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PINEY RUN WATERSHED STUDY

AFFECTED ENVIRONMENT

CARROLL COUNTY BUREAU OF RESOURCE MANAGEMENT

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1. Introduction

This chapter describes current baseline conditions within and in the vicinity of the Piney Run Dam Study Area (Study Area) pertaining to the following relevant technical resources: land use and cover; air quality; noise; geology, topography, and soils; water resources; biological resources; cultural resources; socioeconomics; environmental justice; health and safety; infrastructure; and hazardous and toxic materials and wastes. In compliance with the National Environmental Policy Act of 1969 (NEPA; 42 United States Code [USC] §§ 4321 et seq.) and the President's Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500 – 1508), the US Department of Agriculture's (USDA) NEPA regulations (7 CFR Part 650), Natural Resources Conservation Services (NRCS) Title 190 General Manual Part 410, and NRCS National Environmental Compliance Handbook Title 190 Part 610, this section focuses only on resources that would be potentially affected by implementation of the Piney Run Dam Watershed Plan (Proposed Action).

2. Land Use and Cover

2.1 Site Location

The 51-acre Study Area (**Figure 1**) is situated in a publicly accessible recreation area within Piney Run Park, located in Eldersburg, an unincorporated area/census-designated place in the southern region of Carroll County, Maryland. The town of Sykesville is less than 1.0 mile south of the Study Area. Carroll County is located approximately 15.0 miles northwest of Baltimore.

2.2 Description of Land Use and Cover

Land use can be separated into two primary categories: natural and human modified. Natural land cover includes woodlands, rangeland, grasslands, and other open or undeveloped areas. Human-modified land use includes residential, commercial, industrial, communications and utilities, agricultural, institutional, recreational, and generally other areas developed from a natural land cover condition. Land use is regulated by management plans, policies, guidelines, and ordinances (i.e., zoning) that determine the type and extent of land use allowable in specific areas and protect specially designated or environmentally sensitive areas.

Land use data from the Carroll County Government GIS Open Data library reveal primarily agricultural land use in the County interspersed with areas designated for conservation purposes (Carroll County Government, 2020). Residential and commercial use areas are clustered around unincorporated Eldersburg. The County is generally rural although recent suburban development has increased.

The Study Area is located within the Piney Run Watershed (HUC 021309081023). Land use in the watershed is primarily designated for conservation use and contains the Piney Run Park, a public recreation area, as well as the reservoir and dam. Lands designated for conservation use are defined as areas where it is considered feasible and desirable to conserve open spaces, water supply sources, woodland areas, wildlife, and other natural resources (Carroll County Government, 2017). The conservation land use area may include areas containing steep slopes, stream valleys, and water supply sources. Within Carroll County, the watershed also comprises residential and agricultural land uses, and small scattered patches of industrial and retail uses.

The 51-acre Study Area is primarily undeveloped, comprising 32.3 acres (63 percent) of forested land (**Figure 1**). The remainder of the Study Area includes maintained grass along Piney Run Dam, the dam embankment and associated dam infrastructure, and access roads. Private residences and residential roads are present to the northeast and southwest of the Study Area. The forested areas immediately surrounding Piney Run Dam are designated for conservation purposes.

3. Air Quality

The ambient air quality in an area can be characterized in terms of whether it complies with the primary and secondary National Ambient Air Quality Standards (NAAQS). The Clean Air Act (CAA), as amended, requires the US Environmental Protection Agency (USEPA) to set NAAQS for pollutants considered harmful to public health and the environment. NAAQS are provided for six principal pollutants called "criteria pollutants" (as listed under Section 108 of the CAA): carbon monoxide; lead; nitrogen dioxide; ozone; sulfur dioxide; and particulate matter divided into two size classes of (1) aerodynamic size less than or equal to 10 micrometers (PM_{10}), and (2) aerodynamic size less than or equal to 2.5 micrometers ($PM_{2.5}$). The General Conformity Rule (40 CFR Part 51, Subpart W) requires Federal agencies to prepare written Conformity Determinations for Federal actions in or affecting NAAQS in non-attainment areas, except when the action is covered under the Transportation Conformity Rule or when the action is exempt because the total increase in emissions is insignificant, or *de minimis*.

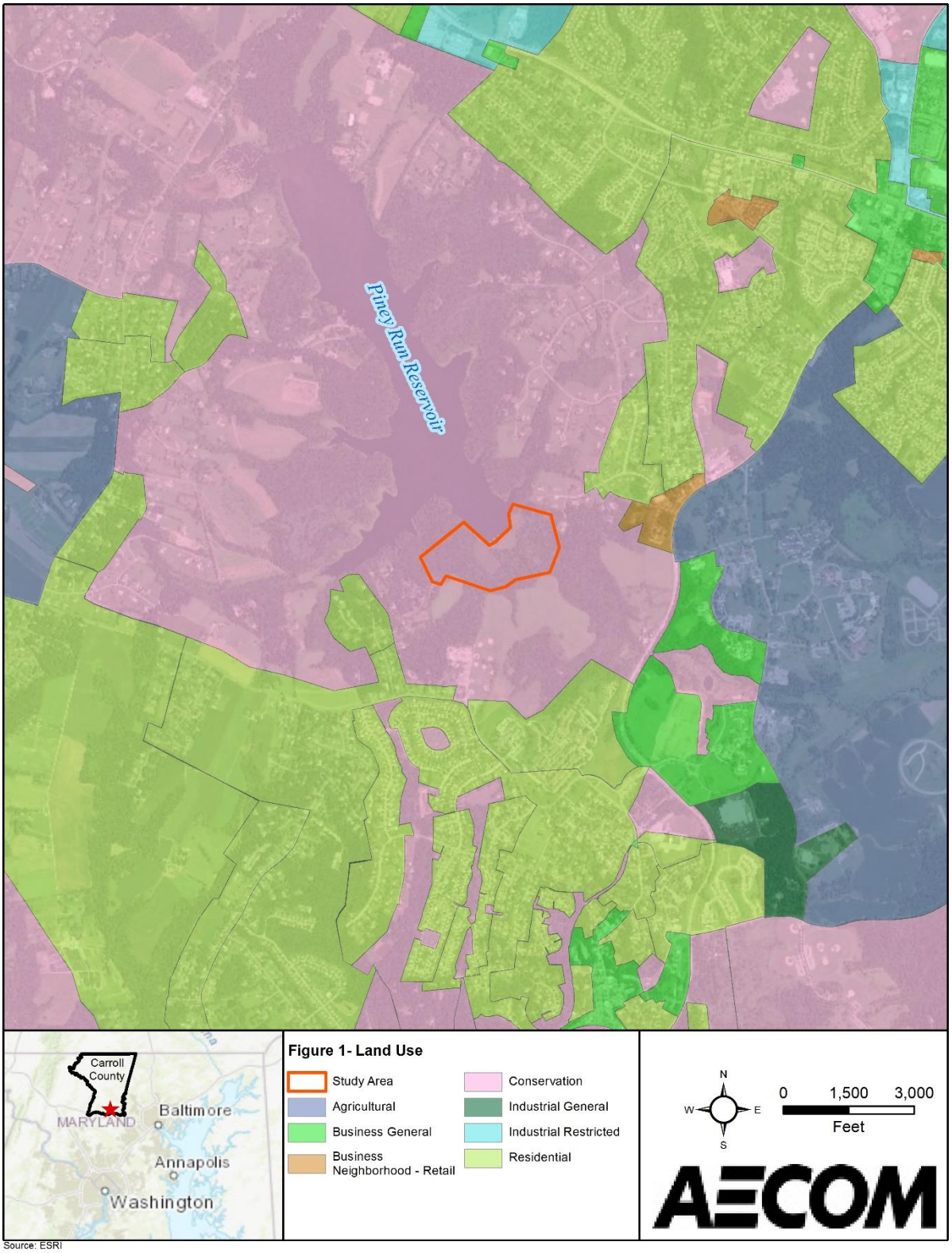
Carroll County is a non-attainment area for 8-hour ozone (USEPA, 2019). As such, the County must evaluate the emissions of ozone to determine the applicability of the general conformity regulations. The de minimis level for ozone is 50 tons per year (tpy).

Under the CAA, USEPA established New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPs) to minimize emissions of criteria pollutants and hazardous air pollutants (HAPs) from man-made emission sources. Although typically present in minimal quantities in the ambient air, HAPs have high toxicity which may pose a threat even at low concentrations. NESHAPs primarily apply to "stationary sources," which are emission sources that have a fixed location (e.g., fuel-burning boilers and generators, entire facilities/plants, etc.), as opposed to "mobile sources," which are emission sources that have the ability to move from one location to another (e.g., motor vehicles, trains, airplanes, etc.). With the exception of motor vehicles or equipment utilized during dam inspections and land maintenance activities (e.g., mowing), no emission sources occur within the Study Area.

3.1 Sensitive Receptors

Sensitive receptors include, but are not limited to, asthmatics, children, and the elderly, as well as specific facilities, such as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, and childcare centers.

Figure 1: Land Use



As the Study Area is located within a primarily undeveloped forested parcel of land for recreational purposes, no sensitive receptors are present. Sensitive receptors within the vicinity include residential properties to the northeast and southwest of the Study Area. Approximately 50 residences are present within a 0.5-mile radius of the Study Area, with the nearest house less than 0.1 mile from the eastern boundary. In addition, Flohrville United Methodist Church and Springfield Presbyterian Church are located 0.4 mile east and 0.8 mile south of the Study Area, respectively. Sykesville Middle School, approximately 1.0 mile from the Study Area, is the nearest school.

3.2 Greenhouse Gases and Climate Change

The Study Area lies within the humid subtropical climate zone, as classified by the Köppen climate classification system, and is characterized by hot and humid summers, and cool winters with variable snowfall (NOAA, 2020). Temperatures range from an average high of 87.6 degrees Fahrenheit (°F) in July to an average low of 21.9°F in January. Average annual precipitation is approximately 43.4 inches; average annual snowfall is 33.5 inches (NOAA, 2014).

Greenhouse gases (GHGs) are components of the atmosphere that trap heat relatively near the surface of the earth and contribute to shifts in the global climate (i.e., the greenhouse effect and climate change). Water vapor occurs naturally and is the most abundant GHG. Other GHGs, such as carbon dioxide (CO_2; the second most abundant GHG), nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, result from human activities, such as the burning of fossil fuels. State-wide GHG emissions in Maryland were estimated at 57.6 million metric tpy of CO_2 equivalent in 2016 (EIA, 2019).

GHGs are regulated under Section 202 of the CAA. The USEPA regulates GHGs through mobile source emission standards, the Prevention of Significant Deterioration program, and the Title V Operating Permits program. Additionally, 40 CFR 98 requires facilities that emit 25,000 metric tons of CO_2 equivalent to annually report their GHG emissions to USEPA. There are no reporting facilities within 5 miles of the Study Area according to USEPA's GHG Reporting Program website (USEPA, 2020).

4. Noise

Noise is defined as unwanted sound and is typically any sound that is undesirable due to its interference with communications or other human activities and its ability to affect hearing. Noise may be intermittent or continuous, steady or impulsive. Human response to noise varies depending on the sound pressure level, type of noise, distance from the noise source, sensitivity, and time of day.

Sound, within the range of human hearing, can vary in intensity by over 1 million units. Therefore, a logarithmic scale, known as the decibel (dB) scale, is used to quantify sound intensity and to compress the scale to a more manageable range. Sound is characterized by its amplitude (how loud it is), frequency (pitch), and duration. The human ear does not hear all frequencies equally; thus, the A-weighted decibel scale (dBA) is used to reflect the selective sensitivity of human hearing. The human range of hearing amplitude extends from 0 dBA to 120 dBA, 0 dBA being the threshold of hearing for someone with a normal hearing mechanism and 120 dBA being the threshold of pain. The USEPA recommends a 70 dBA over a 24-hour (or 75 dBA over 8-hour) average exposure limit for environmental noise (USEPA, 1974).

Carroll County has a specific noise control ordinance to provide for the control of sound levels throughout the County that promotes public health, safety, and welfare. The noise ordinance includes noise limits for different land uses. **Table 1** provides the maximum allowable noise level permitted at receiving land uses (Carroll County 2004 Code §93.03).

Table 1: Maximum Allowable Sound Levels (dBA)

Day/Night	Industrial	Commercial	Residential
Day	75	67	65
Night	75	62	55

Sources: (Carroll County Government, 2005)

The areas surrounding the Study Area include undeveloped lands, rural and suburban single-family residences, and some commercial properties. Populations residing in rural or other non-urban areas are estimated to experience outdoor Day-Night Average Sound Level values ranging between 30 and 50 dBA (FICON, 1992; USEPA, 1974). The predominant off-site source of ambient noise in the site vicinity includes roadway traffic and the routine operations of nearby businesses. Landscaping work at nearby residences may also generate occasional noise from the use of lawn mowers or weed cutters. Sensitive noise receptors, those that are more susceptible to adverse effects of high noise levels, are present within 1.0 mile of the Proposed Action area and are the same as those listed for air quality (**Section 3**).

5. Geology, Topography, and Soils

5.1 Geology

Geological resources consist of surface and subsurface materials and their properties. Principal geologic factors influencing the ability to support structural development are seismic properties (i.e., potential for subsurface shifting, faulting, or crustal disturbance), soil stability, bedrock competency, and topography.

Carroll County lies in the Piedmont Plateau province, which comprises hard, crystalline igneous and metamorphic geology (Maryland Geological Survey, 2020). Bedrock in the region includes phyllite, marble, schist, and moderately to slightly metamorphosed volcanic rocks. Historically, mineral resources were present in the region, including, building stone and small deposits of nonmetallic minerals, base-metal sulfides, gold, chromite, and iron ore.

Piney Run Dam is located within the Morgan Run Formation adjacent to areas of alluvium upstream and downstream of the dam (Muller, 1994). The Morgan Run Formation primarily consists of fine- to medium-grained garnetiferous mica schist and quartz-mica schist containing discontinuous layers and lenses of quartzite ranging from five centimeters (2.0 inches) to one meter (3.3 feet) thick. Areas of Alluvium are typically one to five meters (16.4 feet) thick, occur in floodplains of streams, and consist of interbedded light gray to brown gravel, sand, silt, and gray-blue to gray-brown clay. The gravel is dominantly quartz, and the sand and silt are predominantly quartz-mica mixtures. The bedrock of the Study Area consists of Pre-Cambrian metamorphic rock, which is made up of metamorphosed igneous and sedimentary rocks with pegmatite and granitic

pluton intrusions. Schist, gabbro, gneiss, marble, granite, and quartzite are among the multitude of rocks in this part of the Piedmont Plateau (Maryland Geological Survey, 2020).

5.2 Topography

Topography is the change in elevation over the surface of a land area. An area's topography is influenced by many factors, including human activity, underlying geologic material, seismic activity, climatic conditions, and erosion. A discussion of topography typically encompasses a description of surface elevations, slope, and distinct physiographic features (e.g., mountains) and their influence on human activities.

Carroll County is characterized by rolling hills with prominent topographical relief from Parr's Ridge, a physiographic feature bisecting the county from southwest to northeast. The region's distinctive topography, evidenced by contrasting ridges, valleys, and other prominent features, is a product of differential weathering of the several rock types found in this area (Reger & Cleaves, 2020). Topography within the Study Area is also characterized by rolling uplands interrupted by incised stream valleys. In many places within the Study Area, the natural topography has been significantly impacted by the existing dam embankment/abutments, the emergency spillway, and large borrow/spoil wasting areas created during the dam's construction. Elevations within the Study Area range between 465 and 580 ft above mean sea level (AMSL) (**Figure 2**).

5.3 Soils

The term soil, in general, refers to unconsolidated materials overlying bedrock or other parent material. Soil structure, elasticity, strength, shrink-swell potential, and erodibility all determine the ability for the ground to support man-made structures. Soils typically are described in terms of their complex type, slope, physical characteristics, and relative compatibility or constraining properties with regard to particular construction activities and types of land use.

Soils in the Study Area are generally well drained and loamy. Eight different soil types occur within the Study Area, in addition to the dam (earth fill) (**Table 2; Figure 3**). Soils classified as "hydric" may pose a development concern related to poor drainage, a high-water table, or a high shrink/swell potential. Hydric soils are saturated, flooded, or ponded with water during the growing season, long enough to develop anaerobic (oxygen-deprived) conditions in the upper soil. Together with hydrophytic vegetation and other hydrologic characteristics, these soils are a potential indicator of wetland hydrology (NRCS, 2018). One hydric soil (Codorus silt loam, 0 to 3 percent slopes) occurs in the Study Area. In addition, Brinklow channery loam, 15 to 25 percent slopes, and Manor loam, 15 to 25 percent slopes, are considered to be highly erodible soils.

The Farmland Protection Policy Act (FPPA) (7 USC 4201 et seq.) of 1981 states that Federal agencies must "minimize the extent to which Federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses". The resources protected by the FPPA include prime and unique farmland. These lands are categorized by the USDA Natural Resources Conservation Service (NRCS) based on underlying soil characteristics, which would be favorable for production of food, feed, forage, fiber, and oilseed crops. Farmland subject to FPPA requirements does not have to be currently used for cropland, but can be forest land, pastureland, cropland, or other land, except for water or urban built-up land. Approximately 50 percent of the Study Area is designated as prime farmland, while 0.2 percent is designated as Farmland of Statewide Importance.

Table 2: Select Soil Characteristics

Map Unit Symbol	Soil Type	Acres in ROI	Percent of ROI	Prime Farmland	Hydric	Farmland of Statewide Importance	Description
BrC	Brinklow channery loam, 8 to 15 percent slopes	1.2	2.4	Yes	No	No	Well-drained soils. Depth to water table is more than 80 inches.
BrD	Brinklow channery loam, 15 to 25 percent slopes	7.8	15.5	No	No	No	Well-drained soils. Depth to water table is more than 80 inches.
CdA	Codorus silt loam, 0 to 3 percent slopes	7.2	14.2	Yes[1]	Yes	No	Moderately well-drained soils. Depth to water table is approximately 18 to 30 inches.
GdB	Glenelg loam, 3 to 8 percent slopes	13.2	26.1	Yes	No	No	Well-drained soils. Depth to water table is more than 80 inches.
GdC	Glenelg loam, 8 to 15 percent slopes	0.1	0.2	Yes	No	Yes	Well-drained soils. Depth to water table is more than 80 inches.
GhB	Glenville silt loam, 3 to 8 percent slopes	3.6	7.1	Yes	No	No	Moderately well-drained soils. Depth to water table is approximately 18 to 22 inches.
MaD	Manor loam, 15 to 25 percent slopes	5.6	11.0	No	No	No	Well-drained soils. Depth to water table is more than 80 inches.
MaF	Manor loam, 25 to 65 percent slopes	7.4	14.6	No	No	No	Well-drained soils. Depth to water table is more than 80 inches.

Sources: (NRCS, 2019)
[1]Prime farmland if not frequently flooded during growing season.

Figure 2: Topography

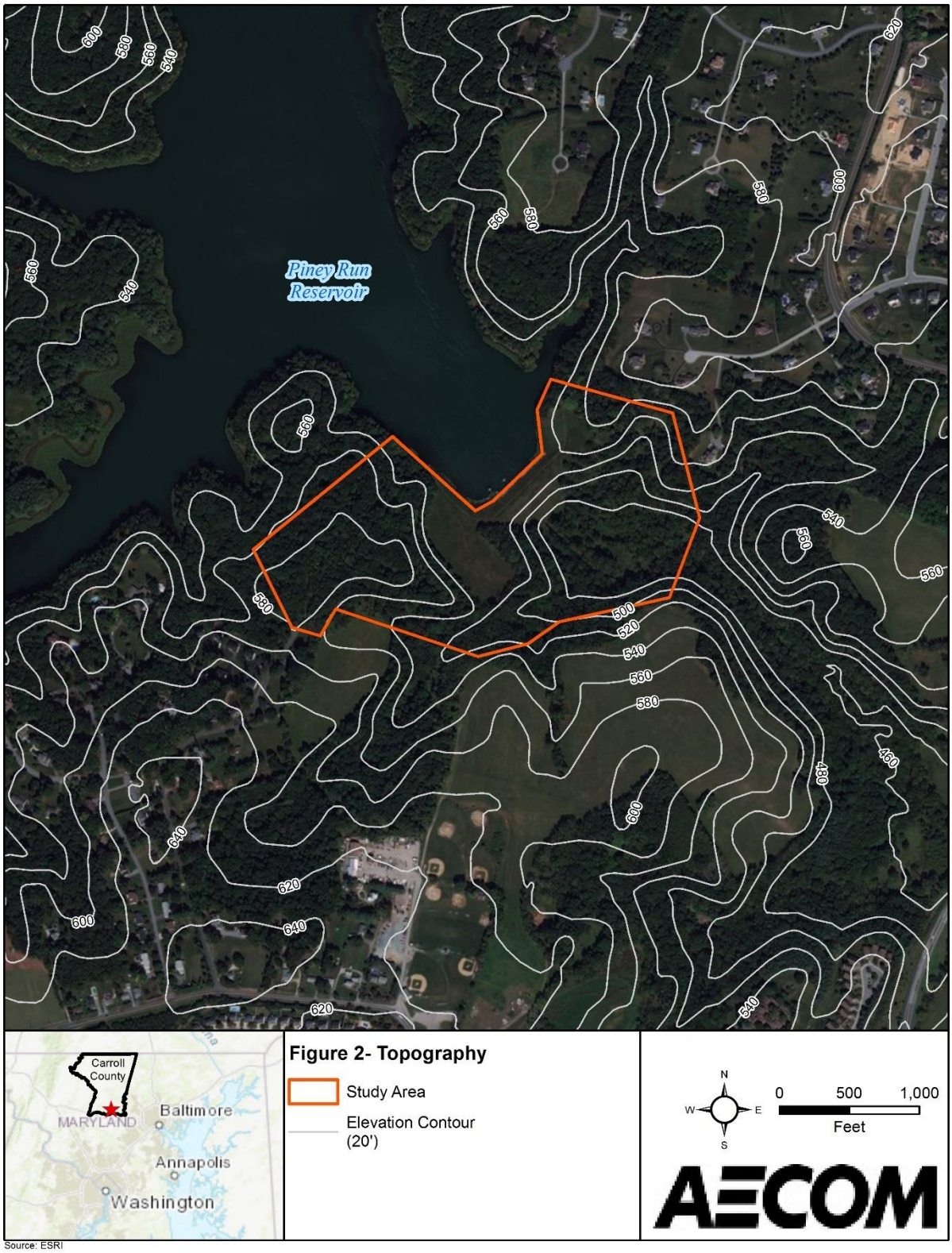
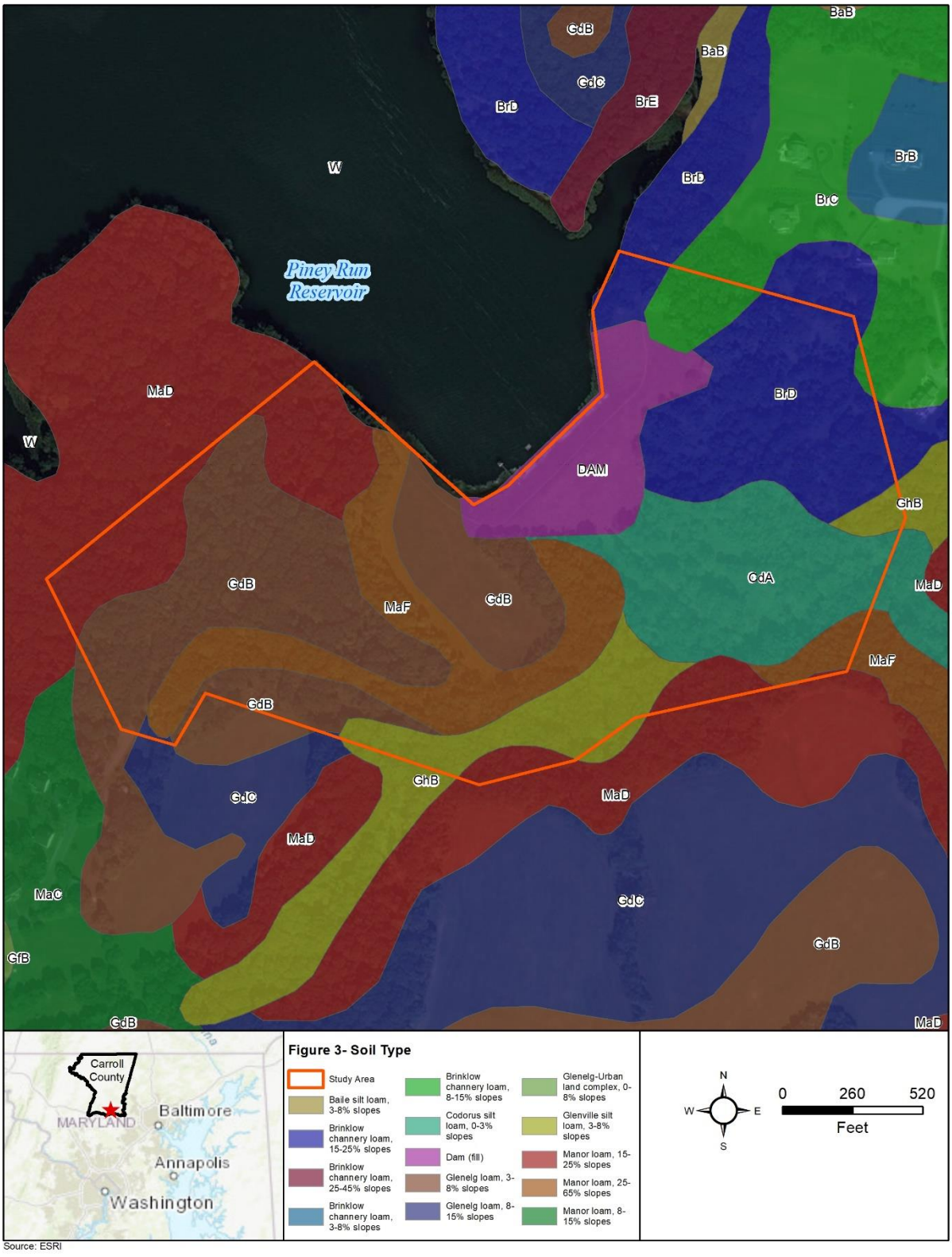


Figure 3: Soil Types



6. Water Resources

Water resources evaluated in this analysis include surface water, wetlands, groundwater, and floodplains.

6.1 Surface Waters

Surface water resources comprise lakes, rivers, and streams and are important for a variety of reasons including ecological, economic, recreational, aesthetic, and human health. Surface waters are considered to be "waters of the United States" (WOUS), which has a broad meaning under the Clean Water Act (CWA) and incorporates deep water aquatic habitats and special aquatic habitats (including wetlands). Wetlands are areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands serve a variety of functions including flood control, groundwater recharge, maintenance of biodiversity, wildlife habitat, recreational opportunities, and maintenance of water quality. WOUS are protected under Section 404 of the CWA.

Piney Run is the dominant surface water within the Study Area and flows in a southeast direction from its impoundment in Piney Run Reservoir. The stream runs for approximately 12.5 miles (mi) from its headwaters near the Village of Winfield, beyond the intersection of MD-97 and MD-26, to its discharge into the Patapsco River approximately 6.2 mi southeast of the Study Area.

A wetlands and waters planning level survey was conducted on 4 November 2019 that identified four streams comprising 2,267.2 linear feet (LF), and three palustrine forested (PFO) wetlands comprising 1.42 acres, within the Study Area **(Figure 4)**. Two of the four streams are perennial riverine, which are waterways with continuous flow throughout the year; one is an intermittent riverine, which has little to no flow during dry seasons; and one is an ephemeral riverine, which only flows in direct response to precipitation events.

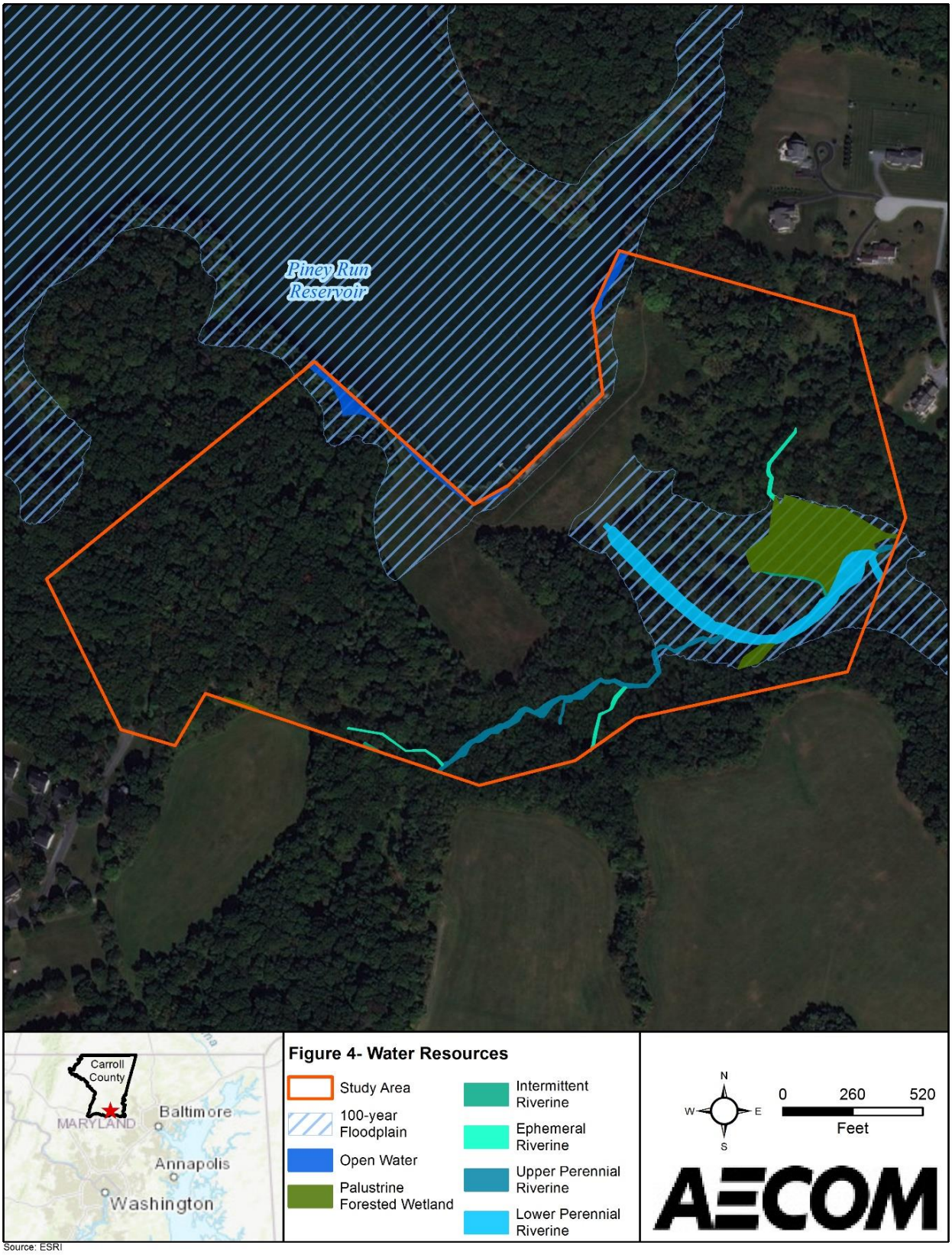
Section 303(d) of the CWA directs each State to identify and list waters in which current required controls of a specified substance are inadequate to achieve water quality standards. MDE's 2018 Integrated Report notes Piney Run as impaired (Category 5 under Section 303(d)) for one designated use (aquatic life and wildlife), due to temperature exceedance. Piney Run Reservoir is noted as Category 2 under Section 303(d) for two designated uses: aquatic life and wildlife, and fishing. Category 2 water bodies are "water bodies meeting some water quality standards but with insufficient data and information to determine if other water quality standards be being met". The water quality standards listed for Piney Run Reservoir under Category 2 for aquatic life and wildlife in Piney Run are total phosphorus, dissolved oxygen, and sedimentation while for fishing are polychlorinated biphenyl and mercury in fish tissue (MDE, 2019).

6.2 Floodplains

Floodplains are areas of low, level ground on one or both sides of a stream channel that are subject to either periodic inundation by flood water. A 100-year floodplain has a 1 percent chance of inundation in any given year, while a 500-year floodplain has a 0.2 percent chance. Inundation dangers associated with floodplains have prompted Federal, State, and local legislation that limits development in these areas.

The 100-year floodplain for Piney Run was delineated by the Federal Emergency Management Agency (FEMA) and documented in the Flood Insurance Study (FIS) for Carroll County, Maryland and Incorporated Areas (FEMA, 2015) effective October 2, 2015. Approximately 1.4 square miles of the 18.4-square mile Piney Run watershed is within either a 100-year or 500-year floodplain which includes approximately 10.7 acres of the Study Area (**Figure 4**). The original work plan for the watershed discusses serious flooding problems in the watershed before the dam was constructed. Major floods that occurred in 1946, 1956, and 1967. Flooding without the dam was determined at the time to potentially cause significant damage to roads and bridges, to portions of the Springfield Hospital complex including the water treatment plant, and to agricultural flood plain land (SCS, 1968). The FIS indicates that the dam and reservoir were not included in the detailed modeling of the floodplain but does discuss the flood control benefits of the dam noting that at Arrington Road located near the downstream end of the watershed, "the discharge from a 100-year frequency flood with the dam is reduced to the same discharge as a 25-year frequency flood without the dam" (FEMA, 2015). Floodplain issues are typically managed through preventive and corrective measures to reduce the risk of current and future flood impacts. The construction of Piney Run Dam is an example of a preventative structural measure that attenuates floods to protect downstream properties. Currently, no documentation could be located of any problems related to flooding or other water quantity issues, but it is noted that the dam plays a significant role in flood protection of downstream properties.

Figure 4: Water Resources



Source: ESRI

6.3 Groundwater

Groundwater describes the water present beneath the Earth's surface and is an essential resource used for potable water consumption, agricultural irrigation, and industrial applications. Groundwater properties are often described in terms of aquifer or well capacity, water quality, and surrounding geologic composition.

The Schist-Saprolite Aquifer underlies the Study Area (Carroll County Government, 2011). Most groundwater is stored in the saprolite, which overlies the solid rock (MGS, 2020). Groundwater occurs primarily from secondary porosity and permeability provided by fractures (USGS, 2020).

No potable wells occur within the Study Area, although 13 monitoring/observation wells occur within the Study Area.

7. Biological Resources

Biological resources include native or naturalized plants, animals, and the habitats in which they occur. Special status biological resources are defined as those plant and animal species listed as threatened or endangered, or proposed as such, by the US Fish and Wildlife Service (USFWS) or Maryland Department of Natural Resources (MDNR).

7.1 Vegetation and Wildlife

The Study Area primarily comprises forested uplands and is dominated by upland tree species, including oaks (*Quercus spp*), hickories (*Carya spp*), and tulip poplar (*Liriodendron tulipifera*). Other dominant vegetation include ash-leaf maple (*Acer negundo*) and rambler rose (*Rosa multiflora*), an invasive species. The herbaceous stratum is dominated by the invasive common reed (*Phragmites australis*).

Invasive species are abundant throughout the Study Area and a total of 17 species were observed during field surveys conducted on 4 November 2019 (**Figure 5; Table 3**). The amount of invasive species is described in terms of relative aerial coverage to other invasive and non-invasive species in the area, based on an observational review, and categorized as high, medium, or low occurrence abundance. Species in high abundance include Japanese stiltgrass (*Mycrostegium vimineum*), wine berry (*Rubus phoenicolasius*), wavyleaf basketgrass (*Oplismenus hirtellus subsp. Undulatifolius*), and barberry (*Berberis thunbergii*).

Figure 5: Vegetation

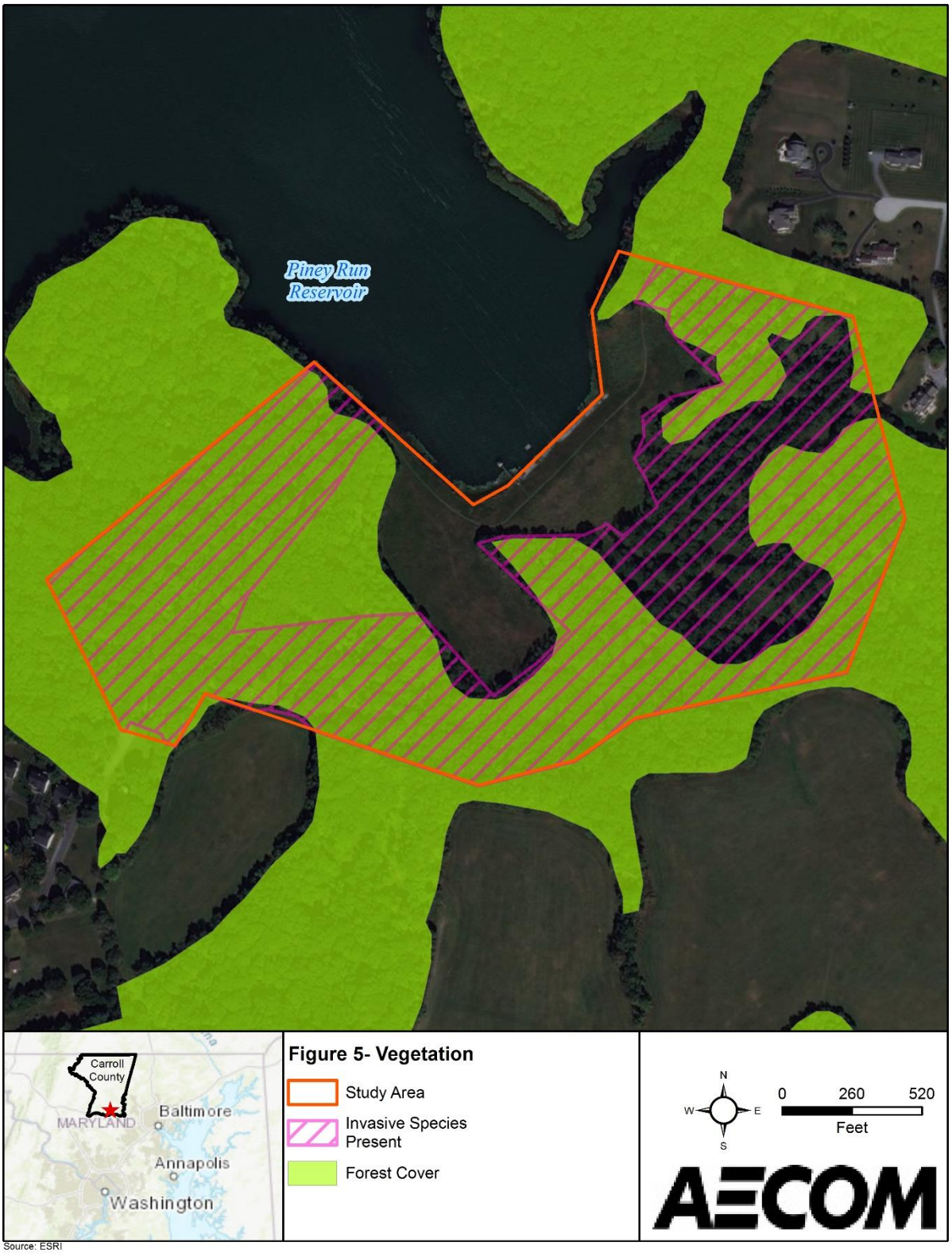


Table 3: Invasive Species within the Study Area

Common Name	Scientific Name	Occurrence Abundance[1]
Barberry	*Berberis thunbergii*	Medium to High
Beefsteak plant	*Perilla frutescens*	Medium
Chinese privet	*Ligustrum sinense*	Medium
Chinese wisteria	*Wisteria sinensis*	Low
English ivy	*Hedera helix*	Low
Garlic mustard	*Alliaria petiolate*	Medium
Ground ivy	*Glechoma hederacea*	Low
Honeysuckle bush	*Lonicera maackii*	Low
Japanese honeysuckle	*Lonicera japonica*	Medium
Japanese stiltgrass	*Mycrostegium vimineum*	High
Mile a minute	*Persicaria perfoliate*	Medium
Multiflora rose	*Rosa multiflora*	Medium
Oriental bittersweet	*Celastrus orbiculatus*	Medium
Russian olive	*Elaeagnus angustifolia*	Medium
Tree of heaven	*Ailanthus altissima*	Low
Wavyleaf basketgrass	*Oplismensus hirtellus*	High
Wine berry	*Rubus phoenicolasius*	High

[1]Occurrence Abundance is defined as:
High = greater or equal to 30 percent coverage
Medium = 5 to 30 percent coverage
Low = less than 5 percent coverage

Wildlife likely to utilize the Study Area would be typical of the Piedmont Plateau region of the Eastern US, such as the eastern box turtle (*Terrapene carolina carolina*), eastern rat snake (*Pantherophis alleghanensis*), white-tailed deer (*Odocoileus virginianus*), eastern cottontail rabbit (*Sylvilagus floridanus*), Eastern grey squirrel (*Sciurus carolinensis*), blue jay (*Cyanocitta cristata*), and great horned owl (*Bubo virginianus*). Waterfowl within the vicinity include wood duck (*Aix sponsa*), hooded merganser (*Lophodytes cucullatus*), common merganser (*Mergus merganser*), and double-crested cormorant (*Phalacrocorax auritus*) (Maryland Ornithological Society, 2020).

The aquatic habitat of Piney Run Reservoir is mapped as a Lacustrine, Limnetic, Unconsolidated Bottom, Permanently flooded, Impoundment, with a variety of depth, habitat types, and substrates that support numerous assemblages of species (USFWS, 2020). As such, Piney Run supports native fish species such as pumpkinseed sunfish (*Lepomis gibbosus*), red eared sunfish (*Lepomis microlophus*), redbreast sunfish (*Lepomis auritus*), brown bullhead (*Ameiurus nebulosus*), smallmouth bass (*Micropterus dolomieu*), white sucker (*Catostomus commersonii*), spotfin shiner (*Catostomus commersonii*), creek chub (*Semotilus atromaculatus*), and tessellated darter (*Etheostoma olmstedi*). The lake also supports introduced, non-native populations of striped bass (Morone saxatilis), tiger muskie (*Esox masquinongy x Esox lucius*), and rainbow trout (*Oncorhynchus mykiss*) (MDDNR, 2013). The Piney Run Reservoir supports recreational fishing

and is regularly stocked with largemouth bass (*Micropterus salmoides*), black crappie (*Pomoxis nigromaculatus*), yellow perch (*Perca flavescens*), channel catfish (*Ictalurus punctatus*), and bluegill (*Lepomis macrochirus*) (Rudow's FishTalk, 2020).

Native submerged aquatic plants such as curly pondweed (*Potamogeton crispus*) provide important cover and food for a variety of species and help support a productive recreational fishery (MDDNR). The most abundant invasive aquatic vegetation encountered in the reservoir is the invasive hydrilla (*Hydrilla verticillata*) (Hare, 2002).

The non-native plain pocketbook (*Lampsilis cardium*) from the Potomac River is fairly common in Maryland's rivers and streams and is potentially present in Piney Run (MDDNR, 2010). In addition, crayfish (*Cambarus spp.*), common stonefly (*Paragnetina media*), mayflies (*Hexagenia limbata*), and caddisflies (Order *Trichoptera*) are just a few of the many types of native aquatic insects and macroinvertebrates that may occur (MDDNR, 2004).

7.2 Special Status Species

Special status species include threatened and endangered (T&E) plants and animals that are Federally or State-protected; bald eagles, as protected under the Bald and Golden Eagle Protection Act (BGEPA) of 1940; and migratory birds, as protected under the Migratory Bird Treaty Act (MBTA).

Federal status as a T&E species is derived from the Endangered Species Act (ESA) of 1973 (16 USC §1531 et seq.) and is administered by USFWS. They maintain a current list of Federally endangered and threatened species, candidate species, and species of concern. Candidate species and species of concern designated by USFWS receive no statutory protection under the ESA. In Maryland, the Maryland Department of Natural Resources (MDNR) administers the Nongame and Endangered Species Conservation Act (Annotated Code of Maryland 10-2A-01), which is the primary Maryland law that governs the legal State listing of T&E species.

7.2.1 Threatened and Endangered Species

According to the USFWS Information for Planning and Consultation database, the Federally threatened northern long-eared bat (NLEB; *Myotis septentrionalis*) is the only Federally listed species with the potential to occur within or around the Study Area. No Federally designated critical habitat is present (USFWS, 2020a).

The NLEB is found across much of the eastern and north-central US. The NLEB hibernates in caves and abandoned mines during the winter, and forages in the surrounding wooded areas in autumn. During late spring and summer, the NLEB roosts and forages in upland forests. The primary threats to NLEB include white-nose syndrome, a disease caused by fungus that disturbs hibernation and causes a deadly loss in energy stores, and the degradation of its summer or winter roosting habitat from human activities. The forested portion of the Study Area has the potential to provide summer roosting and foraging habitat for the NLEB.

A total of 21 State-listed T&E species have the potential to occur within Carroll County. Based on consultation with MDNR via letter dated 31 January 2020, no natural heritage resources, including Federal and State-listed species, are anticipated to be present in the Study Area (**Appendix A**).

7.2.2 Bald Eagles

Bald eagles (*Haliaeetus leucocephalus*) are protected under the BGEPA, which prohibits the take, possession, transport, or sale of live or dead eagles and their parts, nests, or eggs unless authorized by permit. Habitat for the bald eagle primarily consists of mature forest in proximity to large bodies of open water for foraging. Large, dominant trees are utilized for nesting sites, typically within 1.0 mile of open water.

According to the Maryland Bald Eagle Nest Monitoring Program, one bald eagle nest has been observed near the Study Area, situated approximately 0.1 mile to the northwest. Another bald eagle nest has been observed approximately 0.5 mile west of the Study Area (Maryland Bird Conservation Partnership, 2020).

7.2.3 Migratory Birds

The MBTA prohibits, unless permitted by regulations, the take of any migratory bird listed in the MBTA, including any part, nest, or egg of any such bird (16 USC § 703). Migratory birds include species with at least some populations breeding in the continental US and/or Canada, including songbirds, shorebirds, water birds, and waterfowl.

Maryland is located within the Atlantic Flyway, where lands may provide resting, feeding, and breeding grounds to migratory birds (USFWS, 2020b). Migratory bird species with the potential to occur at the Proposed Action area include: blue-winged warbler (*Vermivora pinus*), eastern whip-poor-will (*Antrostomus vociferous*), prairie warbler (*Dendroica discolor*), red-headed woodpecker (*Melanerpes erythrocephalus*), rusty blackbird (*Euphagus carolinus*), and wood thrush (*Hylocichla mustelina*).

8. Cultural Resources

Cultural resources are historic properties as defined by the National Historic Preservation Act (NHPA); cultural items as defined by the Native American Graves Protection and Repatriation Act (NAGPRA); archaeological resources as defined by the Archaeological Resources Protection Act; sacred sites as defined by Executive Order (EO) 13007 to which access is afforded under the American Indian Religious Freedom Act; and collections and associated records as defined by 36 CFR Part 79. NEPA requires consideration of "important historic, cultural, and natural aspects of our natural heritage." Consideration of cultural resources under NEPA includes the necessity to independently comply with the applicable procedures and requirements of other Federal and State laws, regulations, EOs, and presidential memoranda.

The NHPA of 1966, as amended (Public Law 89-665; 54 USC §300101 *et seq.*), establishes the policy of the Federal government to provide leadership in the preservation of historic properties and administer Federally owned or controlled historic properties. Section 106 of the NHPA (54 USC §306108) requires Federal agencies to consider the effect an undertaking may have on historic properties; its implementing regulations, 36 CFR Part 800, describe the procedures for identifying and evaluating historic properties; assessing the effects of Federal actions on historic properties; and consulting to avoid, reduce, or minimize adverse effects. As part of the Section 106 process, agencies are required to consult with the State Historic Preservation Office (SHPO).

The Section 106 process requires each undertaking to define an Area of Potential Effect (APE). An APE is "the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any properties exist…[and the APE] is influenced by the scale and nature of an undertaking and may be different for different kinds of

effects caused by the undertaking" (36 CFR Part 800.16[d]). The Study Area is coterminous with the APE.

The USDA will conduct Section 106 consultation with the SHPO. [This section will be updated as applicable based on Section 106 consultation efforts and determinations by the SHPO].

8.1 Architectural and Archaeological Resources

A Phase I archaeological survey was conducted in the Study Area during 3-6 December 2019. The survey consisted of visual surface inspection for above-ground evidence of archaeological sites and the excavation of 217 shovel test pits. Survey results found 1 prehistoric and 242 historic artifacts, and the identification of 4 historic archaeological sites. The prehistoric artifact and 1 of the historic artifacts occurred as isolated finds, while the remaining 241 historic artifacts are attributed to 3 of the 4 historic sites. The archaeological sites include: 18CR292, an early twentieth century refuse pit; 18CR293, an early nineteenth to early twentieth century farmstead; 18CR294, a likely nineteenth century spring box; and 18CR295, a possible nineteenth century domestic occupation.

Of the four historic sites, only Site 18CR293 is potentially eligible for listing in the NHPA's National Register of Historic Places (NRHP); Sites 18CR292 and 18CR294 are not considered eligible for listing. For a property or site to be listed or eligible for listing in the NRHP, it must possess sufficient integrity of location, design, setting, materials, workmanship, feeling, and association, and meet one or more of the NRHP significance criteria listed below (54 USC 302103):

- Association with events that have made a significant contribution to the broad patterns of our history;
- Association with the lives of significant persons in our past;
- Embodiment of the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction;
- Yielded, or may be likely to yield, information important in history or prehistory

Site 18CR293 includes 5 features and 224 historic artifacts representing two functionally discrete site loci. Locus A served as the farmstead's agricultural core as indicated by the foundations of a large barn and secondary outbuilding, along with a low-density scatter of artifacts with very limited functional diversity. Locus B served as the farmstead's domestic epicenter, as indicated by a dwelling foundation and higher quantities of more functionally diverse artifacts, including service and storage wares. The distribution of artifacts and features reflects the division of space the site occupants imposed on the landscape. Site 18CR293 is also located in what was likely a very isolated part of the valley throughout the nineteenth century, a setting which might have forced site occupants to adapt to life in a more remote location. Given the presence of numerous features, discrete activity areas, and intact archaeological deposits, Site 18CR293 is potentially eligible for NRHP listing; however, further investigation would be required to make this determination.

8.2 Native American Consultation

The USDA will conduct formal consultation with federally recognized Native American tribes as required under EO 13175, *Consultation and Coordination with Indian Tribal Governments*. The

following seven federally recognized tribes were identified as having potential ancestral ties to or interest in Carroll County: Delaware Nation; Seneca-Cayuga Nation; Delaware Tribe of Indians; Oneida Nation of New York; Onondaga Nation; St. Regis Mohawk Tribe; and, Tuscarora Nation of New York. These entities will be invited to participate as Sovereign Nations in both the EA and the NHPA Section 106 process. [This section will be updated as applicable based on Native American consultation efforts and responses received].

9. Socioeconomics

Socioeconomics is defined as the basic attributes and resources associated with the human environment, particularly population and economic activity. Human population is affected by regional birth and death rates as well as net migration. Economic activity typically comprises employment, personal income, and industrial growth. Impacts on these two fundamental socioeconomic indicators can also influence other components such as housing availability and public services provision.

The following subsections identify and describe the socioeconomic environment surrounding the Study Area, including the unincorporated community of Eldersburg, Carroll County, and the State of Maryland. Socioeconomic areas of discussion include local demographics, regional and local economy, local housing, and local recreation activities. Data used in preparing this section was collected from the 2013-2017 American Community Survey (US Census Bureau, 2017) and the 2010 US Census (US Census Bureau, 2010).

9.1 Population

The State of Maryland had a population increase of 9.0 percent from 2000 to 2010, similar to the 9.7 percent increase in the US population over the same period (**Table 4**) (US Census Bureau, 2010). Both Carroll County and Eldersburg populations grew more than the US and State averages between 2000 and 2010. Population growth between 2010 and 2017 occurred at similar rates in the US, State of Maryland, and Eldersburg (approximately 13 to 15 percent), with Eldersburg experiencing the highest growth at 15.6 percent, while the rate of growth in Carroll County was lower (10.8 percent).

Table 4: Population

Area	2000	2010	2017	Population Change 2000 – 2010 (%)	Population Change 2010 – 2017 (%)
United States	281,421,906	308,745,538	321,004,407	9.7	14.1
Maryland	5,296,486	5,773,552	5,996,079	9.0	13.2
Carroll County	150,897	167,134	167,319	10.8	10.8
Eldersburg	27,741	30,531	32,064	10.1	15.6

Sources: (US Census Bureau, 2010); (US Census Bureau, 2017)

9.2 Regional Economy

Local, County, and State per capita and median household income from 2017 is summarized in **Table 5**. Eldersburg has a higher median household income and per capita income than both Carroll County and the State of Maryland. The top five industries in Eldersburg are: (1) educational,

health, and social services (25.3 percent); (2) professional, scientific, management, administrative, and waste management services (15.5 percent); (3) public administration (10.1 percent); (4) arts, entertainment, recreation, and accommodation and food services (8.2 percent); and (5) retail trade (8.1 percent) (US Census Bureau, 2017). Unemployment rates for the State and the County were 6.1 percent and 4.0 percent, while Eldersburg reported a lower unemployment rate at 3.2 percent in 2017 (US Census Bureau, 2017).

Table 5: Regional Income

Area	Number of Households	Median Household Income	Per Capita Income	Population Below Poverty Level (%)	Unemployment Rate (%)
Maryland	2,181,096	78,916	39,070	9.7	6.1
Carroll County	60,432	90,510	39,690	5.5	4.0
Eldersburg	11,000	113,549	45,078	3.3	3.2

Sources: (US Census Bureau, 2017)

9.3 Housing

Table 6 presents selected housing characteristics for the State of Maryland, Carroll County, and Eldersburg. Median home values and mortgages are highest in Eldersburg when compared to the County and State, while median rent is highest for the State. Additionally, the State of Maryland has the highest percentage of renter-occupied housing units (33.2 percent), compared to Carroll County (18.2 percent) and Eldersburg (10.9 percent). Overall, the percentages of occupied housing units are similar among the County and Eldersburg (95.6 and 98.0 percent, respectively), and higher than the State (89.9 percent).

Table 6: Housing Characteristics

Area	Housing Units Available	Occupied (%)	Owner-Occupied (%)	Median Value	Median Home Mortgage	Renter Occupied (%)	Median Contract Rent
Maryland	245,921	89.9	66.8	296,500	1,954	33.2	1,311
Carroll County	2,779	95.6	81.8	328,100	2,021	18.2	1,131
Eldersburg	225	98.0	89.1	371,600	2,174	10.9	1,135

Sources: (US Census Bureau, 2017)

9.4 Schools

Several educational facilities are located within 2.0 miles of the Study Area. These include Sykesville Middle School, Eldersburg Elementary School, Piney Ridge Elementary School, and Liberty High School. Sykesville Middle School, located approximately one mile from the Study Area, is the nearest school.

Table 7 provides regional educational attainment for persons 25 years and older. The percentage of individuals with a bachelor's degree or higher is generally similar for the State, County, and Eldersburg. Eldersburg has a higher percentage of individuals without a high school diploma than Carroll County, although both the County and Eldersburg have lower percentages than the State (11.3 percent). Carroll County has the highest percentage of high school graduates (48.5 percent) compared to Eldersburg (46.0 percent) and the State (45.8 percent).

Table 7: Regional Educational Attainment of Persons 25 years and Older

Area	No Diploma (%)	High School Graduate or Higher (%)	Bachelor's Degree or Higher (%)
Maryland	11.3	45.8	13.3
Carroll County	6.9	48.3	12.6
Eldersburg	8.3	46.0	12.9

Sources: (US Census Bureau, 2017)

9.5 Shops and Services

No shops and services are present within the Study Area and few occur in close proximity due to the rural and residential nature of the land use. Five businesses are located within 0.5 mile of the site: Fogle's Septic Services (0.22 mile southwest), an optometrist (0.47 mile south), Acts Chesapeake Regional Office (0.35 mile east), and two restaurants (0.38 mile east). The majority of regional businesses in the vicinity occur along MD-32 and MD-26.

9.6 Recreational Facilities

The reservoir impounded by Piney Run Dam (Piney Run Reservoir) is a popular recreational area for the community. Piney Run Reservoir offers fishing and boating activities, including canoe, kayak, and rowboat rentals (Carroll County Government, 2020a). The reservoir is stocked with largemouth bass, black crappie, yellow perch, rainbow trout, and other species. Surrounding Piney Run Reservoir is Piney Run Park, encompassing 550 acres of fields, forest, and open space. Piney Run Park offers over 5.0 miles of hiking trails, tennis courts, playgrounds, and picnic areas. The Piney Run Nature Center is located within Piney Run Park and provides educational programs throughout the year to school, youth, and community organizations. In 2019, Piney Run Park received a total of 103,367 visitors. It is estimated that approximately 20% of annual visitors use the reservoir facilities (e.g., boating, fishing), while the remaining 80% use other park facilities (Degitz, 2019).

Recreational trails connecting to the rest of Piney Run Park run through the Study Area; no other recreational facilities are present.

9.7 Protection of Children

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, was established to prioritize identification and assessment of environmental health risks and safety risks that may affect children, who may suffer disproportionately from environmental health and

safety risks, and to ensure Federal agencies' policies, programs, activities, and standards address environmental and safety risks to children.

No individuals, including children, currently live on or occupy the Study Area. Children may occur periodically within the Study Area while utilizing Piney Run Park for recreational purposes. Approximately 50 single-family homes are located within 0.5-mile of the Study Area. The percentage of the population under age 18 is generally similar between the town, County, and State (see **Table 8**).

Table 8: Total Population versus Population under Age 18

Area	Total Population	Population under 18	Population under 18 (%)
Maryland	5,966,079	1,347,613	22.5
Carroll County	167,319	37,339	22.3
Eldersburg	32,064	7,288	22.7

Sources: (US Census Bureau, 2017)

10. Environmental Justice

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires Federal agencies to identify and address disproportionate adverse effects of their programs, policies, and activities on minority and low-income populations. Potential environmental justice considerations are determined by comparing demographic and economic characteristics (minority population composition and poverty rates) within the project sites to the same characteristics in the surrounding region.

Table 9 presents regional demographics by race for the areas surrounding the Study Area.

Table 9: Regional Population by Race

Area	All Individuals	White Non-Hispanic or Latino (%)	Hispanic or Latino (%)	African-American (%)	American Indian and Alaska Native (%)	Asian Alone (%)	Native Hawaiian and other Pacific Islander Alone (%)	Other Race (%)	Two or More Races (%)
Maryland	5,996,079	51.9	9.6	29.3	0.2	6.2	0.0	0.3	2.6
Carroll County	167,219	89.8	3.2	3.3	0.2	1.7	0.0	0.1	1.7
Eldersburg	32,064	89.9	2.6	2.9	0.3	2.4	0.0	0.1	1.8

Sources: (US Census Bureau, 2017)

10.1 Low-Income Populations

The US Census Bureau defines a "poverty area" as an area where 20 percent or more of the residents have incomes below the poverty threshold, and an "extreme poverty area" as one with 40 percent or more below the poverty level.

Neither Carroll County nor the unincorporated community of Eldersburg meet the definition of a poverty area as the estimated poverty rates are 5.5 percent and 3.3 percent, respectively (**Table 5**).The poverty rate for the State of Maryland was found to be below 10 percent (**Table 5)**.

10.2 Minority Populations

The term "minority population" includes persons who identify themselves as African American, Asian or Pacific Islander, Native American or Alaska Native, or Hispanic. A minority population exists where the percentage of minorities in an affected area either exceeds 50 percent or is meaningfully greater than in the general population of the larger surrounding area.

Neither the unincorporated community of Eldersburg nor Carroll County contain minority populations, as defined above. According to **Table 9**, the percentages of minority persons in Eldersburg and Carroll County are 10.1 percent and 10.2 percent, respectively. These numbers are significantly lower than the percentage of minority persons in the State of Maryland (48.1 percent).

As neither the unincorporated community of Eldersburg nor Carroll County are defined as poverty areas and do not contain notable minority populations, the Study Area is not considered to be an environmental justice area of concern.

11. Health and Safety

A healthy and safe environment is one in which there is no potential, or there is an optimally reduced potential, for death, serious bodily injury or illness, or property damage. Health and safety addresses matters such as workers' health and safety during facility construction activities and subsequent operation, and public safety during facility construction activities and subsequent operation.

11.1 Public Health and Safety

The Carroll County Sheriff's Office is responsible for law enforcement patrol in and around the Study Area and reports issues related to local law enforcement. The Carroll County Sheriff's Southern Office is located approximately 2.0 miles northeast of the Study Area, while the Sykesville Police Department is approximately 1.5 miles south. The nearest fire station is the Sykesville-Freedom District Fire Station, a volunteer fire department located approximately 0.6 mile east of the Study Area. The nearest general hospital is Northwest Hospital (10.0 miles southeast), a non-profit hospital with 231 beds for acute care services (Lifebridge Health, 2020). Additionally, ExpressCare Urgent Care Center is located 1.8 miles northeast of the Study Area.

Piney Run Dam does not currently meet safety and performance standards for a High Hazard Class dam. The current hazard classification is based on the potential for loss of human life due to the prevalence of bridges, roads, homes and buildings existing in the downstream dam breach inundation zone. Since there is a potential for loss of human life, the dam does not currently comply with NRCS and State of Maryland standards commensurate with the risk of failure.

Per Executive Order 11988, *Floodplain Management*, NRCS is required to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains while acquiring, managing, and disposing of Federal lands and facilities; providing Federally undertaken, financed, or assisted construction and improvements; and conducting Federal activities and programs affecting land use. Currently, Piney Run Dam does not meet NRCS and MDE criteria for a High Hazard Dam, thus putting public health and safety at risk. The failure of Piney Run Dam during the worst-case flood event would result in potential loss of life and property damage, particularly to 31 nearby addresses (including commercial, institutional, and residential buildings), nine roads, and one railroad line.

11.2 Occupational Health and Safety

The health and safety of contractors in Maryland are safeguarded by the Maryland Occupational Safety and Health (MOSH) State Plan, as managed by the Maryland Division of Labor and Industry. The MOSH State Plan adopts all standards set forth by the Federal Occupational Safety and Health Administration (OSHA), in addition to unique general industry, construction, and agricultural standards (US Department of Labor, 2020). MOSH standards specify the amount and type of training required for construction workers, the use of protective equipment and clothing, engineering controls, and maximum exposure limits for workplace stressors.

12. Infrastructure

Infrastructure is defined as the fundamental facilities and systems serving a geographic area, such as the transportation network and utilities. Specifically, utilities are defined as the public service of providing essential services such as sanitary sewer, water, electricity, and natural gas.

The Study Area consists of a primarily undeveloped tract of land. The only structures that occur on the property are Piney Run Dam itself and associated structures (e.g., water intake tower, principal spillway riser), a 278-foot portion of Hollenberry Road, and previously identified historic sites. The 71.5-foot high earth embankment dam comprises a 57.85-foot high concrete riser, draining into a 36-inch reinforced concrete pipe. The 36-inch conduit extends approximately 304 feet and discharges to a reinforced concrete impact basin.

Neighboring businesses are served by major utility infrastructure (i.e., natural gas, electric, potable water, and sanitary sewer). Baltimore Gas and Electric Company (BGE) is the natural gas and electric power supplier in the area. Water service is provided by the Freedom District Water Treatment Plant, owned and operated by Carroll County, Maryland. Sewerage service is provided by the Freedom District Wastewater Treatment Plant, owned by the State of Maryland and operated by the Maryland Environmental Service using conveyance systems owned and operated by Carroll County. Two groundwater sources, the Raincliffe and Fairhaven wells, supplement the Freedom District Water Treatment Plant.

Roadways in the surrounding area are primarily smaller, residential roads. MD-32 is the nearest highway and is less than 0.5 mile southeast of the site; it runs north-south through Carroll County. Clearview Airpark is the nearest public airport located less than 6.0 miles north of the Study Area. The Baltimore/Washington International Thurgood Marshall Airport is the nearest international airport, approximately 22.0 miles southeast of the Study Area.

13. Hazardous and Toxic Materials and Waste

Hazardous materials are defined as "hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions [in 49 CFR 173]" (49 CFR 171.8).

Hazardous wastes are defined by the Resource Conservation and Recovery Act of 1976 in 42 USC §6903(5), as amended by the Hazardous and Solid Waste Amendments, as "a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (a) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (b) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed."

In addition to threatening human health and well-being, the improper release of or exposure to hazardous materials and wastes may threaten wildlife, plants, fish, and their habitats, soil systems, and water resources. Localized conditions such as soil, topography, water resources, and climate may affect the extent of contamination from or exposure to hazardous substances.

A query of the MDE Oil Control Program's database found no remediation sites requiring cleanup within 1.0 mile of the Study Area. Further, no Superfund sites are present in Carroll County.

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Appendix A: Agency Coordination

MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor
Jeannie Haddaway-Riccio, Secretary

January 30, 2020

Ms. Charlene Wu
AECOM
3101 Wilson Boulevard
Suite 900
Arlington, VA 22201

RE: Environmental Review for Piney Run Watershed Study - Piney Run Dam Rehab, Carroll County, Maryland.

Dear Ms. Wu:

The Wildlife and Heritage Service has determined that there are no official State or Federal records for listed plant or animal species within the delineated area shown on the map provided. As a result, we have no specific concerns regarding potential impacts or recommendations for protection measures at this time. We would like to point out, however, that our remote analysis suggests that the forested area on this property contains Forest Interior Dwelling Bird habitat. Populations of many bird species which depend on this type of forested habitat are declining in Maryland and throughout the eastern United States. Interested landowners can contact us for further voluntary guidelines to help conserve this important habitat.

Please be sure to let us know if the limits of proposed disturbance or overall site boundaries change and we will provide you with an updated evaluation. Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at (410) 260-8573.

Sincerely,

Lori A. Byrne

Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

ER# 2020.0024.cl