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1.0 INTRODUCTION

This Exhibit provides background information regarding the general environmental setting of the Area of Study. The Project Study Area, as described in Exhibit D, is based on the geographic extent of the Macro Corridor developed during the Alternatives and Siting Analysis (**Exhibit D**). The boundaries of the Macro Corridor were constrained by the Project's Purpose and Need (**Exhibit B – Necessity Statement**) that define the substation location and the tap transmission line.

The information contained in this Exhibit was gathered from numerous sources, including Federal, State, and local Geographic Information Systems (GIS) databases, published reports and maps, and field reconnaissance surveys.

The Area of Study is in Monroe County, which is located in northeastern Pennsylvania (**Figure C-1**). Portions of the following municipalities are included:

- Chestnuthill Township, Monroe County
- Jackson Township, Monroe County
- Pocono Township, Monroe County

2.0 NATURAL ENVIRONMENT OF THE AREA OF STUDY

2.1 Physiographic Region and Topography

Monroe County extends across three physiographic regions (**Figure C-2**), the Glaciated Low Plateau Section and the Glaciated Pocono Plateau Section of the Appalachian Plateau Province in the north and the Appalachian Mountain Section of the Ridge and Valley Province in the south (Sevon 2000). Surface topography is shaped by the underlying bedrock geology, as well as glacial and stream erosion and deposition.

The Area of Study is located within the Appalachian Mountain Section. Its northern margin ends at the base of the Pocono Plateau Escarpment, a prominent topographic feature that separates the Pocono Plateau Section from the Appalachian Mountain Section. The Appalachian Mountain Section in this area is characterized by low linear ridges and shallow valleys that extend to the Pocono Plateau Escarpment (Sevon 2000). Folded sedimentary rocks produce subparallel ridges of erosion-resistant strata (Berg

1975). Local variation in elevation between the mountain tops and valley floor is about 700 feet.

2.2 Geology

The geology of the Area of Study can be described in terms of underlying consolidated rocks (bedrock geology) and unconsolidated deposits atop bedrock (surficial geology) (Berg (1975), Berg et al (1977), Carswell and Lloyd (1979), , and Sevon et al (1975)).

The bedrock geology of the Area of Study is displayed in **Figure C-3**. The rock units that directly underlie unconsolidated material are Upper Devonian in age covering a time period ranging from about 365 million year ago to about 375 million years ago. From youngest to oldest they are:

- Long Run Member (Catskill Formation) (Dclr)
- Beaverdam Run Member (Catskill Formation) (Dcbr)
- Walcksville Member (Catskill Formation) (Dcw)

Most of the Area of Study is underlain with the Long Run Member, characterized by alternating sequences of gray sandstone with red siltstone and shale. Along its southeast edge, the Area of Study is directly underlain with the Beaverdam Run or Walcksville Members, also consisting of sandstone, siltstone, and shale.

Unconsolidated geologic units overlying the Area of Study bedrock are glacial, alluvial, and colluvial, as defined below. This area is known to have undergone glaciation over the last 150,000 years. It is believed glaciers advanced into this area generally from the northeast with the Pocono Plateau Escarpment and Blue Mountain influencing the main direction of flow. Most of the Area of Study is covered with material carried by and deposited directly from the ice sheets. Sediments transported and deposited by present-day and ancestral streams are called alluvium. Alluvial deposits primarily occur within stream banks and in floodplains, most of which are post-glacial floodplains.

Colluvium is a mass of material that typically accumulates at the base of slopes from upslope erosion. Colluvial deposits can be found at the head of some unnamed tributaries to Appenzell Creek.

2.3 Soils

The general characters of soils that have developed in the Area of Study correspond closely to physiography and geology (Lipscomb 1981). Soils in the Ridge and Valley Province are well to moderately well drained, may be shallow or deep, and are derived from shale bedrock or till and colluvium. Deep, excessively to well drained soils form in alluvium on terraces and floodplains.

TABLE C-1: Soils with Hydric Characteristics within Area of Study

SOIL SYMBOL	SOIL NAME
Hydric Soils	
As	ALLUVIAL LAND
CmA	CHIPPEWA AND NORWICH SILT LOAMS, 0 TO 5 PERCENT SLOPES
CnB	CHIPPEWA AND NORWICH EXTREMELY STONY SOILS, 0 TO 8 PERCENT SLOPES
Hy	HOLLY SILT LOAM
MgB	MORRIS CHANNERY SILT LOAM, 2 TO 10 PERCENT SLOPES
MoB	MORRIS EXTREMELY STONY SILT LOAM, 0 TO 8 PERCENT SLOPES
MoC	MORRIS EXTREMELY STONY SILT LOAM, 8 TO 20 PERCENT SLOPES
ReA	REXFORD GRAVELLY SILT LOAM, 0 TO 3 PERCENT SLOPES
VxB	VOLUSIA EXTREMELY STONY SILT LOAM, 0 TO 8 PERCENT SLOPES
Wb	WAYLAND SILTY CLAY LOAM
Soils with Hydric Inclusions	
BrA	BRACEVILLE GRAVELLY LOAM, 0 TO 3 PERCENT SLOPES
BrB	BRACEVILLE GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES
MbB	MARDIN VERY STONY SILT LOAM, 0 TO 8 PERCENT SLOPES
MbC	MARDIN VERY STONY SILT LOAM, 8 TO 25 PERCENT SLOPES
Ph	PHILO SILT LOAM
Po	POPE SILT LOAM
VoB	VOLUSIA GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES
WmB	WELLSBORO CHANNERY LOAM, 3 TO 8 PERCENT SLOPES
WmC	WELLSBORO CHANNERY LOAM, 8 TO 15 PERCENT SLOPES
WpB	WELLSBORO EXTREMELY STONY LOAM, 0 TO 8 PERCENT SLOPES
WpC	WELLSBORO EXTREMELY STONY LOAM, 8 TO 25 PERCENT SLOPES

Source: US Department of Agriculture/Natural Resources Conservation Service (USDA/NRCS)

Soil mapping units, labeled by predominant soil series, within the Area of Study are illustrated in **Figure C-4**. Specific units highlighted include prime farmland soils, hydric soils, and soils with hydric inclusions. Prime farmland soils, particularly significant in agricultural areas, have the best combination of physical and chemical characteristics for producing food and feed. These soil properties are used to determine if farms are eligible to be incorporated into the County Agricultural Conservation Easement program (see Section 3.1.1). Hydric soils are formed under sufficiently wet conditions (saturation, flooding, or ponding) during the growing season to develop anaerobic conditions in the

upper regions and support the growth of wetland vegetation. Hydric inclusions are small areas of hydric soils located within a larger soil type that is not typically identified as hydric. **Table C-1** provides a list of the hydric soils and soils with hydric inclusions located within the Area of Study.

2.4 Surface Water

The Area of Study is located primarily within the McMichael Creek and Pocono Creek subwatersheds of the Brodhead Creek watershed of the Delaware River Basin.¹ A small section of the western Area of Study lies within the Pohopoco Creek subwatershed of the Lehigh River watershed of the Delaware River Basin.² Major streams and lakes found on USGS topographic maps are illustrated in **Figure C-5** and discussed further below.

2.4.1 Streams

Named streams³ in the Area of Study are:

- Appenzell Creek – HQ-CWF, MF
- Fall Creek – EV, MF
- Hypsy Creek – EV, MF
- McMichael Creek – EV, MF
- Reeders Run – HQ-CWF, MF
- Sugar Hollow Creek – CWF, MF

The Pennsylvania Code (Title 25, Chapter 93) establishes narrative and numeric water quality criteria necessary to support a variety of protected water uses. All surface waters must be protected for aquatic life (warm water fishes), water supply (potable, industrial, livestock, wildlife, and irrigation), and recreation (boating, fishing, water contact sports, and aesthetics). In addition to general/narrative standards that are applicable to all surface waters, stream reach-specific water quality criteria protect certain stream segments for critical uses (i.e., the most sensitive designated or existing use to be protected).

¹ Drainage List C of Pennsylvania Code. Title 25, Chapter 93, Water Quality Standards (“Chapter 93”)

² Drainage List D of Pennsylvania Code. Title 25, Chapter 93, Water Quality Standards (“Chapter 93”)

³ Names on USGS 7.5-minute topographic quadrangles

Stream segments within the Area of Study have Chapter 93 designated use classifications of CWF (a cold water fishery suitable for the maintenance or propagation of fish indigenous to a cold water habitat) or are designated for special protection as High Quality (HQ) and Exceptional Value (EV) waters (**Figure C-6**). All streams also have a migratory fishes (MF) designated use for the passage, maintenance and propagation of migratory fish. Additionally, within the Area of Study, Appenzell Creek and McMichael Creek are approved trout stocking streams (PFBC 2009). There are no Class A wild trout streams within the Area of Study.

2.4.2 100-year Floodplains

One-hundred year floodplains are areas adjacent to streams which would be inundated by a flood elevation that has a 1-percent chance of being equaled or exceeded each year. The Federal Emergency Management Agency (FEMA) delineates the extent of some 100-year floodplains on Flood Insurance Rate Maps. The 100-year floodplain boundaries shown on **Figure C-6** were acquired from the Monroe County Planning Commission (MCPC) digital database. The MCPC 100-year floodplain boundaries, obtained from the PADEP digital database, represent FEMA floodplains and differ slightly from those indicated on FEMA maps.

2.4.3 Lakes

Numerous bodies of open water can be found throughout the Area of Study. The larger lakes and ponds occur along stream floodplains. Major lakes include Akiba Lake, Trout Lake, Grubers Lake, and Mountain Spring Lake (**Figure C-5**).

2.4.4 Wetlands

United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) wetland maps indicate that wetlands in the Area of Study are palustrine i.e., nontidal, freshwater wetlands dominated by trees, shrubs, persistent emergent vegetation, and emergent mosses or lichens (**Figure C-5**). NWI wetlands are classified in accordance with the Cowardin system (Cowardin et al. 1979) which also includes open waters (e.g., streams, ponds, lakes) as wetlands.

The wetlands depicted in the NWI database were not identified or delineated in accordance with methodologies used by regulatory agencies to establish boundaries of wetlands under their jurisdiction. The NWI maps were created based on the analysis of aerial photographs from the 1980s with limited ground verification, and should not be considered an alternative to conducting a delineation based on regulatory requirements. The results of a wetland delineation conducted for the transmission route corridor is reported in **Appendix 6**.

2.5 Vegetation Communities

Vegetation within the Area of Study includes human-influenced plant communities such as agricultural fields, successional meadows, and landscaped areas with much of the undeveloped portion dominated by upland or floodplain forests.

The Area of Study lies within the Central Appalachian Broadleaf Forest-Coniferous Forest-Meadow Forest ecosystem province (Bailey 1998). This province is temperate, with distinct summer and winter seasons and some of the highest precipitation levels in the eastern United States. Within this ecosystem province, vegetation communities have been further refined into regional classifications such as those established by the Pennsylvania Department of Conservation and Natural Resources (Fike 1999) and Monroe County (Natural Areas Inventory (NAI); TNC 1991; TNC 1999).

The portion of Monroe County in which the Area of Study lies is classified as Mixed Oak Forest (TNC 1991). The upland forests within this region are characterized by species such as red oak (*Quercus rubra*), white oak (*Q. alba*), black oak (*Q. velutina*), sugar maple (*Acer saccharum*), beech (*Fagus grandifolia*), white ash (*Fraxinus americana*), tuliptree (*Liriodendron tulipifera*), and hickories (*Carya* spp). Shrub species typical of these forests include blueberry (*Vaccinium corymbosum*), spicebush (*Lindera benzoin*), witch hazel (*Hamamelis virginiana*), and northern arrowwood (*Viburnum recognitum*). Pohopoco Mountain forests vary somewhat from this general community description and are more typical of Northern Hardwood Forests, including the additional species of yellow birch (*Betula alleghaniensis*), hemlock (*Tsuga canadensis*), and black cherry (*Prunus serotina*).

2.6 Special Use Areas

2.6.1 Scenic Areas

No areas designated as “scenic” by the PDCNR (vistas and overlooks, waterfalls, scenic hikes, or other special areas) are located within the Area of Study (PDCNR 2009b). Similarly, there are no Heritage Geology Sites designated by the Pennsylvania Natural Heritage Program in the Area of Study (PDCNR 2009d).

2.6.2 Wilderness Areas

No part of the Area of Study is located within the National Wilderness Preservation System (NWPS 2009).

2.6.3 Wild and Scenic Rivers

No Wild & Scenic Rivers designated pursuant to the federal Wild & Scenic Rivers Act or designated by the Pennsylvania Scenic Rivers Act are located within the Area of Study (PDCNR 2009c).

2.6.4 State Game Lands

In Jackson Township, small portions of the 5,400-acre State Game Land #38 abut the northwest and northern boundaries of Area of Study (about 4,500 feet) and nearly three acres extend into the Area of Study. State Game Land #186 is southeast and outside of the Area of Study.

2.6.5 Nature Conservancy Priority Sites

According to the Natural Areas Inventory (NAI) for Monroe County, one “Priority Natural Area” is partially located within the Area of Study (TNC 1991, 1999). This site is located along the powerline clear-cut near Fall Creek and is rated 4 out of 5 for priority of preservation (1 is highest ranking). A 356-acre buffer zone bisected by the powerline has been established. The site is a known location for two rare species of butterflies.

2.7 Wildlife

Typical wildlife species found within the Area of Study include those found in wetlands, forested habitats, scrub-shrub habitats, and open/agricultural lands. Wetlands in the area harbor species such as green frog (*Rana clamitans*), bullfrog (*R. catesbeiana*), northern

water snake (*Nerodia sipedon*), red-wing blackbird (*Agelaius phoeniceus*), common yellowthroat (*Geothlypis trichas*), and raccoon (*Procyon lotor*). Forests and scrub-shrub habitats are home to species such as white-tailed deer (*Odocoileus virginianus*), gray squirrel (*Sciurus carolinensis*), wild turkey (*Melagris gallopavo*), box turtle (*Terrapene carolina*), striped skunk (*Mephitis mephitis*), opossum (*Didelphis marsupialis*), and a variety of small mammals and songbirds. Open and agricultural lands are likely to support woodchuck (*Marmota monax*), eastern cottontail (*Sylvilanus floridanus*), Canada goose (*Branta canadensis*), turkey vulture (*Cathartes aura*), and red-tailed hawk (*Buteo jamaicensis*) (TNC 1991, Fergus and Hansen 2000).

2.7.1 Rare, Threatened, and Endangered Species

Based on a search of the Pennsylvania Natural Diversity Inventory (PNDI) database and follow-up consultations with the U.S. Fish and Wildlife Service (USFWS), Pennsylvania Fish and Boat Commission (PFBC), Pennsylvania Game Commission (PGC), and Pennsylvania (DCNR) the following federal and/or state rare, threatened, or endangered (RTE) species could potentially occur within the Area of Study include one reptile, one plant, and two butterflies. These are:

- Bog turtle (*Glyptemys muhlenbergii*) – State endangered, Federal threatened reptile
- Fall Dropseed Muhly (*Muhlenbergia uniflora*) – State endangered plant
- Frosted Elfin (*Callophrys irus*) – State imperiled butterfly
- Persius Duskywing (*Erynnis persius*) – State critically imperiled butterfly

Habitat assessments for these RTE species, including a Phase I Bog Turtle Habitat Survey, were conducted for the selected transmission route corridor. The results of this assessment are located in **Appendix 8**. The habitat assessments concluded that no appropriate habitat for any of the target species was found. As part of the environmental permitting and approval process for the selected route, additional RTE surveys may be required.

3.0 HUMAN ENVIRONMENT OF THE AREA OF STUDY

Human impacts on the natural environment within the Area of Study are represented by a number of development types and patterns. These are discussed below using the Monroe County land use codes described in Section 3.1 and other land use/cover categories noted in Sections 3.2 through 3.5.

3.1 Monroe County Land Use Codes

Monroe County Land Use codes in the Area of Study are displayed in **(Figure C-7)** and discussed below.

3.1.1 Agriculture

Considerable sections of the Area of Study are utilized for agricultural purposes. All of these lands are privately owned. The primary agricultural use involves row crops such as hay, corn, and soybeans. Other agricultural uses include horse pastures and dairy farms, but these are limited in extent compared to the row crops.

Monroe County has several mechanisms for protecting farmland.

- Agricultural Security Area (ASA)
- Agricultural Conservation Easement (ACE)
- Act 319 ("Clean and Green Act")

ASA, ACE, and Act 319 lands are shown on **Figure D-4** found within **Exhibit D**.

The Farmland Preservation Board administers the creation of an ASA and the purchase of an ACE. An ASA is an area of 500 or more semi-contiguous acres that is used for agricultural production. Farmers voluntarily form and/or join an ASA as a means of receiving special consideration with regards to regulations, nuisance complaints, and conflicting land uses.

The ACE purchase program allows counties to use the Pennsylvania farmland preservation fund to purchase development rights. Qualifying farms must be part of an existing ASA and are rated on the basis of soil quality, proximity to other farms, and other criteria. Once a farm is in easement, agricultural production must continue every

year thereafter, with no new structures permitted except farm accessory buildings.

Act 319 provides a means by which landowners whose property meets one of three qualifying uses (farming, forest, water supply/open space) is assessed for property tax purposes on the basis of its use rather than on the basis of its fair market value.

3.1.2 Transportation/Utilities

Monroe County includes only railroads and airports under the transportation land use, not roadways. There are no railroads or airports present within the Area of Study. The closest airport is Pegasus Airport, which is located approximately 3.5 miles southeast of the Area of Study. Utility pipelines are discussed in Section 3.2.2 (Pipelines).

3.1.3 Private/Public Parks & Recreation Facilities

There are no federal or county parks situated within the Area of Study. A portion of the 1,300-acre Big Pocono State Park is located within the northern edge of the Area of Study and the 20-acre Jackson Township Park is located within the Village of Reeders. In the Village of McMichael, at the northwestern edge of the Area of Study, approximately 800 acres of the Pohoqualine Fishing Club land is preserved as open space through funds provided by Monroe County, Chestnuthill Township, and Jackson Township.

3.1.4 Educational Services

No public or private schools are located within the Area of Study. One independent day care facility is located along Route 715 south of the Village of McMichael.

3.1.5 Forest

Forested land cover consists of large uninterrupted areas of wooded land identified as a land use/cover type, or smaller fragments incorporated into other land use types, such as residential, agricultural, parks and recreation, or group camps. Fragmented forest cover borders many of the residential developments and farms and often indicates the presence of steep slopes or rocky soils that could not be developed or converted to agricultural use. Large swaths of forest cover are associated with areas preserved for public recreation (Pohoqualine Fishing Club) and private recreation (Camp Akiba, Mountain Spring Lakes).

3.1.6 Government Services

Government services within the Area of Study are located within the Village of Reeders. These services are associated with Jackson Township and include administrative offices and maintenance department facilities.

3.1.7 Industrial

There are no industrial land uses within the Area of Study.

3.1.8 Residential

Residential land use is the most prominent land use cover type in the Area of Study and is composed primarily of single-family residences. Most of the residential development has occurred since World War II, much of that within the past 20 years. Relatively recent residential developments include Appenzell Estates, Fawn Ridge, and Mountain View Meadows.

3.1.9 Retail Trade

Commercial land use occurs primarily as retail development along Route 715. Most of the commercial sites are relatively spread out with sections of undeveloped or residential land in between. The more concentrated commercial land use within the Area of Study is noted near the Village of Reeders. Retail facilities in this village include restaurants, automotive service stations, and a variety of specialty shops.

3.1.10 Resorts & Group Camps

One resort, Mountain Spring Lakes Resort, is located within the Area of Study. Several group camps, including Mt. Gilead, Streamside Camp, and Camp Akiba, are also located within the Area of Study.

3.1.11 Services & F.I.R.E. (Finance, Insurance, Real Estate)

Service related land uses identified within the Area of Study include banks, real estate offices, churches, and cemeteries. Most of the banks and real estate offices are concentrated in population centers. St. Marks Church and related cemetery are located in the Village of Appenzell; other churches and cemeteries are located along Route 715 and in more rural areas of the Area of Study.

3.1.12 Vacant

Vacant lands were randomly scattered across the Area of Study in a wide variety of land cover types and extending over a variety of parcel sizes. For example, numerous small parcels (1 to 2 acres) within the residential developments were noted as vacant if they were undeveloped. Similar sized parcels within the commercialized areas along Route 715 were also noted as vacant if they were unoccupied. Larger parcels of forested or pasture land, which ranged from 20 to 100 acres, were also identified as vacant.

3.2 Other Linear Features

3.2.1 Roadways

As noted in Section 3.1.2 (Communication/Transportation/Utilities), the Monroe County transportation code does not include roads. The primary roadway system within the Area of Study is comprised of a two-lane state route (PA State Route 715) with numerous rural roads, residential streets, and several unpaved roads.

PA Route 715 is an east-west arterial state road that connects Brodheadsville with the major commercial centers along Interstate 80, including Tannersville and Stroudsburg. Through most of the Area of Study, Route 715 consists of two undivided traffic lanes bordered by sporadic commercial development.

3.2.2 Pipelines

There are no pipelines within the Area of Study.

3.3 Historic, Cultural, and Archeological Resources

Historic Architecture

URS conducted a desktop survey and windshield survey of historic architectural resources within the Appenzell Area of Study. The desktop survey consisted of accessing the Pennsylvania Historical and Museum Commission (PHMC)'s Bureau of Historic Preservation (BHP)'s Cultural Resources Geographic Information System (CRGIS) to review available information on previously recorded historic architectural sites within the Area of Study. A two-day windshield survey conducted in February 2009 provided information about the built environment and the types of historic architectural resources

in the Area of Study. Areas of concern were identified during the windshield survey and entered on the constraints map, along with any previously recorded historic architectural sites.

For historic architecture, the PUC Application's focus is on National Register of Historic Places (NRHP)-listed or -eligible resources. One NRHP-eligible resource, Reeder's Log Cabin (PHMC Key No. 039437), had been located within the Area of Study but was demolished approximately nine years ago. It was located on Route 715, just south of Reeders in Jackson Township. Although not of direct concern in this application process, it should be noted that there are thirty-five previously recorded historic architectural resources within the Appenzell Area of Study with a NRHP status of Undetermined. Undetermined status means that although these resources have been brought to the attention of PHMC, no determination of eligibility has been made. In conclusion, there are no previously identified NRHP-listed or -eligible historic architectural resources in the Area of Study.

The Area of Study is rural and suburban, hilly and flat, agricultural and wooded. Several small towns, including Reeders, Appenzell, and McMichael are located here. The main roads include Route 715, Mountain Road, and State Route 4010. Route 715 travels from northeast to southwest, Mountain Road travels from east to west, and State Route 4010 passes from south to north through the Area of Study. Several lakes and recreation sites, including campsites and resorts, are also located here.

Historic architectural resources are located throughout the Area of Study, including in the small towns and along the major roads where some grander historic dwellings and commercial structures are still extant among those of a more vernacular nature. Clusters of historic architectural resources stand at crossroads. Isolated farmhouses and farmsteads are scattered throughout the Area of Study. A number of intact farmsteads remain; however, many others have lost their agricultural fields and outbuildings to greenfield suburban-style housing developments.

In addition to the historic farmsteads, detached dwellings, and commercial buildings mentioned above, other types of historic architectural resources identified in the Area of Study during the windshield study include churches and cemeteries, recreational and

educational facilities, and a limekiln. Dwelling types include the Pennsylvania three-bay, gable-front-and-wing, Ranch, Cape Cod, and Bungalow, and styles include Craftsmen, Rustic, and Colonial Revival. The historic resources range in date from the nineteenth century to the mid-twentieth century. It is possible that some resources may date to an even earlier period. Examples of historic architectural resources found in specific locations within the Area of Study are discussed below.

The center of Reeders, located near the northeast corner of the Area of Study, is home to historic dwellings, a church, and a post office built in 1941. Other historic resources are located along Route 715 and on other smaller roads surrounding Reeders. Located to the north of Reeders is one of the many recreational centers in the Area of Study, the eponymous Mountain Springs Lake Resort, established in 1942. Mt. Gilead, a Christian girls summer camp established in 1953, is located to the northwest of Reeders.

One of the lakes in the Area of Study, Trout Lake, is located in the eastern half of the Area of Study, to the northeast of the proposed substation. Trout Lake Retreats, which includes a series of small cabins, is located on south side of the lake. A cluster of historic buildings is located at the crossroads of Doll Road / T 486 and T 481 and north of the crossroads on Doll Road / T 486. This cluster includes a school, church, farmstead, and individual dwellings.

Another lake, Lake Akiba, is located in the middle of the Area of Study on the south side. It is southwest of the proposed substation. Around Lake Akiba are several historic farmsteads (including a tree farm) and Camp Akiba itself, established in 1926. A cluster of historic buildings centered on the crossroads of Neola Road and Miller Road and extending south along Neola Road, includes a church, the Pocono-Jackson Historical Society housed in the former 1840-church, a cemetery, and several frame and stone nineteenth- and early twentieth-century dwellings. A few farmhouses and attendant barns are located on Smith Hill / Hillside Road, south of Lake Akiba; however it appears that these farmhouses have lost their former agricultural land to the suburban-style houses that surround them.

McMichael is located on McMichael Creek in the western portion of the Area of Study, on the south side. Historic resources here include a former hotel, and several frame

dwellings, and a log cabin.

Although there are no previously identified NRHP-listed or -eligible historic architectural resources in the Area of Study, there are a number of Undetermined resources located here. Additionally, the Area of Study includes a rich representation of unrecorded historic architectural resources, including those of a domestic, agricultural, commercial, and recreational nature.

Archaeology

The desktop survey noted above also included a CRGIS search for previously identified archaeological sites within the Area of Study. No sites have been documented in the Area of Study, and only a few archaeological surveys have been conducted in this region. Nonetheless, the Area of Study, overall, possesses at least a moderate potential for pre-contact (Native American) archaeological resources. This is due to the dissected nature of the terrain, with numerous upland flats between drainages, such as Appenzell and McMichaels creeks. These settings frequently yield lithic scatters, evidence of short-term occupation, most likely by small groups. Broader floodplain settings, like the area around the margins of Trout Lake, may also yield evidence of pre-contact occupation.

Historic archaeological sites tend to occur along roadways or at the end of farm lanes extending back from a public thoroughfare. In many cases, the historic architectural resources noted above (but, particularly any dating to the nineteenth century), will most likely also contain an archaeological component.

3.4 Hazardous Materials

Eight potential sources of contamination were identified by accessing Federal and state databases for listed facilities located within a two-mile search radius of Appenzell, the approximate center of the Area of Study. These databases consisted of:

- National Priority List for Pennsylvania (NPL)
- Federal Comprehensive Environmental Response, Compensation and Liability (CERCLIS)
- Federal Resource Conservation and Recovery Information System (RCRIS)

- State Hazardous Waste (SHWS)
- Leaking Underground Storage Tanks (LUST)
- Solid Waste Facilities/Transfer Stations Sites (SWF/LF)
- Registered Underground Storage Tanks (UST)
- RCRA Treatment, Storage, and Disposal (TSD)
- RCRA Registered Large Quantity Generators of Hazardous Waste (LQG)
- RCRA Regulated Small Quantity Generators of Hazardous Waste (SQG)

The eMapPA website identified three potential sources of contamination listed on the UST database, within the two-mile search area. The UST database listed the following facilities:

- Jackson Corner Service Station
- Wallingford General Store
- Jackson Township Municipal Facility

Jackson Corner Service Station, located at the intersection of Route 715 and Neola Road, has one tank currently in use. The Wallingford General Store, located at 1379 Neola Road, has one tank that is inactive and closed without a permit. Jackson Township has three inactive tanks that are exempt from state law. No violations are listed for any of these facilities.

The eMapPA website also identified three potential sources of contamination listed on the Land Recycling Cleanup Location database, within the two-mile search area. These include:

- Private Property of Keith Elliot, located along Mountain Road, north of Kenny Drive
- Private Property of Harry Corvi, located at 1343 Neola Road, near White Pine Drive
- Henny Penny Daily, located along Route 715, south of White Church Road

All three of these sites are related to soil contamination and are considered active remediation sites.

The Envirofacts Database identified two potential sources of contamination listed as Superfund sites located within the two-mile search area. These include:

- Butz Landfill, located on township route 601, Stroudsburg
- Village of Reeders GW, located on Route 715, Jackson Township

Butz Landfill, a closed landfill, covers 13 acres along the southern base of Camelback Mountain. Minimal information is available regarding the exact location and cause for the Village of Reeders groundwater contamination site. Envirofacts Database information indicates that the Butz Landfill is on the Final NPL, whereas the Village of Reeders site has been removed from the NPL.

3.5 Proposed Developments

The United States Census Bureau reports a nearly 20 percent increase in Monroe County's population from 2000 to 2008, and about a 70 percent increase from 1990 to 2008. Chestnuthill Township has also seen a 20 percent growth 2000 to 2008, while nearly doubling in population 1990 to 2008. The same trend in population growth has been experienced by Jackson Township. The Official Zoning Maps of Chestnuthill Township (August 2004) and Jackson Township (June 1989) do not identify future residential or commercial development.

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