	a	142	165	26	139	20	15	30	85
Dauphin	a	159	1,719	562	971	548	168	78	223
Lackawanna	b	129	892	412	450	34	15	80	107
Lebanon		65	715	365	e	117	32	97	133
Lehigh	b	248	2,614	1,037	1,418	153	250	189	250
Luzerne		106	1,524	516	945	137	303	145	327
Lycoming	a	19	723	181	433	40	24	18	118
Monroe	b	100	855	488	e	20	41	44	181
Montour		a	b	a	17	a			a
Northampton	225	272	989	252	676	511	170	115	518
Northumberland		42	197	b	108	a	4	b	61
Pike		13	113	b	58	a	7	12	62
Schuylkill	c	a	267	139	128	78	15	17	116
Snyder		a	127	27	100	a	a	a	b
Sullivan			a	a	a		a		a
Susquehanna	a	b	41	30	11	a		a	48
Union		42	173	a	152	a	14	a	169
Wayne	b	39	199	b	110	a	23	26	262
Wyoming		14	74	44	b	a	a	a	56
Totals*	225	1,812	13,926	4,994	7,076	1,859	1,306	1,023	3,651

Table 2.5-15— County Employment for the 50-mile Area by Economic Sector, Sub-Sector, Industry Group, and Industry: Construction, 2006

(Page 3 of 3)

Source: USCB,
2006m.

Notes:

a = 0 to 19 employees

b = 20 to 99 employees

c = 100 to 249 employees

d = is not used by the USCB in this table

e = 250 to 499 employees

* Totals do not include counties characterized by employment ranges a-e as noted above

Table 2.5-16— Employment by Industry Sectors and Class of Workers in Luzerne County, Columbia County, and the ROI, 2000 and 2006

Industry Sector and Class of Workers	Average Employment											
	Luzerne County				Columbia County				Total ROI			
	2000		2006		2000		2006		2000		2006	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total, All Industries	143,492	100%	147,674	100%	30,006	100%	31,398	100%	173,498	100%	179,072	100%
Agriculture, Forestry, Fishing & Hunting, and Mining	1,057	0.7%	974	0.7%	561	1.9%	450	1.4%	1,618	0.9%	1,424	0.8%
Construction	8,515	5.9%	8,164	5.5%	1,624	5.4%	2,134	6.8%	10,139	5.8%	10,298	5.8%
Manufacturing	23,754	16.6%	19,685	13.3%	7,233	24.1%	6,163	19.6%	30,987	17.9%	25,848	14.4%
Wholesale Trade	6,075	4.2%	6,369	4.3%	790	2.6%	643	2.0%	6,865	4.0%	7,012	3.9%
Retail Trade	18,595	13.0%	21,399	14.5%	3,609	12.0%	3,567	11.4%	22,204	12.8%	24,966	13.9%
Transportation and Warehousing, Utilities	8,260	5.8%	7,269	4.9%	1,571	5.2%	1,611	5.1%	9,831	5.7%	8,880	5.0%
Information	4,916	3.4%	4,816	3.3%	513	1.7%	813	2.6%	5,429	3.1%	5,629	3.1%
Finance, Insurance, Real Estate and Rental and Leasing	8,322	5.8%	8,808	6.0%	969	3.2%	926	2.9%	9,291	5.4%	9,734	5.4%
Professional, Scientific, Management, Administrative, and Waste Services	8,963	6.2%	11,238	7.6%	1,438	4.8%	1,734	5.5%	10,401	6.0%	12,972	7.2%
Educational, Health, and Social Services	30,882	21.5%	33,791	22.9%	7,170	23.9%	8,852	28.2%	38,052	21.9%	42,643	23.8%
Arts, Entertainment, Recreation, Accommodation and Food Services	9,988	7.0%	11,601	7.9%	2,355	7.8%	2,660	8.5%	12,343	7.1%	14,261	8.0%
Other Services (except public administration)	6,369	4.4%	5,971	4.0%	1,185	3.9%	1,166	3.7%	7,554	4.4%	7,137	4.0%
Public Administration	7,796	5.4%	7,589	5.1%	988	3.3%	679	2.2%	8,784	5.1%	8,268	4.6%
Class of Workers												
Private wage and salary workers	117,667	82.0%	120,502	81.6%	24,104	80.3%	25,491	81.2%	141,771	81.7%	145,993	81.5%
Government Workers	17,307	12.1%	17,891	12.1%	3,775	12.6%	3,981	12.7%	21,082	12.2%	21,872	12.2%
Self-employed workers in own not incorporated business	8,131	5.7%	8,917	6.0%	2,002	6.7%	1,902	6.1%	10,133	5.8%	10,819	6.0%
Unpaid family workers	387	0.3%	364	0.2%	125	0.4%	24	0.1%	512	0.3%	388	0.2%
Totals	143,492	100%	147,674	100%	30,006	100%	31,398	100%	173,498	100%	179,072	100%

**Table 2.5-17— Top 10 Employers in Luzerne County and Columbia County,
Second Quarter 2006**

County/Firm	Product/Service Provided	Employment
Luzerne County		
United States Government	Public Administration	N/A
Pennsylvania State Government	Public Administration	N/A
Wyoming Valley Health Care System	Medical	3,500
Luzerne County Government	Public Administration	1,739
OneSource, Inc.	Administrative Support, Waste Management and Remediation	N/A
Hazleton Area School District	Education	1,346
NBC Pittston Merchants, Inc.	Retail	N/A
PPL Susquehanna, LLC	Energy	1,000
Wal-Mart Associates, Inc.	Retail	650
Geisinger-Wyoming Valley	Medical	1,100
Metz and Associates, LTD	Accommodation and Food Service	N/A
Wilkes-Barre Area School District	Education	N/A
Columbia County		
State System of Higher Education	Education	N/A
Wise Foods, Inc	Food	800
Community Health Systems, Inc - Berwick Hospital Corporation	Medical	N/A
Magee Rieter Automotive Systems	Textile Industrial	N/A
Del Monte Corporation	Food	N/A
Berwick Area School District	Education	680
Deluxe Homes of PA, Inc	Housing	220
Kawneer Company, Inc	Manufacturer / Exporter / Importer	N/A
Wal-Mart Associates, Inc	Retail	N/A
Bloomsburg Hospital	Medical	N/A
Haddon Craftsmen, Inc	Manufacturing	N/A

Table 2.5-18— Income Characteristics in Luzerne County, Columbia County, Scranton-Wilkes-Barre-Hazleton Metropolitan Statistical Area, Pennsylvania, and the U.S., 2000 and 2006

Income Characteristics	County/Location				
	Luzerne County	Columbia County	Scranton-Wilkes-Barre-Hazleton Metropolitan Statistical Area	Commonwealth of Pennsylvania	U.S.
2000					
Percent of Individuals Below the Poverty Level	11.1%	13.1%	11.1%	11.0%	12.4%
Median Household Income	\$33,771	\$34,094	\$34,161	\$40,106	\$41,994
Per Capita Income	\$18,228	\$16,973	\$18,229	\$20,880	\$21,587
Mean Household Income	\$43,451	\$42,774	\$44,205	\$52,682	\$56,644
2006					
Percent of Individuals Below the Poverty Level	13.3%	10.7%	n/a	12.1%	13.3%
Median Household Income	\$39,687	\$39,135	n/a	\$46,259	\$48,451
Per Capita Income	\$21,346	\$18,715	n/a	\$24,694	\$25,267
Mean Household Income	\$50,006	\$46,822	n/a	\$61,319	\$65,527

Table 2.5-19— Mean Earnings in Luzerne County, Columbia County, Scranton-Wilkes-Barre-Hazleton Metropolitan Statistical Area, Pennsylvania, and the U.S., 2000 and 2006

Income Characteristics	County/Location				
	Luzerne County	Columbia County	Scranton-Wilkes-Barre-Hazleton Metropolitan Statistical Area	Commonwealth of Pennsylvania	U.S.
2000					
Mean Earnings	\$45,897	\$42,936	\$46,362	\$54,209	\$56,604
Percent Greater Than the National Average	-18.9%	-24.1%	-18.1%	-4.2%	n/a
2006					
Mean Earnings	\$52,370	\$48,437	n/a	\$64,352	\$66,733
Percent Greater Than the National Average	-21.5%	-27.4%	n/a	-3.6%	n/a

Table 2.5-20— Occupied Housing Units and Vacant (available) Housing Units in Luzerne County, Columbia County, and the ROI, 2000 and 2006

Housing Units	County/Location					
	Luzerne County		Columbia County		Total ROI	
	Number	Percent	Number	Percent	Number	Percent
2000						
Total Housing:	144,686	100%	27,733	100%	172,419	100%
Total Occupied Units:	130,687	90.3%	24,915	89.8%	155,602	90.2%
Owner-Occupied	91,914	70.3%	18,030	72.4%	109,944	70.7%
Renter-Occupied	38,773	29.7%	6,885	27.6%	45,658	29.3%
Total Unoccupied Units:	13,999	9.7%	2,818	10.2%	16,817	9.8%
Year-around Units	11,482	7.9%	1,514	5.5%	12,996	7.5%
Seasonal, recreational, or occasional use units	2,517	1.7%	1,304	4.7%	3,821	2.2%
2006						
Total Housing:	147,321	100%	28,811	100%	176,132	100%
Total Occupied Units:	130,034	88.3%	25,302	87.8%	155,336	88.2%
Owner-Occupied	94,840	72.9%	19,569	77.3%	114,409	73.7%
Renter-Occupied	35,194	27.1%	5,733	22.7%	40,927	26.3%
Total Unoccupied Units:	17,287	11.7%	3,509	12.2%	20,796	11.8%
Year-around Units	13,948	9.5%	2,442	8.5%	16,390	9.3%
Seasonal, recreational, or occasional use units	3,339	2.3%	1,067	3.7%	4,406	2.5%
2000-2006 Average Annual Percent Change						
Total Housing:	0.3%		0.6%		0.4%	
Total Occupied Units:	-0.1%		0.3%		-0.03%	
Owner-Occupied	0.5%		1.4%		0.7%	
Renter-Occupied	-1.5%		-2.8%		-1.7%	
Total Unoccupied Units:	3.9%		4.1%		3.9%	
Year-around Units	3.6%		10.2%		4.4%	
Seasonal, recreational, or occasional use units	5.4%		-3.0%		0.4%	

Table 2.5-21— New Housing Units (both Single-family and Multi-family) Authorized for Construction, Luzerne County, Columbia County, and the Region of Interest, 2000 to 2006

	Year	County/Location		
		Luzerne County	Columbia County	Total ROI
Total Existing Units	2000	144,686	27,733	172,419
Annual Building Permits	2000	471	142	613
	2001	559	142	701
	2002	717	156	873
	2003	829	182	1,011
	2004	673	156	829
	2005	403	72	475
	2006	480	65	545
Annual Units	2000	490	188	678
	2001	580	149	729
	2002	854	169	1,023
	2003	935	191	1,126
	2004	712	263	975
	2005	407	73	480
	2006	536	69	605
Annual Construction Cost	2000	\$56,282,978	\$12,648,938	\$68,931,916
	2001	\$75,160,529	\$14,818,228	\$89,978,757
	2002	\$103,733,348	\$19,390,413	\$123,123,761
	2003	\$123,197,471	\$22,457,498	\$145,654,969
	2004	\$101,566,458	\$28,753,601	\$130,320,059
	2005	\$68,154,090	\$11,007,416	\$79,161,506
	2006	\$98,895,176	\$9,904,219	\$108,799,395

Table 2.5-22— Apartment and Townhouse Complexes within about 30 Mi (48 km) of Berwick, Pennsylvania
(Page 1 of 2)

Apartment & Townhouse Complex	City/Location	Distance From Berwick		Number of Bedrooms
		mi	km	
Luzerne County				
St. Thomas Court	Hazleton	17.4	28.1	1-3
Lexington Village Apartments	Nanticoke	21.1	34.0	2
Woodbryn Associates	Mountain Top	23.1	37.1	n/a
University City Housing	Plymouth	23.5	37.8	n/a
Saint Vincent Apartments	Plymouth	23.9	38.4	n/a
Teberio Properties, LLC	Mountain Top	25.4	40.9	n/a
Gateway Manor Apartments	Edwardsville	27.6	44.4	1-3
KBK Apartments	Kingston	27.6	44.4	n/a
Four Star Apartments	Kingston	28.0	45.1	n/a
MS Carrier Apartments	Wilkes-Barre	28.0	45.1	n/a
Gates Avenue Apartments	Kingston	28.2	45.4	n/a
Chapin Apartments	Kingston	28.5	45.9	n/a
Provincial Tower Apartments	Wilkes-Barre	28.6	46.0	2
North River Street Apartments	Wilkes-Barre	28.7	46.2	0-3
Cedar Village Apartments	Ashley	28.9	46.5	1-3
SDK Green Acres Apartments	Kingston	28.9	46.5	1-3
Nittany Woodlands	Lehman	29.7	47.8	n/a
Lafayette Garden Apartments, LLC	Wilkes-Barre	30.3	48.7	1-2
Mayflower Crossing	Wilkes-Barre	30.3	48.8	1-4
Hi-Meadows Apartments	Dallas	30.4	48.9	1-4
Marlboro Place	Wilkes-Barre	31.0	49.9	1-2
Saint John Apartments, LP	Wilkes-Barre	32.4	52.1	n/a
Country Club Apartments	Dallas	32.7	52.6	2-3
Wilkeswood Apartments	Wilkes-Barre	33.5	53.9	1-3
East Mountain Apartments	Wilkes-Barre	33.6	54.1	1-2
Subtotal of Facilities: 25				
Columbia County				
353 North Market Street Apartments	Berwick	0.8	1.3	3
Briar Manor Apartments	Berwick	2.7	4.3	n/a
Hawthorne Heights Townhouses	Bloomsburg	12.8	20.5	n/a
Scottown Apartments	Bloomsburg	12.7	20.4	n/a
Ridgeview Westlawn Apartments	Danville	22.2	35.7	1-2
Subtotal of Facilities: 5				
Schuylkill				
Berwick House Apartments	Tamaqua	29.5	47.5	n/a
ABC Tamaqua High Rise, Inc.	Tamaqua	29.6	47.6	0-1
Subtotal of Facilities: 2				
Northumberland				
Nottingham Estates	Elysburg	26.7	42.9	n/a

Table 2.5-22— Apartment and Townhouse Complexes within about 30 Mi (48 km) of Berwick, Pennsylvania

(Page 2 of 2)

Apartment & Townhouse Complex	City/Location	Distance From Berwick		Number of Bedrooms
		mi	km	
Mountain View Apartments	Elysburg	27.3	44.0	1-2
Subtotal of Facilities: 2				
Total of Facilities: 34				
Notes: Distances were calculated as driving distances.				

Table 2.5-23— Hotels, Motels, and Bed & Breakfasts within about 30 Mi (48 km) of Berwick, Pennsylvania

(Page 1 of 4)

County/Name	City/Location	Distance from Berwick		Number of Units	Occupancy
		mi	km		
Luzerne County					
Super 8 Motel	Nescopeck	1.4	2.3	46	Phone-n/a
Emerald Forest Inn	Nescopeck	5.2	8.4	n/a	n/a
Lookout Motor Lodge	Drums	8.9	14.3	19	n/a
Best Value Inn	Drums	9.9	15.9	63	Phone-n/a
Americas Best Value Inn	Drums	9.9	15.9	58	n/a
The Blue Heron B & B	Shickshinny	11.1	17.9	n/a	n/a
Eagle Rock Resort	Hazleton	11.8	19.0	46	n/a
Comfort Inn	West Hazleton	13.5	21.7	119	Occupancy is greater than 80% on weekdays throughout the year
Forest Hill Inn	Hazleton	14.8	23.8	40	n/a
Fairfield Inn & Suites by Marriott	Hazleton	15.4	24.8	57	n/a
Econo Lodge	Drums	16.9	27.2	42	n/a
Holiday Inn Express Suites	Drums	17.1	27.5	65	Booked throughout the summer on weekends; Business travelers comprise the business during winter weekdays
Best Western Genetti Lodge	Hazleton	17.8	28.6	77	n/a
Harts Content B & B	Huntington Mills	17.8	28.6	3	n/a
Nesco Manor Hotel	Drums	18.0	29.0	5	n/a
Ramada Inn	Hazleton	18.0	29.0	106	Phone-n/a
Penn Terrace Motel	Hazleton	18.2	29.3	24	n/a
Capri Motel Inc.	Hazleton	18.3	29.5	n/a	n/a
Emily's B & B	Hazleton	18.5	29.8	4	n/a
Hampton Inn	Hazleton	18.5	29.8	123	Phone-n/a
Hazleton Motor Inn	Hazleton	19.0	30.6	25	n/a
Mt. Laurel Motel	Hazleton	19.8	31.9	41	n/a
Young's Country Inn	Cambra	20.5	33.0	n/a	n/a
Montfort Motel	Sheppton	23.0	37.0	n/a	n/a
Inn Between	Hanover Twp	25.4	40.9	n/a	n/a
Econo Lodge Inn & Suites	White Haven	26.2	42.2	30	n/a
Knights Inn Lake Harmony	White Haven	26.2	42.2	20	n/a
Mountain Laurel Resort & Spa	White Haven	26.2	42.2	150	Booked throughout the summer on weekends; January through March is the slower period
Budget Inn	White Haven	26.2	42.2	35	n/a
Inn at Hickory Run	White Haven	26.4	42.5	4	n/a
Poplar Inn	Wilkes-Barre	27.5	44.3	n/a	n/a
Budget Inn	Kingston	27.7	44.6	n/a	n/a
Econo Lodge	Wilkes-Barre	29.0	46.7	104	Phone-n/a
Ramada In Pocono-Lake Harmony	White Haven	29.3	47.2	134	Approximately 80-90% full on weekends during July and August

Table 2.5-23— Hotels, Motels, and Bed & Breakfasts within about 30 Mi (48 km) of Berwick, Pennsylvania
(Page 2 of 4)

County/Name	City/Location	Distance from Berwick		Number of Units	Occupancy
		mi	km		
Comfort Inn Pocono Fountain	White Haven	29.3	47.2	112	Phone-n/a
Days Inn	Wilkes-Barre	29.8	48.0	68	n/a
Comfort Inn	Wilkes-Barre	29.8	48.0	65	n/a
Sign of the Rose B & B	Wilkes-Barre	30.6	49.2	8	n/a
Pondarowland B & B	Dallas	30.7	49.4	5	n/a
Best Western Genetti Hotel & Convention Center	Wilkes-Barre	30.7	49.4	72	n/a
Hillard House	Wilkes-Barre	30.7	49.4	2	n/a
Ramada Inn on the Square	Wilkes-Barre	30.9	49.7	157	Phone-n/a
Wilkes-Barre Lodge	Wilkes-Barre	31.7	51.0	40	n/a
Red Carpet	Wilkes-Barre	31.8	51.2	n/a	n/a
Holiday Inn Wilkes-Barre Arena	Wilkes-Barre	31.8	51.2	120	Phone-n/a
Host Inn All Suites Hotels	Wilkes-Barre	31.9	51.3	66	n/a
Wilkes-Barre Days Inn	Wilkes-Barre	32.0	51.5	75	n/a
The Country Place Retreat	White Haven	32.1	51.7	n/a	n/a
Hilton Garden Inn	Wilkes-Barre	32.1	51.7	123	Generally booked Monday through Wednesday throughout the year
Subtotal of Facilities: 49				2,353	
Columbia County					
Crossroads Hotel & Lounge	Berwick	0.7	1.1	n/a	n/a
White Birch Inn	Berwick	1.2	1.9	7	n/a
Red Maple Inn	Berwick	2.5	4.0	n/a	n/a
Briar Creek Hotel	Berwick	3.1	5.0	n/a	n/a
Tuggy's Motel, Inc.	Mifflinville	5.0	8.0	n/a	n/a
Tennytown Motel	Bloomsburg	9.0	14.5	21	n/a
Augustine's Inn B & B	Bloomsburg	9.3	15.0	3	n/a
Budget Host Patriot Inn	Bloomsburg	9.6	15.4	59	Booked throughout the summer on weekends; shutdown period in February
Lightstreet Hotel	Bloomsburg	10.3	16.6	n/a	n/a
The Inn at Turkey Hill	Bloomsburg	10.5	16.9	18	n/a
Hampton Inn	Bloomsburg	10.8	17.4	70	Winter months are booked Monday through Thursday; Mostly booked throughout the summer on weekends
Keller's Motel	Bloomsburg	11.1	17.9	n/a	n/a
College Hill B & B	Bloomsburg	11.8	19.0	3	n/a
Maggies Main Street Inn	Bloomsburg	11.9	19.2	n/a	n/a
Yellow Gables B & B	Bloomsburg	11.9	19.2	3	n/a
College Hill B & B	Bloomsburg	12.1	19.5	n/a	n/a
Irondale Inn B & B	Bloomsburg	12.7	20.4	4	n/a

Table 2.5-23— Hotels, Motels, and Bed & Breakfasts within about 30 Mi (48 km) of Berwick, Pennsylvania

(Page 3 of 4)

County/Name	City/Location	Distance from Berwick		Number of Units	Occupancy
		mi	km		
Holiday Inn Express	Bloomsburg	13.8	22.2	71	Phone-n/a
Econo Lodge	Bloomsburg	13.9	22.4	80	Busier periods are Thursday through Sunday throughout the year; Summer months are the busiest with variable availability
Inn at Buckhorn Road	Bloomsburg	14.4	23.2	120	Phone-n/a
Stone Castle Motel & Gym	Bloomsburg	15.7	25.3	146	Weekly and monthly rentals only; Booked for special events in the area including Bloomsburg Fair Week, Little League Events, and Race Weekends
Catawissa Railroad Caboose	Catawissa	16.5	26.6	8	n/a
Winn's Motel	Danville	16.7	26.9	n/a	n/a
Penn Motel	Danville	17.9	28.8	n/a	n/a
Centre Inn	Nanticoke	20.1	32.3	n/a	n/a
Hess Hotel	Benton	20.2	32.5	n/a	n/a
Ruby's Inn	Nanticoke	21.8	35.1	n/a	n/a
Hotel Iola	Millville	22.0	35.4	n/a	n/a
Fair Haven B & B	Catawissa	22.1	35.6	4	n/a
Best Western Danville Inn	Danville	22.1	35.6	58	Booked throughout the summer on weekends; Winter months are approximately 50% full during the week
Mil & Jim Parkway Inn	Nanticoke	22.1	35.6	n/a	n/a
Fair Haven B & B	Numidia	22.2	35.7	4	n/a
Quality Inn & Suites	Danville	22.4	36.0	77	Booked throughout the summer on weekends; Winter months vary in the availability
Hampton Inn	Danville	22.6	36.4	71	Booked throughout the summer on weekdays and weekends
Days Inn Conference Center	Danville	22.6	36.4	142	Booked throughout the summer on weekdays and weekends; Mostly booked on weekends in the winter months
Key Motor Inn	Danville	22.6	36.4	120	n/a
Super 8 Motel	Danville	22.6	36.4	n/a	n/a
Red Roof Inn	Danville	22.8	36.7	107	Phone-vn/a
The Peaceable Kingdom B & B	Catawissa	24.0	38.6	1	n/a
Fishing Creek Lodge	Benton	25.1	40.4	4	n/a
Cottage at Sky Meadow Farm	Benton	25.2	40.6	1	n/a
Doctor's Inn B & B	Danville	25.4	40.9	4	n/a

Table 2.5-23— Hotels, Motels, and Bed & Breakfasts within about 30 Mi (48 km) of Berwick, Pennsylvania

(Page 4 of 4)

County/Name	City/Location	Distance from Berwick		Number of Units	Occupancy
		mi	km		
Pine Barn Inn & Motel	Danville	25.8	41.5	98	n/a
Country Farm B & B	Benton	26.7	43.0	2	n/a
Fishing Creek Angler B & B	Benton	28.0	45.1	4	n/a
Central Park Hotel	Benton	28.5	45.9	n/a	n/a
Jamison City Hotel, Inc.	Benton	29.0	46.7	11	n/a
Subtotal of Facilities: 47				1,321	
Schuylkill County					
McAdoo Hotel	McAdoo	21.7	34.9	n/a	Phone-n/a
Pine's Motel	Tamaqua	25.3	40.7	n/a	Phone-n/a
Kaier Mansion	Mahoney City	30.4	48.9	5	Busy throughout the year; Variable depending on events in the area
Subtotal of Facilities: 3				5	
Carbon County					
Macalusco's at the Lantern Inn	Nesquehoning	31.7	51.0	17	Booked throughout the summer on weekends, especially on Race Weekends
Split Rock Resort	Lake Harmony	31.8	51.2	n/a	n/a
Subtotal of Facilities: 2				17	
Total of Facilities: 101				3,696	
Notes: n/a = not available Distances were calculated as driving distances.					

Table 2.5-24— Public Schools Located in Luzerne County and Columbia County

(Page 1 of 4)

County/Public School District/ Schools	City/ Location	Grades Taught	Number of Students	Students per FTE Teacher	Greater than State Average 15.2	Percent Decrease in School Ratio Needed to Meet the State Ratio of 15.2 (Note 5)
Luzerne County						
Bear Creek Community CS:						
Bear Creek Community Charter School	Wilkes-Barre	K-7	259	15.6	Yes	2.56
Crestwood SD:						
Crestwood High School	Mountain Top	9-12	1,104	21.4	Yes	28.97
Crestwood Middle School	Mountain Top	7-8	495	17.2	Yes	11.63
Fairview Elementary School	Mountain Top	K-6	773	19.1	Yes	20.42
Rice Elementary School	Mountain Top	K-6	790	17.9	Yes	15.08
Dallas SD:						
Dallas Elementary School	Dallas	K-5	697	18.0	Yes	15.56
Dallas High School	Dallas	9-12	869	16.6	Yes	8.43
Dallas Middle School	Dallas	6-8	684	17.5	Yes	13.14
Wycallis Elementary School	Dallas	K-5	450	21.2	Yes	28.30
Greater Nanticoke Area SD:						
GNA Elementary School	Nanticoke	3-5	443	16.5	Yes	7.88
Greater Nanticoke Area Education Center	Nanticoke	6-7	324	18.3	Yes	16.94
Greater Nanticoke Area High School	Nanticoke	8-12	953	20.7	Yes	26.57
J.F. Kennedy Elementary School	Nanticoke	2	132	20.6	Yes	26.21
K.M. Smith Elementary School	Nanticoke	K-1	322	20.5	Yes	25.85
Hanover Areas SD:						
Hanover Area Junior/Senior High School	Wilkes-Barre	7-12	1,044	17.4	Yes	12.64
Hanover Area Memorial Elementary School	Wilkes-Barre	5-6	291	13.3	No	n/a
Hanover Green Elementary School	Wilkes-Barre	K	134	13.5	No	n/a
Lee Park Elementary School	Wilkes-Barre	1-2	291	21.7	Yes	29.95
Lyndwood Elementary School	Wilkes-Barre	3-4	300	16.5	Yes	7.88
Hazleton Area SD:						
Arthur Street Elementary School	Hazleton	K-6	432	17.8	Yes	14.61
Drums Elementary/Middle School	Drums	K-8	731	19.2	Yes	20.83
Freeland Elementary/Middle School	Freeland	K-8	956	17.2	Yes	11.63
Hazle Elementary School	Hazleton	K-6	752	17.2	Yes	11.63
Hazleton Area High School	Hazleton	9-12	3,335	20.3	Yes	25.12
Heights Terrace Elementary/Middle School	Hazleton	K-8	1,072	18.1	Yes	16.02
Mcadoo Kelayres Elementary School	Mcadoo	K-6	426	15.3	Yes	0.65
Valley Elementary/Middle School	Sugarloaf	K-8	1,109	16.7	Yes	8.98
West Hazleton Elementary/Middle School	West Hazleton	K-8	973	17.6	Yes	13.64
Hazleton Areas Carrer Center SD:						
Hazleton Area Career Center	Hazleton	9-12	n/a	n/a	n/a	n/a
Lake-Lehman SD:						
Lake-Lehman Junior High School	Lehman	7-12	1,071	16.7	Yes	8.98
Lake-Noxen Elementary School	Harveys Lake	K-6	353	13.0	No	n/a

Table 2.5-24— Public Schools Located in Luzerne County and Columbia County

(Page 2 of 4)

County/Public School District/ Schools	City/ Location	Grades Taught	Number of Students	Students per FTE Teacher	Greater than State Average 15.2	Percent Decrease in School Ratio Needed to Meet the State Ratio of 15.2 (Note 5)
Lehman-Jackson Elementary School	Lehman	K-6	486	14.0	No	n/a
Ross Elementary School	Sweet Valley	K-6	248	13.9	No	n/a
Luzerne IU 18 SD:						
Luzerne Intermediate Unit 18	Kingston	n/a	n/a	n/a	n/a	n/a
Northwest Areas SD:						
Garrison Memorial School	Shickshinny	K-6	160	13.1	No	n/a
Hunlock Creek School	Shickshinny	K-6	284	15.6	Yes	2.56
Huntington Mills School	Shickshinny	K-6	308	17.5	Yes	13.14
Northwest Area High School	Shickshinny	7-12	668	15.2	No	n/a
Pittston Area SD:						
Ben Franklin Kindergarten Center	Dupont	K	199	19.9	Yes	23.62
Pittston Area High School	Pittston	9-12	1,079	20.2	Yes	24.75
Pittston Area Middle School	Pittston	6-8	760	16.5	Yes	7.88
Pittston Area Primary Center	Pittston	1-2	454	15.1	No	n/a
Pittston City Intermediate Center	Pittston	3-5	688	18.1	Yes	16.02
West Side AVTS:						
West Side AVTS School	Kingston	9-12	503	13.6	No	n/a
Wilkes-Barre Areas SD:						
Daniel J. Flood Elementary School	Wilkes-Barre	K-6	521	14.6	No	n/a
Dodson Elementary School	Wilkes-Barre	K-6	457	17.1	Yes	11.11
Dr. David W. Kistler Elementary School	Wilkes-Barre	K-6	903	16.8	Yes	9.52
Elmer L. Meyers Junior/Senior High School	Wilkes-Barre	7-12	949	14.0	No	n/a
G.A.R. Memorial Junior/Senior High School	Wilkes-Barre	7-12	919	14.8	No	n/a
Heights/Murray Elementary School	Wilkes-Barre	K-6	653	14.1	No	n/a
James M. Coughlin Junior/Senior High School	Wilkes-Barre	9-12	1,075	16.9	Yes	10.06
Solomon/Plains Elementary School	Plains	K-6	858	15.8	Yes	3.80
Solomon/Plains Junior High School	Plains	7-8	535	15.2	No	n/a
Wilkes-Barre AVTS:						
Wilkes-Barre AVTS School	Wilkes-Barre	9-12	n/a	n/a	n/a	n/a
Wyoming Area SD:						
Kennedy Elementary Center	Exeter	K-4	246	18.1	Yes	16.02
Montgomery Avenue Elementary School	West Pittston	K-6	475	16.8	Yes	9.52
Sara J. Dymond Elementary School	Pittston	K-6	231	13.9	No	n/a
Tenth Street Elementary School	Wyoming	K-5	359	16.1	Yes	5.59
Wyoming Area Secondary Center	Exeter	7-12	1,316	18.6	Yes	18.28
Wyoming Valley West SD:						
Chester Street Elementary School	Kingston	1-5	232	13.6	No	n/a
Dana Elementary Center	Forty Fort	K-5	553	16.3	Yes	6.75
Main Elementary Center	Plymouth	K-5	401	14.3	No	n/a
Pringle Street Elementary School	Kingston	K-4	96	12.0	No	n/a
Schuyler Avenue Elementary School	Kingston	K-5	241	17.2	Yes	11.63

Table 2.5-24— Public Schools Located in Luzerne County and Columbia County

(Page 3 of 4)

County/Public School District/ Schools	City/ Location	Grades Taught	Number of Students	Students per FTE Teacher	Greater than State Average 15.2	Percent Decrease in School Ratio Needed to Meet the State Ratio of 15.2 (Note 5)
State Elementary Center	Larksville	K-5	594	16.3	Yes	6.75
Third Avenue Elementary School	Kingston	K-5	163	27.2	Yes	44.12
Wyoming Valley West Middle School	Kingston	6-8	1,315	17.5	Yes	13.14
Wyoming Valley West High School	Plymouth	9-12	1,485	18.3	Yes	16.94
Other:						
Youth Forestry Camp #2 School	White Haven	7-12	49	6.1	No	n/a
Subtotals	69		42,028		=	=
Columbia County						
Benton Area SD:						
Appleman Elementary School	Benton	K-6	385	12.6	No	n/a
Benton Area Junior/Senior High School	Benton	7-12	382	12.7	No	n/a
Berwick Area SD:						
Berwick Area High School	Berwick	9-12	992	13.5	No	n/a
Berwick Area Middle School	Berwick	6-8	897	14.7	No	n/a
Fourteenth Street Elementary School	Berwick	K-5	214	13.8	No	n/a
Mulberry Street Elementary School	Berwick	K-5	88	10.9	No	n/a
Nescopeck Elementary School	Nescopeck	K-5	276	14.5	No	n/a
Orange Street Elementary School	Berwick	K-5	386	13.3	No	n/a
Salem Elementary School	Berwick	K-5	462	15.9	Yes	4.40
Bloomsburg Area SD:						
Beaver-Main Elementary School	Bloomsburg	K-5	104	14.1	No	n/a
Bloomsburg Area High School	Bloomsburg	9-12	488	13.5	No	n/a
Bloomsburg Area Middle School	Bloomsburg	6-8	440	13.1	No	n/a
Memorial Elementary School	Bloomsburg	K-5	454	13.5	No	n/a
W.W. Evans Memorial Elementary School	Bloomsburg	K-5	263	14.6	No	n/a
Central Columbia SD:						
Central Columbia Elementary School	Bloomsburg	K-4	712	15.4	Yes	1.30
Central Columbia High School	Bloomsburg	9-12	696	15.4	Yes	1.30
Central Columbia Middle School	Bloomsburg	5-8	713	16.4	Yes	7.32
Columbia Montour AVTS SD:						
Columbia-Montour AVTS School	Bloomsburg	9-12	682	16.0	Yes	5.00
Millville Area SD:						
Millville Area Elementary School	Millville	K-6	411	11.7	No	n/a
Millville Area Junior/Senior High School	Millville	6-12	344	11.1	No	n/a
South Columbia Area SD:						
Hartman Elementary Center	Catawissa	K-4	536	14.4	No	n/a
Southern Columbia High School	Catawissa	9-12	478	15.7	Yes	3.18
Southern Columbia Middle School	Catawissa	5-8	438	14.7	No	n/a
Subtotals	23		10,841			
Totals	92		52,869			

Table 2.5-24— Public Schools Located in Luzerne County and Columbia County

(Page 4 of 4)

County/Public School District/ Schools	City/ Location	Grades Taught	Number of Students	Students per FTE Teacher	<u>Greater than State Average</u> 15.2	<u>Percent Decrease in School Ratio Needed to Meet the State Ratio of 15.2</u> (Note 5)
<p>Notes:</p> <p>FTE = full-time equivalent K = kindergarten PK = pre-kindergarten CS = Charter School SD = School District IU = Intermediate Unit AVTS = Area Vocational Technical School</p> <p>1. Mcadoo is located in Schuylkill County but is part of the Hazleton Area school district including the budget.</p> <p>2. The following schools are vocational schools: Hazleton Area Career Center, West Side AVTS School, and Wilkes-Barre AVTS School</p> <p>3. Youth Forestry Camp #2 School - This is an juvenile justice detention school which is not part of the total revenue and expenditure numbers presented in Section 2.5.2.5.</p> <p>4. Salem Elementary School is located in Luzerne County but part of the Berwick School District and budget in Columbia County.</p> <p><u>5. An n/a indicates that the school student per FTE teacher ratio is less than or equal to the state average and does not need a percent decrease in school ratio to meet the state ratio of 15.2.</u></p>						

Table 2.5-25— Private Schools Located in Luzerne County and Columbia County

(Page 1 of 2)

County/Public School District/Schools	City/Location	Grades Taught	Number of Students	Students per FTE Teacher
Luzerne County				
Anne McLaughlin's Child Care School	Sybertsville	PK-K	35	18
Bishop Hafey Junior/Senior High School	Hazleton	7-12	576	15
Bishop Hoban High School	Wilkes-Barre	9-12	626	13
Bishop O'Reilly High School	Kingston	9-12	363	13
Childrens Ark Christian Day School	Mountaintop	PK-K	132	n/a
Dallas Little People Day Care	Dallas	PK-K	37	n/a
Ebenezer Faith Christian School	Plymouth	K-12	51	7
Gate of Heaven School	Dallas	PK-8	493	20
Genesis School	Wilkes-Barre	1-12	25	13
Hazleton Trinity's Nursery & Kindergarten	Hazleton	PK-K	168	n/a
Holy Rosary Elementary School	Duryea	PK-8	238	20
Holy Spirit Academy	Hazleton	PK-6	300	19
Holy Trinity School	Hazleton	K-6	172	20
Humpty Dumpty Kollege School	Pittston	PK-K	70	n/a
I'm Big Now Learning Center	Dallas	K-5	429	n/a
Immanuel Christian School	Hazleton	K-8	85	13
Israel Ben Zion Academy	Kingston	PK-8	94	4
It's A Small World Day Care	Wilkes-Barre	PK-K	30	30
Jenny Lynn Ferraro Academy	Kingston	PK-K	53	18
Keystone Job Corp High School	Drums	11-12	600	35
Kings Kids Christian School	Wilkes-Barre	K-12	47	9
Little People Day Care	Kingston	PK-K	101	34
Little People Day Care	Wilkes-Barre	PK-K	74	15
Living Word Baptist Academy	Shickshinny	K-10	7	3
Magic Years School	Plains	PK-K	33	33
Magic Years School	Wilkes-Barre	K	10	10
MBA Academy	Wyoming	Un-graded	16	8
Milford E. Barnes Junior School	Wilkes-Barre	K-12	67	15
MMI Preparatory	Freeland	6-12	203	12
Muhlinburg Christian Academy	Hunlock Creek	PK-K	48	12
Pope John Paul II Catholic School	Nanticoke	K-8	320	21
Regis Academy	Kingston	6-8	156	14
Regis Elementary School	Kingston	PK-5	195	24
Sacred Heart Elementary School	Luzerne	PK-5	149	24
Sacred Heart of Jesus School	Dupont	PK-8	184	17
Sacred Heart School	Plains	PK-8	235	26
Seton Catholic High School	Pittston	9-12	270	13
Shining Stars School	Mountaintop	PK-K	80	n/a
St. Alonysius Elementary School	Wilkes-Barre	K-8	231	19
St. Boniface School	Wilkes-Barre	PK-8	215	22
St. Hedwig Elementary School	Kingston	PK-5	116	16
St. John The Baptist School	Pittston	K-8	200	20
St. Joseph Memorial School	Hazleton	PK-6	192	23
St. Jude School	Mountaintop	K-8	420	18
St. Mary Assumption School	Pittston	PK-8	234	21

Table 2.5-25— Private Schools Located in Luzerne County and Columbia County

(Page 2 of 2)

County/Public School District/Schools	City/Location	Grades Taught	Number of Students	Students per FTE Teacher
St. Marys School	Dupont	PK-8	169	16
St. Nicolas St. Marys School	Wilkes-Barre	K-8	464	23
St. Peter and Paul School	Plains	PK-8	204	18
The Christian Academy of Community	Sweet Valley	PK-12	39	12
The Learning Station School	Nanticoke	PK-12	109	n/a
Transfiguration School	Hazleton	PK-6	174	17
Wilkes-Barre Academy	Wilkes-Barre	PK-8	205	20
Wyoming Area Catholic School	Exeter	PK-8	228	20
Wyoming Seminary Lower School	Kingston	PK-8	430	11
Wyoming Seminary Upper School	Kingston	9-12	435	10
Wyoming Valley Montessori School	Kingston	PK-6	148	30
Wyoming Valley SDA Elementary School	Mountaintop	PK-7	11	6
Subtotals	57 schools		10,996	
Columbia County				
Bloomsburg Christian School	Bloomsburg	PK-12	79	9
Chillisquaque Valley Parc School	Bloomsburg	1-8	33	33
Christian Covenant Academy	Orangeville	K-11	41	11
Columbia County Christian School	Bloomsburg	PK-12	287	17
Greenwood Friends School	Millville	PK-6	770	9
Heritage Christian Academy	Berwick	Un-graded	24	5
Holy Family Consolidated School	Berwick	K-5	137	17
St. Columbia Elementary School	Bloomsburg	PK-5	151	17
Subtotals	8 schools		1,522	
Totals	65 schools		12,518	
Notes: FTE = full-time equivalent K = kindergarten PK = pre-kindergarten SDA = Seventh-Day Adventist				

Table 2.5-26— Boat Launches in Luzerne County and Columbia County, Listed Alphabetically by City

County/Facility Name	City/Location	No. of Slips
Luzerne County		
Mountain Springs Lake	Benton	1
Ricketts Glen State Park	Benton	2
Harvey's Lake	Harvey's Lake	2
Moon Lake Park	Hunlock Creek	1
Lily Lake	Nanticoke Area	1
Susquehanna River, North Branch - Apple Tree Access	Pittston	1
Harris Pond	Sweet Valley	1
Sylvan Lake	Sweet Valley	1
Susquehanna River, North Branch - Union Township Access	West Nanticoke	1
Susquehanna River, North Branch - Hanover Township Access	Wilkes-Barre	1
Susquehanna River, North Branch - Nesbit Park Access	Wilkes-Barre	1
Francis E Walter Dam	White Haven	n/a
Frances Slocum State Park	Wyoming	2
Subtotal of Facilities: 13		15
Columbia County		
Briar Creek Lake	Berwick	1
Susquehanna River, North Branch - Test Track Park	Berwick	1
Susquehanna River, North Branch - Bloomsburg	Bloomsburg	1
Subtotal of Facilities: 3		3
Total of Facilities: 16		18
Note:n/a = not available		

Table 2.5-27— Charter Boats/Fishing Guides Services in Luzerne County and Columbia County, Listed Alphabetically by City

County/Service Name	City/Location
Luzerne County	
Rays Guide Service	Dupont
Dick Ackourey and Son, Inc.	Luzerne
Jack O'Donnell	White Haven
Subtotal of Facilities: 3	
Columbia County	
Fishing Creek Angler	Benton
Slate Drake Guide Service, Inc.	Berwick
Subtotal of Facilities: 2	
Total of Facilities: 5	

Table 2.5-28— The Campgrounds and RV Parks within about 30 Mi (48 km) of Berwick, Pennsylvania

County/Campsite/RV	City/Location	Distance from Berwick		Total No. of Sites
		mi	km	
Luzerne County				
Paradise Campground Resort	Nescopeck	5.2	8.4	n/a
Council Cup Campground	Wapwallopen	9.1	14.6	165
Moyers Grove Campground	Wapwallopen	12.8	20.6	170
Whispering Pines Camping Estates	Stillwater	13.8	22.2	60
Hazleton/Wilkes-Barre KOA	Drums	15.8	25.4	100
Hidden New Lake Campground	Shickshinny	17.4	28.0	n/a
81-80 RV Park and Campground	Drums	17.5	28.2	87
Nesco Manor	Drums	17.9	28.8	n/a
Moon Lake Park	Hunlock Creek	22.6	36.4	63
Lehigh Gorge Campground	White Haven	28.8	46.3	150
Sandy Valley Campground	White Haven	30.9	49.7	113
Frances Slocum State Park	Wyoming	32.9	52.9	100
Hickory Run State Park	White Haven	33.0	53.1	381
Subtotal of Facilities: 13				1,389
Columbia County:				
Diehl's Camping Resort	Bloomsburg	11.5	18.5	200
Indian Head Campground	Bloomsburg	14.6	23.5	225
Turner's High View Camping	Bloomsburg	15.9	25.6	92
Red Rock Mountain Campground	Benton	20.0	32.2	n/a
Mt. Zion Family Campground	Catawissa	20.0	32.2	n/a
Shady Rest Campgrounds	Millville	20.4	32.8	100
Springbrook Camp Grounds	Catawissa	20.5	33.0	150
Ideal Park	Catawissa	21.1	34.0	n/a
Lake Glory Campground	Catawissa	21.2	34.1	150
J&D Campgrounds	Catawissa	21.7	34.9	245
Mill Race Golf & Camping Resort	Benton	24.8	39.9	n/a
Ricketts Glen State Park	Benton	25.4	40.9	120
Grassmere Park Campgrounds	Benton	27.5	44.3	65
Acorn Acres	Benton	28.4	45.7	100
Good's Campground	Benton	29.3	47.2	62
Subtotal of Facilities: 15				1,509
Schuylkill County				
Red Ridge Lake Campgrounds	Zion Grove	25.4	40.9	160
Tuscarora State Park	Barnesville	29.0	46.7	6
Locust Lake State Park	Barnesville	33.3	53.6	282
Subtotal of Facilities: 3				448
Northumberland County				
Knoebels Campground	Elysburg	25.5	41.0	500
Splash Magic Campground	Northumberland	33.7	54.2	220
Subtotal of Facilities: 2				720
Total of Facilities: 33				4,066

**Table 2.5-29— The Property and Income Tax Rates in Luzerne County and
Columbia County, 2008**

Type of Tax	County		Commonwealth of Pennsylvania
	Luzerne	Columbia	
Income Tax (%)	0.0	0.0	3.07
Sales Tax (%)	0.0	0.0	6.0
Hotel Tax (%)	5.0	3.0	0.0
Property Tax (mills)			
Real Estate	25.0	6.1460	0.0
Debt Service	22.0	1.3450	0.0
Library	1.2	n/a	0.0
Community Colleges	8.0	n/a	0.0
Support of Hospitals & Poorhouses	nr	n/a	0.0
Roads & Bridges	6.0	n/a	0.0
Paarks & Playgrounds	1.0	n/a	0.0
Criminal Justice	28.3	n/a	0.0
Human Services	3.4	n/a	0.0
Total Property Tax	94.9	7.4910	0.0
Notes: n/a - not applicable nr - not reported 1 mill = 1/1,000 of a U.S. dollar, or one-tenth of one cent			

Table 2.5-30— The Fiscal Year 2007 Actual County Revenues and Expenditures in Luzerne County

Type of Revenue/Expenditure	Luzerne County	
	2007 Dollars	Percent
Revenues:		
Real Estate Taxes	72,398,609	51.5
Claims Taxes	13,838,930	9.8
Miscellaneous Taxes	391,062	0.0
Department Earnings	52,429,028	37.3
Court Cost and Fines	1,784,400	1.4
Total Revenues Actual 2007	140,842,029	100.0
Expenditures:		
Departmental Expenditures	142,014,064	100.0

Table 2.5-31— The Fiscal Year 2006 Actual County Revenues and Expenditures in Columbia County

Type of Revenue/Expenditure	Columbia County	
	2006 Dollars	Percent
Revenues:		
Real Estate Taxes	5,521,606	33.0
Per capita Taxes	181,582	1.1
Hotel Taxes	200,721	1.2
Federal Grants	41,672	0.3
State Grants	5,905,977	36.3
Payments In Lieu of Taxes	54,184	0.3
Departmental Earnings	2,958,647	17.7
Court Cost and Fines	247,013	1.5
Other: Tax Billings, Copies, and Other	223,093	1.3
Transfers	988,325	5.9
Interest	160,473	1.0
Rents	237,435	1.4
Total Revenues Actual 2006	16,720,728	100.0
Expenditures:		
Departmental Expenditures	16,427,359	100.0

Table 2.5-32— Major Public Water Suppliers in Luzerne County and Columbia County

County/Water Supplier ⁽¹⁾⁽²⁾	Water Source	Design Capacity		Average Production			Maximum Production		
		gpd	lpd	gpd	%	lpd	gpd	%	lpd
Luzerne County									
Freeland Borough Municipal Water Authority	GW	1,613,200	6,106,627	430,438	26.7	1,629,385	709,000	43.9	2,683,857
HCA Water System Filter Plant - Hazleton	SW	10,000,000	37,854,120	5,394,000	53.9	20,418,512	7,700,000	77.0	29,147,672
Pennsylvania American Water Company - Ceasetown ⁽²⁾	SW	n/a	n/a	3,500,000	n/a	13,248,942	3,950,000	n/a	14,952,377
Pennsylvania American Water Company - Crystal Lake	SW	6,000,000	22,712,472	3,420,000	57.0	12,946,109	5,000,000	83.3	18,927,060
Pennsylvania American Water Company - Huntsville ⁽³⁾	SW	n/a	n/a	n/a	n/a	n/a	4,500,000	n/a	17,034,354
Pennsylvania American Water Company - Nesbitt ⁽³⁾	SW	12,000,000	45,424,944	10,000,000	83.3	37,854,120	11,000,000	91.7	41,639,532
Pennsylvania American Water Company - Watres ⁽²⁾	SW	16,000,000	60,566,592	10,000,000	62.5	37,854,120	16,000,000	100.0	60,566,592
United Water Pennsylvania - Dallas	GW	1,566,000	5,927,955	462,000	29.5	1,748,860	569,000	36.3	2,153,899
Subtotal		47,179,200	178,592,710	33,206,438	70.4	125,700,049	49,428,000	104.8	187,105,344
Columbia County									
Pennsylvania American Water Company - Berwick	GW	4,600,000	17,412,895	1,739,000	37.8	6,582,831	2,477,000	53.8	9,376,466
United Water Pennsylvania- Bloomsburg	SW	4,147,200	15,698,861	2,581,000	62.2	9,770,148	3,479,000	83.9	13,169,448
Subtotal		8,747,200	33,111,756	4,320,000	49.4	16,352,980	5,956,000	68.1	22,545,914
Total		55,926,400	211,704,466	37,526,438	67.1	142,053,029	55,384,000	99.0	209,651,258
<p>Notes: GW = groundwater SW = surface water gpd = gallons per day lpd = liters per day n/a = not applicable or no information available (1) Municipal water suppliers serving populations greater than 4,500. (2) Ceasetown and Watres are part of the same water system. (3) Huntsville and Nesbitt are part of the same water system.</p>									

Table 2.5-33— Environmental Protection Agency Safe Drinking Water Information System, Luzerne County and Columbia County

(Page 1 of 2)

County/Water System Name	Population Served	Primary Water Source Type
Luzerne County		
Community Water Systems: Water Systems that serve the same people year-round (e.g. in homes or businesses).		
Aqua PA Applewood	82	Groundwater
Aqua PA Barrett	150	Groundwater
Aqua PA Fieldcrest	110	Groundwater
Aqua PA Forest Park	335	Groundwater
Aqua PA Garbush	160	Groundwater
Aqua PA Greenbriar	28	Groundwater
Aqua PA Hex Acres	278	Groundwater
Aqua PA Laurel Lakes Village	380	Groundwater
Aqua PA Midway System	1,793	Groundwater
Aqua PA Oakhill	486	Groundwater
Aqua PA Penn Lake	70	Groundwater
Aqua PA Rhodes Terrace	50	Groundwater
Aqua PA Shickshinny Apache	140	Groundwater
Aqua PA Shickshinny Lake	126	Groundwater
Aqua PA St. Johns Estates	75	Groundwater
Aqua PA Sunrise Estates	162	Groundwater
Aqua PA Tambur	110	Groundwater
Aqua PA Wapwallopen	239	Groundwater
Aqua PA Warden Place	275	Groundwater
Aqua PA White Haven	1,200	Groundwater
Chase Manor Water Association	95	Groundwater
Conyngham Water Company	1,932	Groundwater
Freeland Borough Municipal Water Authority	4,610	Groundwater
Indian Springs Water Company	133	Groundwater
Orchard East Water Association	100	Groundwater
Orchard West Water Association	90	Groundwater
Overbrook Water Company	298	Groundwater
Pennsylvania American Water Company Hillcrest	125	Groundwater
Pennsylvania American Water Company Homesite	55	Groundwater
United Water PA Dallas	5,113	Groundwater
United Water PA Harveys Lake	200	Groundwater
United Water PA Shavertown	3,035	Groundwater
HCA Roan Filter Plant	40,620	Surface Water
Pennsylvania American Water Company Ceasetown	63,198	Surface Water
Pennsylvania American Water Company Crystal Lake	9,535	Surface Water
Pennsylvania American Water Company Huntsville	10,800	Surface Water
Pennsylvania American Water Company Nesbitt	58,278	Surface Water
Pennsylvania American Water Company Watres	51,978	Surface Water
Stockton Water System	90	Surface Water
Subtotal	256,534	
Others:	14,326	550 via groundwater
	185	2 via Purchase of Groundwater
Subtotal	14,511	
Total	271,045	

Table 2.5-33— Environmental Protection Agency Safe Drinking Water Information System, Luzerne County and Columbia County

(Page 2 of 2)

County/Water System Name	Population Served	Primary Water Source Type
Non-Transient Non-Community Water Systems: Water Systems that serve the same people, but not year-round (e.g. schools that have their own water system).		
Subtotal	21,802	32 via Groundwater
Subtotal	50	1 via Purchase of Surface Water
Total	21,852	
Transient Non-Community Water Systems: Water Systems that do not consistently serve the same people (e.g. rest stops, campgrounds, gas stations).		
Total	26,330	192 via Groundwater
Columbia County		
Community Water Systems: Water Systems that serve the same people year-round (e.g. in homes or businesses).		
Catawissa Municipal Water Authority	1,580	Groundwater
Mifflin Twp Ma	900	Groundwater
Orangeville Municipal Water Authority	480	Groundwater
Pa American Water Berwick	16,000	Groundwater
United Water PA Col Co Ind Pk	138	Groundwater
Wonderview Water Company	320	Groundwater
Benton Municipal Water Authority	1,100	Groundwater under the influence of surface water
Millville Municipal Authority	969	Groundwater under the influence of surface water
United Water PA Bloomsburg Op	21,500	Surface water
Subtotal	42,987	
Others:		
Subtotal	1,721	Groundwater
Total	44,708	
Non-Transient Non-Community Water Systems: Water Systems that serve the same people, but not year-round (e.g. schools that have their own water system).		
Subtotal	6,553	16 via Groundwater
Subtotal	30	1 via Purchase of surface water
Total	6,583	
Transient Non-Community Water Systems: Water Systems that do not consistently serve the same people (e.g. rest stops, campgrounds, gas stations).		
Total	4,618	81 via Groundwater

Table 2.5-34— Sewer Districts/Systems in Luzerne County and Columbia County

County/Sewer System	Capacity	
	gallons per day (gpd)	liters per minute (lpm)
Luzerne County		
Wyoming Valley Sanitary Authority	32.0 million	84,120
Greater Hazleton Joint Sewer Authority	8.9 million	23,396
Mountaintop Area Joint Sewer Authority	4.16 million	10,936
Lower Lackawanna Valley Sanitary Authority	6.0 million	15,773
Shickshinny Sewer Authority	0.45 million	1,183
Conyngham Borough Authority	0.35 million	920
Nescopeck Sewer Authority	0.11 million	289
Freeland Sewer Authority	0.75 million	1,972
Butler Township Sewer Authority	10 million	26,288
Subtotals - 9 facilities		
Columbia County		
Berwick Area Joint Sewer Authority	3.64 million	9,569
Catawissa Borough Sewer Authority	0.2 million	526
Millville Borough Sewer Authority	0.3 million	789
Bloomsburg Municipal Authority	4.29 million	11,277
Greenwood Township Municipal Authority	0.0075 million	20
Orange Township Sewer Authority	0.013 million	34
Hemlock Township Municipal Sewer Coop	0.3 million	789
Madison Township Municipal Authority	0.02 million	53
Benton Borough Municipal Water and Sewer Authority	0.132 million	347
Orangeville Borough Water Authority	0.07 million	184
Montour Township Authority	0.1 million	263
North Centre Township Authority	0.0004 million	1
Locust Township Municipal Authority	0.05 million	131
Subtotals - 13 facilities		
Totals - 22 facilities		

Table 2.5-35— Fire/EMS Departments in Luzerne County and Columbia County

(Page 1 of 4)

County/Fire Department Name	City/Location	Department Type	Organization Type	Number of Stations	Active FF - Career/Volunteer/Paid per Call	Non-FF - Civilian/Volunteer
Luzerne County						
Avoca Fire Department	Avoca	V	L	1	25	0
Bear Creek Township Volunteer Hose Company	Bear Creek	V	L	2	15	10
Butler Township Fire Company	Drums	V	L	1	45	20
Courtdale Volunteer Hose Company	Courtdale	V	L	1	18	4
Dallas Fire & Ambulance, Inc	Dallas	V	L	1	25	1
Dennison Township Volunteer Fire Company	White Haven	V	L	1	12	5
Dorrance Township Volunteer Fire Department	Wapwallopen	V	L	1	30	20
Dupont Volunteer Hose Company #1	Dupont	V	L	1	40	0
Edwardsville Fire Department	Edwardsville	MV	L	1	48	14
Elm Hill Hose Company #3	Plymouth	MV	L	3	43	15
Excelsior Hose Company #2	Duryea	V	L	1	28	20
Exeter Hose Company #1	Exeter	V	L	1	40	0
Exeter Park Volunteer Hose Company	Exeter	V	L	1	57	8
Fairmount Township Volunteer Fire & Ambulance Company	Sweet Valley	V	L	1	9	21
Fearnots Volunteer Fire Company	Freeland	V	L	1	20	0
Forty Fort Fire Department	Forty Fort	MV	L	1	34	5
Franklin Township Volunteer Fire Company	Dallas	V	L	1	10	3
Freeland Fire Department	Freeland	V	L	1	48	40
Germania Hose Company	Duryea	V	L	1	45	0
Goodwill Hose Company #2	Plymouth	MV	L	1	17	4
Hanover TWP Fire Department	Wilkes-Barre	MV	L	6	218	30
Harveys Lake Fire & Ambulance Company	Harveys Lake	V	L	1	18	25
Harwood Volunteer Fire Department	Hazleton	V	L	1	35	25
Hazle Township Volunteer Fire & Rescue Company	Harleigh	V	L	2	55	30
Hazleton Fire Department	Hazleton	MV	L	3	66	100
Hughestown Hose Company #1	Hughestown	V	L	1	34	21
Hunlock Creek Volunteer Fire Company	Hunlock Creek	V	L	1	30	10
Huntington Valley Volunteer Fire Company	Huntington Mills	V	L	1	25	6
Jackson Township Volunteer Fire Department	Shavertown	V	L	1	18	8

Table 2.5-35— Fire/EMS Departments in Luzerne County and Columbia County

(Page 2 of 4)

County/Fire Department Name	City/Location	Department Type	Organization Type	Number of Stations	Active FF - Career/Volunteer/Paid per Call	Non-FF - Civilian/Volunteer
Jenkins Township Volunteer Hose Company	Pittston	MV	L	1	23	40
Kingston Fire Department	Kingston	MV	L	2	69	0
Kunkle Fire Company, Inc	Dallas	V	L	1	32	15
Larksville Volunteer Fire Company #1	Larksville	MV	L	1	24	0
Mocanaqua Volunteer Fire Company #1, Inc	Mocanaqua	V	L	1	40	0
Mountaintop Hose Company 1	Mountaintop	V	L	1	31	0
Nanticoke City Fire Department	Nanticoke	MV	L	5	60	0
Nescopeck Township Volunteer Fire Company #1, Inc	Nescopeck	V	L	1	20	17
Nescopeck Volunteer Fire Company #1	Nescopeck	V	L	1	20	130
Newport Township Fire Department	Nanticoke	MV	L	1	53	0
Nuangola Volunteer Fire Department	Nuangola	V	L	1	30	20
Nuremberg Weston Volunteer Fire Department	Weston	V	L	1	35	20
Pittston City Fire Department	Pittston	MV	L	1	55	0
Pittston Township Volunteer Fire Department	Pittston	MV	L	2	17	46
Plains Township Fire Department	Plains	MC	L	2	23	0
Pond Hill-Lily Lake Fire Company	Wapwallopen	V	L	1	17	6
Port Trevorton Fire Company	Port Trevorton	V	L	1	22	25
Pringle Volunteer Fire Department	Pringle	V	L	1	25	0
Rescue Hose Company #1	Ashley	V	L	1	30	0
Rice Township Volunteer Fire Department	Mountain Top	V	L	1	12	5
Salem Township Volunteer Fire Company	Luzerne	V	L	1	12	5
Shades Creek Volunteer Fire Company, Inc	White Haven	V	L	1	10	1
Shavertown Volunteer Fire Department	Shavertown	V	L	1	35	0
Shickshinny Volunteer Fire Company, Inc	Shickshinny	V	L	1	20	15
Slocum Twp Volunteer Fire Company	Wapwallopen	V	L	1	32	15
Sugar Notch Fire and Hose Company #1	Sugar Notch	V	L	1	20	0
Sugarloaf Fire Company, Inc	Sybertsville	V	L	1	53	87
Sweet Valley Volunteer Fire Company	Sweet Valley	V	L	1	25	10
The Volunteer Fire Department of Luzerne	Luzerne	V	L	1	30	3
Trucksville Volunteer Fire Company	Trucksville	V	L	1	25	10

Table 2.5-35— Fire/EMS Departments in Luzerne County and Columbia County

(Page 3 of 4)

County/Fire Department Name	City/Location	Department Type	Organization Type	Number of Stations	Active FF - Career/Volunteer/Paid per Call	Non-FF - Civilian/Volunteer
Warrior Run Borough Volunteer Fire Company	Warrior Run	V	L	1	15	0
West Hazleton Fire Department	West Hazleton	MV	L	1	37	0
West Wyoming Hose Company	West Wyoming	V	L	2	30	0
White Haven Fire Company #1	White Haven	V	L	1	30	20
Wilkes Barre Township Volunteer Fire Department	Wilkes-Barre	V	L	1	28	20
Wilkes-Barre City Fire Dept EMS	Wilkes-Barre	C	L	1	88	10
Wright Township Volunteer Firemans Association	Mountain Top	V	L	1	30	0
Wyoming Hose Company #1	Wyoming	V	L	1	35	5
Wyoming Volunteer Hose Company #2	Wyoming	V	L	1	90	0
Subtotals: 68 Departments				87	2,391	970
Columbia County						
Aristes Fire Company	Aristes	V	L	1	20	8
Beaver Township Volunteer Fire Company	Bloomsburg	V	L	1	15	16
Benton Volunteer Fire Company	Benton	V	L	1	30	6
Bloomsburg Fire Department, Inc	Bloomsburg	V	L	1	100	25
Buckhorn Community Volunteer Fire Company #1	Bloomsburg	V	L	1	30	20
Catawissa Hose Company #1	Catawissa	V	L	1	30	26
Defender Fire Company	Berwick	V	L	1	75	0
Eagle Hose Company #2	Berwick	V	L	1	125	0
East Berwick Hose Company #2	Berwick	V	L	1	20	10
Espy Fire Company 1	Bloomsburg	V	L	1	38	14
Fernville Volunteer Fire Company	Bloomsburg	V	L	1	30	23
Main Township Volunteer Fire Company	Bloomsburg	V	L	1	15	5
Mifflin Township Forest Rangers & Fire Company No. 1	Mifflinville	V	L	1	15	12
Millville Community Fire Company	Millville	V	L	1	50	0
Montour Township Fire Department	Bloomsburg	V	L	1	20	6
North Mountain Fire Company	Benton	V	L	1	12	17
Orangeville Community Fire Company	Orangeville	V	L	1	25	20

Table 2.5-35— Fire/EMS Departments in Luzerne County and Columbia County

(Page 4 of 4)

County/Fire Department Name	City/Location	Department Type	Organization Type	Number of Stations	Active FF - Career/Volunteer/Paid per Call	Non-FF - Civilian/Volunteer
PPL Susquehanna Fire Brigade	Berwick	V	Private or industrial fire brigade	1	150	0
Ranger Hose Company #2	Berwick	V	L	1	25	30
Reliance Fire Company #1	Berwick	V	L	5	70	0
Summerhill Fire Company	Berwick	V	L	1	25	35
Valley Chemical Fire Company	Numidia	V	L	1	27	80
Wilburton Hose Company #1	Wilburton	V	L	1	20	0
Subtotals: 23 Departments				27	967	353
Total				114	3,358	1,323
Notes: V = Volunteer C = Career MC = Mostly Career MV = Mostly Volunteer L = Local CY = calendar year						

Table 2.5-36— Assessment of Archeological Potential for BBNPP Phase Ia Project APE

Area	Total Acres (ac (ha))	High-Moderate Potential Acres of Area ⁽¹⁾ (ac (ha))%	Low Potential Acres of Area (ac (ha))%	Disturbed/No Potential Acres of Area (ac (ha))%
Southeast Alternative	353 (143)	102 (41) 28.8%	246 (100) 69.7%	5 (2) 1.4%
West Alternative				
A (A1A-SW Unit)	153 (62)	86 (35) 56.2%	67 (27) 43.8%	0
B (A1B-W 1 Unit)	255 (103)	138 (56) 54.1%	55 (22) 21.6%	62 (25) 24.3%
C (A1A+A1B-W 2 Units)	408 (165)	224 (91) 54.9%	122 (49) 29.9%	62 (25) 15.2%
Area 6	174 (70)	87.9 (36) 50.5%	37.4 (15) 21.5%	48.3 (20) 27.8%
Area 7	38 (15)	34.1 (14) 89.7%	0.2 (0.1) 0.5%	3.2 (1) 8.4%
Area 8	272 (110)	103.1 (42) 37.9%	34.1 (14) 12.5%	135.2 (55) 49.7%
Confers Lane	27 (11)	10.9 (4) 39.8%	6.6 (3) 24.1%	9.9 (4) 36.1%
Subtotal (Areas 6-8, Confers)	511 (207)	236 (96) 46.2%	78 (32) 15.3%	197 (80) 38.6%
Total	1,272 (515)	562 (227) 44.2%	446 (181) 35.1%	264 (107) 20.7%
<p>Note: (1) Floodplain/low terrace settings on both sides of Susquehanna River have high to moderate potential for both near-surface and deeply buried archeological sites; Upland settings have high to moderate potential for near-surface archeological sites.</p>				

Table 2.5-37— Summary of Previously Surveyed Archeological Sites Identified in the Project APE Along the West Bank of the Susquehanna River

Site Number	Site Name	Location in APE	Landform	Site Type	Age ⁽¹⁾	Recommended NRHP Status
36LU0015	SES-3	Area 8	Floodplain	Prehistoric Open	A,LA	Eligible
36LU0016	SES-6	Area 8	Floodplain	Prehistoric Open	A,LA,EW,MW,LW	Eligible
36LU0048	SES-16	Area 8	Floodplain	Prehistoric Open	Unknown Prehistory	Undetermined
36LU0049	SES-8	Area 8	Floodplain	Prehistoric Open	A,LA,Tr,W,EW,LW	Eligible
36LU0050	SES-10	Area 8	Floodplain	Prehistoric Open	A,LA	Not Eligible
36LU0051	SES-11	Area 7	Floodplain	Prehistoric Open	W,LW	Eligible
<p>Note: (1) A = Archaic; EA = Early Archaic; MA = Middle Archaic; LA = Late Archaic; W = Woodland; EW = Early Woodland; MW = Middle Woodland; LW = Late Woodland; Tr = Transitional</p>						

**Table 2.5-38— Previously Recorded Architectural Resources within the 0.5 mi (0.8 km)
Radius of the Proposed Project**

Resource Number	Name	Resource Type	Date	Township	Within APE?	Current NRHP* Status
086527	Union Reformed & Lutheran Church (Old River Church)	Church	1833	Conyngham	No, located in Southeast Alternative east of river	Undetermined
092644	L.R. 40028 Bridge	Bridge	Unknown	Salem	No	Not Eligible
135679	SR 239 Bridge	Bridge	1940	Conyngham	No	Not Eligible
135820	SR 7228 Bridge	Bridge	1937	Salem	No	Not Eligible
141673	North Branch Canal; Wyoming Canal Co; Pennsylvania Canal Co	Canal and Locks	1828, 1831	Salem	Yes, west bank floodplain	Eligible
* National Register of Historic Places <u>eligibility as previously recorded</u>						

Table 2.5-39— The Summary of Surveyed Architectural and Historic Resources in Project Viewshed

(Page 1 of 3)

ID No.	Name	Address	Style and Type	Date	Preliminary Initial NRHP Eligibility Recommendation
Resources Recommended Eligible for NRHP Listing (Require PHRS Forms per PHMC-BHP-June 5, 2008)					
GAI-03 (086572)	Union Reformed and Lutheran Church (Old River Church and Burying Ground)	3200 SR 239, Conyngham Twp	Greek Revival Church and Cemetery	1833 (Church), 1805 (Cemetery)	Eligible, Criteria A and C (Further research ongoing to determine Criterion B eligibility.)
GAI-04	Woodcrest	3209 SR 239, Conyngham Twp	Federal, Vernacular Farmstead	1805, 1822	Eligible, Criteria A and C
GAI-06	Stone Arch Bridge	Beach Grove Road at Stone Church Road, Salem Twp	Vernacular Stone Arch Bridge	c1935	Eligible, Criterion C
GAI-09	North Market Street Bridge	North Market Street, Salem Twp	Vernacular Stone Arch Bridge	c1935	Eligible, Criterion C
GAI-10 (141673)	North Branch Pennsylvania Canal	Along Susquehanna River, US Rt. 11 Vicinity, Salem Twp	Vernacular Canal	1828	Eligible, Criteria A and C
GAI-11	Canadian Pacific/ Bloomsburg Division of the Delaware, Lackawanna & Western Railway	Along Susquehanna River, US Rt. 11 Vicinity, Salem Twp	Vernacular Railroad	1858	Eligible, Criterion <u>AA*</u>
GAI-12	Susquehanna and Tioga Turnpike	US Rt. 11, Salem Twp	Vernacular Highway	1807-1810	Eligible, Criterion <u>AA*</u>
GAI-26	House (Red Brick Studios)	1405 Berwick-Hazleton Highway (SR 93), Nescopeck Twp	Masonry Vernacular, Gothic Revival Residence	c1880	Eligible, Criterion C
GAI-27	Pennsylvania Railroad-Sunbury Line/ Delaware & Hudson Railroad	Along Susquehanna River in Vicinity of River Road and SR 239, Nescopeck Twp	Vernacular Railroad	c1870	Eligible, Criterion <u>AA*</u>
GAI-36 through GAI-45	Wapwallopen Historic District	454 through 480 South River Street, Wapwallopen	Vernacular, Italianate, Gothic Revival, Queen Anne, Stick, Colonial Revival Historic District	c1870-c1900	Eligible, Criteria A and C (Further study ongoing to determine all contributing resources and district boundary.)
Other Resources Requiring Completion of PHRS forms per PHMC-BHP Request-June 5, 2008					
GAI-05	Hummel Farmstead	371 Beach Grove Road, Salem Twp	Frame Vernacular Farmstead	c1890	Not Eligible
GAI-07	Kiliti Farm	62 Kiliti Road, Salem Twp	American Foursquare, Vernacular Farmstead	c1925	Not Eligible
GAI-08	Heller Farm	4210 North Market Street, Salem Twp	Frame Vernacular Farmstead	c1930	Undetermined. Further study ongoing
GAI-13	House	29 Bell Bend Road, Salem Twp	Bungalow Residence	c1925	Not Eligible
GAI-14	House	49 Bell Bend Road, Salem Twp	Frame Vernacular, Georgian Residence	c1875	Not Eligible

Table 2.5-39— The Summary of Surveyed Architectural and Historic Resources in Project Viewshed

(Page 2 of 3)

ID No.	Name	Address	Style and Type	Date	Preliminary-Initial NRHP Eligibility Recommendation
GAI-20	Valley View Farm	1022 Salem Boulevard, Salem Twp	Frame Vernacular Farmstead	c1900	Not Eligible
GAI-25	Michaels Farm	4252 N. Market Street, Salem Twp	Frame Vernacular Farmstead	c1880	Not Eligible
GAI-29	Farm	950 Berwick-Hazleton Highway (SR 93), Nescopeck Twp	Greek Revival Farmstead	c1870-c1960	Not Eligible
GAI-30	House	944 Berwick-Hazleton Highway (SR 93), Nescopeck Twp	Masonry Vernacular, Georgian Residence	c1870	Not Eligible
GAI-33	Farm	783 Berwick-Hazleton Highway (SR 93), Nescopeck Twp	Masonry Vernacular, Greek Revival Farmstead	c1880	Not Eligible
GAI-35	Farm	212 East Cherry Road (T379), Nescopeck Twp	Frame Vernacular Farmstead	c1890	Not Eligible
GAI-50	Farm	811 River Road (SR 3036), Nescopeck Twp	Vernacular, Georgian Farmstead	c1880-c2000	Not Eligible
Identified Ineligible Resources Requiring No Further Work per PHMC-BHP-June 5, 2008					
GAI-01	Beach Grove Cemetery	Beach Grove Road, Salem Twp	Vernacular Cemetery	c1850-c2004	Not Eligible
GAI-02	Stone Walls	Bell Bend Road at US Rt. 11, Salem Twp	Vernacular Walls	c1810-c1850?	Not Eligible
GAI-15	House	65 Bell Bend Road, Salem Twp	Frame Vernacular Residence	c1880	Not Eligible
GAI-16	House	155 Bell Bend Road, Salem Twp	Minimal Traditional, Cape Cod Residence	c1950	Not Eligible
GAI-17	House	189 Bell Bend Road, Salem Twp	Colonial Revival Residence	c1925	Not Eligible
GAI-18	House	193 Bell Bend Road, Salem Twp	Minimal Traditional Residence	c1950	Not Eligible
GAI-19	House	1021 Salem Boulevard, Salem Twp	Frame Vernacular Residence	c1950	Not Eligible
GAI-21	Bell Bend Efficiency Apartments	1043 Salem Boulevard, Salem Twp	Frame Vernacular Apartment	c1940	Not Eligible
GAI-22	House	1047 Salem Boulevard, Salem Twp	Frame Vernacular Residence	c1910	Not Eligible
GAI-23	House	1091 Salem Boulevard, Salem Twp	Frame Vernacular Residence	c1910	Not Eligible
GAI-24	House	1069 Salem Boulevard, Salem Twp	American Foursquare Residence	c1925	Not Eligible
GAI-28	Barn and Trailer	998 Berwick-Hazleton Highway (SR 93), Nescopeck Twp	Vernacular Former Farmstead	c1900-c1990	Not Eligible
GAI-31	House	906 Berwick-Hazleton Highway (SR 93), Nescopeck Twp	Frame Vernacular Residence	c1900	Not Eligible
GAI-32	House	809 Berwick-Hazleton Highway (SR 93), Nescopeck Twp	Frame Vernacular Residence	c1910	Not Eligible

**Table 2.5-39— The Summary of Surveyed Architectural and Historic Resources in
Project Viewshed**

(Page 3 of 3)

ID No.	Name	Address	Style and Type	Date	Preliminary-Initial NRHP Eligibility Recommendation
GAI-34	House	175 East Cherry Road (T379), Nescopeck Twp	Frame Vernacular Residence	c1930	Not Eligible
GAI-46	House (Opossum Lodge)	598 River Road (SR 3036), Nescopeck Twp	Frame Vernacular Residence	c1920	Not Eligible
GAI-47	House	546 River Road (SR 3036), Nescopeck Twp	Frame Vernacular Residence	c1920	Not Eligible
GAI-48	House	520 River Road (SR 3036), Nescopeck Twp	Frame Vernacular Residence	c1920	Not Eligible
GAI-49	House	510 River Road (SR 3036), Nescopeck Twp	Frame Vernacular Residence	c1920	Not Eligible
GAI-51	Quarry	SR 3036 (River Road) vicinity, Nescopeck Twp	Vernacular Extraction Facility	c1930	Not Eligible
GAI-52 (135820)	Bridge	N. Market Street, Salem Twp	Vernacular Concrete Bridge	1937	Not Eligible

Note:

* ~~National Register of Historic Places~~ Resource subsequently determined Not Eligible based on supplemental research and SHPO review and comment.

Table 2.5-40— Summary of Surveyed Architectural and Historical Resources in Phase Ia Project Footprint, West of Susquehanna River

ID No.	Name	Date	Style and Type	Address	Township	Recommended NRHP Status
GAI-01	Beach Grove Cemetery	c1850-c2004	Vernacular Cemetery	Beach Grove Road	Salem	Not Eligible
GAI-02	Stone Walls	c1810-c1850?	Vernacular Walls	Bell Bend Road at US Rt. 11	Salem	Undetermined
GAI-10 (141673)	North Branch PA. Canal	1828, 1831	Vernacular Canal	Along Susquehanna River, US Rt. 11 Vicinity	Salem	Eligible, Criteria A, C.
GAI-11	Del. Lackawanna & Western Railway	1858	Railroad	Vicinity Salem TWP	Salem	Eligible, Criterion A
GAI-12	Susquehanna and Tioga Turnpike	1807-1810	Vernacular Highway	US Rt. 11 Salem TWP	Salem	Eligible, Criterion A
National Register of Historic Places						

Table 2.5-41 Summary of Identified Archeological Sites in Phase 1b Project APE

Site #	Area	Landform	Setting	Prehist Art.	Hist Art.	Site Type	Age	NRHP ⁽¹⁾ Eligibility Recommendations
Site-1	West-Alt	Upland-hill-slope	Plowed field	2	-	Lithic scatter	Unknown Prehistoric	Not Eligible
Site-2	West-Alt	Upland flat	Plowed field	-	147	Historic artifact scatter	Early to mid-19th century	Potentially Eligible, Criterion-D
Site-3	West-Alt	Upland flat	Plowed field	-	101	Historic artifact scatter	Late 19th to mid-20th century	Potentially Eligible, Criterion-D
Site-4	West-Alt	Upland flat	Plowed field	-	369	Historic artifact scatter	Early to mid-19th century and Early to mid-20th century	Potentially Eligible, Criterion-D
Site-5	Area-7	Terrace/Floodplain	Plowed field	48	35	Lithic scatter	EA, LA, EW ⁽²⁾	Potentially Eligible, Criterion-D
Site-6	West-Alt	Upland flat	Plowed field	2	-	Lithic scatter	Unknown Prehistoric	Not Eligible
Site-7	West-Alt	Upland flat	Sparse woods/brush	-	363	Farmstead (artifact scatter/foundations)	Late 19th to late 20th century	Potentially Eligible, Criterion-D
Site-8	West-Alt	Upland flat	Wooded	-	147	Historic artifact scatter/ possible foundation depression	Mid to late-20th century	Not Eligible
Site-9	West-Alt	Upland flat	Sparse trees brush/ grassy field	2	71	Historic artifact scatter/ possible foundation depression	19th century	Potentially Eligible, Criterion-D
Site-10	West-Alt	Upland flat	Open field	-	208	Farmstead (artifact scatter/foundations)	Mid 19th to 20th century	Potentially Eligible, Criterion-D
Site-11	West-Alt	Upland flat	Wooded	-	23	Historic artifact scatter	19th century	Not Eligible
Total	-	-	-	54	1,464	-	-	7 potentially eligible; 4 not eligible
Notes: (1) NRHP- National Register of Historic Places (2) EA=Early Archaic; LA=Late Archaic; EW=Early Woodland								

Table 2.5-42— Summary of Identified Archeological Sites in Phase Ib Project APE

Site #	GAI Site #	Area	Landform	Setting	Prehist Art.	Hist Art.	Site Type	Age	Phase Ib NRHP* Eligibility Recommendations
36LU278	1	West Alt	Upland hill slope	Plowed field	2	=	Lithic scatter	Unknown Prehistoric	Not Eligible
36LU279	2	West Alt	Upland flat	Plowed field	=	147	Historic artifact scatter	Early to mid 19 th century	Potentially Eligible, Criterion D
36LU280	3	West Alt	Upland flat	Plowed field	=	101	Historic artifact scatter	Late 19 th to mid 20 th century	Potentially Eligible, Criterion D
36LU281	4	West Alt	Upland flat	Plowed field	=	369	Historic artifact scatter	Early to mid 19 th century and Early to mid 20 th century	Potentially Eligible, Criterion D
36LU288	5	Area 7	Terrace/ Floodplain	Plowed field	48	35	Lithic scatter	EA, LA, EW **	Potentially Eligible, Criterion D
36LU282	6	West Alt	Upland flat	Plowed field	2	=	Lithic scatter	Unknown Prehistoric	Not Eligible
36LU283	7	West Alt	Upland flat	Sparse woods/ brush	=	363	Farmstead (artifact scatter/foundations)	Late 19 th to late 20 th century	Potentially Eligible, Criterion D
36LU284	8	West Alt	Upland flat	Wooded	=	147	Historic artifact scatter/ possible foundation depression	Mid to late 20 th century	Not Eligible
36LU285	9	West Alt	Upland flat	Sparse trees brush/grassy field	2	71	Historic artifact scatter/ possible foundation depression	19 th century	Potentially Eligible, Criterion D
36LU286	10	West Alt	Upland flat	Open field	=	208	Farmstead (artifact scatter/foundations)	Mid 19 th to 20 th century	Potentially Eligible, Criterion D
36LU287	11	West Alt	Upland flat	Wooded	=	23	Historic artifact scatter	19 th century	Not Eligible
Total	-	-	-	-	54	1,464	-	-	7 potentially eligible; 4 not eligible

*NRHP-National Register of Historic Places; **EA=Early Archaic; LA=Late Archaic; EW=Early Woodland

Table 2.5-43— Summary of Identified Isolated Finds in Initial Phase Ib Project APE

IF #	Area	Section	Setting	Age	Description	Recommended NRHP Eligibility
IF 1	West Alt.	1	Upland	Unknown Prehistoric	1 proj. point	NE
IF 2	West Alt.	6	Upland	Early Archaic	1 proj. point	NE
IF 3	West Alt.	6	Upland	Early Archaic	1 proj. point	NE
IF 4	West Alt.	6	Upland	Middle to Late Archaic	1 proj. point	NE
IF 5	West Alt.	6	Upland	Early Archaic	1 proj. point	NE
IF 6	West Alt.	3	Upland	Unknown Prehistoric	1 debitage	NE
IF 7	West Alt.	3	Upland	Unknown Prehistoric	1 utilized flake	NE
IF 8	West Alt.	3	Upland	Unknown Prehistoric	1 debitage	NE
IF 9	West Alt.	3	Upland	Unknown Prehistoric	1 retouched flake	NE
IF 10	West Alt.	6	Upland	Unknown Prehistoric	1 proj. point	NE
IF 11	West Alt.	7	Upland	Late Archaic	1 proj. point	NE
IF 12	West Alt.	7	Upland	Unknown Prehistoric	1 proj. point	NE
IF 13	DELETED					
IF 14	West Alt.	7	Upland	Unknown Prehistoric	1 debitage	NE
IF 15	West Alt.	12	Upland	Early Archaic	1 proj. point	NE
IF 16	Area 6	3	Upland	Unknown Prehistoric	1 biface	NE
IF 17	Area 7	2	Low Terrace/ Floodplain	Unknown Prehistoric	1 debitage	NE
IF 18	Area 7	2	Low Terrace/ Floodplain	Unknown Prehistoric	1 biface	NE
IF 19	Area 7	2	Low Terrace/ Floodplain	Unknown Prehistoric	1 debitage	NE
IF 20	Area 7	2	Low Terrace/ Floodplain	Unknown Prehistoric	1 biface	NE
IF 21	Area 7	2	Low Terrace/ Floodplain	Unknown Prehistoric	1 debitage	NE
IF 22	West Alt.	17	Upland	Unknown Prehistoric	1 debitage	NE
IF 23	West Alt.	29	Upland	Unknown Prehistoric	1 debitage	NE
IF 24	West Alt.	1	Upland	Unknown Prehistoric	1 debitage	NE
IF 25	West Alt.	1	Upland	Unknown Prehistoric	1 debitage	NE
IF 26	West Alt. DELETED	4	Upland	Unknown Prehistoric	1 debitage	NE
IF 27	West Alt.	1	Upland	Unknown Prehistoric	1 proj. point	NE

Notes:
 *NRHP=National Register of Historic Places; NE=Not Eligible; Note IFs #13 has and 26 have been deleted. deleted (noncultural).

**Table 2.5-44— Summary of Potentially NRHP-Eligible Archeological Sites in Phase Ib
Project APE**

Site #	Site Type	Age	NRHP ⁽¹⁾ Eligibility Recommendation	Recommended Action
Site 2	Historic Artifact Scatter	Early to mid 19th century	Potentially Eligible, Criterion D	Avoid/Phase II
Site 3	Historic Artifact Scatter	Late 19th to mid 20th century	Potentially Eligible, Criterion D	Avoid/Phase II
Site 4	Historic Artifact Scatter	Early to mid 19th century and Early to mid 20th century	Potentially Eligible, Criterion D	Avoid/Phase II
Site 5	Prehistoric Lithic Scatter	Early Archaic, Late Archaic, Early Woodland	Potentially Eligible, Criterion D	Avoid/Phase II
Site 7	Farmstead (Historic Artifact Scatter/ Foundations)	Late 19th to late 20th century	Potentially Eligible, Criterion D	Avoid/Phase II
Site 9	Historic Artifact Scatter/ Possible Foundation Depression	19th Century	Potentially Eligible, Criterion D	Avoid/Phase II
Site 10	Farmstead (Historic Artifact Scatter/ Foundations)	Mid 19th to 20th century	Potentially Eligible, Criterion D	Avoid/Phase II
<p>Note: (1) National Register of Historic Places</p>				

Table 2.5-45— Summary of Potentially NRHP-Eligible Archeological Sites in Phase Ib Project APE

<u>Site #</u>	<u>GAI Site #</u>	<u>Site Type</u>	<u>Age</u>	<u>Phase Ib NRHP* Eligibility Recommendation</u>	<u>Recommended Action</u>
<u>36LU279</u>	<u>2</u>	<u>Historic Artifact Scatter</u>	<u>Early to mid 19th century</u>	<u>Potentially Eligible, Criterion D</u>	<u>Avoid/Phase II</u>
<u>36LU280</u>	<u>3</u>	<u>Historic Artifact Scatter</u>	<u>Late 19th to mid 20th century</u>	<u>Potentially Eligible, Criterion D</u>	<u>Avoid/Phase II</u>
<u>36LU281</u>	<u>4</u>	<u>Historic Artifact Scatter</u>	<u>Early to mid 19th century and Early to mid 20th century</u>	<u>Potentially Eligible, Criterion D</u>	<u>Avoid/Phase II</u>
<u>36LU288</u>	<u>5</u>	<u>Prehistoric Lithic Scatter</u>	<u>Early Archaic, Late Archaic, Early Woodland</u>	<u>Potentially Eligible, Criterion D</u>	<u>Avoid/Phase II</u>
<u>36LU283</u>	<u>7</u>	<u>Farmstead (Historic Artifact Scatter/ Foundations)</u>	<u>Late 19th to late 20th century</u>	<u>Potentially Eligible, Criterion D</u>	<u>Avoid/Phase II</u>
<u>36LU285</u>	<u>9</u>	<u>Historic Artifact Scatter/ Possible Foundation Depression</u>	<u>19th century</u>	<u>Potentially Eligible, Criterion D</u>	<u>Avoid/Phase II</u>
<u>36LU286</u>	<u>10</u>	<u>Farmstead (Historic Artifact Scatter/ Foundations)</u>	<u>Mid 19th to 20th century</u>	<u>Potentially Eligible, Criterion D</u>	<u>Avoid/Phase II</u>

* National Register of Historic Places

Table 2.5-46— Phase II National Register Site Evaluations: Summary and Recommendations

<u>Site #</u>	<u>GAI Site #</u>	<u>Area</u>	<u>Sect.</u>	<u>Site Type</u>	<u>Age</u>	<u>Integrity</u>	<u>Info Potential</u>	<u>NRHP Eligibility Recommendation</u>	<u>Recommendations</u>
36LU279	2	West Alt	7	Domestic	Early to Mid 19th century	Poor	Low	Not Eligible	No Further Work
36LU280	3	West Alt	13	Domestic	Late 19th to Mid 20th century	Good	Low	Not Eligible	No Further Work
36LU281	4	West Alt	14	Farmstead	Mid 19th to Early 20th century	Poor	Low	Not Eligible	No Further Work
36LU283	7	West Alt	30	Farmstead	Late 19th to Late 20th century	Poor	Low	Not Eligible	No Further Work
36LU285	9	West Alt	17	Domestic	Mid to Late 19th and 20th century	Poor	Low	Not Eligible	No Further Work
36LU286	10	West Alt	31	Farmstead	Mid 19th to 20th century	Poor	Low	Not Eligible	No Further Work
36LU288	5	Area 7	2	Lithic Scatter/Camp	Paleo, LA,TA/EW, LW *	Poor	Low	Not Eligible	No Further Work

*Paleo=Paleoindian, LA=Late Archaic, TA=Terminal Archaic, EW=Early Woodland, LW=Late Woodland

Table 2.5-47— Second Supplemental Phase Ib Investigation: Summary and Recommendations of Identified Sites and Isolated Finds

Site #	GAI Site #	Area	Sect.	Site Type	Age	Integrity	Info Potential	NRHP Eligibility Recommendation	Recommendations
<u>36LU301</u>	<u>12</u>	<u>Lot 4</u>	<u>1</u>	<u>Lithic Scatter</u>	<u>Poss Early Archaic</u>	<u>Good</u>	<u>High</u>	<u>Potentially Eligible</u>	<u>Avoid/Phase II</u>
<u>36LU302</u>	<u>13</u>	<u>Lot 6B/ Lot 6</u>	<u>2</u>	<u>Domestic</u>	<u>Mid 19th to 20th century</u>	<u>Poor</u>	<u>Low</u>	<u>Not Eligible</u>	<u>No Further Work</u>
<u>IF 28</u>	<u>N/A</u>	<u>Lot 3</u>	<u>2</u>	<u>N/A</u>	<u>Unknown Prehistoric</u>	<u>N/A</u>	<u>N/A</u>	<u>Not Eligible</u>	<u>No Further Work</u>

**Table 2.5-48— Summary of Architectural and Historical Resources in Project Viewshed
Recommended Eligible for NRHP Listing**

ID No.	Name	Address	Style and Type	Date	NRHP Eligibility Recommendation
<u>141673</u> (GAI-10)	<u>North Branch Pennsylvania Canal</u>	<u>Along Susquehanna River, US Rt. 11 Vicinity, Salem Twp</u>	<u>Vernacular Canal</u>	<u>1828</u>	<u>Determined Eligible by PHMC-BHP, Criterion A</u>
<u>155049</u> (GAI-03)	<u>Union Reformed and Lutheran Church (Old River Church and Burying Ground)</u>	<u>3209 SR 239, Conyngham Twp</u>	<u>Federal Church and Cemetery</u>	<u>1833 (Church), 1805 (Cemetery)</u>	<u>Determined Eligible by PHMC-BHP, Criterion C</u>
<u>155052</u> (GAI-04)	<u>Woodcrest</u>	<u>3209 SR 239, Conyngham Twp</u>	<u>Federal Vernacular Farmstead</u>	<u>1805, 1822</u>	<u>Determined Eligible by PHMC-BHP, Criterion A and Possibly C</u>
<u>155054</u> (GAI-06)	<u>Stone Arch Bridge</u>	<u>Beach Grove Road at Stone Church Road, Salem Twp</u>	<u>Vernacular Stone Arch Bridge</u>	<u>c1935</u>	<u>Recommended Potentially Eligible, Criterion A</u> <i>Further study recommended</i>
<u>155055</u> (GAI-09)	<u>North Market Street Bridge</u>	<u>North Market Street, Salem Twp</u>	<u>Vernacular Stone Arch Bridge</u>	<u>c1935</u>	<u>Recommended Potentially Eligible, Criterion A</u> <i>Further study recommended</i>
<u>155064</u> (GAI-26)	<u>House (Red Brick Studios)</u>	<u>1405 Berwick-Hazleton Highway (SR 93), Nescopeck Twp</u>	<u>Masonry Vernacular, Gothic Revival Residence</u>	<u>c1880</u>	<u>Recommended Eligible, Criterion C</u>
<u>155070</u> (GAI-36 through GAI-45)	<u>Wapwallopen Historic District</u>	<u>454 through 480 South River Street, Wapwallopen</u>	<u>Vernacular, Italianate, Gothic Revival, Queen Anne, Stick, Colonial Revival Historic District</u>	<u>c1870- c1900</u>	<u>Recommended Eligible, Criteria A and C</u> <i>Further study recommended in order to determine all contributing resources and district boundary.</i>

Table 2.5-49—Summary of NRHP-Eligible Architectural and Historical Resources in Phase 1b Project Footprint

ID No.	Name	Address	Style and Type	Date	NRHP⁽¹⁾ Eligibility Recommendation
GAI-10 (141673)	North Branch Pennsylvania Canal	Along Susquehanna River, US Rt. 11 Vicinity, Salem Twp	Vernacular Canal	1828	Eligible, Criteria A and C
GAI-11	Canadian Pacific/Bloomsburg Division of the Delaware, Lackawanna & Western Railway	Along Susquehanna River, US Rt. 11 Vicinity, Salem Twp	Vernacular Railroad	1858	Eligible, Criterion A
GAI-12	Susquehanna and Tioga Turnpike	US Rt. 11, Salem Twp	Vernacular Highway	1807-1810	Eligible, Criterion A
<p>Note (1) National Register of Historic Places</p>					

Table 2.5-50— Summary of NRHP-Eligible Architectural and Historical Resources in Phase Ib Project Footprint

ID No.	Name	Address	Style and Type	Date	Location in Project Area	Initial 2008 NRHP* Eligibility Recommendation	2010 NRHP Eligibility Recommendation
141673 (GAI-10)	North Branch Pennsylvania Canal	Along Susquehanna River, US Rt. 11 Vicinity, Salem Twp	Vernacular Canal	1828	Initial Phase Ib APE, Areas 6 and 7	Eligible, Criteria A and C	Determined Eligible by PHMC-BHP, Criterion A
155053 (GAI-11)	Bloomsburg Division of the Delaware, Lackawanna & Western Railway	Along Susquehanna River, US Rt. 11 Vicinity, Salem Twp	Vernacular Railroad	1858	Initial Phase Ib APE, Areas 6 and 7	Eligible, Criterion A**	Determined Not Eligible by PHMC-BHP
155056 (GAI-12)	Susquehanna and Tioqa Turnpike	US Rt. 11, Salem Twp	Vernacular Highway	1807-1810	Initial Phase Ib APE, Areas 6 and 7	Eligible, Criterion A**	Determined Not Eligible by PHMC-BHP
155054 (GAI-06)	Stone Arch Bridge	Beach Grove Road at Stone Church Road, Salem Twp	Vernacular Stone Arch Bridge	c1935	Suppl Phase Ib APE, Lot 4	Eligible, Criterion A	Recommended Potentially Eligible, Criterion A <i>Further study recommended</i>
*National Register of Historic Places; **Resource determined Not Eligible based on subsequent research and SHPO review and comment							

Table 2.5-51— Columbia County Historic Landmarks Listed on the Federal National Register of Historic Places

Name	Area	Address/Location
Berwick Armory	Berwick Borough	201 Pine St., Berwick
Bloomsburg Historic District	Bloomsburg	Roughly bounded by Penn, 5th West, Willow, Millville and Lights Sts.
Bridge in Fishing Creek Township	Fishing Creek Twp	LR 19078 over Little Pine Creek, Bendertown
Catawissa Friends Meetinghouse	Catawissa Borough	South and 3rd Sts., Catawissa
Creasyville Covered Bridge	Pine/Jackson Twp	SR 683, Milville
Davis Covered Bridge	Cleveland Twp	SR 371, Catawissa
Eckman, Sam, Covered Bridge No. 92	Pine/Greenwood Twp	SR 548, Milville
Fowlersville Covered Bridge	North Centre Twp	SR 19039, Fowlersville
Furnace Covered Bridge No. 11	Cleveland Twp	SR 373, Esther
Hollingshead Covered Bridge No. 40	Catawissa Twp	SR 405, Catawissa
Jackson Mansion and Carriage House	Berwick Borough	344 Market St., Berwick
Johnson Covered Bridge No. 28	Cleveland Twp	SR 320, Catawissa
Josiah Hess Covered Bridge No. 122	Fighting Creek Twp	SR 563, Forks
Jud Christie Covered Bridge No. 95	Pine/Jackson Twp	SR 685, Milville
Kramer Covered Bridge No. 113	Greenwood Twp	SR 572, Rohrsburg
Kreigbaum Covered Bridge	Ralphi/Cleveland Twps.	E of Elysburg on T 458, Numidia
Parr's Mill Covered Bridge No. 10	Cleveland/Franklin Twps	SR 371, Parr's Mill
Patterson Covered Bridge No. 112	Orange Twp	SR 575, Orangeville
Riegel Covered Bridge No. 6	Franklin Twp	SR 312, Catawissa
Rohrbach Covered Bridge No. 24	Franklin Twp	SR 369, Catawissa
Rupert Covered Bridge No. 56	Bloomsburg Town/Montour Twps.	ST 449, Rupert
Shoemaker Covered Bridge	Pine Twp	SR 19053, lola
Snyder Covered Bridge No. 17	Locust Twp	SR 361, Slabtown
Stillwater covered Bridge No. 134	Stillwater Borough	SR 629, Stillwater
Twin Bridges-East Paden Covered Bridge No. 120	Forks	Off PA 478
Twin Bridges-West Paden Covered Bridge No. 121	Forks	Off Pa 487
Wagner Covered Bridge No. 19	Locust Twp	SR 468, Newlin
Wanich Covered Bridge No. 69	Mount Pleasant/Hemlock Twp	Off PA 42, Fernville
Welle Hess Covered Bridge No. 51	Grassmere Park	SR 19074
Y Covered Bridge No. 156	Sugarloaf Twp	SR 757, Central

Table 2.5-52— Luzerne County Historic Landmarks Listed on the Federal National Register of Historic Places

Name	Area	Address/Location
Ashkey Planes	Fairview/Hanover Twps	Off PA 309, Ashley Vicinity
Bear Creek Village Historic District	Bear Creek Village Borough	PA 115 at Bear Creek Dam, Bear Creek Village
Bittenbender Covered Bridge	Huntington Twp	S of Huntington Mills off LR 40076, Huntington Mills
Bridge in City of Wilkes-Barre	Wilkes-Barre City	LR 5 over Mill Creek, Wilkes-Barre
Catlin Hall, Wilkes College	Wilkes-Barre City	92 S River St, Wilkes-Barre
Central Railroad of New Jersey Station	Wilkes-Barre City	31-35 S Baltimore St., Wilkes-Barre
Comerford Theater	Wilkes-Barre City	71 Public Sq., Wilkes-Barre
Denison House	Forty Fort Borough	35 Denison St., Forty Fort
Eckley Historic District	Foster Twp	Both sides of Main St, through town, Eckley
Evans, Benjamin, House	Nescopeck Twp	Off PA 93, Nescopeck
Forty-Fort Meetinghouse	Forty Fort Borough	River St. and Wyoming Ave., Forty-Fort
Guthrie, George W., School	Wilkes-Barre City	643 N. Washington St., Wilkes-Barre
Keller House		217 W. Broad St., Hazelton
Kingston Armory	Wilkes-Barre City	280 Market St., Wilkes-Barre
Luzerne County Courthouse	Wilkes-Barre City	N. River St., Wilkes-Barre
Luzerne County Fresh Air Camp	Butler Twp	Middle Rd., approx. 0.25 mi. NE of jct. PA 3021
Luzerne Presbyterial Institute	Wyoming Borough	Institute St., Wyoming
Market Street Bridge	Wilkes-Barre City	Market St./LR 11 over Susquehanna River, Wilke-Barre
Market Street Bridge	Kingston Borough	Market St./LR 11 over Susquehanna River, Kingston
Markel Banking & Trust Company Building	Hazelton City	8 W. Broad St., Hazelton
McClintock Hall	Wilkes-Barre City	44 S. River St., Wilke-Barre
Pardee, Isreal Platt, Mansion	Hazelton City	235 N. Laurel St. and 28 Aspen St., Hazelton
River Street Historic District	Wilkes-Barre City	W. South and W. Ross Strs. & Barnum Pl., Wilker-Barre
St. Gabriel's Catholic Parish Complex	Hazelton City	122-142 S. Wyoming St., Hazelton
St. John the Evangelist Roman Catholic Church and School Building	Wilkes-Barre City	419 N. Main St., Wilkes-Barre
Stegmaier Brewery	Wilkes-Barre City	Roughly bounded by Coal, Welles, Market, Lincoln and Baltimore Sts., Wilkes-Barre
Stoddartsville Historic District	Buck Twp	S. side of PA 115 at Lehigh R.
Swetland Homestead	Wyoming Borough	855 Wyoming Ave., Wyoming
Weiss Hall	Wilkes-Barre City	98 S. River St., Wilkes-Barre
West End Wheelmen's Club	Wyoming Borough	439 S. Franklin St., Wilkes-Barre
Wyoming Monument	Sugarloaf Twp	US 11, Wyoming Ave. and Susquehanna St., Wyoming Borough
Wyoming Seminary	Kingston Borough	Sprague Ave., Kingston

Table 2.5-53— Summary of Identified Cultural Resources by NRHP Eligibility Status

Location	NRHP-Listed	NRHP-Eligible	NRHP-Ineligible	NRHP-Undetermined	Unmapped	Total
Columbia County	4	13	27	392	23	459
Beaver Township			1	1		2
Berwick Borough	2	4	4	325	6	341
Briar Creek Borough		5	2	12	2	21
Briar Creek Township			12		2	14
Fishing Creek Township	1		3	1	12	17
Mifflin Township		3	2	46	1	52
North Centre Township	1		2			3
South Centre Township		1	1	5		7
Sugarloaf Township				2		2
Luzerne County	3	38	98	102	20	261
Black Creek Township		1	6	3	1	11
Butler Township	1		8	11	1	21
Conyngam Borough			2		1	3
Conyngam Township			6	17	6	29
Dorrance Township			11	13		25
Hazle Township				1	1	2
Hollenback Township		6	2	1		9
Hunlock Township		2	9	6	2	19
Huntington Township	1	9	7	7	3	27
Nescopeck Borough			1			1
Nescopeck Township	1	4	2	5	1	13
New Columbus Borough			3	5	1	9
Newport Township		2	12	2		16
Nuangola Borough				6		6
Rice Township		2				2
Ross Township		1		1	1	3
Salem Township		6	10	10		26
Shickshinny Borough			3			3
Slocum Township				1		1
Sugarloaf Township		4	8	8	1	21
Union Township		1	6	5	1	13
Wright Township			2			2
Schuylkill County			1		2	3
North Union Township			1		2	3

Table 2.5-54— NRHP-Listed Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (7 Records)

Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H (1)	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
Columbia County (4 records)											
Berwick Borough (2 records)											
77423	77329	Jackson Mansion & Carriage House / Berwick City Hall	Building	Berwick	H	1860-1879	Second Empire, Stone	Public-local	Borough of Berwick	Listed	yes
96444	96345	Brigadier General Edward L. Davis / Berwick Armory	Building	Berwick	H	1922-1940	Craftsman, Tudor Revival, brick	Public-state	Pennsylvania National Guard Armories	Listed	yes
Fishing Creek Township (1 record)											
122	122	Bridge in Fishing Creek Township	Bridge	NA	H	1915	LR 19078 over Little Pine Creek, Bendertown, concrete			Listed	yes
North Centre Township (1 record)											
379	379	Fowlersville Covered Bridge	Bridge	Mifflinville	H	1886	Truss, Wood	Public-local	N. Center Twp. Village of Fowlersville	Listed	yes
Luzerne County (3 records)											
Butler Township (1 record)											
119128	112050	Luzerne County Fresh Air Camp	Building	NA	H	1927	Wood			Listed	Yes
Huntington Township (1 record)											
912	894	Bittenbenders' Covered Bridge	Bridge	Shickshinny	H	1800-1899	Queen post truss, wood		Multiple	Listed	yes
Nescopeck Township (1 record)											
50960	50866	Evans, Benjamin, House	Building	NA	H	1800-1899	Weatherboard	Private	Individual	Listed	yes
Note: (1) P = Prehistoric, H = Historic											

Table 2.5-55— NRHP-Eligible Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (51 Records)

(Page 1 of 4)

Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
Columbia County (13 records)											
Berwick Borough (4 records)											
20528	20437	Chestnut Street School	Building	NA	H	1911	Brick			Eligible	yes
20531	20440	Market Street School	Building	Berwick	H	1860-1879	Italianate, Brick	Public-local	Berwick School District	Eligible	yes
20563	20472	Schain's Department Store	Building	Berwick	H	1889-1919	Vernacular Victorian Romanesque, Brick	Private-Public	Individual	Eligible	yes
141673	128433	North Branch Canal (Pennsylvania Canal Company, Wyoming Canal Company)	District	Berwick	H	1828, 1831	Canal and Locks			Eligible	yes
Briar Creek Borough (5 records)											
110379	108278	Briar Creek School/ Boroughhall	Building	Mifflinville	H	1900-1919	Vernacular Pa Country School, Frame	Public-local	Briar Creek Borough	Eligible	yes
36Co0026	NA	The Hosler Historic Site	Archeological Site	Berwick	H	Hist	Historic Domestic	unknown		Eligible	Not evaluated
36Co0027	NA	The Woodin/Eaton Foundry Site	Archeological Site	Berwick	H	19thC Historic	Industrial	unknown		Eligible	Not evaluated
36Co0028	NA	The Martz Farm Site	Archeological Site	Mifflinville	P/H	P, Late 18th to 19thC Historic	Open Prehistoric and Historic	Barbara A Kurian and Cynthia L Malisa		Eligible	Not evaluated
36Co0029	NA	The Martzville Road Historic Site	Archeological Site	Mifflinville	H	19thC Historic	Historic Domestic	Michael and Tina Gray		Eligible	Not evaluated
Mifflin Township (3 records)											
21285	21194	Exchange Hotel/Ye Olde Hotel	Building	Mifflinville	H	1860-1879	Frame Vernacular	Private	Individual	Eligible	yes
21291	21200	Patriotic Sons of America, Washington Camp No. 684/ German School	Building	Mifflinville	H	1860-1879	Brick Greek Revival	Public-local	Mifflinville Town Lot	Eligible	yes

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Table 2.5-55— NRHP-Eligible Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (51 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
36Co0018	NA	Mifflinville Bridge A	Archeological Site	Mifflinville	P	Unknown Prehistoric	Lithic Reduction	Mifflin Township		Eligible	Not evaluated
South Centre Township (1 records)											
36Co0017	NA	Mifflinville Bridge Z	Archeological Site	Mifflinville	P	Unknown Prehistoric	Open Prehistoric, Unknown Function	Mr. William F. Seesholtz Jr.		Eligible	Not evaluated
Luzerne County (38 records)											
Black Creek Township (1 record)											
113879	110081	Mountain Grove School/ Trinity Lutheran "Church House"	Building	Nuremberg	H	1881	L19th-20thC Revival, Vernacular Country School, weatherboard	Private	Trinity Lutheran Church	Eligible	yes
Hollenback Township (6 records)											
95049	94953	Bridge No. 45802	Structure	Sybertsville	H	unknown	Truss, concrete	Public-local	Hollenback Twp	Eligible	yes
95052	94956	Bridge No. 45810	Structure	Sybertsville	H	unknown	Truss, concrete	Public-local	Hollenback Twp	Eligible	yes
135731	122468	none	Bridge	NA	H	1895	Metal			Eligible	yes
135733	122470	none	Bridge	NA	H	1908	Steel			Eligible	yes
NA	BMS 407215037 55802	TR 375 Over Hollenback Creek	Bridge	Sybertsville	H	1908	Pony Truss, Warren, Steel	Public-local	Luzerne County	Eligible	yes
NA	BMS 407215039 25810	TR 392 Over Wapwallopen Creek	Bridge	Sybertsville	H	1895ca	Pony Truss, Pratt, Metal	Public-local	Luzerne County	Eligible	yes
Hunlock Township (2 records)											
105179	105078	Retreat State Correctional Inst. Entrance Bridge	Bridge	NA	H	1900-1930	unknown			Eligible	yes
NA	BMS 407216180 90001	Retreat Access Rd Over Susquehanna River	Bridge	Nanticoke	H	1910ca	Thru Truss, Steel	Public-local	Department of General Services	Eligible	Yes
Huntington Township (9 records)											
95048	94952	Bridge No. 46018	Structure	NA	H	NA	Concrete			Eligible	yes
95056	94960	Bridge No. 46016	Structure	Shickshinny	H	1891	Truss, Continuous, concrete	Public-local	Huntington Twp	Eligible	yes

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Table 2.5-55— NRHP-Eligible Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (51 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
95057	94961	Bridge No. 16007	Bridge	Shickshinny	H	1887	Truss, Continuous, concrete	Public-local	Huntington Twp	Eligible	yes
135745	122482	none	Bridge	NA	H	1895	Metal			Eligible	yes
135746	122483	none	Bridge	NA	H	1890	Metal			Eligible	yes
NA	BMS 407217045 16016	T-451 Over Huntington Creek	Bridge	NA	H	1891 (altered 1950)	unknown	Public-local	Luzerne County	Eligible	yes
NA	BMS 407217047 26018	TR 472 Over Huntington Creek	Bridge	Shickshinny	H	1890 (altered 1940)	Pony Truss, Pratt, Metal	Public-local	Luzerne County	Eligible	yes
NA	BMS 407217048 26006	TR 482 Over Huntington Creek	Bridge	NA	H	1910	Pony Truss, Pratt, Steel	Public-local	Luzerne County	Eligible	yes
NA	BMS 407217050 46002	TR 504 Over Huntington Creek	Bridge	Stillwater	H	1895ca	Closed Spandrel Arch, Deck, Stone	Public-local	Luzerne County	Eligible	Yes
Nescopeck Township (4 records)											
95054	94958	Bridge No. 46003	Structure	Berwick	H	1920	Arch, masonry	Public-local	Nescopeck Twp	Eligible	yes
135784	122521	none	Bridge	NA	H	1883	Wrought Iron			Eligible	yes
135785	122522	none	Bridge	NA	H	1889	Wrought Iron			Eligible	yes
NA	BMS 407223037 66603	TR 376 Over Nescopeck Creek	Bridge	NA	H	1909	Closed Spandrel Arch, Deck, Stone	Public-local	Luzerne County	Eligible	yes
Newport Township (2 records)											
106142	106040	none	Building	Nanticoke	H	NA	unknown	Private	Individual	Eligible	yes
144081	132284	Holy Child Church, St. Stanislaus Institute	Building	NA	H	1918	Brick			Eligible	yes
Rice Township (2 records)											
36Lu0272	NA	Pump House Site	Archeological Site	Wilksbarre W	P	LA	Open Prehistoric, Unknown Function			Eligible	Not evaluated
36Lu0273	NA	Earth Conservation 1	Archeological Site	Wilksbarre W	P	LA	Open Prehistoric, Unknown Function	unknown		Eligible	Not evaluated
Ross Township (1 record)											

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
NA	BMS 407227057 57009	TR 575 Over Huntington Creek	Bridge	NA	H	1895ca	Pony Truss, Pratt, Steel	Public-local	Luzerne County	Eligible	yes
Salem Township (6 records)											
36Lu0015	NA	SES-3	Archeological Site	Berwick	P	A, LA	Open Habitation, Prehistoric	P.P. and L		Eligible	yes
36Lu0016	NA	SES-6	Archeological Site	Berwick	P	A,LA,EW, MW,LW	Open Habitation, Prehistoric	P.P. and L		Eligible	yes
36Lu0049	NA	SES-8	Archeological Site	Berwick	P	A, LA, Tr, W, EW, LW	Open Habitation, Prehistoric	P.P. and L		Eligible	yes
36Lu0051	NA	SES-11	Archeological Site	Berwick	P	W, LW	Open Habitation, Prehistoric	P.P. and L		Eligible	yes
36Lu0191	NA	none	Archeological Site	Berwick	P	LA, Tr	Camp Site	B.I.P Inc.		Eligible	yes
36Lu0270	NA	Beach Haven I	Archeological Site	Berwick	P	LA, Tr	Open Prehistoric, Unknown Function	unknown		Eligible	yes
Sugarloaf Township (4 records)											
95055	94959	Bridge No. 57310, Nescopeck Creek Bridge	Structure	Sybertsville	H	NA	Concrete	Public-local	Sugarloaf Twp	Eligible	Yes
135825	122562	none	Bridge	NA	H	1912	Concrete			Eligible	yes
135828	122565	none	Bridge	NA	H	1927	Steel			Eligible	yes
NA	BMS 407230034 07310	TR 340 Over Nescopeck Creek	Bridge	Sybertsville	H	1927	Thru Truss, Pratt, Steel	Public-local	Luzerne County	Eligible	yes
Union Township (1 record)											
120446	112495	Harrison, Joseph Henderson, House	Building	Shickshinny	H	1860-1900	Vernacular, Greek Revival, brick	Private	Individual	Eligible	yes
* P = Prehistoric, H = Historic ** P=Prehistoric; H=Historic A=Archaic; EA=Early Archaic; MA=Middle Archaic; LA=Late Archaic; Tr=Transitional Archaic; W=Woodland; EW=Early Woodland; MW=Middle Woodland; LW=Late Woodland											

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Table 2.5-56— NRHP-Ineligible Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (126 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
Columbia County (27 records)											
Beaver Township (1 record)											
132661	119398	none	Bridge	NA	H	1930	Concrete			Ineligible	yes
Berwick Borough (4 records)											
92202	92106	Berwick River Bridge 19 1 0 0184 0 001113	Bridge	Berwick	H	1905	Truss, Steel, Stone	Public-local	Berwick	Ineligible	yes
132673	119410	none	Bridge	Mifflinville	H	1940	unknown			Ineligible	yes
132674	119411	none	Bridge	Mifflinville	H	1929	Steel			Ineligible	yes
143231	130226	Berwick Borough Historic District	District	Berwick / Mifflinville	H	1860-1919	Various	Private	Multiple	Ineligible	yes
Briar Creek Borough (2 records)											
20581	20490	Bowman Residence/ Ash Property	Building	Mifflinville	H	1860-1879	Federal, Gothic Revival, brick	Private	Individual	Ineligible	yes
132676	119413	none	Bridge	NA	H	1950	Steel			Ineligible	yes
Briar Creek Township (12 records)											
100497	100397	Broyan Farm	Building	Mifflinville	H	NA	Folk, stone	Private	Individual	Ineligible	Yes
132678	119415	none	Bridge	NA	H	1956	Concrete			Ineligible	yes
132679	119416	Briar Creek Township Bridge #4	Bridge	NA	H	1922	Concrete			Ineligible	yes
132680	119417	Briar Creek Township Bridge #1	Bridge	NA	H	1948	Steel			Ineligible	yes
132681	119418	Briar Creek Township Bridge #2	Bridge	NA	H	1948	Steel			Ineligible	yes
132682	119419	none	Bridge	NA	H	1937	Concrete			Ineligible	yes
132683	119420	none	Bridge	NA	H	1950	Steel			Ineligible	yes
132685	119422	none	Bridge	NA	H	1938	Concrete			Ineligible	yes
132686	119423	none	Bridge	NA	H	1941	Concrete			Ineligible	yes
132687	119424	none	Bridge	NA	H	1941	Concrete			Ineligible	yes
132688	119425	none	Bridge	NA	H	1930	Concrete			Ineligible	yes
132689	119426	none	Bridge	NA	H	1930	Concrete			Ineligible	yes
Fishing Creek Township (3 records)											

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
92260	92164	L.R. 19080 Bridge 19 2 0 0080 0 007881	Bridge	Stillwater	H	1906-1915	Arch, masonry	Public-local	Fishing Creek Twp	Ineligible	Yes
132705	119442	none	Bridge	NA	H	NA	unknown			Ineligible	yes
132707	119444	none	Bridge	NA	H	1940	Steel			Ineligible	yes
Mifflin Township (2 records)											
92203	92107	Mifflinville River Bridge 19 2 0 0103 0 000684	Bridge	Mifflinville	H	1907 (altered 1957)	Truss, Steel, Stone, Latticed	Public-local	Center Mifflin Twps	Ineligible	yes
132752	119489	none	Bridge	NA	H	1935	Steel			Ineligible	yes
North Centre Township (2 records)											
132765	119502	Tr 730 North Centre Township Bridge #1	Bridge	NA	H	1921	Steel			Ineligible	yes
132768	119505	County Bridge #168	Bridge	NA	H	1985	Steel			Ineligible	yes
South Centre Township (1 record)											
132789	119526	none	Bridge	NA	H	1949	Concrete			Ineligible	yes
Luzerne County (98 records)											
Black Creek Township (6 records)											
92596	92500	L.R. 40012 Bridge 40 2 0 0012 0 000862	Bridge	Nuremberg	H	NA	Arch, masonry	Public-local	Black Creek Twp	Ineligible	Yes
114794	110336	Rock Glen School	Building	Nuremberg	H	NA	school, brick	Public-local	Black Creek Twp	Ineligible	yes
135663	122400	none	Bridge	NA	H	1982	Concrete			Ineligible	yes
135664	122401	none	Bridge	NA	H	1953	Steel			Ineligible	yes
135665	122402	none	Bridge	NA	H	1936	Concrete			Ineligible	yes
135666	122403	none	Bridge	NA	H	1920	Steel			Ineligible	yes
Butler Township (8 records)											
87160	87064	Senior Citizens Center	Building	Freeland	H	NA	unknown	Public-local	Senior Citizens Center	Ineligible	yes
92651	92555	L.R. 653 Bridge 40 1 0 0663 0 004303	Bridge	Conyngham	H	NA	Arch, masonry	Public-local	Butler	Ineligible	yes
135667	122404	none	Bridge	NA	H	1939	Steel			Ineligible	yes

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
135669	122406	none	Bridge	NA	H	1928	Concrete			Ineligible	yes
135670	122407	none	Bridge	NA	H	1926	Concrete			Ineligible	yes
135672	122409	none	Bridge	NA	H	1909	Concrete			Ineligible	Yes
135674	122411	none	Bridge	NA	H	1933	Concrete			Ineligible	yes
135675	122412	none	Bridge	NA	H	1920	Steel			Ineligible	yes
Conyngham Borough (2 records)											
101932	101832	Hazleton Area Public Library	Building	Conyngham	H	NA	Weatherboard	Public-local	Hazleton Area Public Library	Ineligible	yes
135676	122413	none	Bridge	NA	H	1900	Stone			Ineligible	yes
Conyngham Township (6 records)											
87161	87065	Bridge No. 1	Bridge	Shickshinny	H	1919-1980	Concrete	Public-local	Shickshinny/ Mocanaqua	Ineligible	yes
96754	96655	Mocanaqua Historic District	District	Shickshinny	H	1882	Twentieth Century Revival, Cape Cod, Vernacular, wood	Private	Multiple	Ineligible	yes
135678	122415	none	Bridge	NA	H	1956	Concrete			Ineligible	yes
135679	122416	none	Bridge	NA	H	1940	Steel			Ineligible	yes
135680	122417	none	Bridge	NA	H	1956	Concrete			Ineligible	Yes
36Lu0053	NA	SES-15	Archeological Site	Berwick	P	A	Open Habitation, Prehistoric	P.P. and L		Ineligible	Not evaluated
Dorrance Township (11 records)											
92637	92541	L.R. 40025 Bridge 40 2 0 0025 0 000174	Bridge	Nanticoke	H	NA	Arch, masonry	Public-local	Dorrance Twp	Ineligible	yes
95043	94947	Bridge No. 45104	Structure	Sybertsville	H	1895	Truss, Continuous	Public-local	Dorrance Twp	Ineligible	yes
135689	122426	none	Bridge	NA	H	1895	Metal			Ineligible	yes
135690	122427	none	Bridge	NA	H	1900	Stone			Ineligible	yes
135691	122428	none	Bridge	NA	H	1936	Steel			Ineligible	yes
135692	122429	none	Bridge	NA	H	1925	Concrete			Ineligible	yes

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
135693	122430	none	Bridge	NA	H	1930	Concrete			Ineligible	yes
135694	122431	none	Bridge	NA	H	1925	Concrete			Ineligible	yes
135695	122432	none	Bridge	NA	H	1925	Concrete			Ineligible	yes
135696	122433	none	Bridge	NA	H	1897	Stone			Ineligible	Yes
36Lu0119	NA	Apple Tree Site	Archeological Site	Freeland	H	ca. 1925, 20thC	Historic Domestic (Abandoned Vernacular Homestead)	A.J. and S. Sawa		Ineligible	Not evaluated
Hollenback Township (2 records)											
135730	122467	none	Bridge	NA	H	1938	Steel			Ineligible	yes
135732	122469	none	Bridge	NA	H	1911	unknown			Ineligible	yes
Hunlock Township (9 records)											
92617	92521	L.R. 40072 Bridge 40 2 0 0072 0 010724	Bridge	Nanticoke	H	NA	Arch, masonry	Public-local	Hunlock Twp	Ineligible	yes
92640	92544	L.R. 40070 Bridge 40 2 0 0070 0 003912	Bridge	Nanticoke	H	1938	Arch, masonry	Public-local	Hunlock Twp	Ineligible	yes
92650	92554	L.R. 40072 Bridge 40 2 4 0072 0 019860	Bridge	Nanticoke	H	1938	Arch, masonry			Ineligible	yes
135734	122471	none	Bridge	NA	H	1938	Stone			Ineligible	yes
135735	122472	none	Bridge	NA	H	1983	Steel			Ineligible	yes
135736	122473	none	Bridge	NA	H	1925	Concrete			Ineligible	Yes
135738	122475	none	Bridge	NA	H	1925	Concrete			Ineligible	yes
135739	122476	none	Bridge	NA	H	1925	Concrete			Ineligible	yes
135740	122477	none	Bridge	NA	H	1940	Concrete			Ineligible	yes
Huntington Township (7 records)											
90079	89983	House (T-935)	Building	Shickshinny	H	1906-1920	farmhouse, barn, silos, wood	Private	individual	Ineligible	yes
92606	92510	L.R. 235 Bridge 40 1 0 0235 0 023810	Bridge	Shickshinny	H	NA	Arch, concrete	Public-local	Huntington Twp	Ineligible	yes
92641	92545	L.R. 40077 Bridge 40 2 0 0077 0 016020	Bridge	Shickshinny	H	NA	Arch, stone, masonry	Public-local	Huntington Twp	Ineligible	yes

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
102275	102174	Huntington Historic District	District	Shickshinny	H	1807-1875	various	Private	Multiple	Ineligible	yes
135741	122478	none	Bridge	NA	H	1924	Concrete			Ineligible	yes
135744	122481	none	Bridge	NA	H	1928	Concrete			Ineligible	yes
135748	122485	none	Bridge	NA	H	1940	Steel			Ineligible	yes
Nescopeck Borough (1 record)											
92590	92494	L.R. 40017 Bridge 40 2 4 0017 0 005347	Bridge	Berwick	H	1895	Truss, Continuous, steel			Ineligible	Yes
Nescopeck Township (2 records)											
92652	92556	L.R. 40092 Bridge 40 2 4 0092 0 005004	Bridge	Berwick	H	1895-1905	Truss, Continuous, steel	Public-local	Nescopeck Twp	Ineligible	yes
135786	122523	none	Bridge	NA	H	1905	Steel			Ineligible	yes
New Columbus Borough (3 records)											
95044	94948	Bridge No. 42504	Structure	Stillwater	H	NA	Lattice railing, concrete	Public-local	New Columbus Borough	Ineligible	yes
135788	122525	none	Bridge	NA	H	1926	Steel			Ineligible	yes
135790	122527	none	Bridge	NA	H	1900	Stone			Ineligible	yes
Newport Township (12 records)											
89175	89079	none	Building	Nanticoke	H	NA	Wood			Ineligible	yes
89176	89080	none	Building	Nanticoke	H	NA	Wood			Ineligible	yes
127194	115207	Alden	District	Nanticoke	H	1881	Vernacular, Foursquare, Craftsman, weatherboard	Private	Multiple	Ineligible	Yes
127195	115208	Kirtland M. Smith School	Building	Nanticoke	H	1930	Neo-Classical Revival, brick	Public-local	Newport Twp	Ineligible	yes
127196	115209	Sheatown	District	Nanticoke	H	1880	vernacular	Private	Multiple	Ineligible	yes
127196	115209	Robert Street, Newport Twp.	District	NA	H	1880	Vinyl			Ineligible	yes

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
127197	115210	Nanticoke Branch of the Central Railroad of NJ	Bridge	NA	H	1870	Stone			Ineligible	yes
127221	115234	Alden House Company No 3	Building	Nanticoke	H	1911	Beaux Arts, brick	Private	Trustees of Alden Methodist Church	Ineligible	yes
127248	115261	Newport United Methodist Church Cemetery	Site	Nanticoke	H	1900	Granite	Private	Trustees of Alden Methodist Church	Ineligible	yes
127251	115264	Meade House	Building	Nanticoke	H	1885	vernacular	Private	individual	Ineligible	yes
135791	122528	none	Bridge	NA	H	1954	Concrete			Ineligible	yes
135792	122529	none	Bridge	NA	H	1955	Concrete			Ineligible	Yes
Salem Township (10 records)											
92634	92538	L.R. 40093 Bridge 40 2 0 0093 0 002060	Bridge	Berwick	H	1941-1942	Arch, masonry/ metal	Public-local	Salem WP	Ineligible	yes
92644	92548	L.R. 40028 Bridge 40 2 0 0028 0 029679	Bridge	Berwick	H	NA	Arch, masonry	Public-local	Salem Twp	Ineligible	yes
92645	92549	L.R. 4 Bridge 40 1 0 0004 0 010374	Bridge	Berwick	H	1940	Arch, masonry	Public-local	Salem WP	Ineligible	yes
96755	96656	Stackhouse, E.S., Coal Company Watchman's House	Building	Shickshinny	H	1900-1925	Vernacular Frame, wood	Abandoned	Unavailable	Ineligible	yes
96756	96657	Dogtown House	Building	Shickshinny	H	1890-1930	Vernacular Frame, wood	Private	Individual	Ineligible	yes
135818	122555	none	Bridge	NA	H	1941	Stone			Ineligible	yes
135819	122556	none	Bridge	NA	H	1984	Concrete			Ineligible	yes
135820	122557	none	Bridge	NA	H	1937	Concrete			Ineligible	yes
36Lu0050	NA	SES-10	Archeological Site	Berwick	P	A, LA	Open Habitation, Prehistoric	P.P. and L		Ineligible	Not evaluated
36Lu0183	NA	Baluski	Archeological Site	Berwick	P	A, EA	Camp Site	Harry and Alice Baluski		Ineligible	Not evaluated

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
Shickshinny Borough (3 records)											
86544	86449	Search, George, Homestead	Building	Shickshinny	H	1859	Wood	Private	Individual	Ineligible	yes
89187	89091	none	Building	NA	H	NA	Slated for demolition, Luzerne County Community Development			Ineligible	yes
89188	89092	none	Building	Shickshinny	H	NA	unknown			Ineligible	yes
Sugarloaf Township (8 records)											
92591	92495	L.R. 184 Bridge 40 1 0 0184 0 050219	Bridge	NA	H	1936-1937	Truss, Continuous, steel	Public-local	Sugarloaf Twp	Ineligible	yes
92646	92550	L.R. 184 Bridge 40 1 0 0184 0 049518	Bridge	Sybertsville	H	1937	Evenly layered masonry	Public-local	Sugarloaf Twp	Ineligible	yes
135821	122558	none	Bridge	NA	H	1907	Steel			Ineligible	yes
135822	122559	none	Bridge	NA	H	1936	Steel			Ineligible	Yes
135823	122560	none	Bridge	NA	H	1992	Steel			Ineligible	yes
135824	122561	none	Bridge	NA	H	1939	Concrete			Ineligible	yes
135826	122563	none	Bridge	NA	H	1907	Steel			Ineligible	yes
135827	122564	none	Bridge	NA	H	1924	Steel			Ineligible	yes
Union Township (6 records)											
92647	92551	L.R. 935 Bridge 40 1 0 0935 0 022539	Bridge	Shickshinny	H	1850-1940	Arch, masonry	Public-local	Union TWP	Ineligible	yes
92648	92552	L.R. 935 Bridge 40 1 0 0935 0 018329	Bridge	Shickshinny	H	NA	Arch, masonry	Public-local	Union TWP	Ineligible	yes
92649	92553	L.R. 40072 Bridge 40 2 0 0072 0 000791	Bridge	Shickshinny	H	NA	Arch, masonry	Public-local	Union TWP	Ineligible	yes
135829	122566	none	Bridge	NA	H	1895	Stone			Ineligible	yes
135830	122567	none	Bridge	NA	H	1925	Concrete			Ineligible	yes
135831	122568	none	Bridge	NA	H	1940	Steel			Ineligible	yes
Wright Township (2 records)											

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Table 2.5-56— NRHP-Ineligible Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (126 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
36Lu0091	NA	none	Archeological Site	Freeland	P	Unknown Prehistoric	Open Habitation, Prehistoric	unknown		Ineligible	Not evaluated
36Lu0093	NA	none	Archeological Site	Freeland	P	Unknown Prehistoric	Temporary Camp	unknown		Ineligible	yes
Schuylkill County (1 record)											
North Union Township (1 record)											
137960	124697	none	Bridge	NA	H	1934	Concrete			Ineligible	yes
* P = Prehistoric, H = Historic ** P=Prehistoric; H=Historic A=Archaic; EA=Early Archaic; MA=Middle Archaic; LA=Late Archaic; Tr=Transitional Archaic; W=Woodland; EW=Early Woodland; MW=Middle Woodland; LW=Late Woodland											

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
Columbia County (392 records)											
Beaver Township (1 record)											
101418	101318	Farm on Vandermark Property	Building	Shumans	H	NA	unknown	Private	537	Unknown	Not evaluated
Berwick Borough (325 records)											
16937	16846	none	Building	Berwick	H	1860	Vernacular, Italianate, Frame			Unknown	Not evaluated
16938	16847	none	Building	Berwick	H	1880	Eclectic, Alumunum Frame			Unknown	Not evaluated
16939	16848	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
16940	16849	none	Building	Berwick	H	1860	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
16941	16850	none	Building	Berwick	H	1860	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
16942	16851	none	Building	Berwick	H	1860	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
16943	16852	none	Building	Berwick	H	1860	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
16944	16853	none	Building	Berwick	H	1860	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
16945	16854	none	Building	Berwick	H	1900	Vernacular, Colonial Revival, Brick			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
16946	16855	none	Building	Berwick	H	1900	Vernacular, Colonial Revival, Brick			Unknown	Not evaluated
16947	16856	none	Building	Berwick	H	1860	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
16948	16857	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
16949	16858	none	Building	Berwick	H	1880	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
16950	16859	none	Building	Berwick	H	1860	Vernacular, Italianate, Frame			Unknown	Not evaluated
16951	16860	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
16952	16861	none	Building	Berwick	H	1860	Vernacular, Italianate, Frame			Unknown	Not evaluated
16953	16862	none	Building	Berwick	H	1880	Vernacular, Queen Anne, Frame			Unknown	Not evaluated
16954	16863	none	Building	Berwick	H	1860	Colonial Revival, Brick			Unknown	Not evaluated
16955	16864	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
16956	16865	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
16957	16866	none	Building	Berwick	H	1860	Vernacular, Greek Revival, Frame			Unknown	Not evaluated

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Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
16958	16867	none	Building	Berwick	H	1899	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
16959	16868	none	Building	Berwick	H	1880	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
16960	16869	none	Structure	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
16961	16870	none	Building	Berwick	H	1900	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
16962	16871	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
16963	16872	none	Building	Berwick	H	1860	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
16964	16873	none	Building	Berwick	H	1900	Vernacular, Queen Anne, Frame			Unknown	Not evaluated
16965	16874	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
16966	16875	none	Building	Berwick	H	1900	Queen Anne, Frame			Unknown	Not evaluated
16967	16876	none	Building	Berwick	H	1880	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
16968	16877	none	Building	Berwick	H	1900	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
16969	16878	none	Building	Berwick	H	1900	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated

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Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
16970	16879	none	Building	Berwick	H	1900	Vernacular, Colonial Revival, Brick			Unknown	Not evaluated
16971	16880	none	Building	Berwick	H	1900	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
16972	16881	none	Building	Berwick	H	1900	Vernacular, Italianate, Brick			Unknown	Not evaluated
16973	16882	none	Building	Berwick	H	1880	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
16974	16883	none	Building	Berwick	H	1900	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
16975	16884	none	Building	Berwick	H	1900	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
16976	16885	none	Building	Berwick	H	1900	Colonial Revival, Brick			Unknown	Not evaluated
16977	16886	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
16978	16887	none	Building	Berwick	H	1880	Eclectic, brick			Unknown	Not evaluated
16979	16888	none	Building	Berwick	H	1900	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
16980	16889	none	Building	Berwick	H	1800	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
16981	16890	none	Building	Berwick	H	1800	Vernacular, Italianate, Frame			Unknown	Not evaluated
16982	16891	none	Building	Berwick	H	1800	Vernacular, Greek Revival, Frame			Unknown	Not evaluated

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Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
16983	16892	none	Building	Berwick	H	1800	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
16984	16893	none	Building	Berwick	H	1880	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
16985	16894	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
16986	16895	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
16987	16896	none	Building	Berwick	H	1890	Vernacular, Italianate, Frame			Unknown	Not evaluated
16988	16897	none	Building	Berwick	H	1900	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
16989	16898	none	Building	Berwick	H	1890	Eclectic, Frame			Unknown	Not evaluated
16990	16899	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
16991	16900	none	Building	Berwick	H	1880	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
16992	16901	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
16993	16902	none	Building	Berwick	H	1881	Vernacular, Queen Anne, Frame			Unknown	Not evaluated
16994	16903	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
16995	16904	none	Building	Berwick	H	1880	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
16996	16905	none	Building	Berwick	H	1800	Vernacular, Italianate, Frame			Unknown	Not evaluated
16997	16906	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
16998	16907	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
16999	16908	none	Building	Berwick	H	1900	Vernacular, Queen Anne, Frame			Unknown	Not evaluated
17000	16909	none	Building	Berwick	H	1860	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
17001	16910	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
17002	16911	none	Building	Berwick	H	1860	Vernacular, Italianate, Frame			Unknown	Not evaluated
17003	16912	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
17004	16913	none	Building	Berwick	H	1880	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
17005	16914	none	Building	Berwick	H	1900	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
17006	16915	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
17007	16916	none	Building	Berwick	H	1880	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
17008	16917	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
17009	16918	none	Building	Berwick	H	1860	Vernacular, Italianate, Frame			Unknown	Not evaluated
17010	16919	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
17011	16920	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
17012	16921	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
17013	16922	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19363	19272	none	Building	Berwick	H	1860	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19364	19273	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19365	19274	none	Building	Berwick	H	1880	Vernacular, Greek Revival, Frame			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
19366	19275	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19367	19276	none	Building	Berwick	H	1860	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
19368	19277	none	Building	Berwick	H	1860	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
19369	19278	none	Building	Berwick	H	1880	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
19370	19279	none	Building	Berwick	H	1860	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19371	19280	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19372	19281	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Brick			Unknown	Not evaluated
19373	19282	Hinkley Funeral Home	Building	Berwick	H	1900	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19374	19283	none	Building	Berwick	H	1900	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19375	19284	none	Building	Berwick	H	1860	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19376	19285	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
19377	19286	none	Building	Berwick	H	1860	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19378	19287	none	Building	Berwick	H	1900	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19379	19288	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19380	19289	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19381	19290	none	Building	Berwick	H	1900	Vernacular, Italianate, Frame			Unknown	Not evaluated
19382	19291	none	Building	Berwick	H	1900	Vernacular, East Lake, Frame			Unknown	Not evaluated
19383	19292	none	Building	Berwick	H	1860	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
19384	19293	none	Building	Berwick	H	1860	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
19385	19294	none	Building	Berwick	H	1880	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
19386	19295	none	Building	Berwick	H	1900	Vernacular, Carpenter Gothic, Frame			Unknown	Not evaluated
19387	19296	none	Building	Berwick	H	1900	Vernacular, East Lake, Frame			Unknown	Not evaluated
19388	19297	none	Building	Berwick	H	1860	Vernacular, Greek Revival, Frame			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
19389	19298	none	Building	Berwick	H	1860	Vernacular, Italianate, Brick			Unknown	Not evaluated
19390	19299	none	Building	Berwick	H	1880	Vernacular, Queen Anne, Frame			Unknown	Not evaluated
19391	19300	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19392	19301	none	Building	Berwick	H	1900	Eclectic, Frame			Unknown	Not evaluated
19393	19302	none	Building	Berwick	H	1860	Italianate, Brick			Unknown	Not evaluated
19394	19303	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19395	19304	none	Building	Berwick	H	1900	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19396	19305	none	Building	Berwick	H	1860	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19397	19306	none	Building	Berwick	H	1860	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19398	19307	none	Building	Berwick	H	1900	Vernacular PA, Commercial, Frame			Unknown	Not evaluated
19399	19308	none	Building	Berwick	H	1900	Vernacular PA, Industrial, Frame			Unknown	Not evaluated
19400	19309	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19401	19310	none	Building	Berwick	H	1900	Vernacular, Queen Anne, Frame			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
19402	19311	none	Building	Berwick	H	1860	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19403	19312	none	Building	Berwick	H	1880	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
19404	19313	none	Building	Berwick	H	1900	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19405	19314	none	Building	Berwick	H	1880	Vernacular PA, Industrial, Frame			Unknown	Not evaluated
19406	19315	none	Building	Berwick	H	1880	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
19407	19316	none	Building	Berwick	H	1880-1889	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
19408	19317	none	Building	Berwick	H	1860	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19409	19318	none	Building	Berwick	H	1860	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
19410	19319	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Stucco Frame			Unknown	Not evaluated
19411	19320	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Brick			Unknown	Not evaluated
19412	19321	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
19413	19322	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19414	19323	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
19415	19324	none	Building	Berwick	H	1880	Queen Anne, Frame			Unknown	Not evaluated
19416	19325	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Brick			Unknown	Not evaluated
19417	19326	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19418	19327	none	Building	Berwick	H	1880	Vernacular, Second Romanesque Revival, Brick			Unknown	Not evaluated
19419	19328	none	Building	Berwick	H	1903	Vernacular, Colonial Revival, Brick			Unknown	Not evaluated
19420	19329	none	Building	Berwick	H	1873	Vernacular, Gothic Revival, Brick			Unknown	Not evaluated
19421	19330	none	Building	Berwick	H	1860	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
19422	19331	none	Building	Berwick	H	1860	Vernacular, Italianate, Frame			Unknown	Not evaluated
19423	19332	none	Building	Berwick	H	1860	Vernacular, Gothic Revival, Brick			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
19424	19333	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19425	19334	none	Building	Berwick	H	1860	Vernacular, Federal, Frame			Unknown	Not evaluated
19426	19335	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19427	19336	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
19428	19337	none	Building	Berwick	H	1860	Eclectic, brick			Unknown	Not evaluated
19429	19338	none	Building	Berwick	H	1880	Colonial Revival, Frame			Unknown	Not evaluated
19430	19339	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19431	19340	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19432	19341	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19433	19342	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
19434	19343	none	Building	Berwick	H	1880	Eclectic, Frame			Unknown	Not evaluated
19435	19344	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19436	19345	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
19437	19346	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
19438	19347	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
19439	19348	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
19440	19349	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19441	19350	none	Building	Berwick	H	1880	Eclectic, Frame			Unknown	Not evaluated
19442	19351	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19443	19352	none	Building	Berwick	H	1880	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
19444	19353	Old Berwick Hospital	Building	Berwick	H	1900	Vernacular, Colonial Revival, Brick			Unknown	Not evaluated
19445	19354	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19446	19355	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19447	19356	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19448	19357	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
19449	19358	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19450	19359	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19451	19360	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19452	19361	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19453	19362	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19454	19363	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
19455	19364	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
19456	19365	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
19457	19366	none	Building	Berwick	H	1880	Vernacular, Carpenter Gothic, Frame			Unknown	Not evaluated
19458	19367	none	Building	Berwick	H	1880	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
19459	19368	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Brick			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
19460	19369	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19461	19370	none	Building	Berwick	H	1860	Vernacular, Italianate, Frame			Unknown	Not evaluated
19462	19371	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19463	19372	none	Building	Berwick	H	1860	Vernacular, Italianate, Frame			Unknown	Not evaluated
19464	19373	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19465	19374	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Brick			Unknown	Not evaluated
19466	19375	none	Building	Berwick	H	1880	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
19467	19376	none	Building	Berwick	H	1860	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
19468	19377	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19469	19378	none	Building	Berwick	H	1860	Vernacular, Italianate, Frame			Unknown	Not evaluated
19470	19379	none	Building	Berwick	H	1860	Vernacular, Italianate, Frame			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
19471	19380	Berwick High School	Building	Berwick	H	1887	Vernacular, Victorian Romanesque, Brick			Unknown	Not evaluated
19472	19381	none	Building	Berwick	H	1880	Vernacular PA, Barn, Frame			Unknown	Not evaluated
19473	19382	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19474	19383	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19475	19384	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19476	19385	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
19477	19386	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19478	19387	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19479	19388	none	Building	Berwick	H	1880	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
19480	19389	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19481	19390	none	Building	Berwick	H	1880	Vernacular, Queen Anne, Frame			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
19482	19391	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19483	19392	none	Building	Berwick	H	1880	Vernacular, Queen Anne, Frame			Unknown	Not evaluated
19484	19393	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
19485	19394	none	Building	Berwick	H	1880	Vernacular PA, Commercial, Frame			Unknown	Not evaluated
19486	19395	none	Building	Berwick	H	1880	Vernacular, Queen Anne, Frame			Unknown	Not evaluated
19487	19396	none	Building	Berwick	H	1871	Italianate, Brick			Unknown	Not evaluated
19488	19397	none	Building	Berwick	H	1880	Vernacular, Italianate, Brick			Unknown	Not evaluated
19489	19398	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
19490	19399	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19491	19400	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
19492	19401	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
19493	19402	none	Building	Berwick	H	1880	Vernacular, Queen Anne, Frame			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
19494	19403	none	Building	Berwick	H	1880	Vernacular, Queen Anne, Frame			Unknown	Not evaluated
19495	19404	none	Building	Berwick	H	1915	Vernacular, Queen Anne, Frame			Unknown	Not evaluated
19496	19405	none	Building	Berwick	H	1880	Vernacular, Queen Anne, Frame			Unknown	Not evaluated
19497	19406	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19498	19407	none	Building	Berwick	H	1880	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
19499	19408	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19500	19409	none	Building	Berwick	H	1880	Eclectic, Frame			Unknown	Not evaluated
19501	19410	none	Building	Berwick	H	1880	Vernacular, Queen Anne, Frame			Unknown	Not evaluated
19502	19411	none	Building	Berwick	H	1880	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
19503	19412	none	Building	Berwick	H	1860	Vernacular, Italianate, Frame			Unknown	Not evaluated
19504	19413	none	Building	Berwick	H	1860	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19505	19414	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
19506	19415	none	Building	Berwick	H	1860	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
19507	19416	none	Building	Berwick	H	1860	Vernacular, Queen Anne, Frame			Unknown	Not evaluated
19508	19417	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
19509	19418	none	Building	Berwick	H	1860	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
19510	19419	none	Building	Berwick	H	1860	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19511	19420	none	Building	Berwick	H	1860	Vernacular, Italianate, Frame			Unknown	Not evaluated
19512	19421	none	Building	Berwick	H	1860	Vernacular, Italianate, Frame			Unknown	Not evaluated
19513	19422	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19514	19423	none	Building	Berwick	H	1880	Vernacular, Italianate, Brick Veneer Frame			Unknown	Not evaluated
19515	19424	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19516	19425	none	Building	Berwick	H	1860	Vernacular PA, Farm House, Frame			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
19517	19426	none	Building	Berwick	H	1880	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
19518	19427	none	Building	Berwick	H	NA	Vernacular, Italianate, Frame			Unknown	Not evaluated
19519	19428	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19520	19429	Presbyterian Church	Building	Berwick	H	1840	Vernacular, Gothic Revival, Brick			Unknown	Not evaluated
19521	19430	none	Building	Berwick	H	1880	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
19522	19431	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19523	19432	none	Building	Berwick	H	1860	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19524	19433	none	Building	Berwick	H	1895	Vernacular, Gothic Revival, Brick			Unknown	Not evaluated
19525	19434	none	Building	Berwick	H	1860	Vernacular, Greek Revival, Frame			Unknown	Not evaluated
19526	19435	none	Building	Berwick	H	1860	Vernacular, Italianate, Brick			Unknown	Not evaluated
19527	19436	none	Building	Berwick	H	1860	Vernacular, Italianate, Brick			Unknown	Not evaluated
19528	19437	none	Building	Berwick	H	1860	Vernacular, Italianate, Brick			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
19529	19438	none	Building	Berwick	H	1860	Vernacular, Italianate, Frame			Unknown	Not evaluated
19530	19439	none	Building	Berwick	H	1860	Vernacular, Italianate, Frame			Unknown	Not evaluated
19531	19440	none	Building	Berwick	H	1880	Vernacular, Queen Anne, Frame			Unknown	Not evaluated
19532	19441	none	Building	Berwick	H	1880	Vernacular, Queen Anne, Frame			Unknown	Not evaluated
19533	19442	none	Building	Berwick	H	1860	Vernacular, Queen Anne, Composition Sheet Frame			Unknown	Not evaluated
19534	19443	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19535	19444	none	Building	Berwick	H	1912	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19536	19445	none	Building	Berwick	H	1860	Vernacular, Italianate, Frame			Unknown	Not evaluated
19537	19446	none	Building	Berwick	H	1860	Vernacular, Victorian Romanesque, Brick			Unknown	Not evaluated
19538	19447	none	Building	Berwick	H	1878	Vernacular, Romanesque Revival, Brick			Unknown	Not evaluated
19539	19448	none	Building	Berwick	H	1860	Italianate, Frame			Unknown	Not evaluated

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Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
19540	19449	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19541	19450	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19542	19451	none	Building	Berwick	H	1880	Queen Anne, Frame			Unknown	Not evaluated
19543	19452	none	Building	Berwick	H	1860	Eclectic, Frame			Unknown	Not evaluated
19544	19453	none	Building	Berwick	H	1880	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
19545	19454	none	Building	Berwick	H	1860	Vernacular, Queen Anne, Frame			Unknown	Not evaluated
19546	19455	Berwick Y.M.C.A.	Building	Berwick	H	1880-1899	Eclectic, brick	Public-local	Y.M.C.A	Unknown	Not evaluated
19547	19456	none	Building	Mifflinville	H	1760	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19548	19457	none	Building	Mifflinville	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19549	19458	none	Building	Berwick	H	1900	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19550	19459	none	Building	Berwick	H	1900	Vernacular, Colonial Revival, Brick			Unknown	Not evaluated
19551	19460	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19552	19461	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
19553	19462	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19554	19463	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19555	19464	none	Building	Mifflinville	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19556	19465	none	Building	Berwick	H	1880	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
19557	19466	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19558	19467	none	Building	Berwick	H	1880	Vernacular, Carpenter Gothic, Frame			Unknown	Not evaluated
19559	19468	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19560	19469	none	Building	Berwick	H	1880	Vernacular, Greek Revival, Brick			Unknown	Not evaluated
19561	19470	none	Building	Mifflinville	H	1880	Vernacular Italianate, Frame	Private	Individual	Unknown	Not evaluated
19562	19471	none	Building	Mifflinville	H	1880	Vernacular, Colonial Revival, Frame			Unknown	Not evaluated
19563	19472	Fairview Ave. School Building	Building	Mifflinville	H	1900	Vernacular, Colonial Revival, Brick			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
20524	20433	none	Building	Berwick	H	1860	Vernacular PA, Country Store, Frame			Unknown	Not evaluated
20525	20434	none	Building	Berwick	H	1890	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
20526	20435	Conyngham Valley Baptist Church	Building	Berwick	H	1909	Vernacular, Gothic Revival, Frame			Unknown	Not evaluated
20527	20436	none	Building	Berwick	H	1860	Vernacular PA, Farm Building, Stucco Frame			Unknown	Not evaluated
20530	20439	none	Building	Berwick	H	1873	Romanesque Revival, Brick			Unknown	Not evaluated
20532	20441	none	Building	Berwick	H	1848	Vernacular, Federal, Brick			Unknown	Not evaluated
20533	20442	none	Building	Berwick	H	1800	Vernacular, Italianate, Brick			Unknown	Not evaluated
20534	20443	none	Building	Berwick	H	1860	Vernacular, Gothic Revival, Brick			Unknown	Not evaluated
20535	20444	First Methodist Church	Building	Berwick	H	1902	Vernacular, Richardson Romanesque, Stone			Unknown	Not evaluated
20536	20445	none	Building	Berwick	H	1860	Vernacular, Colonial Revival, Brick			Unknown	Not evaluated
20537	20446	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
20538	20447	none	Building	Berwick	H	1900	Vernacular PA, One Room Country Store, Frame			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
20539	20448	Thompson Farm, The	Building	NA	H	1813	Vernacular Pa Farm House, Frame			Unknown	Not evaluated
20544	20453	none	Building	Berwick	H	1860	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
20545	20454	none	Building	Berwick	H	1880	Vernacular, Colonial Revival, Brick			Unknown	Not evaluated
20546	20455	none	Building	Berwick	H	1880	Vernacular, Italianate, Frame			Unknown	Not evaluated
20547	20456	National Hotel	Building	Berwick	H	NA	Vernacular PA, Country Hotel, Frame			Unknown	Not evaluated
20548	20457	none	Building	Berwick	H	1880	Vernacular, Plain, Frame			Unknown	Not evaluated
20549	20458	none	Building	Berwick	H	1860	Vernacular, Italianate, Frame			Unknown	Not evaluated
20550	20459	none	Building	Berwick	H	1900	Vernacular PA, Railroad, Frame			Unknown	Not evaluated
20551	20460	none	Building	Berwick	H	1880	Vernacular PA, Country Store, Board and Batten Frame			Unknown	Not evaluated
20552	20461	Jackson & Woodin	Building	Berwick	H	1899	Industrial, Brick			Unknown	Not evaluated
20553	20462	Jackson & Woodin Company	Building	Berwick	H	1902	Industrial, Brick			Unknown	Not evaluated
20554	20463	Jackson & Woodin Company	Building	Berwick	H	1909	Industrial, Brick			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
20555	20464	Jackson & Woodin	Building	Berwick	H	1902	Industrial, Brick			Unknown	Not evaluated
20556	20465	Jackson & Woodin	Building	Berwick	H	1902	Industrial, Brick			Unknown	Not evaluated
20557	20466	Jackson & Woodin	Building	Berwick	H	1902	Industrial, Brick			Unknown	Not evaluated
20558	20467	Jackson & Woodin Company	Building	Berwick	H	1902	Industrial, Brick			Unknown	Not evaluated
20559	20468	First Christian Church, Alliance Christian Church	Building	Berwick	H	1908	Vernacular, Queen Anne, Frame			Unknown	Not evaluated
20560	20469	none	Building	Berwick	H	1860	Italianate, Brick			Unknown	Not evaluated
20561	20470	none	Building	Berwick	H	1860	Eclectic, Wood Shingle Frame			Unknown	Not evaluated
20562	20471	none	Building	Berwick	H	1860	Vernacular, Italianate, Brick			Unknown	Not evaluated
20565	20474	none	Building	Berwick	H	1878	Vernacular, Romanesque Revival, Brick			Unknown	Not evaluated
20566	20475	Woodin Residence	Building	Berwick	H	1860	Italianate, Brick			Unknown	Not evaluated
20567	20476	none	Building	Berwick	H	1816	Vernacular PA, Country Church, Imitation Ashlar			Unknown	Not evaluated
20568	20477	none	Building	Berwick	H	1860	Colonial Revival, Brick			Unknown	Not evaluated
20570	20479	none	Building	Mifflinville	H	1860	Vernacular, Greek Revival, Brick			Unknown	Not evaluated
20571	20480	none	Building	Berwick	H	1900	Queen Anne, Frame			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
20572	20481	none	Building	Berwick	H	1860	Vernacular, Greek Revival, Brick			Unknown	Not evaluated
20573	20482	none	Building	Berwick	H	1880	Vernacular, Italianate, Brick			Unknown	Not evaluated
20574	20483	none	Building	Berwick	H	1880	Italianate, Brick			Unknown	Not evaluated
20575	20484	none	Building	Berwick	H	1880	Vernacular, Italianate, Brick			Unknown	Not evaluated
20576	20485	none	Building	Berwick	H	1880	Italianate, Brick			Unknown	Not evaluated
20577	20486	none	Building	Berwick	H	1900	Vernacular, Romanesque Revival, Brick			Unknown	Not evaluated
20578	20487	none	Building	Mifflinville	H	1860	Vernacular PA, Farm House, Frame			Unknown	Not evaluated
36Co0019	NA	The Fairchild Site	Archeological Site	Mifflinville	P	Unknown Prehistoric	Camp Site	Bloomsburg Municiple Airport		Unknown	Not evaluated
36Co0031	NA	Park Place Village Site 1	Archeological Site	Mifflinville	P	Unknown Prehistoric	Open Prehistoric, Unknown Function	Borough of Berwick		Unknown	Not evaluated
Briar Creek Borough (12 records)											
19565	19474	none	Building	Mifflinville	H	1860-1879	Vernacular Pa Farm House, Composition Frame	Private	Individual	Unknown	Not evaluated
19566	19475	none	Building	Mifflinville	H	1900-1919	Vernacular Colonial Revival, Frame	Private	Individual	Unknown	Not evaluated
19567	19476	none	Building	NA	H	1880	unknown			Unknown	Not evaluated
19568	19477	none	Building	Mifflinville	H	1860-1879	Vernacular Greek Revival, Brick	Private	Individual	Unknown	Not evaluated

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
19569	19478	none	Building	Mifflinville	H	1880-1899	Vernacular Queen Anne, Frame	Private	Individual	Unknown	Not evaluated
19570	19479	none	Building	Mifflinville	H	1860-1879	Vernacular Italianate, Brick	Private	Individual	Unknown	Not evaluated
19571	19480	none	Building	Mifflinville	H	1860-1879	Vernacular Colonial Revival, Brick	Private	Individual	Unknown	Not evaluated
19572	19481	none	Building	Mifflinville	H	1880-1899	Vernacular Queen Anne, Frame	Public	Bloomsburg Bank Columbia Trust Co.	Unknown	Not evaluated
20579	20488	none	Building	Mifflinville	H	1820-1839	Vernacular Federal, Brick	Private	Individual	Unknown	Not evaluated
20580	20489	none	Building	Mifflinville	H	1840-1859	Vernacular Federal, Brick	Private	Individual	Unknown	Not evaluated
20583	20492	none	Building	Mifflinville	H	1860-1879	Vernacular Pa County Store, Frame	Private	Individual	Unknown	Not evaluated
79062	78968	Methodist Episcopal Church	Building	Mifflinville	H	1800-1899	unknown	Private	Methodist Episcopal Church	Unknown	Not evaluated
Fishing Creek Township (1 records)											
NA	BMS 19103300460000	SR 1033 Over Little Pine Creek	Bridge	Stillwater	H	1915	Closed Spandrel Arch, Stone	Public-state	PennDOT	Unknown	Not evaluated
Mifflin Township (46 records)											
20254	20163	none	Building	Mifflinville	H	1860	Federal			Unknown	Not evaluated
20255	20164	none	Building	Mifflinville	H	1860	Vernacular, Greek Revival			Unknown	Not evaluated
20256	20165	none	Building	Mifflinville	H	1860	Vernacular PA, Farm House			Unknown	Not evaluated
20257	20166	none	Building	Mifflinville	H	1860	Vernacular, Greek Revival			Unknown	Not evaluated

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
20258	20167	none	Building	Mifflinville	H	1860	Vernacular, Federal			Unknown	Not evaluated
20259	20168	none	Building	Mifflinville	H	NA	Vernacular, Greek Revival			Unknown	Not evaluated
20260	20169	none	Building	Mifflinville	H	1860	Vernacular PA, Farm house			Unknown	Not evaluated
20261	20170	none	Building	Mifflinville	H	1860	Vernacular PA, Country Store			Unknown	Not evaluated
20262	20171	none	Building	Mifflinville	H	1860	Vernacular PA, County Multi-family			Unknown	Not evaluated
20263	20172	none	Building	Mifflinville	H	1860	Vernacular, Italianate			Unknown	Not evaluated
20264	20173	none	Building	Mifflinville	H	1860	Vernacular, Italianate			Unknown	Not evaluated
20265	20174	none	Building	Mifflinville	H	1860	Vernacular, Italianate			Unknown	Not evaluated
20266	20175	none	Building	Mifflinville	H	1880	Vernacular, County Store			Unknown	Not evaluated
20267	20176	none	Building	Mifflinville	H	1860	Vernacular, Greek Revival			Unknown	Not evaluated
20268	20177	none	Building	Mifflinville	H	1860	Vernacular, Greek Revival			Unknown	Not evaluated
20269	20178	none	Building	Mifflinville	H	1860	Vernacular, Queen Anne			Unknown	Not evaluated
20270	20179	none	Building	Mifflinville	H	1860	Vernacular, Italianate			Unknown	Not evaluated
20271	20180	none	Building	Mifflinville	H	1880	Vernacular, Colonial Revival			Unknown	Not evaluated
20272	20181	none	Building	Mifflinville	H	1880	Vernacular, Colonial Revival			Unknown	Not evaluated
20273	20182	none	Building	Mifflinville	H	1860	Vernacular, Carpenter Gothic			Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
20274	20183	none	Building	Mifflinville	H	1860	Vernacular, Italianate			Unknown	Not evaluated
20275	20184	none	Building	Mifflinville	H	1860	Vernacular, Greek Revival			Unknown	Not evaluated
20276	20185	none	Building	Mifflinville	H	1860	Vernacular, Colonial Revival			Unknown	Not evaluated
20277	20186	none	Building	Mifflinville	H	1860	Vernacular, Gothic Revival			Unknown	Not evaluated
20278	20187	none	Building	Mifflinville	H	1880	Vernacular, Colonial Revival			Unknown	Not evaluated
20279	20188	none	Building	Mifflinville	H	1860	Vernacular, Greek Revival			Unknown	Not evaluated
20280	20189	none	Building	Mifflinville	H	1860	Vernacular, Greek Revival			Unknown	Not evaluated
20281	20190	none	Building	Mifflinville	H	1860	Vernacular, Greek Revival			Unknown	Not evaluated
20282	20191	none	Building	Mifflinville	H	1900	Vernacular, Colonial Revival			Unknown	Not evaluated
20283	20192	none	Building	Mifflinville	H	1860	Vernacular, Greek Revival			Unknown	Not evaluated
20284	20193	none	Building	Mifflinville	H	1860	Vernacular, Greek Revival			Unknown	Not evaluated
20285	20194	none	Building	Mifflinville	H	1860	Vernacular, Greek Revival			Unknown	Not evaluated
20286	20195	none	Building	Mifflinville	H	1860	Vernacular PA, Farm House			Unknown	Not evaluated
20287	20196	none	Building	Mifflinville	H	1860	Vernacular, Colonial Revival			Unknown	Not evaluated
21283	21192	none	Building	Mifflinville	H	1840	Vernacular PA, Farm House			Unknown	Not evaluated
21284	21193	none	Building	Mifflinville	H	1820	Vernacular PA, Farm House			Unknown	Not evaluated
21286	21195	none	Building	Mifflinville	H	1840	Vernacular PA, Farm House			Unknown	Not evaluated

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
21287	21196	none	Building	Mifflinville	H	1860	Vernacular PA, Country Store			Unknown	Not evaluated
21288	21197	none	Building	Mifflinville	H	1860	Vernacular, Italianate			Unknown	Not evaluated
21289	21198	none	Building	Mifflinville	H	1860	Vernacular, Greek Revival			Unknown	Not evaluated
21290	21199	none	Building	Mifflinville	H	1860	Vernacular, Italianate			Unknown	Not evaluated
21292	21201	Methodist Church Parsonage	Building	Mifflinville	H	1861	Greek Revival			Unknown	Not evaluated
21293	21202	none	Building	Mifflinville	H	1883	Eclectic			Unknown	Not evaluated
21294	21203	none	Building	Mifflinville	H	1860	Vernacular, Greek Revival			Unknown	Not evaluated
21295	21204	none	Building	Mifflinville	H	1909	Vernacular, Second Empire			Unknown	Not evaluated
NA	BMS 19721504150053	TR 415 Over Ten Mile Run (County Bridge #53)	Bridge	Mifflinville	H	1930	Stringer, Simple, Steel	Public-local	Columbia County	Unknown	Not evaluated
South Centre Township (5 records)											
144233	132743	Comstock House, Fowler House	Building	NA	H	1860	unknown			Unknown	Not evaluated
144234	132744	Cryder, I. L. House, Cryder House	Building	NA	H	1869	unknown			Unknown	Not evaluated
36Co0001	NA	Lime Ridge (Hunt Cannery)	Archeological Site	Mifflinville	P	Early LW, A	Open Habitation, Prehistoric	Joseph Campbell Co., Camden NJ		Unknown	Not evaluated
36Co0015	NA	Mifflinville Bridge X	Archeological Site	Mifflinville	P	Unknown Prehistoric	undefined	Dr. E.C. Cryder		Unknown	Not evaluated

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
36Co0016	NA	Mifflinville Bridge Y	Archeological Site	Mifflinville	P	Unknown Prehistoric	Open Prehistoric, Unknown Function	Mr. Jack D. Unger		Unknown	Not evaluated
Sugarloaf Township (2 records)											
NA	BMS 19023901701830	SR 239 Over West Creek	Bridge	Benton	H	1934	T-Beam, Simple, Reinforced Concrete	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 19404900201442	SR 4049 Over Fishing Creek	Bridge	Shumans	H	1934	Thru Truss, Baltimore, Steel	Public-state	PennDOT	Unknown	Not evaluated
Luzerne (102 records)											
Black Creek Township (3 records)											
NA	BMS 40301600701015	SR 3016 Over Black Creek	Bridge	Berwick	H	1953	Stringer, Simple, Steel	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40720203094506	TR 309 Over Falls Run (Bridge # 54506)	Bridge	Nuremberg	H	1936	Slab, Simple, Reinforced Concrete	Public-local	Luzerne County	Unknown	Not evaluated
NA	BMS 40720203144502	TR 314 Over Black Creek (Bridge # 54502)	Bridge	Nuremberg	H	1920 (altered 1939)	Deck Girder, Simple, Steel	Public-local	Luzerne County	Unknown	Not evaluated
Butler Township (11 records)											
36Lu0194	NA	Kreiger House	Archeological Site	Freeland	P	LA or Tr	undefined	Dan Kreiger		Unknown	Not evaluated
36Lu0198	NA	Pottery Site	Archeological Site	Freeland	P	LW	possibly Pit or Burial	unknown		Unknown	Not evaluated
NA	BMS 40030902601545 (old BMS 40030902601594)	SR 309 Over Nescopeck Creek	Bridge	Freeland	H	1956	Stringer, Simple, Steel	Public-state	PennDOT	Unknown	Not evaluated

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
NA	BMS 40302100302871 (old BMS 403302100302890)	SR 3021 Over Nescopeck Creek	Bridge	Freeland	H	1926	Slab, Simple, Reinforced Concrete	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40302100602210	SR 3021 Over Nescopeck Creek	Bridge	Freeland	H	1928	T-Beam, Simple, Reinforced Concrete	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40304000400000	SR 3040 Over Branch of Nescopeck Creek	Bridge	Sybertsville	H	1939	Stringer, Simple, Steel	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40720403054717	County Road 41 Over Nescopeck Creek (Bridge # 54717)	Bridge	Freeland	H	1911 (altered 1946)	Slab, Simple, Reinforced Concrete	Public-local	Luzerne County	Unknown	Not evaluated
NA	BMS 40720403564702	TR 356 Over Mill Race (Bridge # 54702)	Bridge	Sybertsville	H	1909	Slab, Simple, Reinforced Concrete	Public-local	Luzerne County	Unknown	Not evaluated
NA	BMS 40720403584715	TR 358 Over Nescopeck Creek	Bridge	Freeland	H	1895ca	Pony Truss, Pratt, Metal	Public-local	Luzerne County	Unknown	Not evaluated
NA	BMS 40720403644703	TR 364 Over Nescopeck Creek (Bridge # 54703)	Bridge	Sybertsville	H	1920ca	Deck Girder, Simple, Steel	Public-local	Luzerne County	Unknown	Not evaluated
NA	BMS 40720403954704	County Road 39 Over Nescopeck Creek (Bridge # 54704)	Bridge	Sybertsville	H	1933	T-Beam, Simple, Reinforced Concrete	Public-local	Luzerne County	Unknown	Not evaluated
Conyngham Township (17 records)											

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
NA	BMS 40023901100850	SR 239 Over Little Wapwallopen Creek	Bridge	NA	H	1940	Stringer, Simple, Steel	Public-state	PennDOT	Unknown	Not evaluated
36Lu0018	NA	Yorkoshi	Archeological Site	Berwick	P	A	Open Habitation, Prehistoric	P.P. and L		Unknown	Not evaluated
36Lu0019	NA	Stone Crusher (#2 Site)	Archeological Site	Berwick	P	A, EA, LA, Tr, W, EW, LW	Open Habitation, Prehistoric	P.P. and L		Unknown	Not evaluated
36Lu0020	NA	none	Archeological Site	Berwick	P	A, Tr	Open Habitation, Prehistoric	Leroy Hentchcliff (?)		Unknown	Not evaluated
36Lu0021	NA	S. Wapwallopen	Archeological Site	Berwick	P/H	A, W, EW, MW, LW, Hist	Open Prehistoric and Historic	unknown		Unknown	Not evaluated
36Lu0022	NA	Bobby Peter	Archeological Site	Sybertsville	P	A, MA, LA, W, EW, LW	Open Habitation, Prehistoric	unknown		Unknown	Not evaluated
36Lu0023	NA	Smith	Archeological Site	Berwick	P	A	Open Habitation, Prehistoric	Smith		Unknown	Not evaluated
36Lu0024	NA	Kibler	Archeological Site	Berwick	P	A (probable)	Open Habitation, Prehistoric	unknown		Unknown	Not evaluated
36Lu0025	NA	Heller	Archeological Site	Berwick	P	A	Open Habitation, Prehistoric	Heller		Unknown	Not evaluated
36Lu0043	NA	Knouse (Wapwallopen)	Archeological Site	Berwick	H	LW, Contact, Hist	Prehistoric burials, Historic	P.P. and L		Unknown	Not evaluated
36Lu0117	NA	none	Archeological Site	Sybertsville	H	19th-20thC	Historic Domestic	Jean Collman, Adolph Wright		Unknown	Not evaluated

Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
36Lu0188	NA	Barn Field (B1)	Archeological Site	Sybertsville/ Berwick	P	A, EA, MA, LA, Tr, W, EW, LW	Open Habitation, Prehistoric	unknown		Unknown	Not evaluated
NA	BMS 40300500301561	SR 3005 Over Branch of Pond Creek	Bridge	Sybertsville	H	1956	Slab, Simple, Reinforced Concrete	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40303400201556 (old BMS 40303400201539)	SR 3034 Over Nescopeck Creek	Bridge	Conyngham	H	1900ca	Closed Spandrel Arch, Deck, Stone	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40720503924803	TR 392 Over Wapwallopen Creek	Bridge	NA	H	1895ca	Pony Truss, Pratt, Steel	Public-local	Luzerne County	Unknown	Not evaluated
NA	BMS 40720504664802	TR 466 Over Pond Creek (Bridge # 4402)	Bridge	Sybertsville	H	1956	Box Beam, Adjacent, Prestressed Concrete	Public-local	Luzerne County	Unknown	Not evaluated
NA	BMS 40720802945113	County Road 29 over Wapwallopen Creek	Bridge	Sybertsville	H	1925	T-Beam, Simple, Reinforced Concrete	Public-local	Luzerne County	Unknown	Not evaluated
Dorrance Township (13 records)											
36Lu0092	NA	The Ryan Site	Archeological Site	Freeland	P	Unknown Prehistoric	Temporary Camp/ Specialized Activity Area	Private		Unknown	Not evaluated
36Lu0096	NA	Lutz Mill	Archeological Site	Sybertsville	H	ca. 1900	Historic Industrial (mill and farm)	Antoinette Smerski Meyers, Rd #1 Wapwallopen Pa 18660		Unknown	Not evaluated

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
36Lu0107	NA	Deliman	Archeological Site	Sybertsville	P	A	Open Habitation, Prehistoric	Michael Deliman, Blue Ridge Mtn Rd. Dorrance, Pa		Unknown	Not evaluated
36Lu0116	NA	none	Archeological Site	Sybertsville	H	Unknown Historic	Historic Domestic (with stone wall)	unknown		Unknown	Not evaluated
36Lu0193	NA	Wapwallopen Creek	Archeological Site	Freeland	P	Tr	undefined	unknown		Unknown	Not evaluated
NA	BMS 40300700800517 (old BMS 403007-800535)	SR 3007 Over Wapwallopen Creek	Bridge	Freeland	H	1936	Stringer, Simple, Steel	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40301000500000	SR 3010 Over Wapwallopen Creek	Bridge	Freeland	H	1925 (altered 1963)	T-Beam, Simple, Reinforced Concrete	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40301000501664 (old BMS 40301000501693)	SR 3010 Over Branch Wapwallopen Creek	Bridge	Freeland	H	1935 (altered 1962)	Closed Spandrel Arch, deck, reinforced concrete	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40720803045111	County Road 30 Over Wapwallopen Creek (Bridge # 45111)	Bridge	Sybertsville	H	1925	T-Beam, Simple, Reinforced Concrete	Public-local	Luzerne County	Unknown	Not evaluated
NA	BMS 40720803045115	County Road 29 over Wapwallopen Creek (Bridge # 45115)	Bridge	Sybertsville	H	1930	Slab, Simple, Reinforced Concrete	Public-local	Luzerne County	Unknown	Not evaluated
NA	BMS 40720803875105	TR 387 Over Wapwallopen Creek	Bridge	Sybertsville	H	1897 (altered 1963)	Closed Spandrel Arch, Deck, Stone	Public-local	Luzerne County	Unknown	Not evaluated

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
NA	BMS 40720804045110	TR 404 Over Little Wapwalopen Creek	Bridge	Freeland	H	1900ca	Closed Spandrel Arch, Deck, Stone	Public-local	Luzerne County	Unknown	Not evaluated
NA	BMS 40720804065104	TR 406 Over Wapwalopen Creek (Bridge # 45104)	Bridge	Sybertsville	H	1895	Pony Truss, Pratt, Metal	Public-local	Luzerne County	Unknown	Not evaluated
Hazle Township (1 record)											
36Lu0190	NA	BC (General for Confluence)	Archeological Site	Conyngham	P	LA, Tr, LW	Open Prehistoric, Unknown Function	unknown		Unknown	Not evaluated
Hollenback Township (1 record)											
NA	BMS 40301200501442 (old BMS 40301200501463)	SR 3012 Over Wapwalopen Creek	Bridge	Sybertsville	H	1938	Stringer, Simple, Steel	Public-state	PennDOT	Unknown	Not evaluated
Hunlock Township (6 records)											
36Lu0186	NA	Catscan Site	Archeological Site	Nanticoke	P	Unknown/Unknown Prehistoric	Open Prehistoric, Unknown Function	unknown		Unknown	Not evaluated
NA	BMS 40001103301406 (old BMS 40001103301400)	US 11 Over Hunlock Creek	Bridge	Nanticoke	H	1940	T-Beam, Simple, Reinforced Concrete	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40400500100223 (old BMS 40400500100195)	SR 4005 Over Hunlock Creek	Bridge	Nanticoke	H	1900ca	Closed Spandrel Arch, Deck, Stone	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40401602202428	SR 4016 Over Hunlock Creek	Bridge	Nanticoke	H	1925	T-Beam, Simple, Reinforced Concrete	Public-state	PennDOT	Unknown	Not evaluated

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
NA	BMS 40401602500000 (old BMS 40401602401934)	SR 4016 Over Hunlock Creek	Bridge	Nanticoke	H	1925	T-Beam, Simple, Reinforced Concrete	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40401602501372	SR 4016 Over Hunlock Creek	Bridge	Nanticoke	H	1925	T-Beam, Simple, Reinforced Concrete	Public-state	PennDOT	Unknown	Not evaluated
Huntington Township (7 records)											
100548	100448	40 1 0 0935 0 000166	Bridge	Shickshinny	H	1924	Truss, Steel	Public-local	Huntington Twp	Unknown	Not evaluated
NA	BMS 40023903102552	SR 239 Over Huntington Creek	Bridge	NA	H	1927	T-Beam, Simple, Reinforced Concrete	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40023903600666	SR 239 Over Pine Creek	Bridge	Stillwater	H	1928	T-Beam, Simple, Reinforced Concrete	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40023903902410	SR 239 Over Tributary Pine Creek	Bridge	Stillwater	H	1928	Slab, Simple, Reinforced Concrete	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40400700100108	SR 4007 Over Shickshinny Creek	Bridge	NA	H	1940	Stringer, Simple, Steel	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40401000100100	SR 4010 Over Huntington Creek	Bridge	Shickshinny	H	1940	Stringer, Simple, Steel	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40401600700000 (old BMS 40401600602804)	SR 4016 Over Marsh Creek	Bridge	Shickshinny	H	1924	T-Beam, Simple, Reinforced Concrete	Public-state	PennDOT	Unknown	Not evaluated
Nescopeck Township (5 records)											
36Lu0212	NA	Headly Forge	Archeological Site	Berwick	H	Hist	historic industrial	unknown		Unknown	Not evaluated

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
36Lu0213	NA	Westler Site	Archeological Site	Berwick	H	1850-1940	historic domestic, midden	unknown		Unknown	Not evaluated
NA	BMS 40301400202380	SR 3014 Over Nescopeck Creek	Bridge	Berwick	H	1905	Thru Truss, Camelback, Steel	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40722303427312	TR 342 Over Nescopeck Creek	Bridge	Sybertsville	H	1889	Pony Truss, Pratt, Wrought Iron	Public-local	Luzerne County	Unknown	Not evaluated
NA	BMS 40722303564706	TR 356 Over Nescopeck Creek	Bridge	Sybertsville	H	1883	Pony Truss, Pratt, Wrought Iron	Public-local	Luzerne County	Unknown	Not evaluated
New Columbus Borough (5 records)											
NA	BMS 40300100900995	SR 3001 Over Forge Creek (Robert Street)	Bridge	NA	H	1955	Box Beam, Adjacent, Prestressed Concrete	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40300401502133	SR 3004 Over Branch of Newport Creek	Bridge	Nanticoke	H	1954	Slab, Simple, Reinforced Concrete	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40401400100106	SR 4014 Over Pine Creek Tributary	Bridge	Stillwater	H	1900ca	Closed Spandrel Arch, Deck, Stone	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40742004862502	TR 486 Over Pine Creek (Bridge # 42502)	Bridge	NA	H	1927	Closed Spandrel Arch, Stone, Deck	Public-local	Luzerne County	Unknown	Not evaluated
NA	BMS 40742020042504	Town Hill Road (Pine Creek Road) over Pine Creek	Bridge	Stillwater	H	1926	Pony Truss, Pratt, Steel	Public-local	Luzerne County	Unknown	Not evaluated
Newport Township (2 records)											

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
36Lu0037	NA	"Retreat Poor Farm"	Archeological Site	Nanticoke	P	Probable A, MW, LW	Open Habitation, Prehistoric	State of Pa Retreat State (mental) Hospital		Unknown	Not evaluated
36Lu0101	NA	Hahn/Roger	Archeological Site	Nanticoke	P	A	Open Habitation, Prehistoric	unknown		Unknown	Not evaluated
Nuangola Borough (6 records)											
36Lu0251	NA	Max #1	Archeological Site	Wilksbarre W	P	Unknown Prehistoric	Rockshelter/ Cave	unknown		Unknown	Not evaluated
36Lu0252	NA	Max #2	Archeological Site	Wilksbarre W	P	Unknown Prehistoric	Rockshelter/ Cave	unknown		Unknown	Not evaluated
36Lu0253	NA	Max #3	Archeological Site	Wilksbarre W	P	Unknown Prehistoric	Rockshelter/ Cave	unknown		Unknown	Not evaluated
36Lu0254	NA	Max #4	Archeological Site	Wilksbarre W	P	Unknown Prehistoric	Rockshelter/ Cave	unknown		Unknown	Not evaluated
36Lu0255	NA	Max #5	Archeological Site	Wilksbarre W	P	Unknown Prehistoric	Rockshelter/ Cave	unknown		Unknown	Not evaluated
36Lu0256	NA	Max #6	Archeological Site	Wilksbarre W	P	Unknown Prehistoric	Rockshelter/ Cave	unknown		Unknown	Not evaluated
Ross Township (1 record)											
NA	BMS 40402401800000	SR 4024 Over Huntington Creek	Bridge	Sweet Valley	H	1888	Pony Truss, Pratt, Wrought Iron	Public-state	PennDOT	Unknown	Not evaluated
Salem Township(10 records)											
92631	59253	L.R. 40029 Bridge 40 2 0 00290 03387	Bridge	Berwick	H	NA	Arch, masonry/ metal	Public-local	Salem Twp	Unknown	Not evaluated
141673	128433	North Branch Canal (Pennsylvania Canal Company, Wyoming Canal Company)	District	Berwick	H	1828, 1831	Canal			Unknown	Not evaluated

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
36Lu0017	NA	SES-13	Archeological Site	Berwick	P	A, LA,Tr, LW	Open Habitation, Prehistoric	P.P. and L		Unknown	Not evaluated
36Lu0048	NA	SES-16	Archeological Site	Berwick	P	Unknown Prehistoric	Open Habitation, Prehistoric	P.P. and L		Unknown	Not evaluated
36Lu0052	NA	SES-14	Archeological Site	Berwick	P	A, LA, Tr, EW	Open Habitation, Prehistoric	P.P. and L		Unknown	Not evaluated
36Lu0056	NA	none	Archeological Site	Berwick	unknown	unknown	undefined	unknown		Unknown	Not evaluated
36Lu0090	NA	Sapphire	Archeological Site	Berwick	P	LA, Tr, W, EW, MW, LW	Open Habitation, Prehistoric (possible village)	unknown		Unknown	Not evaluated
36Lu0105	NA	Ruben	Archeological Site	Berwick	P	LA, Tr, W, EW, MW, LW	Open Habitation, Prehistoric			Unknown	Not evaluated
NA	BMS 40403900200000	SR 4039/TR 482 Over Small Brock	Bridge	Berwick	H	1941	Arch Culvert, Stone	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40722804367108	TR 436 Over Beach Haven Creek (Bridge # 47108	Bridge	Berwick	H	1937	Slab, Simple, Reinforced Concrete	Public-local	Luzerne County	Unknown	Not evaluated
Slocum Township (1 record)											
36Lu0102	NA	Dug-out-Canoe	Archeological Site	Nanticoke	P	Unknown Prehistoric	Other Specialized Aboriginal Site	unknown		Unknown	Not evaluated
Sugarloaf Township (8 records)											
86552	86457	Foothills Farm	Building	Conyngham	H	1900-Present	Barn design, wood	Private	Individual	Unknown	Not evaluated
36Lu0216	NA	Billhamer/ Birdmill	Archeological Site	Sybertsville	H	19thC	water-powered mill	unknown		Unknown	Not evaluated

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Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
NA	BMS 40009302300000	SR 93 Over Nescopeck Creek	Bridge	Sybertsville	H	1937 (altered 1986)	Pony Truss, Parker, Steel	Public-state	PennDOT	Unknown	Not evaluated
NA	BMS 40723003057309	East County Road 37 Over Little Nescopeck Creek	Bridge	Sybertsville	H	1939	Rigid Frame, Reinforced Concrete	Public-local	Luzerne County	Unknown	Not evaluated
NA	BMS 40723003327301	TR 332 Over Nescopeck Creek	Bridge	Berwick	H	1933	T-Beam, Simple, Reinforced Concrete	Public-local	Luzerne County	Unknown	Not evaluated
NA	BMS 40723003367305	TR 336 (Mill Hill Road) Over Nescopeck Creek	Bridge	Sybertsville	H	1907-1911	Pony Truss, Warren, Steel	Public-local	Luzerne County	Unknown	Not evaluated
NA	BMS 40723003387313	TR 338 Over Little Nescopeck Creek (Bridge # 57313)	Bridge	Conyngham	H	1924 (altered 1968)	Deck Girder, Simple, Steel	Public-local	Luzerne County	Unknown	Not evaluated
NA	BMS 40723003887307	TR 388 Over Nescopeck Creek	Bridge	Sybertsville	H	1895ca (altered 1925)	Pony Truss, Warren, Metal	Public-local	Luzerne County	Unknown	Not evaluated
Union Township (5 records)											
119612	112237	Bridge, Structure 402000680034 921	Bridge	Sweet Valley	H	NA	Arch, masonry	Public-local	Union TWP	Unknown	Not evaluated
36Lu0033	NA	none	Archeological Site	Nanticoke	P	LA, Tr	Open Habitation, Prehistoric	State of Pa Retreat State (mental) Hospital		Unknown	Not evaluated

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Table 2.5-57— NRHP-Undetermined Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (494 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
36Lu0034	NA	none	Archeological Site	Nanticoke	P	LA, Tr	Open Habitation, Prehistoric	State of Pa Retreat State (mental) Hospital		Unknown	Not evaluated
36Lu0035	NA	none	Archeological Site	Nanticoke	P	A, Tr	Open Habitation, Prehistoric	State of Pa Retreat State (mental) Hospital		Unknown	Not evaluated
36Lu0036	NA	none	Archeological Site	Nanticoke	P	EA	Open Habitation, Prehistoric	State of Pa Retreat State (mental) Hospital		Unknown	Not evaluated
<p>* P = Prehistoric, H = Historic ** P=Prehistoric; H=Historic A=Archaic; EA=Early Archaic; MA=Middle Archaic; LA=Late Archaic; Tr=Transitional Archaic; W=Woodland; EW=Early Woodland; MW=Middle Woodland; LW=Late Woodland</p>											

Table 2.5-58— Unmapped Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (45 Records)

(Page 1 of 4)

Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
Columbia County (23 records)											
Berwick Borough (6 records)											
20529	20438	none	Building	Mifflinville	H	1877	unknown			Undetermined	Not evaluated
20540	20449	none	Site	Mifflinville	H	1800	undefined			Undetermined	Not evaluated
20541	20450	none	Building	Mifflinville	H	1820	Vernacular PA, Lock House, Brick			Undetermined	Not evaluated
20542	20451	none	Building	Mifflinville	H	1840	Vernacular, Romanesque Revival, Brick			Undetermined	Not evaluated
20543	20452	none	Building	Mifflinville	H	1880	Vernacular PA, Commercial, Frame			Undetermined	Not evaluated
20569	20478	none	Building	Mifflinville	H	1890	Vernacular, Italianate, Brick			Undetermined	Not evaluated
Briar Creek Borough (2 records)											
19564	19473	none	Building	Mifflinville	H	1840-1959	Vernacular Federal, Brick	Private	Individual	Undetermined	Not evaluated
20582	20491	none	Building	NA	H	1900	unknown			Undetermined	Not evaluated
Briar Creek Township (2 records)											
132677	119414	none	Bridge	NA	H	1938	Concrete			Ineligible	yes
132684	119421	none	Bridge	NA	H	1936	Steel			Ineligible	yes
Fishing Creek Township (12 records)											
19626	19535	none	Building	NA	H	1860	unknown			Undetermined	Not evaluated
19627	19536	none	Building	NA	H	1860	unknown			Undetermined	Not evaluated
19628	19537	none	Building	NA	H	1860	unknown			Undetermined	Not evaluated
19629	19538	none	Building	NA	H	1860	unknown			Undetermined	Not evaluated
19630	19539	none	Building	NA	H	1860	unknown			Undetermined	Not evaluated
19631	19540	none	Building	NA	H	1880	unknown			Undetermined	Not evaluated
19632	19541	none	Building	NA	H	1860	unknown			Undetermined	Not evaluated
19633	19542	Kunkel House	Building	NA	H	1860	unknown			Undetermined	Not evaluated
19634	19543	none	Building	NA	H	1840	unknown			Undetermined	Not evaluated

Table 2.5-58— Unmapped Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (45 Records)

(Page 2 of 4)

Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
20616	20525	none	Building	NA	H	1860	unknown			Undetermined	Not evaluated
20617	20526	Harrison, Neil S., General Store	Building	NA	H	1880	unknown			Undetermined	Not evaluated
20618	20527	Jonestown School	Building	NA	H	1900	unknown			Undetermined	Not evaluated
Mifflin Township (1 records)											
144067	131806	Strafford - Potential Historic District	District	Mifflinville	H	1850-2000	NA	Various	Multiple owners	Ineligible	yes
Luzerne County (20 records)											
Black Creek Township (1 record)											
89635	89539	Morton House	Building	Nuremberg	H	1850	Wood	Private	Individual	Eligible	yes
Butler Township (1 record)											
109969	107999	Keystone Job Corps Center	District	NA	H	1925	Various	Private	Keystone Job Corps Center	Unknown	Not evaluated
Conyngam Borough (1 record)											
97859	97759	Phoenix Hotel	Building	Conyngam	H	1816	wood porches, sandstone	Private and Public-	Individual	Unknown	Not evaluated
Conyngam Township (6 records)											
89134	89038	House No. 2	Building	Berwick	H	NA	Concrete			Ineligible	yes
89135	89039	none	Building	Shickshinny	H	NA	wood			Ineligible	yes
96837	96738	Sarday Store (VFW Post)	Building	NA	H	1919 interior remodeled in 1947 and 1972	VFW building, ceramic tile			Ineligible	yes
135677	122414	none	Bridge	NA	H	1997	Steel			Ineligible	yes
86527	86432	Union Reformed & Lutheran Church	Building	NA	H	1833	Church, original schoolhousewood	Private	Union Reformed and Lutheran Church	Unknown	Not evaluated
119536	112205	House	Building	NA	H	NA	unknown			Undetermined	Not evaluated
Hazle Township (1 record)											

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Table 2.5-58— Unmapped Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (45 Records)

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Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
89160	89064	Harleigh Terrace, Property	Building	NA	H	NA	rubble, wood			Ineligible	yes
Hunlock Township (2 records)											
135737	122474	none	Bridge	NA	H	1910	Steel			Eligible	Yes
89167	89071	Cragle Hill Rd. Property	Building	NA	H	NA	Wood			Ineligible	yes
Huntington Township (3 records)											
135742	122479	none	Bridge	NA	H	1927	Concrete			Ineligible	yes
90640	90544	Heublerville Mill	Building	NA	H	1781-1800	folk, wood frame	Private	Individual	Undetermined	Not evaluated
102283	102182	Huntinton Hardware/ Koons, F.A.B., Store	Building	Shickshinny	H	NA	3 story, wooden porch	Private	Individual	Undetermined	Not evaluated
Nescopeck Township (1 record)											
135787	122524	none	Bridge	NA	H	1997	Concrete			Ineligible	yes
New Columbus Borough (1 record)											
135789	122526	none	Bridge	NA	H	1927	Stone			Ineligible	yes
Ross Township (1 record)											
135815	122552	none	Bridge	NA	H	1888	Wrought Iron			Ineligible	yes
Sugarloaf Township (1 record)											
110531	108345	none	District	NA	H	1850	Brick			Undetermined	Not evaluated
Union Township (1 record)											
112393	109540	Warriors Path Site	District	Shickshinny	P/H	NA	Prehistoric Indian path with associated historic and prehistoric sites			Undetermined	Not evaluated
Schuylkill County (2 records)											
North Union Township (2 records)											
137958	124695	none	Bridge	NA	H	1931	Concrete			Ineligible	yes
137959	124696	none	Bridge	NA	H	1924	Concrete			Ineligible	yes

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Table 2.5-58— Unmapped Cultural Resources Within 10 mi (16 km) of the Bell Bend Project (45 Records)

(Page 4 of 4)

Key No./ Site No.	Inventory ID/ BMS No.	Name	Resource Type	Quad	P/H*	Age/ Components	Description	Ownership	Agency	NRHP Status	SHPO Concurrence
* P = Prehistoric, H = Historic ** P=Prehistoric; H=Historic A=Archaic; EA=Early Archaic; MA=Middle Archaic; LA=Late Archaic; Tr=Transitional Archaic; W=Woodland; EW=Early Woodland; MW=Middle Woodland; LW=Late Woodland											

Table 2.5-59— Census Block Groups within 50 mi (80 km) of BBNPP with Minority and Low Income Populations, 2000

(Page 1 of 2)

County	Total Number of Census Block Groups	Number of Minority Census Block Groups ⁽¹⁾								Number of Low-Income Census Block Groups ⁽¹⁾
		Black or African American	American Indian or Alaskan Native	Asian	Native Hawaiian or Other Pacific Islander	Some Other Race	Multi-Racial	Aggregate (Total) of Racial Minorities	Hispanic/Latino Ethnicity	
Berks	76	0	0	0	0	0	0	1	0	1
Bradford	23	0	0	0	0	0	0	0	0	0
Carbon	48	0	0	0	0	0	0	0	0	0
Columbia	55	0	0	0	0	0	0	0	0	3 ⁽²⁾
Dauphin	13	0	0	0	0	0	0	0	0	0
Lackawanna	195	0	0	0	0	0	0	6	0	6 ⁽³⁾
Lebanon	18	0	0	0	0	0	0	0	0	0
Lehigh	174	1	0	1	0	19	0	54 ⁽⁴⁾	16	13 ⁽⁵⁾
Luzerne	314	4	0	0	0	0	0	5 ⁽⁶⁾	0	13 ⁽⁷⁾
Lycoming	101	8	0	0	0	0	0	8 ⁽⁸⁾	0	9 ⁽⁹⁾
Monroe	50	1	0	0	0	0	0	6	0	0
Montour	14	0	0	0	0	0	0	0	0	0
Northampton	54	0	0	0	0	0	0	0	0	0
Northumberland	94	1	0	0	0	0	0	2	0	5 ⁽¹⁰⁾
Pike	4	0	0	0	0	0	0	0	0	0
Schuylkill	145	2	0	0	0	0	0	2	0	2
Snyder	23	0	0	0	0	0	0	0	0	0
Sullivan	6	0	0	0	0	0	0	0	0	0
Susquehanna	14	0	0	0	0	0	0	0	0	0
Union	24	2	0	0	0	0	0	2	0	1
Wayne	15	0	0	0	0	0	0	1	0	0
Wyoming	23	0	0	0	0	0	0	0	0	0
-	-	-	-	-	-	-	-	-	-	-
Totals	1,483	19	0	1	0	19	0	87	16	53

Table 2.5-59 Census Block Groups within 50 mi (80 km) of BBNPP with Minority and Low-Income Populations, 2000

(Page 2 of 2)

County	Total Number of Census Block Groups	Number of Minority Census Block Groups ⁽¹¹⁾								Number of Low-Income Census Block Groups ⁽¹¹⁾
		Black or African American	American Indian or Alaskan Native	Asian	Native Hawaiian or Other Pacific Islander	Some Other Race	Multi-Racial	Aggregate (Total) of Racial Minorities	Hispanic/Latino Ethnicity	
<p>Notes:</p> <p>(1) A census block group is defined as low income if the percentage of households below governmental poverty thresholds exceed 50%, or the percentage is 20% more than the poverty level for the comparative geographic area within 50 mi (80 km) of BBNPP</p> <p>(2) 2 census block groups in Columbia County have >50% of its households below the governmental poverty threshold, the remaining block group meets the 20% criterion</p> <p>(3) 1 census block group in Lackawanna County has >50% of its households below the governmental poverty threshold, the remaining 5 block groups meet the 20% criterion</p> <p>(4) 8 census block groups in Lehigh County have an aggregate minority population > 50%, the remaining 46 block groups meet the 20% criteria</p> <p>(5) 2 census block groups in Lehigh County have >50% of the households below the governmental poverty threshold, the remaining 11 block groups meet the 20% criterion</p> <p>(6) 2 census block groups in Luzerne County have an aggregate minority population > 50%, the remaining 3 block groups meet the 20% criteria</p> <p>(7) 1 census block group in Luzerne County has >50% of the households below the governmental poverty threshold, the remaining 12 block groups meet the 20% criterion</p> <p>(8) 1 census block group in Lycoming County has an aggregate minority population > 50%, the remaining 7 block groups meet the 20% criteria</p> <p>(9) 1 census block group in Lycoming County has >50% of the households below the governmental poverty threshold, the remaining 8 block groups meet the 20% criterion</p> <p>(10) 1 census block group in Northumberland County has >50% of the households below the governmental poverty threshold, the remaining 4 block groups meet the 20% criterion</p> <p>(11) Unless otherwise indicated, all other census block groups in this table meet the 20% threshold level.</p>										

Table 2.5-60— Census Block Groups within 50 mi (80 km) of BBNPP with Minority and Low-Income Populations, 2000

(Page 1 of 2)

County	Total Number of Census Block Groups	Number of Racial Minority Census Block Groups						Aggregate (Total) of Racial Minorities	Hispanic or Latino Ethnicity Census Block Groups	Number of Low- Income Census Block Groups ⁽¹⁾
		Black or African- American	American Indian or Alaskan Native	Asian	Native Hawaiian or Other Pacific Islander	Some Other Race	Multi- Racial Persons			
Berks	71	0	0	0	0	0	0	0	0	1
Bradford	23	0	0	0	0	0	0	0	0	0
Carbon	48	0	0	0	0	0	0	0	0	0
Columbia	55	0	0	0	0	0	0	0	0	3 ⁽²⁾
Dauphin	12	0	0	0	0	0	0	0	0	0
Lackawanna	195	0	0	0	0	0	0	4	0	6 ⁽³⁾
Lebanon	17	0	0	0	0	0	0	0	0	0
Lehigh	165	1	0	0	0	21	0	39 ⁽⁴⁾	34 ⁽⁵⁾	12 ⁽⁶⁾
Luzerne	314	4	0	0	0	0	0	4 ⁽⁷⁾	0	13
Lycoming	101	8	0	0	0	0	0	8 ⁽⁸⁾	0	9 ⁽⁹⁾
Monroe	49	1	0	0	0	0	0	2	0	0
Montour	14	0	0	0	0	0	0	0	0	0
Northampton	51	0	0	0	0	0	0	0	0	0
Northumberland	94	1	0	0	0	0	0	1	0	4 ⁽¹⁰⁾
Pike	4	0	0	0	0	0	0	0	0	0
Schuylkill	145	2	0	0	0	0	0	2	0	2
Snyder	23	0	0	0	0	0	0	0	0	0
Sullivan	6	0	0	0	0	0	0	0	0	0
Susquehanna	14	0	0	0	0	0	0	0	0	0
Union	24	2	0	0	0	0	0	2	0	1
Wayne	15	0	0	0	0	0	0	1	0	0
Wyoming	23	0	0	0	0	0	0	0	0	0
Totals	1463	19	0	0	0	21	0	63	34	51

Table 2.5-60— Census Block Groups within 50 mi (80 km) of BBNPP with Minority and Low-Income Populations, 2000

(Page 2 of 2)

County	Total Number of Census Block Groups	Number of Racial Minority Census Block Groups							Hispanic or Latino Ethnicity Census Block Groups	Number of Low- Income Census Block Groups ^(†)
		Black or African-American	American Indian or Alaskan Native	Asian	Native Hawaiian or Other Pacific Islander	Some Other Race	Multi- Racial Persons	Aggregate (Total) of Racial Minorities		
Notes:										
1. <u>A census block group is defined as low income if the percentage of households below governmental poverty thresholds exceed 50%, or the percentage is 20% more than the poverty level for the comparative geographic area within 50 miles (80 km) of BBNPP</u>										
2. <u>2 census block groups in Columbia County have >50% of its households below the governmental poverty threshold, the remaining block group meets the 20% criterion</u>										
3. <u>1 census block group in Lackawanna County has >50% of its households below the governmental poverty threshold, the remaining 5 block groups meet the 20% criterion</u>										
4. <u>7 census block groups in Lehigh County have an aggregate minority population > 50%, the remaining 32 block groups meet the 20% criteria</u>										
5. <u>8 census block groups in Lehigh County have a Hispanic population > 50%, the remaining 26 block groups meet the 20% criteria</u>										
6. <u>2 census block groups in Lehigh County have >50% of the households below the governmental poverty threshold, the remaining 10 block groups meet the 20% criterion</u>										
7. <u>2 census block groups in Luzerne County have an aggregate minority population > 50%, the remaining 2 block groups meet the 20% criteria</u>										
8. <u>1 census block group in Lycoming County has an aggregate minority population > 50%, the remaining 7 block groups meet the 20% criteria</u>										
9. <u>1 census block group in Lycoming County has >50% of the households below the governmental poverty threshold, the remaining 8 block groups meet the 20% criterion</u>										
10. <u>1 census block group in Northumberland County has >50% of the households below the governmental poverty threshold, the remaining 3 block groups meet the 20% criterion</u>										
11. <u>UNLESS OTHERWISE INDICATED, ALL OTHER CENSUS BLOCK GROUPS IN THIS TABLE MEET THE 20% THRESHOLD LEVEL</u>										

Table 2.5-61— Census Block Groups and Percentages of Minority People within 50 mi (80 km) of the BBNPP Site, 2000

Area	Total Number of Census Block Groups	Aggregate (Total) Number of Minority Census Block Groups	Percentage of People that are Minorities Within the Census Block Groups							Percent of Ethnic MinorityHispanic/Latino Minority Hispanic/Latino
			African-AmericansAfrican-Americans	Native Americans, Indians, or Alaskans	Asians	Native Hawaiians or Other Pacific Islanders	Some Other Race	Multi-Racial Persons	Aggregate (Total) of Racial Minorities	
50 mi (80 km) Radius	1,483	87	2.262.26%	0.130.13%	0.800.79%	0.020.02%	1.241.21%	0.890.88%	8.255.29%	2.912.85%
	1463	63								
Region of Influence										
Luzerne County	314	5	1.691.69%	0.090.09%	0.580.58%	0.010.01%	0.430.43%	0.570.57%	4.544.54%	1.161.16%
Columbia County	55	0	0.800.80%	0.150.15%	0.520.52%	0.030.03%	0.330.33%	0.580.58%	0.950.95%	0.950.95%
Total	369	54	1.551.55%	0.100.10%	0.570.57%	0.020.02%	0.410.41%	0.570.57%	4.344.34%	1.131.13%

Table 2.5-62— Minority Populations in Luzerne County, Columbia County, the Scranton-Wilkes-Barre-Hazleton MSA, and Commonwealth of Pennsylvania, 2000 and 2006

Year/Minority Populations	Luzerne County		Columbia County		Scranton-Wilkes-Barre-Hazleton Metropolitan Statistical Area		Pennsylvania	
	Number	%	Number	%	Number	%	Number	%
2000								
Total:	319,250	100.0	64,151	100.0	624,776	100.0	12,281,054	100.0
One race:	317,435	99.4	63,780	99.4	621,011	99.4	12,138,830	98.8
Caucasian	308,476	96.6	62,602	97.6	604,836	96.8	10,484,203	85.4
African American	5,408	1.7	516	0.8	8,866	1.4	1,224,612	10.0
Native American and Alaska Native	285	0.1	94	0.1	611	0.1	18,348	0.1
Asian	1,860	0.6	334	0.5	3,873	0.6	219,813	1.8
Native Hawaiian and Other Pacific Islander	47	-	21	-	92	-	3,417	-
Other	1,359	0.4	213	0.3	2,733	0.4	188,437	1.5
Two or more races:	1,815	0.6	371	0.6	3,765	0.6	142,224	1.2
Hispanic/Latino Ethnic Origin	3,713	1.2	609	0.9	7,467	1.2	394,088	3.2
2006								
Total:	313,020	100.0	65,014	100.0	n/a	n/a	12,440,621	100.0
One race:	310,552	99.2	64,820	99.7	n/a	n/a	12,289,713	98.8
Caucasian	296,635	94.8	63,052	97.0	n/a	n/a	10,429,732	83.8
African American	7,514	2.4	545	0.8	n/a	n/a	1,289,799	10.4
Native American and Alaska Native	544	0.2	323	0.5	n/a	n/a	17,634	0.1
Asian	2,859	0.9	586	0.9	n/a	n/a	289,289	2.3
Native Hawaiian and Other Pacific Islander	-	0.0	-	0.0	n/a	n/a	3,332	0.0
Other	3,000	1.0	314	0.5	n/a	n/a	259,927	2.1
Two or more races:	2,468	0.8	194	0.3	n/a	n/a	150,908	1.2
Hispanic/Latino Ethnic Origin	10,246	3.3	905	1.4	n/a	n/a	542,142	4.2
Notes: - = represents zero or rounds to zero n/a = not available Columbia County was originally part of the MSA in 2000; however based on the latest information available on the MSA boundaries, Columbia County is no longer part of the Scranton-Wilkes-Barre-Hazleton MSA but is now part of a micropolitan area. Therefore, comparisons between 2000 and 2006 cannot be made.								

**Table 2.5-63— Census Block Groups and Percentages of Households within
50 mi (80 km) of BBNPP with Low-Income Populations, 2000**

State / Area	Total Number of Census Block Groups	Number of Low-Income Census Block Groups	Percentage of Low-Income Households in Census Block Groups
50 mi (80 km) Radius	4,483,463	5351	10.210.27%
Region of Influence			
Luzerne County	314	13	12.412.37%
Columbia County	55	3	11.611.93%
Total	369	16	n/a12.00%
Note: n/a = not applicable			

Table 2.5-64— Low-Income Populations in Luzerne County, Columbia County, the Scranton-Wilkes-Barre-Hazleton MSA, and Commonwealth of Pennsylvania, 2000 and 2006

Year/Low-Income Populations	Luzerne County		Columbia County		Scranton-Wilkes-Barre-Hazleton Metropolitan Statistical Area		Pennsylvania	
	Number	%	Number	%	Number	%	Number	%
2000								
Families below Poverty	6,827	8.1	1,178	7.1	12,545	7.6	250,296	7.8
All Income Levels	84,729		16,703		165,223		3,225,707	
Individuals below Poverty	34,136	11.1	7,899	13.1	66,626	11.1	1,304,117	11
Population for whom poverty status is determined	307,988		60,324		602,228		11,879,950	
2006								
Families below Poverty	8,455	10.2	917	5.4	n/a	n/a	260,295	8.2
All Income Levels	82,892		16,985		n/a		3,174,335	
Individuals below Poverty	40,379	13.3	6,434	10.7	n/a	n/a	1,448,228	12.1
Population for whom poverty status is determined	303,708		60,337		n/a		12,015,358	
Notes: n/a = not available Columbia County was originally part of the MSA in 2000; however based on the latest information available on the MSA boundaries, Columbia County is no longer part of the Scranton-Wilkes-Barre-Hazleton MSA but is now part of a micropolitan area. Therefore, comparisons between 2000 and 2006 cannot be made.								

Table 2.5-65— Deer Harvests in Wildlife Management Units

Year	Wildlife Management Unit				Total
	No. 3B	No. 3D	No. 4C	No. 4E	
2007-08	16,100	10,600	14,200	11,400	52,300
2006-07	17,100	12,400	15,000	13,100	57,600
2005-06	16,900	11,200	15,700	13,600	57,400
2004	19,800	14,300	17,500	15,100	66,700

Table 2.5-66— Deer Harvests in Luzerne County, Columbia County, and the ROI

Harvest/Year	County		Total ROI
	Luzerne	Columbia	
Deer Harvest			
2003	8,880	5,800	14,680
2002	9,751	6,111	15,862
2001	9,556	6,985	16,541
2000	8,338	7,104	15,442
1999	6,753	4,629	11,382
1998	6,245	4,565	10,810
Archery Deer Harvest			
2003	1,000	710	1,710
2002	1,190	729	1,919
2001	1,141	878	2,019
2000	1,284	1,093	2,377
1999	1,164	865	2,029
1998	952	759	1,711
Flintlock Deer Harvest			
2003	710	480	1,190
2002	639	369	1,008
2001	430	385	815
2000	497	405	902
1999	256	120	376
1998	113	83	196
Totals			
2003	10,590	6,990	17,580
2002	11,580	7,209	18,789
2001	11,127	8,248	19,375
2000	10,119	8,602	18,721
1999	8,173	5,614	13,787
1998	7,310	5,407	12,717

Table 2.5-67— Spring and Fall Turkey Harvests by Management Area

Harvest Year	Management Area			Total
	No. 8	No. 5	No. 4	
2002	6,181	6,169	9,220	21,570
2001	4,114	4,285	6,516	14,915
2000	6,676	7,097	6,907	20,680
1999	4,053	5,310	6,552	15,915
1998	n/a	n/a	n/a	n/a
Note: n/a = not available				

Table 2.5-68— Black Bear Harvests in Luzerne County, Columbia County, and the ROI

Harvest Year	County		Total ROI
	Luzerne	Columbia	
2006	62	27	89
2004-2005	n/a	n/a	n/a
2003	103	42	145
2002	67	41	108
2001	95	36	131
2000	72	33	105
1999	19	15	34
1998	76	42	118
Note: n/a - Not available			

**Table 2.5-69— Beaver Harvests in Luzerne County,
Columbia County, and the ROI**

Harvest Year	County		Total ROI
	Luzerne	Columbia	
2001	294	66	360
2000	225	31	256
1999	210	60	270
1998	229	30	259
1997	341	66	407
1996	292	45	337
1995	132	32	164
1994	250	75	325
1993	114	8	122
1992	181	33	214
1991	109	23	132

Figure 2.5-1 — BBNPP 50 Mile (80 km) Radius Map

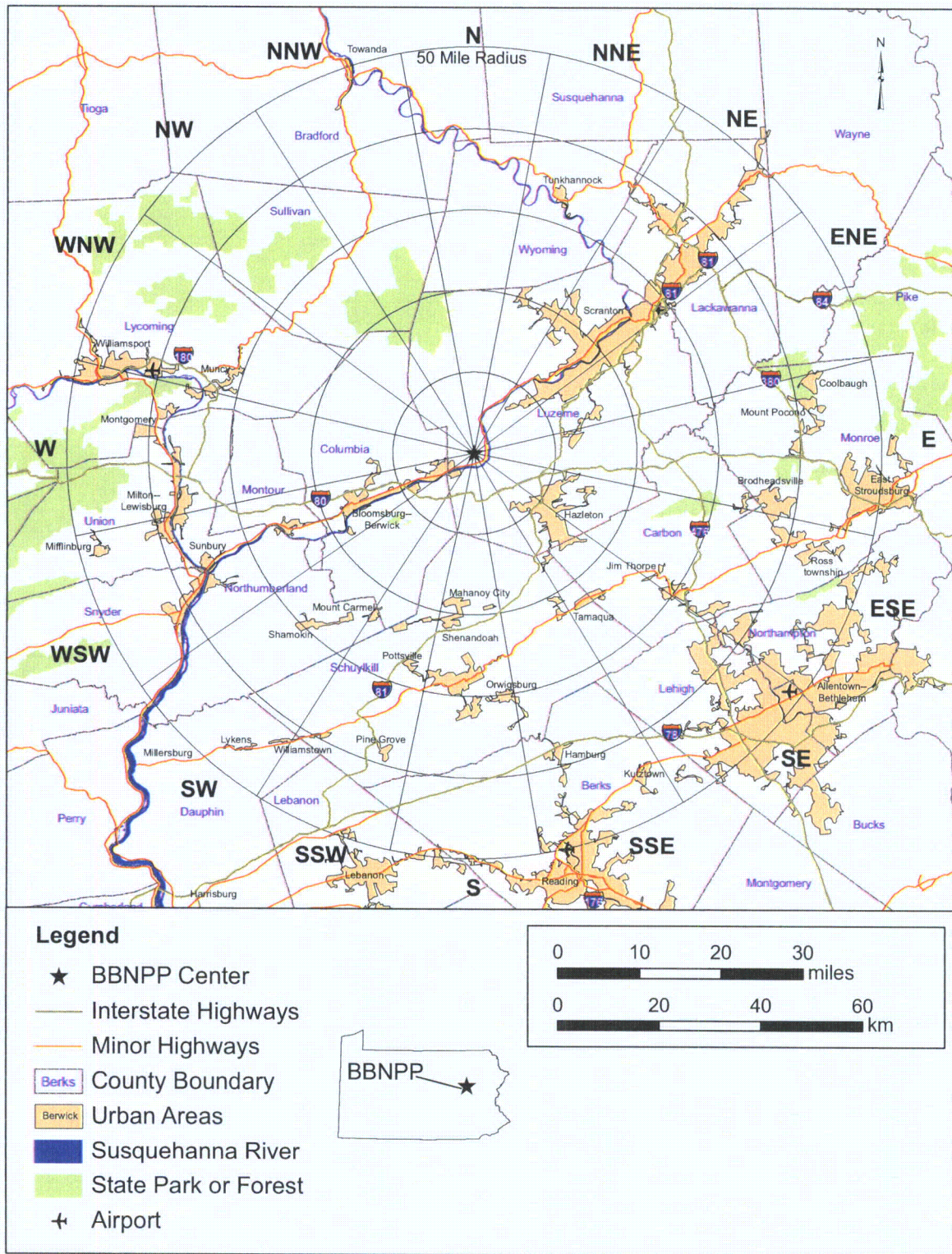


Figure 2.5-2— BBNPP 10 Mile (16km) Radius Map

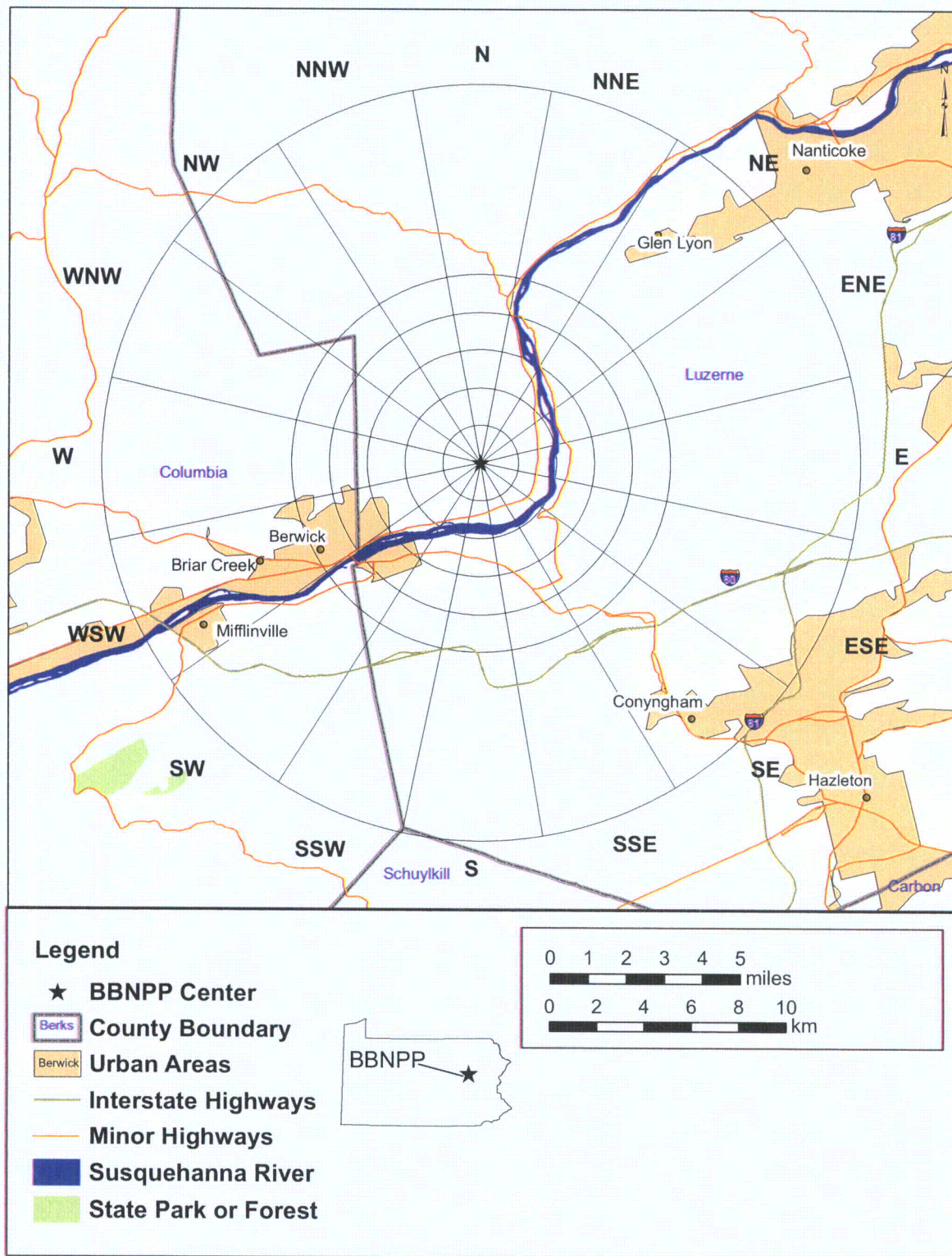


Figure 2.5-3— BBNPP Low Population Zone

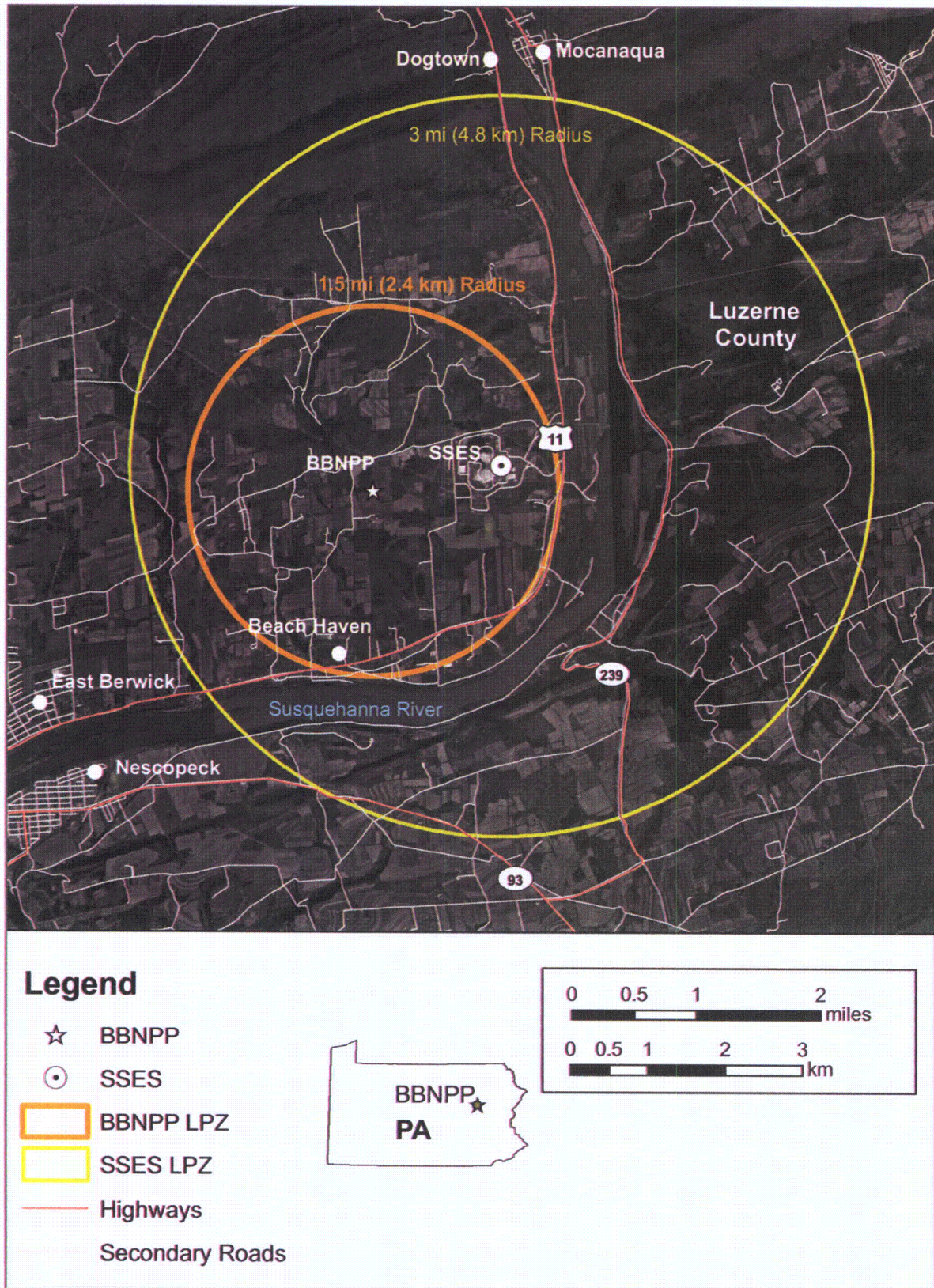


Figure 2.5-4— Locations Surveyed as Part of the Phase 1A Reconnaissance

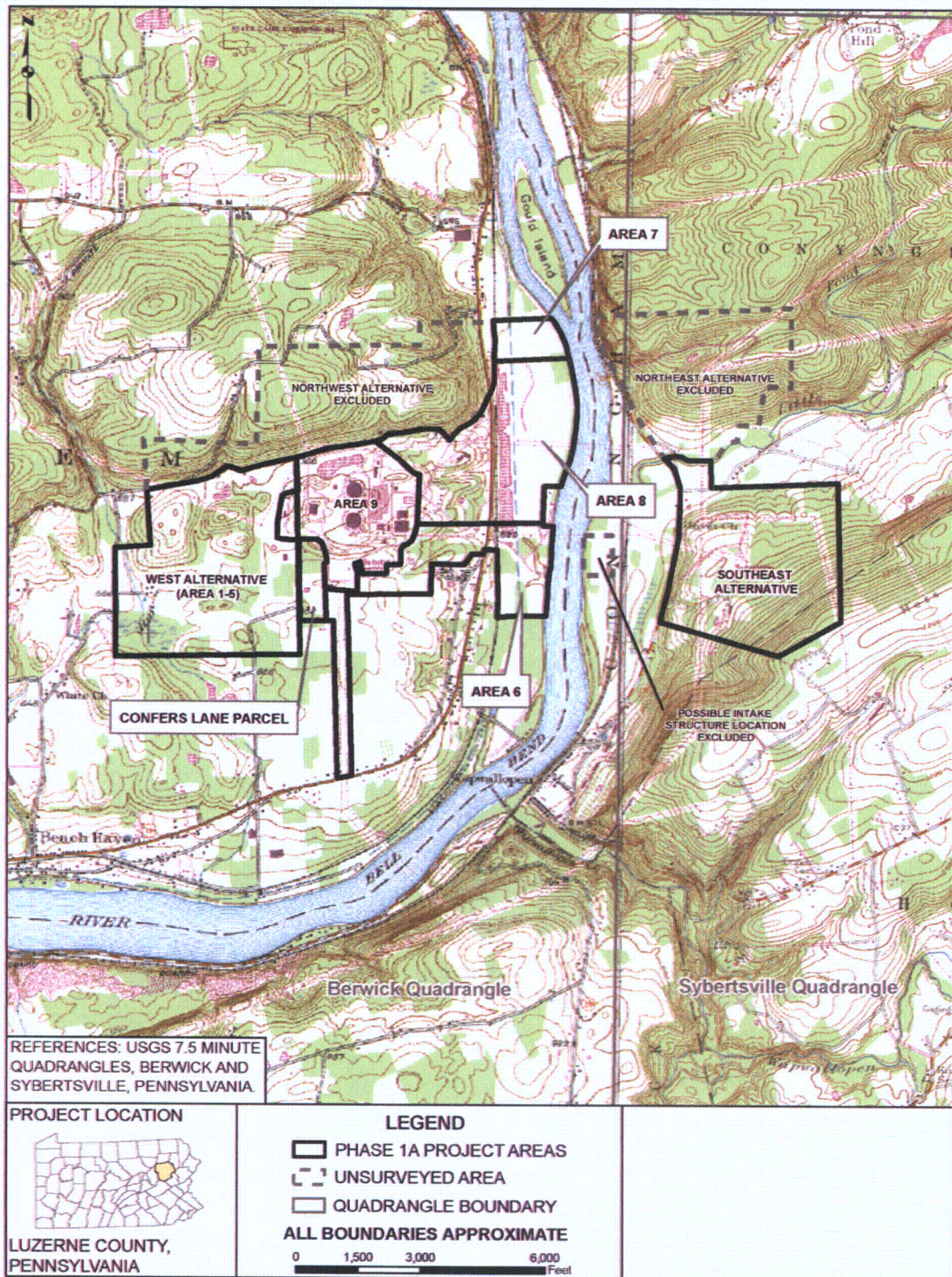


Figure 2.5-5— Phase 1b Project Location

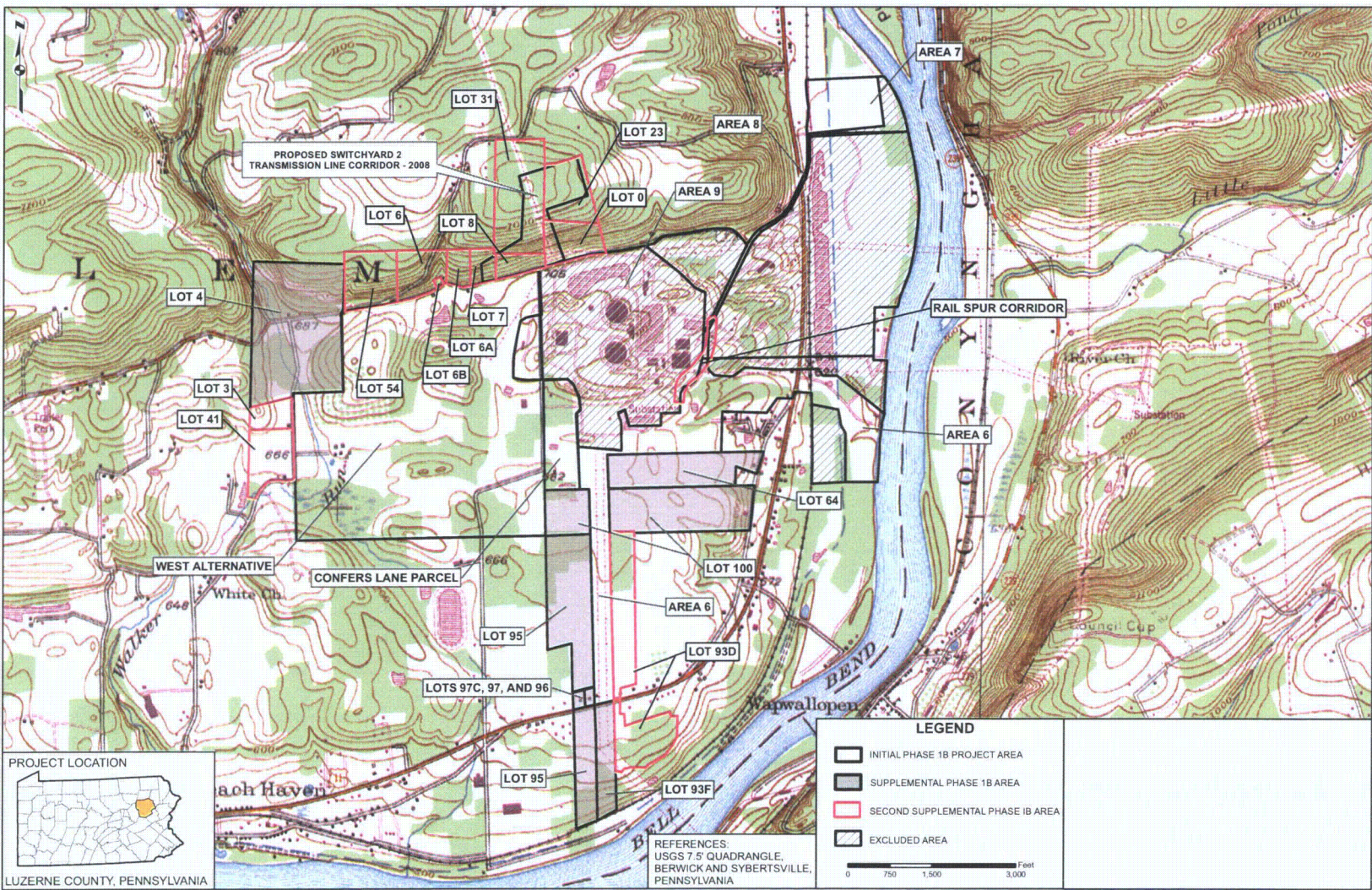


Figure 2.5-6— Previously Recorded Cultural Resources within 1 mi (1.6 km) of the Phase 1a Project Area

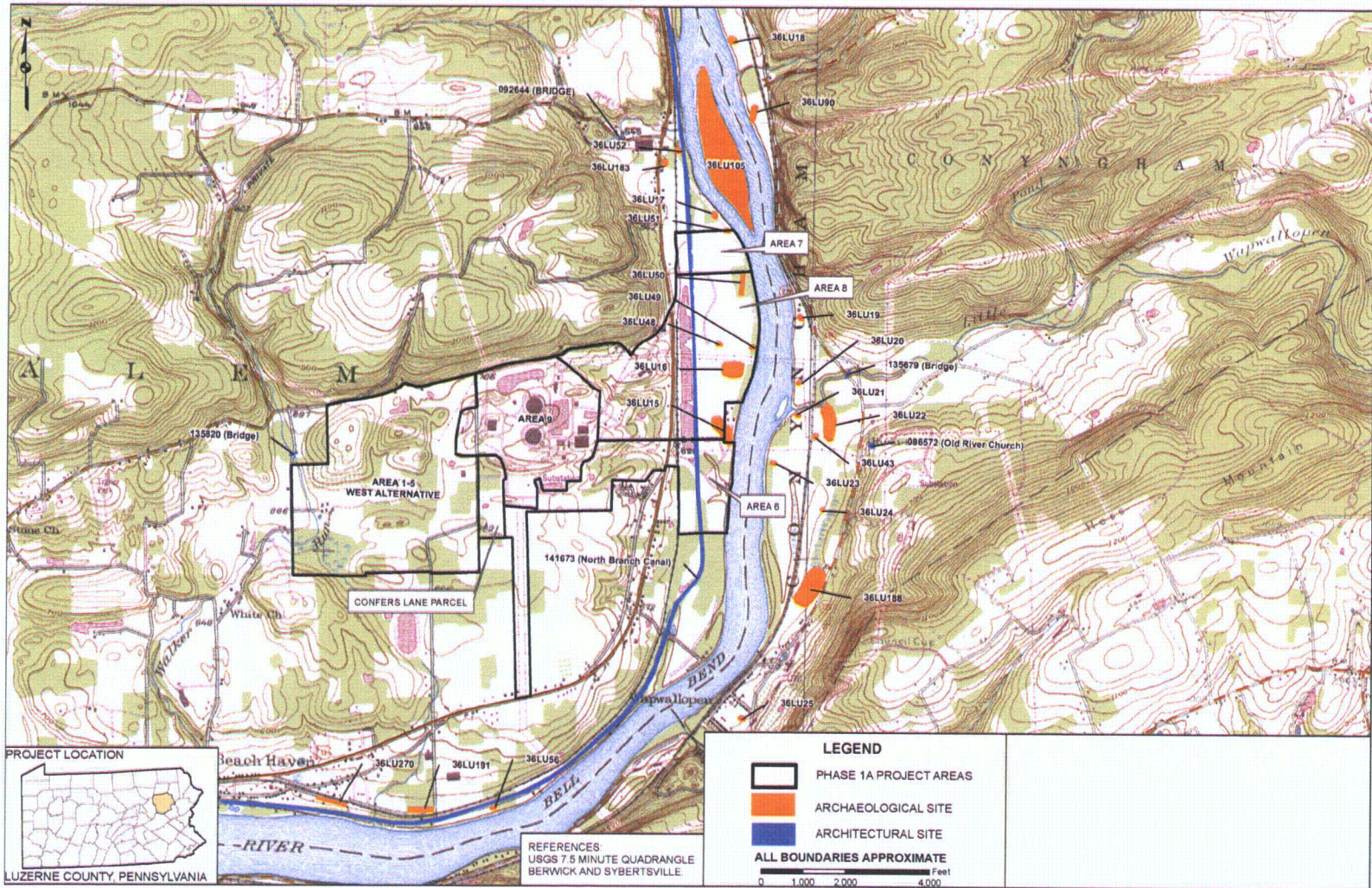


Figure 2.5-7— Surveyed Architectural and Historic Resources in the Project Viewshed

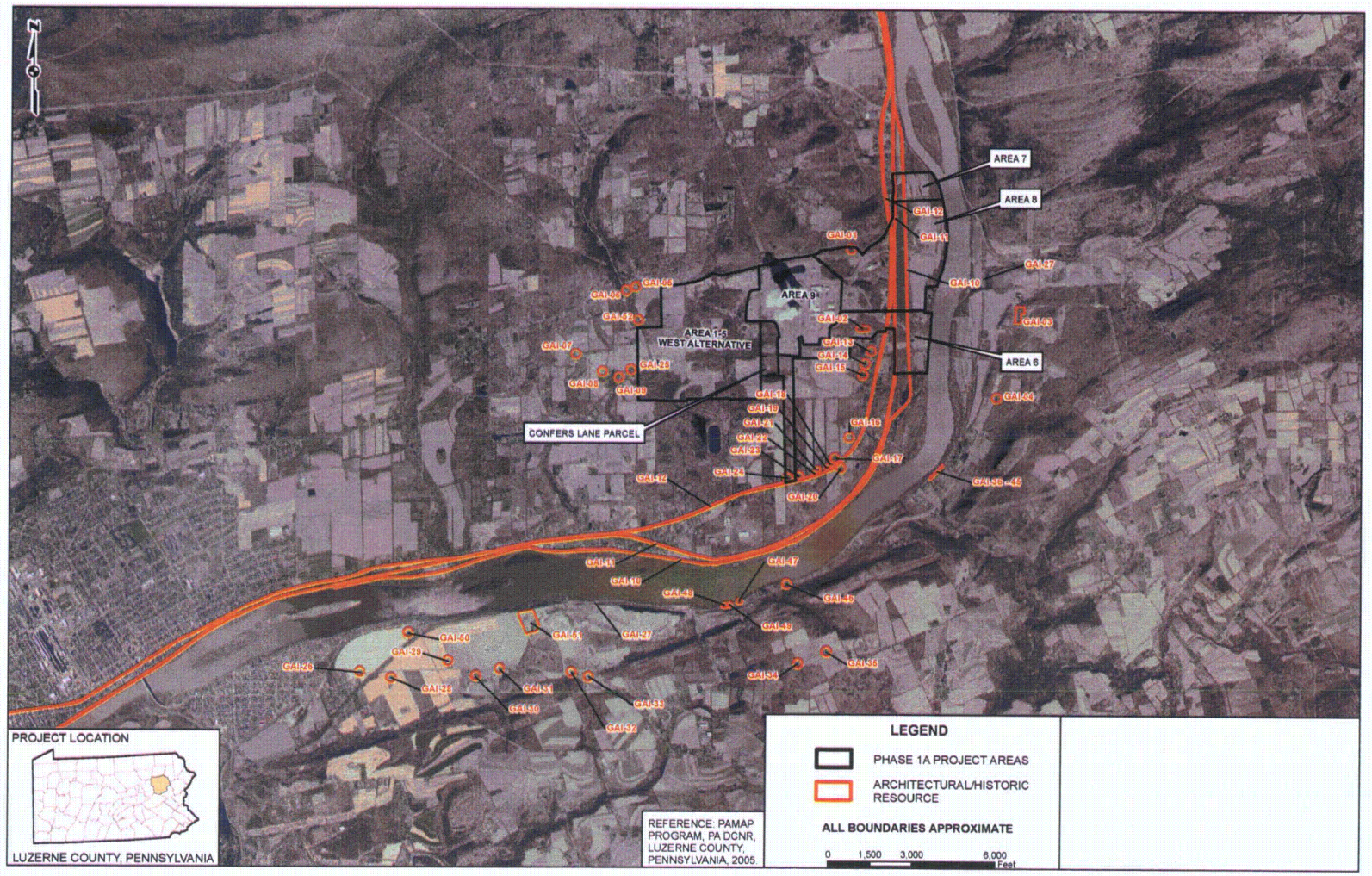


Figure 2.5-8— Phase 1b Project APE Showing Testing Locations and Identified Archeological Sites

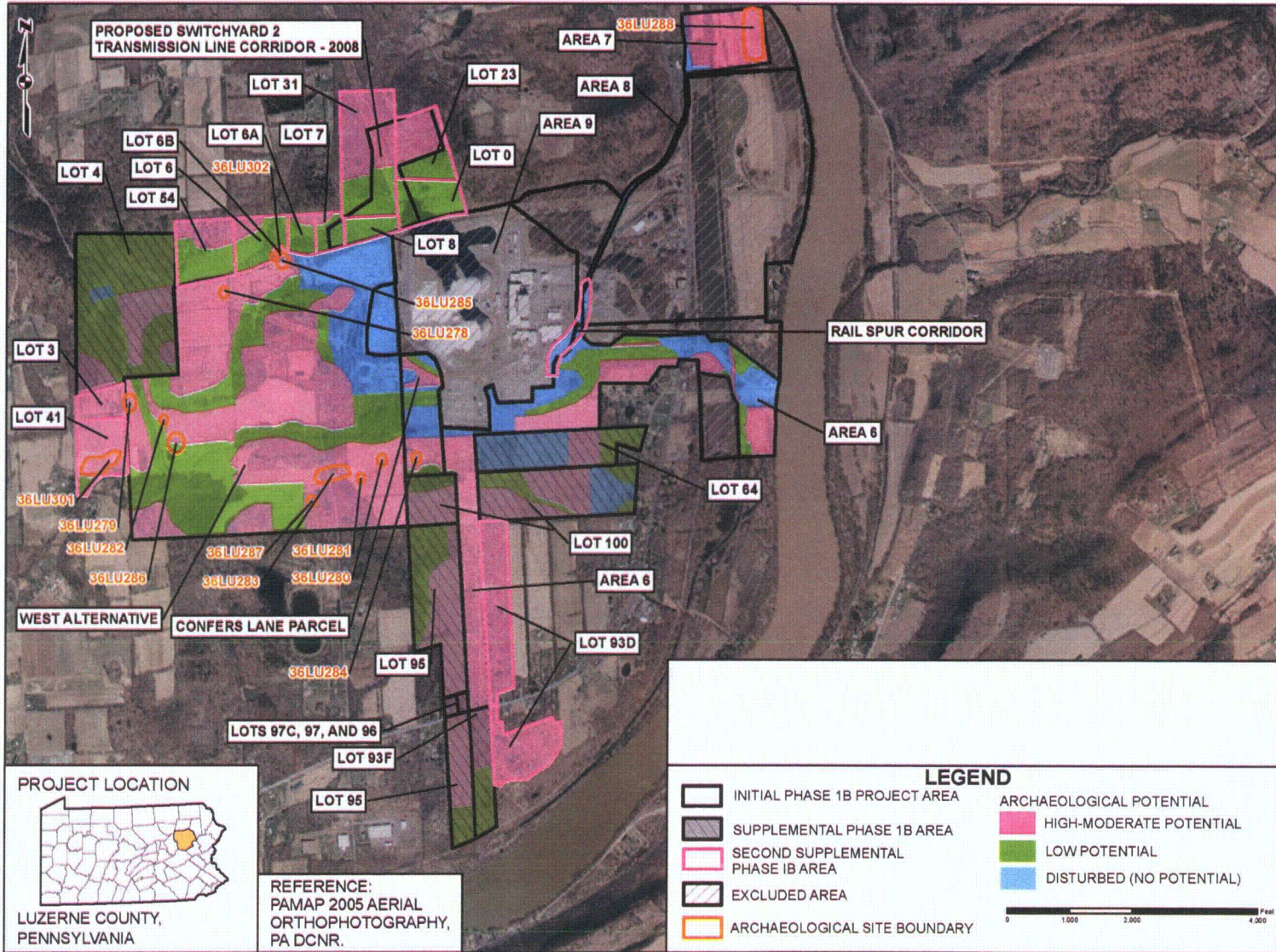


Figure 2.5-9— Black or African-American Minority Population

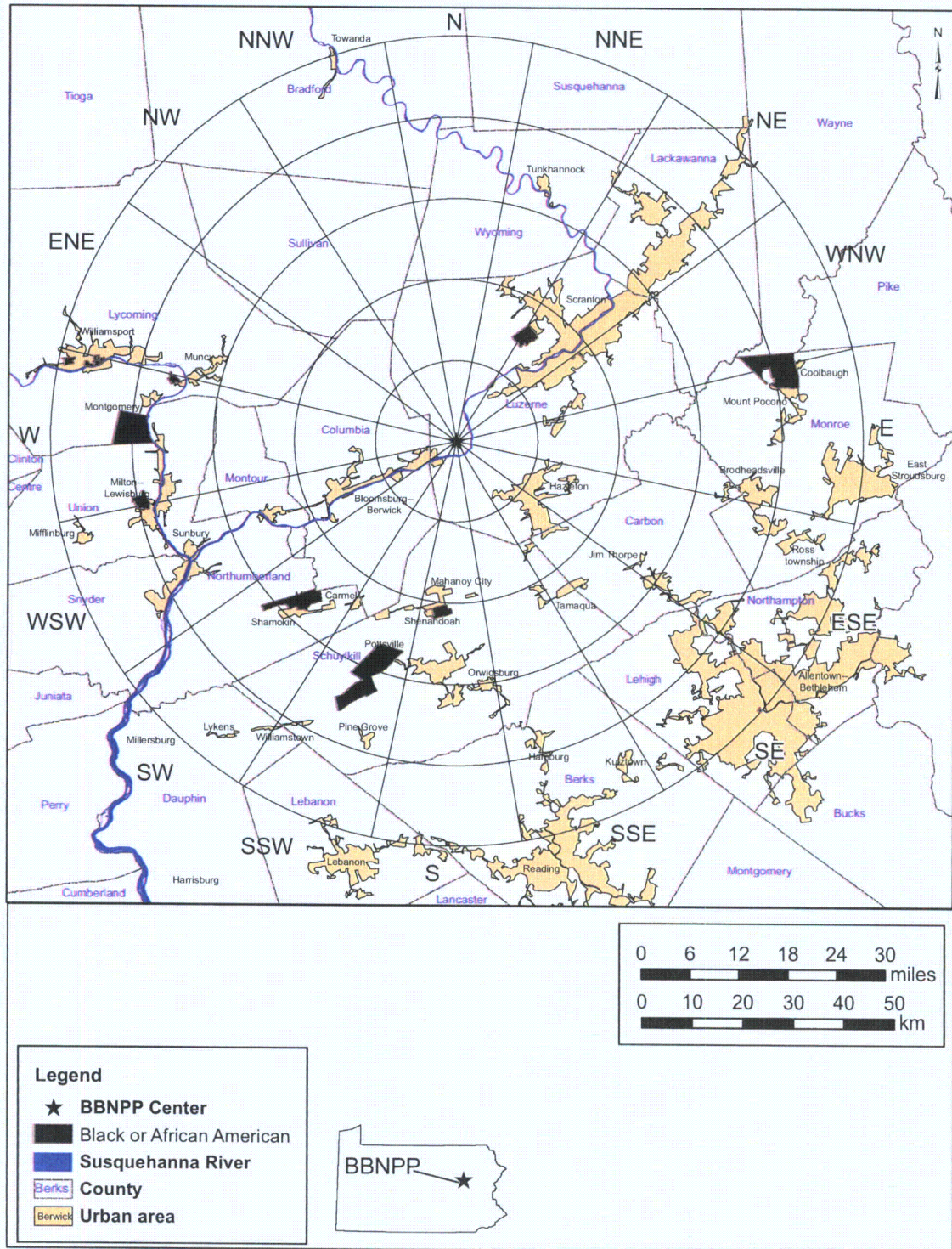


Figure 2.5-10—Asian Minority Population

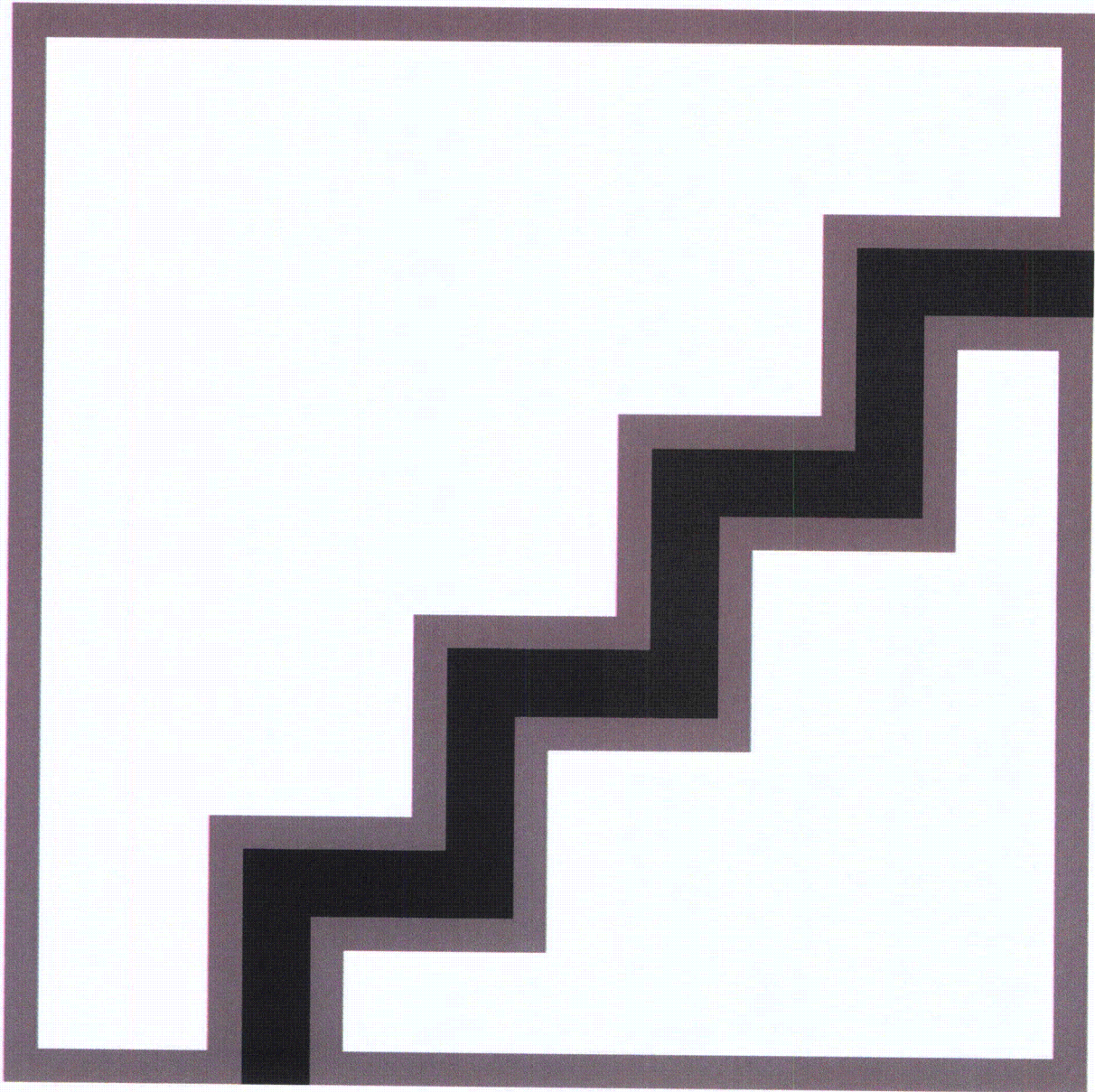


Figure 2.5-11— **Some** Other Minority Population

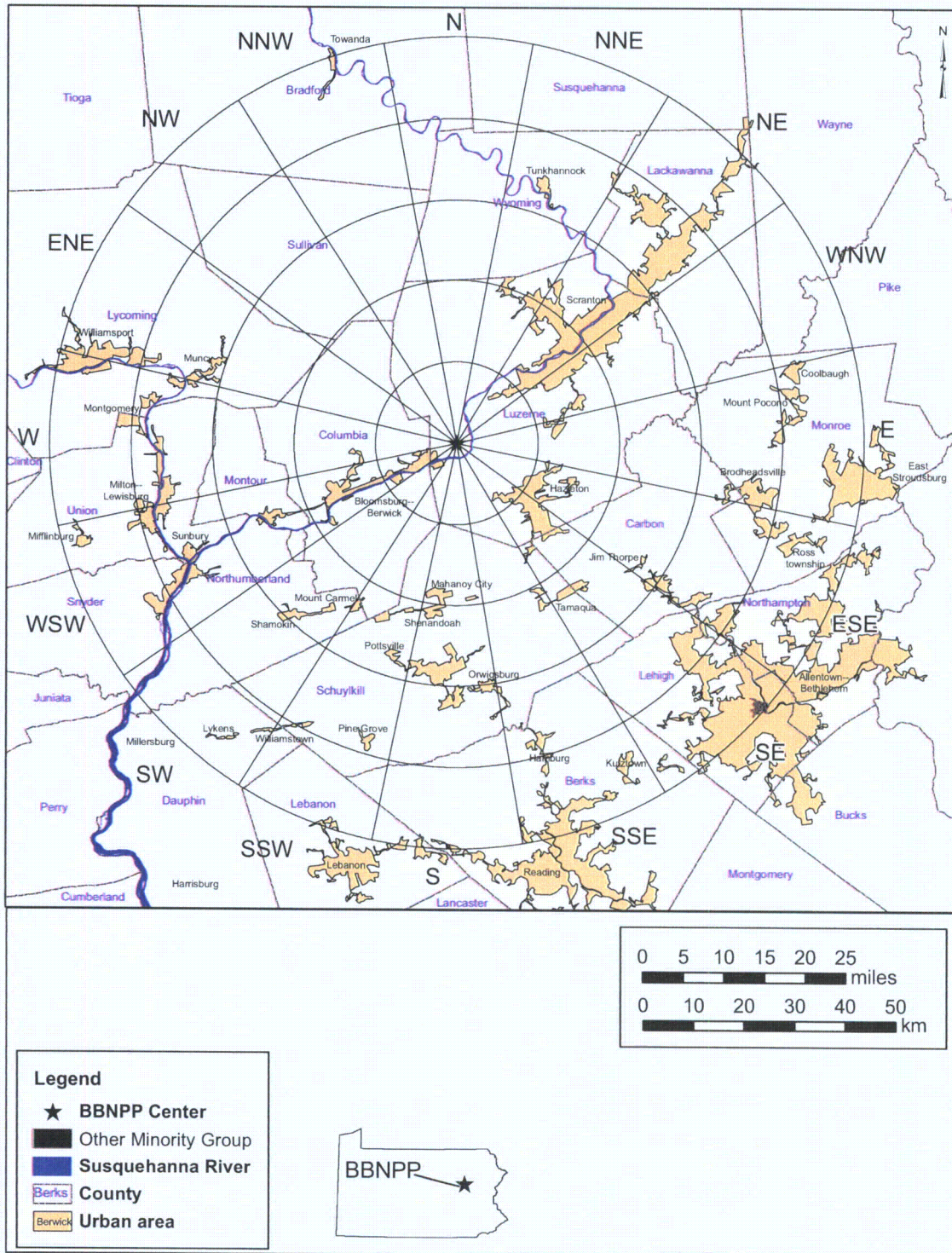


Figure 2.5-12— Aggregate Minority Population

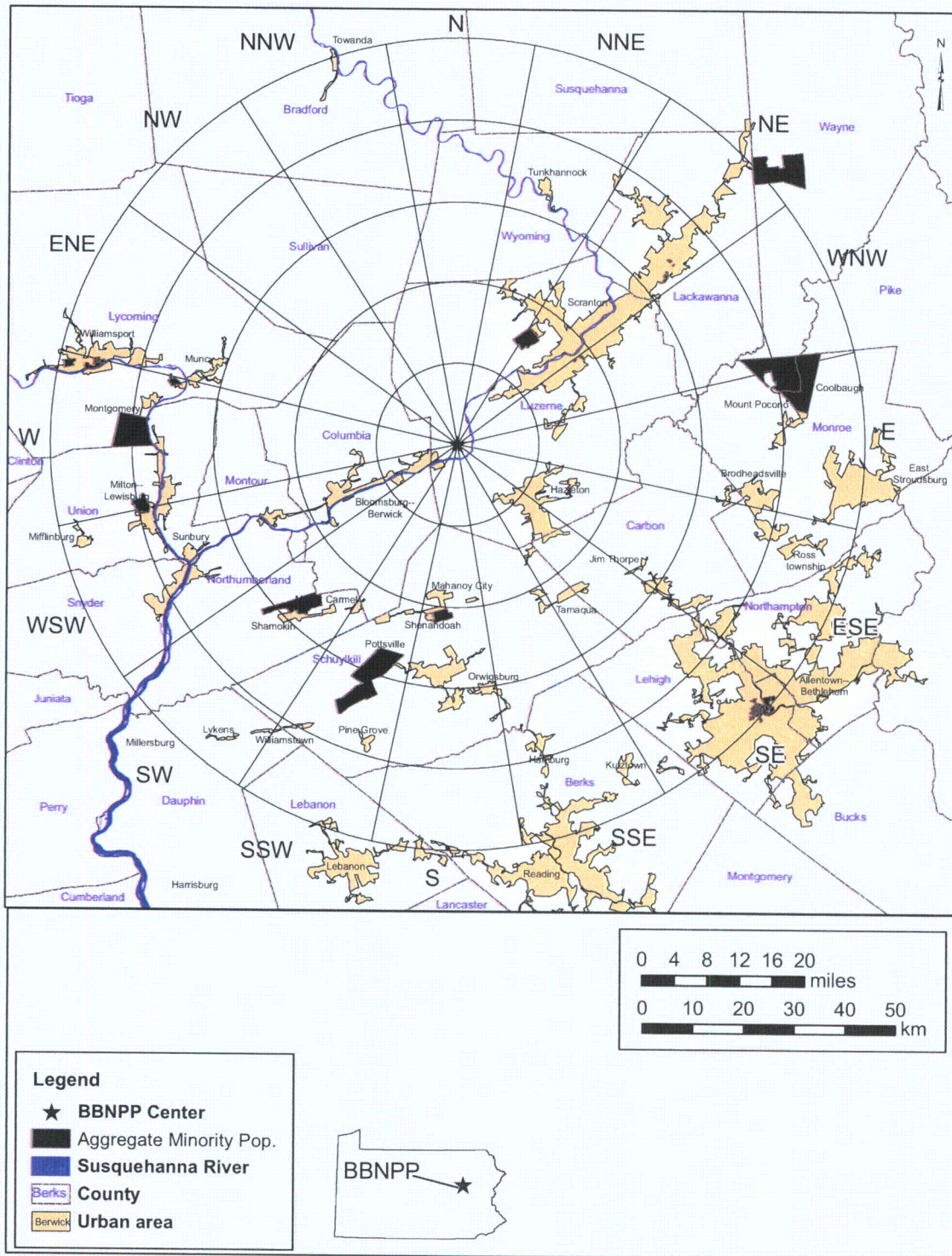


Figure 2.5-13— Hispanic or Latin American Minority Population

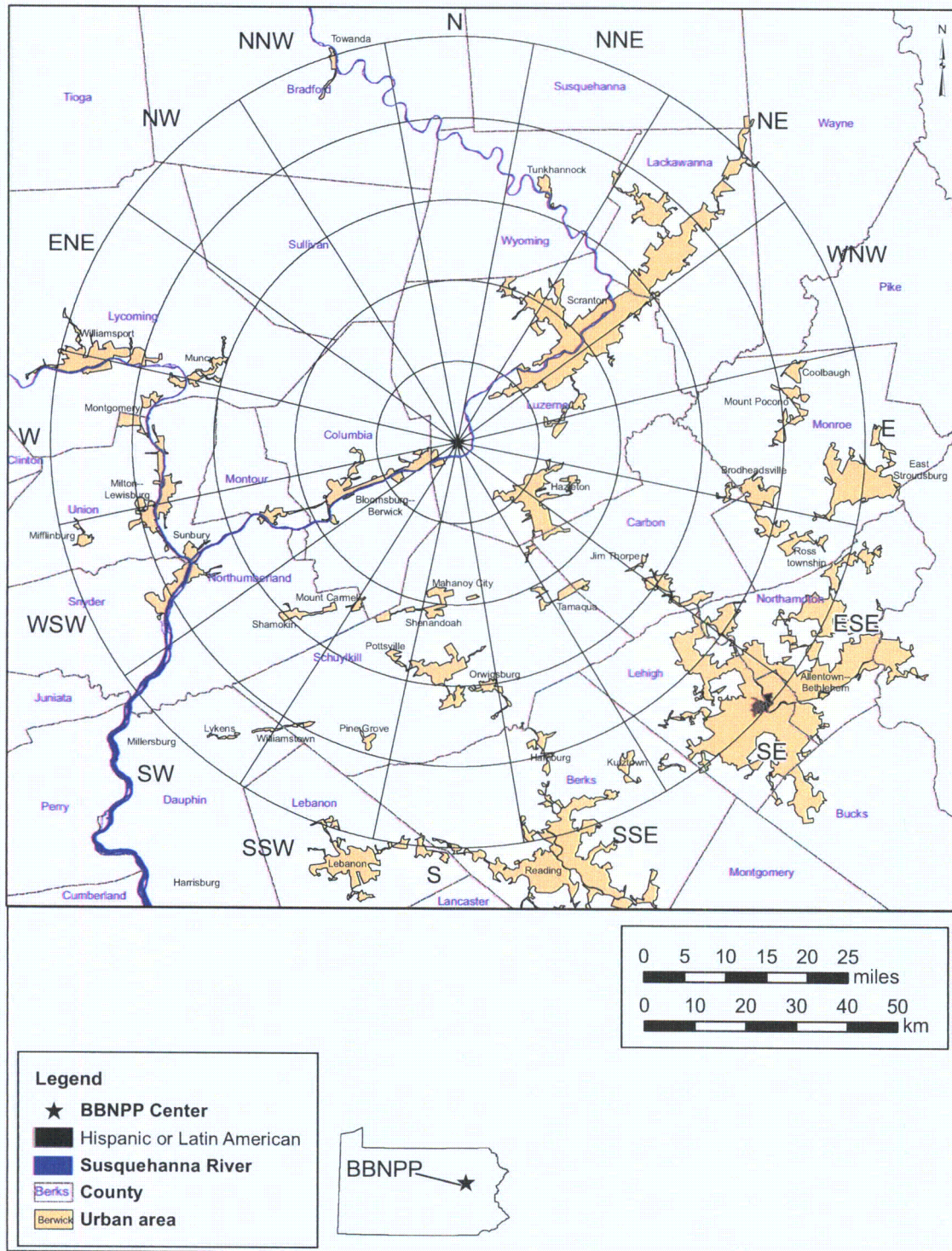
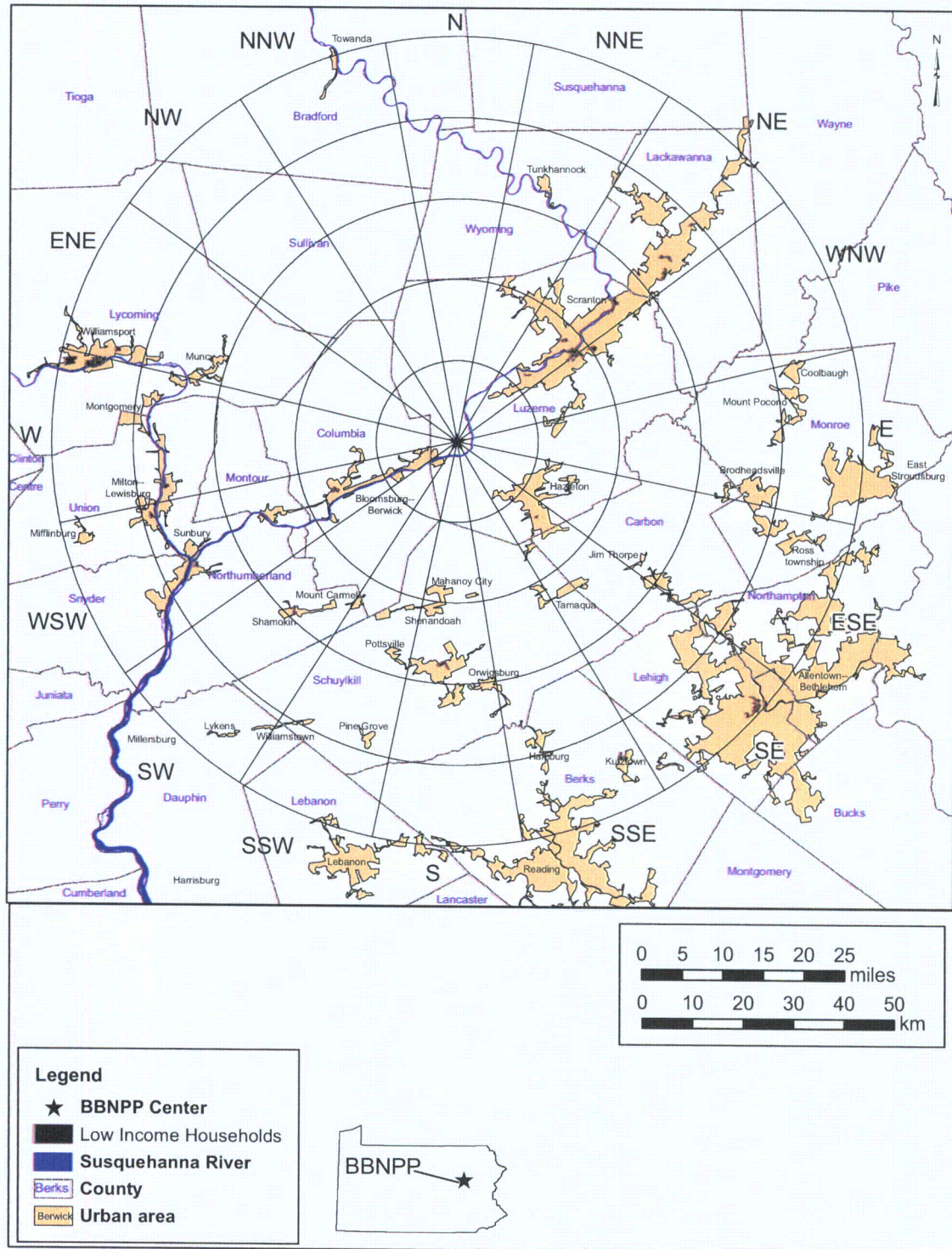


Figure 2.5-14— Low Income Population



Enclosure 2

Response to RAI CR 2.5-2 for COLA Part 3 (ER); Section 2.5

Response to RAI CR 2.5-3 for COLA Part 3 (ER); Section 2.5

Response to RAI CR 2.5-4 for COLA Part 3 (ER); Section 2.5

Response to RAI SE 2.5-2 for COLA Part 3 (ER); Section 2.5

CR 2.5-2**ESRP 4.1.3**

Summary: *Identify historic properties within the project area that can be avoided and describe the avoidance procedures.*

Full Text: During site audit, efforts to avoid adverse impacts to specific sites were discussed. Discuss specific actions to avoid adverse impacts.

Response: Based on the results of initial Phase Ib survey and Pennsylvania State Historic Preservation Office (PA SHPO) consultation, Phase II National Register Evaluation or site avoidance was recommended for seven potentially-eligible archaeological sites (GAI, 2008b and PHMC/BHP, 2009c). It was initially thought that potentially-eligible Site 36LU288 might be avoided by proposed project impacts. Avoidance measures for Site 36LU288, developed in consultation with the PA SHPO, would have included placement of geotextile fabric and fill on the surface of the cultivated field within the site boundary prior to its use as a temporary laydown area, as well as periodic archaeological monitoring during installation and removal of the geotextile fabric and fill. Subsequently, it was determined that avoidance of Site 36LU288 was not feasible.

Based on the results of the Phase II study (GAI, 2010a), all seven sites are recommended as Not Eligible for listing in the NRHP. Based on this assessment and pending SHPO review and concurrence, proposed project impacts will constitute a "No Effect" to these sites.

Based on the results of the 2010 Second Supplemental Phase Ib survey (GAI, 2010b), one additional archaeological site (Site 36LU301) in the project area has been recommended as potentially-eligible to the NRHP. SHPO concurrence on the site's recommended NRHP eligibility is pending. Proposed construction impacts in the site area will result from use as a site laydown and an infiltration basin. Upon receipt of SHPO concurrence on the Site 36LU301 potentially-eligible status, the site will either be avoided or will be subject to a Phase II National Register Site Evaluation. If required, avoidance measures will be developed in consultation with the PA SHPO and are anticipated to be similar to those described above for Site 36LU288.

References Cited in the Response

GAI, 2008b. "Management Summary, Supplemental Phase Ib Cultural Resources Investigations, Bell Bend Nuclear Power Plant, Luzerne County, Pennsylvania, ER 81-0658-079." GAI Consultants, Inc., November 17, 2008.

GAI, 2010a. Technical Report, Phase I Cultural Resources Investigations and Phase II National Register Site Evaluations, Bell Bend Nuclear Power Plant, Luzerne County, Pennsylvania, ER 81-0658-079, GAI Consultants, Inc., June 2010.

GAI, 2010b. Addendum Report, Second Supplemental Phase Ib Cultural Resources Investigation, Power Block Relocation, Bell Bend Nuclear Power Plant, Luzerne County, Pennsylvania, ER 81-0658-079, GAI Consultants, Inc., October 2010.

PHMC/BHP, 2009c. June 11, 2009, letter from Doug McLearen to Rocco Sgarro (PPL Bell Bend, LLC), ER# 91-0658-079-T, Scope of Work Proposal for Phase II Archaeological Evaluations and Assessment of Effects to Historic Resources, Bell Bend Nuclear Power Plant, Salem Township, Luzerne County, Pennsylvania.

COLA Impact

The responses to RAI CR 2.5-2 and CR 2.5-3 add two new COLA ER sections. Section 2.5.3.7 describes Phase II National Register Evaluations and Section 2.5.3.8 describes the Second Supplemental Phase 1b Investigation.

BBNPP COLA ER Section 2.5.3 will be revised to add Section 2.5.3.7 as shown below in a future revision of the COLA.

2.5.3.7 Phase II National Register Evaluations

Based on the results of initial Phase 1b survey and SHPO consultation, Phase II National Register Evaluation or site avoidance was recommended for seven potentially-eligible archaeological sites (GAI, 2008b and PHMC/BHP, 2009c). It was initially thought that potentially-eligible Site 36LU288 might be avoided by proposed project impacts. Potentially NRHP-eligible Site 5 impacts may be avoided by proposed project activities.

Avoidance measures for Site 536LU288, developed in consultation with the PA SHPO, may include would have included placement of geotextile fabric and fill on the surface of the cultivated field within the site boundary prior to its use as a temporary laydown area, as well as periodic archaeological monitoring during installation and removal of the geotextile fabric and fill, or Phase II investigations may be performed instead, as described in the Phase II scope of work, to conclusively evaluate site eligibility. Upon completion of any Phase II investigations and assessment of effects, in consultation with the SHPO, BBNPP will identify measures to avoid, minimize, or mitigate any adverse effects to NRHP-eligible resources, per Section 106 of the National Historic Preservation Act (USC, 2007). Subsequently, it was determined that avoidance of Site 36LU288 was not feasible and Phase II investigations of this site were performed.

BBNPP Section 2.5.3 will be revised to add Section 2.5.3.8 and insert the text shown below as its next to last paragraph.

2.5.3.8 Second Supplemental Phase 1b Investigation

Pending concurrence from the PA SHPO, potentially NRHP-eligible Site 36LU301 may be avoided by proposed project activities. If required, avoidance measures for this site will be developed in consultation with the PA SHPO and are anticipated to be similar to those described above for Site 36LU288 (i.e., placement of geotextile fabric and fill, periodic archaeological monitoring, and removal of the geotextile fabric and fill). If avoidance measures are not feasible, Phase II investigations may be performed to conclusively evaluate site eligibility. Upon completion of any Phase II investigations, in consultation with the PA SHPO, BBNPP will identify measures to avoid, minimize, or mitigate adverse effects to NRHP-eligible resources, per Section 106 of the National Historic Preservation Act (USC, 2007).

BBNPP COLA Section 2.5.3.9 will be renumbered and revised as shown below in a future revision of the COLA.

2.5.3.9-12 References

GAI, 2008a. Technical Report, Phase 1a Cultural Resources Reconnaissance - Berwick, PA, NPP-1, Areas 6,7,8 and Confers Lane parcel, Luzerne County, Pennsylvania, 2008.

GAI, 2008b. Management Summary Phase Ib Cultural Resources Investigation, Bell Bend Nuclear Power Plant, Luzerne County, Pennsylvania, ER 81-0658-079, GAI Consultants Inc., September 2008.

GAI, 2010a. Technical Report, Phase I Cultural Resources Investigations and Phase II National Register Site Evaluations, Bell Bend Nuclear Power Plant, Luzerne County, Pennsylvania, ER 81-0658-079, GAI Consultants, Inc. June 2010.

GAI, 2010b. Addendum Report, Second Supplemental Phase Ib Cultural Resources Investigation, Power Block Relocation, Bell Bend Nuclear Power Plant, Luzerne County, Pennsylvania, ER 81-0658-079, GAI Consultants, Inc. October 2010.

PHMC/BHP, 2009c. Letter from Doug McLearn (PHMC/BHP) to Rocco Sgarro (PPL Bell Bend, LLC), ER# 91-0658-079-T, Scope of Work Proposal for Phase II Archaeological Evaluations and Assessment of Effects to Historic Resources, Bell Bend Nuclear Power Plant, Salem Township, Luzerne County, Pennsylvania, June 11, 2009.

CR 2.5-3ESRP 4.1.3ESRP 5.1.3

Summary: *Provide schedule for Phase II and Phase III investigations for NRHP eligible or listed archaeological sites that cannot be avoided or for which avoidance is uncertain. Mitigation measures would include data recovery investigations developed in consultation with NRC and the SHPO on those sites determined to be NRHP eligible.*

Full Text: Seven archaeological sites with potential to be listed on the NRHP were identified during the Phase I survey. The impacts the project would have on these potential historic properties cannot be determined until the Phase II NRHP evaluations have been completed. Sites determined to be eligible for the NRHP would require data recovery investigations to mitigate adverse impacts.

Response: Based on the results of initial Phase Ib survey and Pennsylvania State Historic Preservation Office (PA SHPO) consultation, Phase II National Register Evaluation or site avoidance was recommended for seven potentially-eligible archaeological sites (GAI, 2008b and PHMC/BHP, 2009c). Phase II National Register Site Evaluations of seven sites (36LU279, 36LU280, 36LU281, 36LU283, 36LU285, 36LU286, and 36LU288) that could not be avoided by project impacts were conducted between July 5 and November 4, 2009, to conclusively evaluate site eligibility (GAI, 2010a). Of the seven sites, six were historic period sites and one (36LU288) was a prehistoric site. It was initially thought that potentially-eligible Site 36LU288 might be avoided by proposed project impacts. Subsequently, it was determined that avoidance of Site 36LU288 was not feasible.

Based on the results of the Phase II study, all seven sites are recommended as Not Eligible for listing in the NRHP. Based on this assessment and pending SHPO review and concurrence, proposed project impacts will constitute a "No Effect" to these sites. Accordingly, no further archaeological investigations are recommended for Sites 36LU279, 36LU280, 36LU281, 36LU283, 36LU285, 36LU286, and 36LU288. The results of this study have been provided in a Phase I/Phase II Technical Report (GAI, 2010a).

Based on the results of the 2010 Second Supplemental Phase Ib survey (GAI, 2010b), one additional site (Site 36LU301) has been recommended as potentially-eligible for listing in the NRHP. PA SHPO review and concurrence on this recommendation is pending. Upon receipt of PA SHPO's concurrence on Site 36LU301's potential eligibility, the site may either be avoided by project impacts or subject to a Phase II National Register Site Evaluation to conclusively determine its NRHP eligibility. Phase II investigations, if required, will be initiated in the first half and completed in the second half of 2011.

Based on the results of Phase II investigations and consultation with NRC and the PA SHPO, the need for Phase III Data Recovery investigations to mitigate adverse impacts from project construction to any NRHP-eligible sites will be determined. A schedule for Phase III investigations, if required, can be provided following completion of additional Phase II NRHP site evaluations.

References Cited in the Response

GAI, 2008b. Management Summary, Supplemental Phase Ib Cultural Resources Investigations, Bell Bend Nuclear Power Plant, Luzerne County, Pennsylvania, ER 81-0658-079. GAI Consultants, Inc., November 17, 2008.

GAI, 2010a. Technical Report, Phase I Cultural Resources Investigations and Phase II National Register Site Evaluations, Bell Bend Nuclear Power Plant, Luzerne County, Pennsylvania, ER 81-0658-079, GAI Consultants, Inc. June 2010.

GAI, 2010b. Addendum Report, Second Supplemental Phase Ib Cultural Resources Investigation, Power Block Relocation, Bell Bend Nuclear Power Plant, Luzerne County, Pennsylvania, ER 81-0658-079, GAI Consultants, Inc. October 2010.

PHMC/BHP, 2009c. June 11, 2009, letter from Doug McLearn to Rocco Sgarro (PPL Bell Bend, LLC), ER# 91-0658-079-T, Scope of Work Proposal for Phase II Archaeological Evaluations and Assessment of Effects to Historic Resources, Bell Bend Nuclear Power Plant, Salem Township, Luzerne County, Pennsylvania.

COLA Impact

The responses to RAI CR 2.5-2 and CR 2.5-3 add two new COLA ER sections. Section 2.5.3.7 describes Phase II National Register Evaluations and Section 2.5.3.8 describes the Second Supplemental Phase 1b Investigation.

BBNPP COLA ER Section 2.5.3.7 generated by the response to RAI CR 2.5-2 will be revised by appending the text shown below.

Phase II National Register Site Evaluations of seven sites (36LU279, 36LU280, 36LU281, 36LU283, 36LU285, 36LU286, and 36LU288) that could not be avoided by project impacts were conducted between July 5 and November 4, 2009, to conclusively evaluate site eligibility (GAI, 2010a). Of the seven sites, six were historic period sites and one (36LU288) was a prehistoric site. The Phase II study included site-specific archival research, fieldwork and laboratory analysis. Field methods included close-interval and/or judgmental shovel testing and test unit excavations. Sites located within cultivated fields were also subject to controlled surface collection and mechanical stripping of the plowzone within trenches. Figure 2.5-8 illustrates the location of Phase II sites.

Phase II investigations at the seven sites and provides recommendations on NRHP eligibility and the need for further work. Phase II investigations included the excavation of 80 test units and 1,169 shovel tests, as well as pedestrian survey of cultivated fields and mechanical stripping of the plowzone in trenches at four sites. This work produced 63,169 artifacts (62,841 historic specimens and 328 prehistoric lithics) and resulted in the documentation of 30 cultural features (GAI, 2010a).

Based on the results of the Phase II study, all seven sites are recommended as Not Eligible for listing in the NRHP. Based on this assessment and pending SHPO review and concurrence, proposed project impacts will constitute a "No Effect" to these sites. Accordingly, no further archaeological investigations are recommended for Sites 36LU279, 36LU280, 36LU281, 36LU283, 36LU285, 36LU286, and 36LU288. The results of this study have been provided in a Phase I/Phase II Technical Report (GAI, 2010a).

Based on this assessment and pending SHPO review and concurrence, proposed project impacts will constitute a "No Effect" to these sites. Accordingly, no further archaeological investigations are recommended for Sites 36LU279, 36LU280, 36LU281, 36LU283, 36LU285, 36LU286, and 36LU288. The results of this study have been provided in a Phase I/Phase II Technical Report (GAI, 2010a).

BBNPP COLA ER Section 2.5.3.8 generated by the response to RAI CR 2.5-2 will be revised by inserting the text shown below into the section.

Based on Second Supplemental Phase Ib results, Site 36LU301 is recommended as potentially-eligible for listing in the NRHP. Pending SHPO review and concurrence on eligibility recommendations, site avoidance or Phase II investigations are recommended for Site 36LU301.

BBNPP COLA Section 2.5.3.9 will be renumbered and revised as shown below in a future revision of the COLA.

2.5.3.912 References

GAI, 2008a. Technical Report, Phase 1a Cultural Resources Reconnaissance - Berwick, PA, NPP-1, Areas 6,7,8 and Confers Lane parcel, Luzerne County, Pennsylvania, 2008.

GAI, 2008b. Management Summary Phase Ib Cultural Resources Investigation, Bell Bend Nuclear Power Plant, Luzerne County, Pennsylvania, ER 81-0658-079, GAI Consultants Inc., September 2008.

GAI, 2010a. Technical Report, Phase I Cultural Resources Investigations and Phase II National Register Site Evaluations, Bell Bend Nuclear Power Plant, Luzerne County, Pennsylvania, ER 81-0658-079, GAI Consultants, Inc. June 2010.

GAI, 2010b. Addendum Report, Second Supplemental Phase Ib Cultural Resources Investigation, Power Block Relocation, Bell Bend Nuclear Power Plant, Luzerne County, Pennsylvania, ER 81-0658-079, GAI Consultants, Inc. October 2010.

PHMC/BHP, 2009c. Letter from Doug McLearn (PHMC/BHP) to Rocco Sgarro (PPL Bell Bend, LLC), ER# 91-0658-079-T, Scope of Work Proposal for Phase II Archaeological Evaluations and Assessment of Effects to Historic Resources, Bell Bend Nuclear Power Plant, Salem Township, Luzerne County, Pennsylvania, June 11, 2009.

CR 2.5-4ESRP 4.1.3ESRP 5.1.3

Summary: *Provide the schedule for completion of criteria of effects report for historic architectural resources.*

Full Text: Ten historic properties within the project area of potential effect were identified that may be NRHP eligible. The criteria of effects report would determine if the BBNPP would have adverse impacts to these properties. Describe the nature of the impacts the project would have on these 10 properties.

Response: Field studies to assess the project effect on ten historic resources were conducted in 2009. A Criteria of Effects report will be submitted in late 2011, subsequent to receipt of Pennsylvania State Historic Preservation Office comments on the Phase I/II Technical report which was submitted to the SHPO in December 2010.

COLA Impact

No changes to the BBNPP COLA ER are required as a result of this RAI response.

SE 2.5-2ESRP 2.5.1

Summary: *Extend the transient population analysis out from 10 to 50 miles.*

Full Text: None.

Response:

The transient population analyses within 10 miles and from 10-50 miles of the BBNPP have been revised to address the BBNPP footprint change.

Analysis of Transient Populations within 10 mi (16 km) radius of the BBNPP

Quantitative estimates of transient populations within a 10 mi (16 km) radius of BBNPP are provided in Table 1. These estimates are based on the revised location of the BBNPP power block.

The term "transient" is used in this analysis to mean persons who live (are domiciled) outside the 10 mi (16 km) area, but may be predictably expected to be in the area at some point.

"Transient population" includes:

- Workers and college students, also referred to as commuters, who live permanently outside of the area but who commute to a worksite or college campus in the area on a regular basis;
- Persons who live outside the area but travel from their home to visit, shop, or tend to personal business or to conduct business within the region, including tourists and visitors recreating in the area; and
- Seasonal workers employed in the agriculture sector.

Individuals who simply travel through the area from a point outside the area to a destination outside the area are not included in this definition. Specifically, the following transient population categories were considered for BBNPP and are discussed below:

1. Visitors/Tourists
 - Seasonal Housing
 - Campgrounds
 - Recreational Resources (fishing, hunting and golf courses)
 - Lodging (Motels/hotels)
2. Commuters
 - Major Employers
 - Universities/colleges

Agricultural workers have been excluded from the analysis, as the Commonwealth of Pennsylvania does not collect data on migrant or seasonal agricultural workers. Additionally, there are currently no significant special events that generate large transient populations within the BBNPP 10 mi (16 km) area.

In order to avoid double counting individuals as transients that either are found in categories that are most likely to have already been captured in census counts of the resident population,

or travel to certain destination categories that typically only attract individuals living in the same area, the transient analysis does not include populations at: primary and secondary schools, hospitals (other than as a major employer), nursing homes (other than as a major employer), prisons (other than as a major employer) or other institutions. In contrast, it is assumed that populations associated with seasonal housing, motels/hotels and campgrounds are transient and come from outside the 10 mi (16 km) area even if certain portions of those populations are likely to originate from within the region.

The transient analysis suggests that there are an estimated 3,599 transients within a 10 mi (16 km) radius of the BBNPP site (Table 1). Of these, there are approximately 230 transients occupying seasonal housing, 1,336 staying at campgrounds, 568 using recreational resources for hunting, fishing and golfing, 326 lodging at motels, hotels and 'bed & breakfast' establishments, and 1,139 commuting to major employers. Locations of hotels, campgrounds, recreational resources, and facilities with commuters were located through geo-coding addresses in ArcGIS (ESRI, 2009).

Seasonal Housing

Table 1 provides information on recreational, seasonal, and occasional housing. LandView 6 software has been used to estimate the transient population from the 2000 US Census (USCB, 2009a; USCB, 2009b). LandView 6 determines the number of housing units within a 10 mi (16 km) radius of BBNPP based on census block point data. For the 10 mi (16 km) area, the number of housing units is multiplied by the percentage of total housing units in the corresponding census block group classified as "for recreational/seasonal/ occasional use." The housing occupancy was summarized in LandView6 - Census 2000 Profile of General Demographic Characteristics DP-1. The number of seasonal housing units was then multiplied by the Pennsylvania State average household size (2.48 persons) to arrive at a maximum population in recreational, seasonal, and occasional housing (USCB, 2000a). In order to account for the fact that these units are occupied for only a portion of the year, the estimated seasonal population for each segment was calculated by assuming that three quarters of the housing units would be occupied for three months of the year (Fermi, 2008). It was also assumed that seasonal occupants typically reside outside the 10 mi (16 km) area. Thus, by multiplying the maximum population in recreational, seasonal, or occasional housing units by 0.1875 ($0.1875 = 0.75 \times 0.25$) an estimate of the equivalent transient housing population was determined for recreational, seasonal, or occasional use. In order to calculate the transient housing population by sector and distance within the 10 mi (16 km) area as detailed in Table 1, it was assumed that transient housing would be distributed in proportion to the resident population. Resident population for each sector and distance within the 10 mi (16 km) area was estimated by SECPOP2000 (NRC, 2003) for the 2000 US Census.

Campgrounds

An estimate of the transient population using campgrounds and RV parks within a 10 mi (16 km) radius of BBNPP is shown in Table 1. There are a total of six campgrounds in this area. Information on the campsites was obtained directly from the campground, the Luzerne County Visitors Bureau or the Pennsylvania Visitor's Network (PVN, 2009). Each campground and RV park was located and assigned spatial coordinates in ArcGIS. To estimate the maximum transient population associated with Moyers Grove, Hidden Lake, Paradise Campground, and Whispering Pine, the average number of persons per site was assumed to be four based on a review of this and other listed campground sites, the occupancy for each site was assumed to

be 47% based on a national survey (Woodall, 2004) of occupancy rates, and all campers were assumed to come from outside the 10 mi (16 km) area.

Recreational Resources

Although many of the visitors to local recreational resources will be residents from the immediate area, an estimate of the transient population using these recreational resources for hunting, fishing or golf within a 10 mi (16 km) radius of BBNPP has been provided in Table 1. Each recreational resource was located and assigned spatial coordinates in ArcGIS. The estimate was obtained from transient population data provided in Appendix E of KLD's Report on Evacuation Time Estimates for BBNPP and SSES (KLD, 2008) as revised by the response to Question No 13.03-37 of BBNPP RAI 92 (KLD, 2010).

Lodging

The estimated transient population using motels and other lodging establishments within a 10 mi (16 km) radius is provided in Table 1. Each motel and other lodging establishment was located and assigned spatial coordinates in ArcGIS. The number of rooms at hotels, motels and bed and breakfast establishments were identified using the AAA Tourbook (AAA, 2010). The maximum transient population for each segment was then calculated by multiplying the 2007 average hotel occupancy for Pennsylvania (61.9%) (PTO, 2007) by the number of rooms and an estimate of the number of persons per room (1.57), which is derived from nationwide survey information (AHLA, 2009). It is assumed that all lodging guests come from outside of the 10 mi (16 km) area.

Commuters (Employees of Major Employers and University/College Students)

As presented in Table 1, the number of transient employees and college students commuting to work from outside the 10 mi (16 km) area was estimated by: identifying the locations of major employers and universities/colleges and determining the size of the workforce and/or student body by obtaining data from a variety of sources. These sources include internet searches and direct phone calls to major employers (KLD, 2008; BHC, 2009; HDC, 2009; PDC, 2009, 2010 ; PASS, 2008); and using 2000 US Census Journey to Work data for minor civil divisions within the Emergency Planning Zone to estimate the percentage of the workforce that commutes to work or school from outside the region (USCB, 2000b; KLD, 2008), unless information was otherwise available from the employer or college (KLD, 2008). Each major employer and university/college was located and assigned spatial coordinates in ArcGIS.

It was assumed that the employees of smaller employers and the staff and students of primary and secondary schools would likely reside within the 10 mi (16 km) area and would not commute from outside of the region.

Analysis of Transient Populations within 10-50 mi (16-80 km) radius of the BBNPP

Quantitative estimates of transient populations within the 10-50 mi (16-80 km) area are provided in Table 2. The estimates are based on the revised location of the BBNPP power block. Transients considered for this analysis included populations using:

- Seasonal Housing
- Lodging (Motels/hotels), and
- Campgrounds

Unlike the analysis provided for the 0-10 mi (0-16 km) radius, the 10-50 mi analysis did not incorporate commuters or recreational resources. In addition, this analysis did not include primary or secondary schools, hospital and nursing home workers or patients, or prison inmates.

In order to avoid double counting populations that are most likely to be "resident" due to either their inclusion in census counts of the resident population or the large geographic area under consideration (where individuals traveling to various destinations may also live within the same area), the transient analysis does not include populations at primary and secondary schools; hospitals, nursing homes, prisons and other institutions; workplaces and colleges; or recreational areas and local attractions. In contrast, it is assumed that all populations associated with seasonal housing, motels/hotels and campgrounds are transient and come from outside the 50 mi (80 km) area. Additionally, agricultural workers have been excluded from the analysis, as the Commonwealth of Pennsylvania does not collect data on migrant or seasonal agricultural workers.

A qualitative discussion of special events that attract a large number of transients from outside the area for a short period of time is presented below.

The transient analysis suggests that there are an estimated 44,141 transients within the 10-50 mi (16-80 km) radii of the BBNPP site (Table 2). Of these, there are approximately 17,272 transients occupying seasonal housing, 14,945 staying at campgrounds, and 11,924 lodging at motels, hotels and 'bed & breakfast' establishments.

Seasonal Housing

Table 2 provides information on recreational, seasonal, and occasional housing. LandView 6 software has been used to estimate the transient population from the 2000 US Census (USCB, 2009a; USCB, 2009b). LandView 6 determines the number of housing units for each 10 mi (16 km) concentric circle segment within the 10 mi (16 km) to 50 mi (80 km) radii based on census block point data. For each segment, the number of housing units is multiplied by the percentage of total housing units in the corresponding census block group classified as "for recreational/seasonal/ occasional use." The housing occupancy was summarized in LandView6 - Census 2000 Profile of General Demographic Characteristics DP-1. The number of seasonal housing units was then multiplied by the Pennsylvania State average household size (2.48 persons) to arrive at a maximum population in recreational, seasonal, and occasional housing (USCB, 2000a). In order to account for the fact that these units are occupied for only a portion of the year, the estimated seasonal population for each segment was calculated by assuming that three quarters of the housing units would be occupied for three months of the year (Fermi, 2008). It was also assumed that seasonal occupants typically reside outside the 50 mi (80 km) area. Thus, by multiplying the maximum population in recreational, seasonal, or occasional housing units by 0.1875 ($0.1875 = 0.75 \times 0.25$) an estimate of the equivalent transient housing population for recreational, seasonal, or occasional use was determined for each 10 mi (16 km) concentric circle segment. Transient populations were rounded up to the nearest whole number.

Campgrounds

An estimate of the transient population using campgrounds and RV parks within the 10-50 mi (16-80 km) area is shown in Table 2. For each 10 mi (16 km) concentric circle segment within the 10-50 mi (16-80 km) radii, the campgrounds and RV park transient population was

estimated by compiling listings of campground and RV parks from PA counties within 50 mi (80 km) of the BBNPP site (PVN, 2009). Each campground and RV park was located and assigned spatial coordinates in ArcGIS. Each site listing a website was reviewed for information on the maximum number of camping, cabin, and RV sites within each campground and RV park. To estimate the maximum transient population associated with campgrounds and RV sites, the average number of persons per site was assumed to be four based on a review of the listed campground sites, the occupancy for each site was assumed to be 47% based on a national survey (Woodall, 2004) of occupancy rates, and all campers were assumed to come from outside the 50 mi (80 km) area.

Lodging

The estimated transient population using motels and other lodging establishments within the 10-50 mi (16-80 km) radii is provided in Table 2. The number of rooms at hotels, motels and 'bed and breakfast' establishments within each 10 mi (16 km) concentric circle segment were identified using the AAA Tourbook (AAA, 2010). Each motel and other lodging establishment was located and assigned spatial coordinates in ArcGIS. The maximum transient population for each segment was then calculated by multiplying the 2007 average hotel occupancy for Pennsylvania (61.9%) (PTO, 2007) by the number of rooms and an estimate of the number of persons per room (1.57), which is derived from nationwide survey information (AHLA, 2009). It is assumed that all lodging guests come from outside of the 50 mi (80 km) area. Transient populations were rounded up to the nearest whole number.

Special Events

Significant special events that generate large transient populations in the BBNPP 50 mi (80 km) area for short periods of time include the Pocono Raceway (NASCAR) in Long Pond, PA and the Little League World Series in Williamsport, PA. The Pocono Raceway, which is estimated to attract many visitors on race weekends, has a seating capacity of 76,812. Two NASCAR Sprint Cup races are held there; one in June and another in August (NASCAR, 2009). Williamsport also hosts the Little League World Series. Seating capacity for the Lamade Stadium, where the Series is held, is approximately 40,000; 10,000 seats with additional space for 30,000 spectators on the grass (Little League, 2009). The Little League World Series in Williamsport typically occurs in August.

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**Table 1: Summary of Transient Populations within 10 mi (16 km) of the BBNPP Site, by Sector and Distance
(Page 1 of 2)**

Sector/Type of Population	Population by Radii/Distance mi (km)						
	0 to 1 mi (0 to 2 km)	1 to 2 mi (2 to 3 km)	2 to 3 mi (3 to 5 km)	3 to 4 mi (5 to 6 km)	4 to 5 mi (6 to 8 km)	5 to 10 mi (8 to 16 km)	0 to 10 mi (0 to 16 km)
N Total	0	16	0	1	1	256	274
NNE Total	0	0	0	4	1	18	23
NE Total	0	2	0	1	1	170	174
ENE Total	0	159	0	276	1	4	440
E Total	360	1	0	1	1	48	411
ESE Total	0	2	0	3	1	325	331
SE Total	0	1	0	1	1	198	201
SSE Total	0	2	0	2	1	4	9
S Total	0	1	0	3	1	3	8
SSW Total	0	2	0	2	1	2	7
SW Total	0	1	0	13	31	9	54
WSW Total	0	3	0	195	269	586	1,053
W Total	0	0	0	3	1	6	10
WNW Total	0	1	0	1	1	519	522
NW Total	0	1	0	1	1	3	6
NNW Total	0	1	0	70	1	4	76
Total Population	360	193	0	577	314	2,155	3,599

**Table 1: Summary of Transient Populations within 10 mi (16 km) of the BBNPP Site, by Sector and Distance
(Page 2 of 2)**

Sector/Type of Population	Population by Radii/Distance mi (km)						
	0 to 1 mi (0 to 2 km)	1 to 2 mi (2 to 3 km)	2 to 3 mi (3 to 5 km)	3 to 4 mi (5 to 6 km)	4 to 5 mi (6 to 8 km)	5 to 10 mi (8 to 16 km)	0 to 10 mi (0 to 16 km)
Seasonal Housing	0	34	0	60	26	110	230
Campgrounds	0	0	0	275	28	1,033	1,336
Recreational Resources	0	159	0	68	0	341	568
Lodging	0	0	0	0	23	303	326
Commuters	360	0	0	174	237	368	1,139
Total	360	193	0	577	314	2,155	3,599

Table 2: Summary of Transient Populations within 10-50 mi (16-80 km) of the BBNPP Site, by 10 mi (16 km) radii

Distance from BBNPP Site	Estimated Seasonal Housing Population	Estimated Campground Population	Estimated Lodging Population	Total Estimated Transient Population
10-20 mi (16-32 km)	1,307	1,196	1,316	3,819
20-30 mi (32-48 km)	2,845	2,419	1,778	7,042
30-40 mi (48-64 km)	6,369	5,506	2,949	14,824
40-50 mi (64-80 km)	6,751	5,824	5,881	18,456
10-50 mi (16-80 km)	17,272	14,945	11,924	44,141

COLA Impact:

BBNPP COLA ER Section 2.5.1.1.1 will be revised by appending the text shown below in a future revision of the COLA:

Transient Population Levels

Transient populations within a 50 mi (80 km) radius of the BBNPP site are shown in Table 2.5-9. Additional information supporting these estimates is described in FSAR Section 2.1.3.1. Quantitative estimates of transients are provided for recreational, seasonal, and occasional housing, motels and hotels, and campgrounds within a 50 mi (80 km) radius. Transient populations associated with major employers and colleges and certain recreational facilities have also been estimated within a 10 mi (16 km) radius of the site. There are an estimated 47,740 transients within a 50 mi (80 km) radius of the BBNPP site. Of these, approximately 44,141 occur within the 10-50 mi (16-80 km) radii. The methods used to calculate these transient populations are discussed in Section 2.5.1.1.3.2 for the 0-10 mi (16 km) area. Transients were identified by distance and sector within a 50 mi (80 km) radius of the site. In order to avoid double counting individuals that are likely to have been captured as residents within the 10-50 mi (16-80 km) region, the transient analysis does not include populations at primary and secondary schools; hospitals, nursing homes, prisons and other institutions; workplaces and colleges; or recreational areas and local attractions. In contrast, it is assumed that all populations associated with seasonal housing, motels/hotels and campgrounds are transient and come from outside the 50 mi (80 km) area. Additionally, agricultural workers have been excluded from the analysis, as the Commonwealth of Pennsylvania does not collect data on migrant or seasonal agricultural workers.

Significant special events that generate large transient populations in the BBNPP 50 mi (80 km) area for short periods of time include the Pocono Raceway (NASCAR) in Long Pond, PA and the Little League World Series in Williamsport, PA. The Pocono Raceway, which is estimated to attract many visitors on race weekends, has a seating capacity of 76,812. Two NASCAR Sprint Cup races are held at this venue; one in June and another in August (NASCAR, 2009). Williamsport also hosts the Little League World Series. Seating capacity for the Lamade Stadium, where the Series is held, is approximately 40,000; 10,000 seats with additional space for 30,000 spectators on the grass (Little League, 2009). The Little League World Series in Williamsport typically occurs in August.

Although both of these events feature large transient populations, as suggested in NRC Regulatory Guide 4.7 (NRC, 1998), transient populations of short duration should be weighted appropriately to reduce their significance relative to other permanent and transient populations. Therefore, transients associated with these special events have not been included with the other transient groups mentioned above in estimating cumulative total transient populations present in the 50 mi (80 km) area.

BBNPP COLA ER Section 2.5.1.1.3.2 will be revised as shown below in a future revision of the COLA:

2.5.1.1.3.2 Transient Population Levels

The term "transient" is used in this analysis to mean persons who live (are domiciled) outside the referenced area, but may be predictably expected to be in the area at some point. In this analysis, "transient population" includes:

- ◆ Workers and college students, also referred to as commuters, who live permanently outside of the area but who commute to a worksite or college campus in the area ~~Columbia and Luzerne Counties~~ on a regular basis;
- ◆ persons who live outside the area but ~~travel at least 50 mi (80 km)~~ from their home to visit, shop, or tend to personal business or to conduct business within the region, including tourists and visitors recreating in the area; and
- ◆ ~~tourists and visitors recreating in the area; and~~
- ◆ seasonal workers employed in the agriculture sector.

~~A "visitor" in this study is considered to be a transient when the following definition is met: the individual travels, at least 50 mi (80 km) each way, into the area for the day, and seeks overnight accommodations. Individuals who simply travel through the area from a point outside the area to a destination outside the area are not included in this definition. Also not included are primary and secondary school students, and hospital, prison and other institutional populations that are typically either captured by estimates of the resident population or would otherwise be expected to be residents within the referenced area.~~

~~SECPOP 2000, a code developed for the Nuclear Regulatory Commission by Sandia National Laboratories to calculate populations by emergency planning zone sectors (NRC, 2003), was used to develop projections of the resident and transient populations by sectors, within the 10 mi (16 km) radius around the BBNPP site. Population projections for the years 2010 through 2080 were projected using the 1990 and 2000 U.S. Census data (USCB, 2000a) and additional five-year county population projections for 2000 to 2020 obtained from the Pennsylvania State Data Center which used a cohort-component demographic projection model (PA Census, 2008b). The population estimates were projected to 2080 by fitting quadratic or linear equations to county population trend lines for the time period 1990 through 2020. These data and growth rates were then used to develop subsequent population projections in SECPOP 2000. The population distribution was computed in SECPOP 2000 by overlaying the 2000 census block point data on the rosette grid defined by the user in this calculation package. Table 2.5-6 presents population distributions, by residential population and transient population in 2000, within each of sixteen geographic directional sectors at radii of 0 to 1 mi (0 to 2 km), 1 to 2 mi (2 to 3 km), 2 to 3 mi (3 to 5 km), 3 to 4 mi (5 to 6 km), 4 to 5 mi (6 to 8 km), and 5 to 10 mi (8 to 16 km) from the BBNPP site. There are an estimated 3,599 transients within the 0-10 mi (16 km) area. Transient populations are described below:~~

Commuters

~~Table 2.5-7 summarizes the commuting patterns to and from the ROI. The ROI has a net increase of 6,243 persons daily during the work week based on 2000 Census Bureau County to County Worker Flow survey data (USCB 2000b). This commuting inflow represents a significant increase to the population base in these two rural counties. The primary employers within the 0-10 mi (16 km) radius of the BBNPP site are listed in FSAR Section 2.1.3. These employers include Berwick Hospital Center, Berwick Offray, Berwick Retirement Village, DeLuxe Building Systems, Luzerne Community College, PPL Susquehanna, SCI Retreat, and Wise Foods (PASS, 2008; PDC, 2010, 2009; BHC, 2009; HDC, 2009).~~

Visitors/Tourists

~~Data on the number of visitors seeking overnight hotel accommodations was estimated for Luzerne County based on hotel tax revenue. In 2007, Luzerne County had 29,773 annual overnight visitors in hotel accommodations, primarily in hotels located along Interstate 81. Geographic information on hotel locations and visitors at each location is not available. No data was available for Columbia County. Overnight hotel transient visitors traveling along Interstate 81 in Luzerne County represents the largest identified contributor to the visitor/ tourist population.~~

~~The visitor transient population estimates are based on the number of motels/hotels, golf course attendance, available fishing and hunting, campground capacity and seasonal housing within the 10 mi (16 km) area. Motels, seasonal housing and campground capacity are among the largest contributors to the visitor/tourist transient category. The relative number of individuals in each of these categories is described in FSAR Section 2.1.3.~~

~~The number of motels/hotels was taken from the AAA Tour Book listings (AAA, 2010). Each facility was located within a sector based on its address and the proximate distance from the BBNPP site. The number of people occupying motel rooms was calculated using the most recently published 2007 average hotel occupancy for Pennsylvania (61.9%) (PTO, 2007). The number of people per room was assumed to be 1.57 (AHLA, 2009).~~

~~There are no major parks or recreational attractions in Columbia and Luzerne Counties. Private campgrounds and camps associated with small fresh water lakes provide the main recreational opportunities. that accommodate tent and recreational vehicles such as Council Cup Campground, Camp Louise, operated by the Girl Scouts in the Heart of Pennsylvania, and shared with Camp Setebaid is the largest campground in the ROI operated year-round. It receives 250-350 visitors per day during the period between June and August and has an average of 300 visitors on weekends throughout the year. From discussions with a representative of the Luzerne County Visitor Bureau, private campgrounds that accommodate tent and recreational vehicles include Acorn Acres (346 daily visitors from April to October), Council Cup Campground (250-300 daily year-round visitors and 295 additional daily visitors from April to October), Good's Campground (100-300 weekend visitors and 10 weekly visitors from April to October), Hidden New Lake Campground (200-300 daily visitors from April to October), and Whispering Pines Camping Estates (250 daily visitors from April to October). Hidden Lake Campground, Paradise Campground, Moyers Grove Campground, and Whispering~~

Pines Camping Estates. Information on the campsites was obtained directly from either the campground, the Luzerne County Visitor's Bureau, or the Pennsylvania Visitor's Network (PVN, 2009). To estimate the number of transients using Moyers Grove, Hidden Lake, Paradise Campground, and Whispering Pine, the average number of persons per site was estimated to be four, and the average occupancy for each site was assumed to be 47% based on a national survey (Woodall, 2004).

Seasonal housing occupancy was estimated using the 2000 U.S. Census data and allocating the distribution of facilities to radii using LandView 6 software (USCB, 2009a; USCB 2009b). The number of seasonal housing units was then multiplied by the Pennsylvania State average household size (2.48 persons) to arrive at a maximum population in recreational, seasonal, and occasional housing (USCB, 2000a). In order to account for the fact that these units are occupied for only a portion of the year, the estimated seasonal population for each segment was calculated by assuming that three quarters of the housing units would be occupied for three months of the year (Fermi, 2008). It was also assumed that all seasonal occupants typically reside outside the 10 mi (80 km) area. Thus, by multiplying the maximum population in recreational, seasonal, or occasional housing units by 0.1875 ($0.1875 = 0.75 \times 0.25$) an estimate of the equivalent transient housing population was determined for recreational, seasonal, or occasional use.

In order to calculate the transient housing population by sector and distance within the 10 mi (16 km) area, it was assumed that transient housing would be distributed in proportion to the resident population. Resident population for each sector and distance within the 10 mi (16 km) area was estimated by SECPOP2000 (NRC, 2003) for the 2000 US Census.

The estimates of transients based on fishing, hunting and golfing are shown in FSAR Section 2.1.3. Four golf courses were located within the 10 mi (16 km) area. These included the Arnolds Golf Course, Blue Ridge Trail Golf Club, the Berwick Golf Club, and the Rolling Pines Golf Course. Hunting was assumed to occur on three nearby state game lands and fishing on two nearby lakes and on the Susquehanna River.

Seasonal Workers in Agriculture

The Commonwealth of Pennsylvania does not collect data regarding migrant or seasonal agriculture workers. The ~~2002-2007~~ Census of Agriculture-County Data (USDA, ~~2002~~2007) estimated that there were ~~8-16~~ farms in Columbia County with migrant farm labor and ~~5-4~~ farms in Luzerne County with migrant farm labor.

Prisons and Correctional Institutions

The Commonwealth of Pennsylvania maintains two prison facilities within the ROI, both located in Luzerne County. The State Correctional Institution (SCI) Retreat is located approximately 8 mi (13 km) north of the BBNPP and about 11 mi (18 km) south of Wilkes-Barre, PA. SCI Retreat is a medium-security prison housing adult males and held approximately 889 inmates as of December 2007. The state Department of Corrections listed its capacity as 806 inmates. Also located in Luzerne County is the SCI Dallas facility located about 20 mi (32 km) to the northeast of the BBNPP site. A total of approximately 2,090 adult males were incarcerated there as of December, 2007 compared to a capacity of 1,750 individuals (PA, 2008a).

In addition to the state prisons identified within the ROI, both Luzerne and Columbia Counties maintain county correctional facilities. The Luzerne County Correctional Facility is located in Wilkes-Barre. In 2007, this facility had a capacity for housing 805 inmates and its daily population averaged about 717 inmates. The Columbia County Prison located in Bloomsburg had an average daily inmate population of about 126 and a capacity of about 190 (PA, 2008b) (PA, 2008c).

Other state prisons located in the vicinity of BBNPP, but outside the ROI, include those in Schuylkill and Northumberland Counties. Schuylkill County contains two prisons, each located in Frackville over 22 mi (35 km) to the south of BBNPP. As of year end 2007, approximately 2,290 adult males were held in the SCI Mahoney facility and about 1,106 were held in the SCI Frackville prison. SCI Frackville is a maximum security prison while SCI Mahoney is a medium security facility. Located southwest of BBNPP in Northumberland County is the medium security SCI Coal Township prison that housed approximately male 1,864 inmates in 2007. Schuylkill and Northumberland Counties also maintained county prisons; average daily inmate populations in these facilities during 2007 were 296 and 185 individuals, respectively (PA, 2008a) (PA, 2008b) (PA, 2008c).

BBNPP COLA ER Section 2.5.1.3 will be revised as shown below in a future revision of the COLA:

2.5.1.3 References

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BBNPP COLA ER Table 2.5-6 will be revised and Table 2.5-9 will be replaced as shown on the following pages in a future revision of the COLA.

Table 2.5-6: Resident and Transient Populations, by Sector and Distance from BBNPP Site, 2000
 (Page 1 of 3)

Sector/Type of Population	Population by Radii/Distance mi (km)						
	0 to 1 mi (0 to 2 km)	1 to 2 mi (2 to 3 km)	2 to 3 mi (3 to 5 km)	3 to 4 mi (5 to 6 km)	4 to 5 mi (6 to 8 km)	5 to 10 mi (8 to 16 km)	0 to 10 mi (0 to 16 km)
N Total							
Transient Population	0	0 <u>16</u>	0	0 <u>1</u>	0 <u>1</u>	1,120 <u>256</u>	1,120 <u>274</u>
Resident Population	35	79	0	0	989 <u>854</u>	1,558 <u>1,671</u>	2,664 <u>2,639</u>
NNE Total							
Transient Population	0	0	0	0 <u>4</u>	0 <u>1</u>	0 <u>18</u>	0 <u>23</u>
Resident Population	0	0	0 <u>5</u>	469 <u>602</u>	274 <u>338</u>	1,825 <u>2,030</u>	2,565 <u>2,975</u>
NE Total							
Transient Population	0	0 <u>2</u>	0	0 <u>1</u>	0 <u>1</u>	0 <u>170</u>	0 <u>174</u>
Resident Population	0	79 <u>101</u>	23 <u>1</u>	49	169	2,787 <u>3,006</u>	3,107 <u>3,326</u>
ENE Total							
Transient Population	1,460 <u>0</u>	0 <u>159</u>	0	0 <u>276</u>	0 <u>1</u>	0 <u>4</u>	1,460 <u>440</u>
Resident Population	0	0	8 <u>0</u>	80 <u>65</u>	68	1,524 <u>1,580</u>	1,680 <u>1,713</u>
E Total							
Transient Population	0 <u>360</u>	0 <u>1</u>	0	0 <u>1</u>	0 <u>1</u>	0 <u>48</u>	0 <u>441</u>
Resident Population	0	54	105 <u>113</u>	163 <u>15</u>	223 <u>142</u>	1,352 <u>1,366</u>	1,897 <u>1,690</u>
ESE Total							
Transient Population	0	0 <u>2</u>	0	0 <u>3</u>	0 <u>1</u>	0 <u>325</u>	0 <u>331</u>

Table 2.5-6: Resident and Transient Populations, by Sector and Distance from BBNPP Site, 2000
(Page 2 of 3)

Sector/Type of Population	Population by Radii/Distance mi (km)						
	0 to 1 mi (0 to 2 km)	1 to 2 mi (2 to 3 km)	2 to 3 mi (3 to 5 km)	3 to 4 mi (5 to 6 km)	4 to 5 mi (6 to 8 km)	5 to 10 mi (8 to 16 km)	0 to 10 mi (0 to 16 km)
Resident Population	76 0	49 86	88	176 283	162 299	1,763 1,611	2,275 2,367
SE Total							
Transient Population	0	0 1	0	0 1	0 1	0 198	0 201
Resident Population	0	38 34	0 4	182 102	49 127	4,527 4,385	4,796 4,652
SSE Total							
Transient Population	0	0 2	0	0 2	0 1	0 4	0 9
Resident Population	0	148	73 64	90 99	60	1,437 1,405	1,808 1,776
S Total							
Transient Population	0	0 1	0	0 3	0 1	0 3	0 8
Resident Population	118	113 81	60 106	164 137	9 52	1,033 893	1,497 1,387
SSW Total							
Transient Population	0	0 2	0	0 2	0 1	0 2	0 7
Resident Population	0 1	80 98	0	245 168	146 147	466 534	937 948
SW Total							
Transient Population	0	0 1	0	0 13	0 31	0 9	0 54
Resident Population	44 50	76 40	153 200	1,428 1,953	43 736	852 990	2,563 3,969
WSW Total							

**Table 2.5-6: Resident and Transient Populations, by Sector and Distance from BBNPP Site, 2000
(Page 3 of 3)**

Sector/Type of Population	Population by Radii/Distance mi (km)						
	0 to 1 mi (0 to 2 km)	1 to 2 mi (2 to 3 km)	2 to 3 mi (3 to 5 km)	3 to 4 mi (5 to 6 km)	4 to 5 mi (6 to 8 km)	5 to 10 mi (8 to 16 km)	0 to 10 mi (0 to 16 km)
Transient Population	0	0 <u>3</u>	0	734 <u>195</u>	300 <u>269</u>	1,400 <u>586</u>	2,434 <u>1,053</u>
Resident Population	40 <u>0</u>	42 <u>236</u>	502 <u>132</u>	3,974 <u>3,471</u>	5,874 <u>5,219</u>	6,673 <u>6,985</u>	17,069 <u>16,043</u>
W Total							
Transient Population	0	0	0	595 <u>3</u>	0 <u>1</u>	0 <u>6</u>	595 <u>10</u>
Resident Population	0	224 <u>0</u>	132 <u>183</u>	127 <u>301</u>	522 <u>443</u>	1,729 <u>1,657</u>	2,734 <u>2,584</u>
WNW Total							
Transient Population	0	0 <u>1</u>	0	0 <u>1</u>	0 <u>1</u>	0 <u>519</u>	0 <u>522</u>
Resident Population	0	51	25 <u>72</u>	52 <u>1</u>	0	928 <u>723</u>	1,056 <u>847</u>
NW Total							
Transient Population	0	0 <u>1</u>	0	0 <u>1</u>	0 <u>1</u>	0 <u>3</u>	0 <u>6</u>
Resident Population	0	35	47 <u>0</u>	0 <u>85</u>	139 <u>127</u>	1,133 <u>998</u>	1,354 <u>1,245</u>
NNW Total							
Transient Population	0	0 <u>1</u>	0	0 <u>70</u>	0 <u>1</u>	596 <u>4</u>	596 <u>76</u>
Resident Population	0	55	183	6 <u>41</u>	35 <u>31</u>	1,318 <u>1,316</u>	1,597 <u>1,626</u>
Total Population	<u>564</u>	<u>1,291</u>	<u>1,151</u>	<u>7,949</u>	<u>9,126</u>	<u>33,305</u>	<u>53,386</u>
Transient Population	1,460 <u>360</u>	0 <u>193</u>	0	1,326 <u>577</u>	300 <u>314</u>	3,116 <u>2,155</u>	6,202 <u>3,599</u>
Resident Population	280 <u>204</u>	1,054 <u>1,098</u>	1,399 <u>1,151</u>	7,202 <u>7,372</u>	8,756 <u>8,812</u>	30,905 <u>31,150</u>	49,596 <u>49,787</u>

Table 2.5-9: Total Population Projections (Resident and Transient) from 2000 to 2080 Within 50 mi (80 km) of the BBNPPP Site

Year	Population Projections within Radii/Distances mi (km)									Annual Average Percent Change For the 10 Year Period
	0 to 10 mi (0 to 16 km)			10 to 20 mi (16 to 32 km)			20 to 30 mi (32 to 48 km)			
	Resident	Transient	Total	Resident	Transient	Total	Resident	Transient	Total	
2000	49,787	3,599	53,386	265,930	3,819	269,749	286,197	7,042	293,239	NA
2010	52,142	3,821	55,963	278,439	4,012	282,451	299,518	7,388	306,906	0.46%
2018	54,680	4,000	58,680	292,013	4,204	296,217	314,175	7,746	321,921	NA
2020	55,296	4,045	59,341	295,405	4,254	299,659	317,889	7,836	325,725	0.60%
2030	58,272	4,253	62,525	311,292	4,470	315,762	335,008	8,240	343,248	0.52%
2040	62,925	4,587	67,512	336,167	4,834	341,001	361,850	8,909	370,759	0.77%
2050	66,377	4,843	71,220	354,592	5,103	359,695	381,624	9,404	391,028	0.53%
2058	69,292	5,044	74,336	370,047	5,320	375,367	398,238	9,804	408,042	NA
2060	69,956	5,092	75,048	373,744	5,377	379,121	402,178	9,904	412,082	0.53%
2070	73,578	5,349	78,927	393,062	5,383	398,445	422,865	9,905	432,770	0.49%
2080	77,332	5,622	82,954	413,104	5,938	419,042	444,630	10,943	455,573	0.51%

Year	Population Projections within Radii/Distances mi (km)						Annual Average Percent Change For the 10 Year Period			
	30 to 40 mi (48 to 60 km)			40 to 50 mi (60 to 80 km)						
	Resident	Transient	Total	Resident	Transient	Total				
2000	420,152	14,824	434,976	629,843	18,456	648,299	1,651,909	47,740	1,699,649	NA
2010	439,712	15,540	455,252	659,349	19,343	678,692	1,729,160	50,104	1,779,264	0.46%
2018	461,241	16,295	477,536	691,502	20,284	711,786	1,813,611	52,529	1,866,140	NA
2020	466,667	16,484	483,151	699,684	20,518	720,202	1,834,941	53,137	1,888,078	0.60%
2030	491,788	17,347	509,135	737,256	21,600	758,856	1,933,616	55,910	1,989,526	0.52%
2040	531,212	18,745	549,957	796,391	23,337	819,728	2,088,545	60,412	2,148,957	0.77%
2050	560,249	19,786	580,035	839,915	24,629	864,544	2,202,757	63,765	2,266,522	0.53%
2058	584,660	20,632	605,292	876,425	25,685	902,110	2,298,662	66,485	2,365,147	NA
2060	590,425	20,844	611,269	885,113	25,951	911,064	2,321,416	67,168	2,388,584	0.53%
2070	620,879	20,845	641,724	930,819	25,951	956,770	2,441,203	67,433	2,508,636	0.49%
2080	652,656	23,032	675,688	978,440	28,671	1,007,111	2,566,162	74,206	2,640,368	0.51%