US Army Corps
of Engineers
Baltimore District

FINDING OF NO SIGNIFICANT IMPACT AND ENVIRONMENTAL ASSESSMENT

MOSCOW, PENNSYLVANIA, SEWER EXTENSION LACKAWANNA COUNTY

SECTION 219 PROJECT

MOSCOW SEWER AUTHORITY CHURCH STREET SANITARY SEWER EXTENSION

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FINDING OF NO SIGNIFICANT IMPACT

Moscow Sewer Authority Church Street Sanitary Sewer Extension
Lackawanna County, Pennsylvania

In accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, the U.S. Army Corps of Engineers, Baltimore District (USACE), has assessed the environmental effects of the Moscow Sewer Authority Church Street Sanitary Sewer Extension, Lackawanna County, Pennsylvania. The Baltimore District is cost sharing the extension of the sewer line along Church Street and Gardner Road, from the existing sanitary sewer manhole located near Moscow Elementary School to the Moscow Borough boundary. The non-federal sponsor is Moscow Sewer Authority. The proposed action consists of installing 1-1/2" to 4" diameter force mains and pressurized sewer laterals located along existing state and borough road rights-of-way and new rights-of-way established to connect private properties. The proposed project will extend approximately 6,300 linear feet along Church Street and northward along Gardner Road for approximately 750 feet. The project will consist of sanitary sewer force mains, pressurized sewer laterals, and gravity sewer. A grinder pump will be installed at each residential or commercial structure. The proposed extension would service existing residents and commercial properties of Moscow Borough, totaling approximately 46.5 Equivalent Dwelling Units. The proposed project would supplant existing, malfunctioning, on-lot sewage disposal systems that pose a potential risk to public health through the release of partially treated or untreated sewage to surface and ground water.

The project is authorized by Section 219 of the Water Resources Development Act (WRDA) of 1992 (Public Law 102-580), as amended. This authority directs USACE to provide assistance to non-Federal interests for carrying out water-related environmental infrastructure and resource protection projects. This project is located within the Borough of Moscow, Lackawanna County, Pennsylvania. Projects in Lackawanna County, Commonwealth of Pennsylvania are specifically authorized in WRDA of 1999 (PL 106-53), §502(f)(11).

The environmental assessment was prepared in compliance with NEPA and supporting regulations promulgated by the Council on Environmental Quality and the USACE. Three alternatives were considered for this project including the proposed action (construction of a low-pressure sewer system), construction of a conventional gravity sewer system, and no action. Potential direct, indirect, and cumulative impacts to land use; geology and topography; soil; prime and unique farmlands; surface waters; wetlands; floodplains; wild and scenic rivers; terrestrial resources; rare, threatened and endangered species; air quality; greenhouse gases; noise; cultural resources; aesthetics and recreation; transportation; demographics and socioeconomic conditions; hazardous, toxic, and radioactive substances; and environmental justice were assessed.

Short-term, minor, adverse impacts from the proposed project include dust, air emissions, and noise from construction activities; potential disruption of traffic during construction; and loss of

vegetation in areas disturbed. The extension of the sewer line will replace malfunctioning, on-lot sewage disposal systems, thereby benefitting the community through the use of safe and reliable sewage conveyance and treatment. Appropriate steps to minimize potential adverse impacts, such as the implementation of best management practices, will be incorporated into the project. The proposed project will not have an adverse effect on any threatened or endangered species or their critical habitat. No impacts to cultural resources or National Register of Historic Places properties are expected.

The accompanying environmental assessment, which was made available for a 30-day public review, supports the conclusion that the project does not constitute a major Federal action significantly affecting the quality of the human environment. Therefore, an environmental impact statement is not necessary to perform the proposed sewer line expansion.

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Date

Esther S. Pinchasin
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TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

1 INTRODUCTION

The U.S. Army Corps of Engineers (USACE) prepared an environmental assessment (EA) in November 2020 pursuant to the National Environmental Policy Act (NEPA) and Engineering Regulation (ER) 200-2-2; however, since the time of that EA's publication, the scope of the project has changed and the project limits of disturbance (LOD) has increased. This EA has been prepared by USACE to replace the November 2020 EA and Finding of No Significant Impact (FONSI).

Potential environmental and socioeconomic impacts from construction and general operation of the Moscow Sewer Authority (MSA) Church Street Sanitary Sewer Extension Project are analyzed herein, pursuant to NEPA and Engineering Regulation (ER) 200-2-2. Unlike the November 2020 EA, this document follows the "Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act" and the "National Environmental Policy Act Implementing Revisions," published by the Council on Environmental Quality in the Federal Register on 16 July 2020 (effective 14 September 2020; 85 FR 43304) and 7 October 2021 (effective 20 May 2022; 86 FR 23453) respectively.

1.1 Project Authority

Section 219 of the Water Resources Development Act (WRDA) of 1992 (PL 102-580), as amended, authorizes USACE to provide assistance to non-Federal interests for carrying out water-related environmental infrastructure and resource protection projects. This project is located within the Borough of Moscow in Lackawanna County, Pennsylvania. Projects in Lackawanna County, Commonwealth of Pennsylvania are specifically authorized in WRDA of 1999 (PL 106-53), §502(f)(11).

1.2 Project Background

The proposed sanitary sewer extension project would run along Church Street from the existing Moscow Borough Central Sanitary Sewer system manhole located near Moscow Elementary School and west to the Moscow Borough line, as well as north along Gardner Road with additional force mains and laterals connecting to private properties (Appendix A, Figures 1, 2). The non-federal sponsor is the Moscow Sewer Authority.

The Lackawanna County Regional Planning Commission prepared the "Sewerage Facilities and Water Supply Plan for the County of Lackawanna" (Plan) in 1971 for all municipalities in the county. The Borough of Moscow adopted the Plan as its Act 537 Official Sewage Facilities Plan on August 4, 1973. The Plan identified the Borough of Moscow as having significant sewage needs that were caused by malfunctioning on-lot sewage disposal systems (OLDS) and recommended that central sewage facilities be constructed. A wastewater treatment plant (WWTP) was constructed in 1984 and expanded in 2008 from 0.180 million gallons per day (MGD) to 0.30 MGD. The MSA owns and operates the existing Moscow Borough Central Sanitary Sewer system and the Moscow WWTP. The Moscow WWTP operates under the National Pollution Discharge Elimination System (NPDES) Permit Number PA-0061123 and consists of 8" PVC gravity line, 8" ductile iron gravity line, 8" ductile iron for railroad crossing, and 8" ductile iron gravity line for stream crossings. The MSA serves 1,009.76 Equivalent Dwelling Units (EDUs), which includes both residential and commercial users.

1.3 Purpose and Need

The purpose of the Moscow Sewer Authority Church Street Sanitary Sewer Extension is to extend the service area to supplant existing, malfunctioning OLDS. The proposed extension would service existing residents and commercial properties of Moscow Borough, totaling approximately 46.5 EDUs.

The Moscow Borough Sewage Enforcement Officer conducted mail-in surveys, field surveys, well water testing and stream testing of 30 residential and commercial properties to identify sewage disposal needs. Two types of existing OLDS were identified: in-ground and elevated sand mounds. Of the 19 in-ground systems tested, five were found to be malfunctioning. There were 28 well water samples taken and 6 were found to be bacteriologically unsafe for drinking. Decontamination of well water for safe drinking and use, or the acquisition of bottled water for the same purpose, is currently the responsibility of individual property owners. The project is needed to reduce detrimental impacts to groundwater, surface water, and public health.

1.4 Coordination

In compliance with NEPA of 1969, as amended, coordination was conducted with Federal, State, and local resources agencies (Appendix B).

USACE coordinated with the Pennsylvania State Historic Preservation Office (SHPO) to ensure compliance with Section 106 of the National Historic Preservation Act (Appendix B). Consultation letters were mailed to federally-listed tribes with potential interest in the project area.

Agency coordination was conducted by USACE through the U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Consultation (IPaC) online system on 23 January 2024 (Appendix B). A Pennsylvania Natural Diversity Inventory (PNDI) review was also performed and a report was generated on 23 January 2024 (Appendix B).

2 PROJECT DESCRIPTION

The proposed project would connect to the existing Moscow Borough Central Sanitary Sewer System at its current terminus, which is a sanitary sewer manhole near the Moscow Elementary School on Church Street (S. R. 690). The proposed sanitary sewer extension would run approximately 6,300 feet from the manhole connection west to the Moscow Borough line. The service area would include Church Street and Gardner Road, where the sanitary sewer would also be extended, as well as main and lateral extensions to private properties (Appendix A, Figure 1, 2). The project will consist of sanitary sewer force mains, pressurized sewer laterals, and gravity sewer and is being constructed to supplant existing, malfunctioning OLDS.

The Pennsylvania Department of Transportation (PennDOT) is planning upgrades to Church Street, including the replacement of an existing vehicle bridge near Van Brunt Creek and adjacent to the sewer line project. The upgrades will involve widening and shifting the road to the north and include construction of a new fill. While the project is not being carried out by the non-federal sponsor, the contractor for the sewer extension is coordinating closely with PennDOT to

avoid conflicts in scheduling, and the proposed road work is not expected to have an impact on the proposed sewer upgrades.

The conceptual design submitted by the MSA consists of 1-1/2" to 4" diameter low pressure mains located along existing state and borough road rights-of-way (ROW), as well as new ROWs, obtained by the non-federal sponsor and established to connect residential and commercial properties. Low pressure sanitary sewer laterals would be constructed and a grinder pump installed at each residential or commercial structure.

The proposed extension would service existing residents and commercial properties on 28 parcels within Moscow Borough, totaling approximately 46.5 EDUs.

3 ALTERNATIVES

3.1 Alternatives Considered

USACE considered three alternatives for the project area and evaluated the impacts of each on the natural and human environment in relation to the project's purpose and need. The three alternatives considered include the following:

3.1.1 Alternative #1 – No-Action

Under the no-action alternative, the sewer line would not be extended. Existing residents and businesses and any future development would continue to use OLDS as the method of sewage disposal.

3.1.2 Alternative #2 – Low-Pressure Sanitary Sewer (LPSS) System

This alternative involves the construction of a low-pressure sanitary sewer (LPSS) system to extend the existing central sanitary sewer system. The LPSS system would consist of sewer mains and laterals ranging in size from 1-1/2 inches to 4 inches diameter.

3.1.3 Alternative #3 – Conventional Gravity Sanitary Sewer Extension

This alternative involves the construction of a conventional gravity sanitary sewer extension to the central sanitary sewer system. The extension would consist of pipeline measuring 8 inches in diameter as well as sewer manholes and a pump station.

3.2 Evaluation of Alternatives

3.2.1 Alternative #1 – Impacts

The no-action alternative would result in the continued discharge of partially treated and untreated sewage effluent to the ground, surface and nearby waterways and wetland areas from malfunctioning OLDS. The continued use of malfunctioning OLDS would continue to contribute to existing pollution and public health concerns stemming from the release of untreated or partially treated sewage. Recurring costs to property owners responsible for treating contaminated well water would continue. Existing conditions such as soil suitability, topography,

and geology in the project area, are not suitable for the continued use or the installation of new OLDS. This alternative would not meet the goals of the Moscow Borough Act 537 Sewage Facilities Plan or Borough Planning Documents and is not considered viable. Thus, Alternative #1 does not meet the purpose and need.

3.2.2 Alternative #2 – Impacts

A LPSS system would allow for adequate, safe, and reliable sewage conveyance and treatment. Annual maintenance costs associated with this type of system (grinder pumps, electric) would be greater than a gravity sewer system, but the cost to install this system is substantially less than a gravity sewer system. The existing sanitary sewer system would be utilized to transport sewage from the project area to the MSA WWTP. Impacts to streams and wetlands in the project area would be temporary and localized.

3.2.3 Alternative #3 – Impacts

A conventional gravity sewer extension would allow for adequate, safe, and reliable sewage conveyance and treatment. The existing sanitary sewer system would be utilized to transport sewage from the project area to the MSA WWTP. Impacts to streams, soils, and wetlands would be comparable to a LPSS system, though across a greater footprint, due to the larger scale of a conventional extension. Annual maintenance costs associated with a conventional gravity sewer line are less than an LPSS system, although the installation cost for a gravity system is substantially greater; thus, Alternative #3 is not considered economically feasible when compared to the construction of a LPSS system.

3.2.4 Preferred Alternative

Based upon the alternatives considered above, Alternative #2, construction of a low-pressure sewer system, has been determined to be the most desirable and cost-effective alternative for serving the properties within the proposed planning area in Moscow Borough. Alternative #1 would allow for the continued discharge of partially treated or untreated sewage from malfunctioning OLDS, thereby posing a potential risk to public health, surface water, and groundwater resources. Alternative #3 would have impacts similar to Alternative #2; however, impacts to soils and wetlands would be greater due to increased footprint of the gravity sewer line system. Alternative #3 is also not considered economically feasible when compared to Alternative #2. Therefore, the preferred alternative/proposed action is Alternative #2- the construction of a low-pressure sewer system. The potential environmental, cultural, and social impacts associated with the proposed action, Alternative #2, are assessed in Section 4.

4 EXISTING CONDITIONS AND PROJECT IMPACTS

This section provides descriptions of the existing conditions of the affected environment, and assesses the potential direct, indirect, and cumulative impacts on the natural and socioeconomic resources of the area affected by the proposed project and alternatives. Each environmental, cultural, and social resource category was reviewed for its applicability to the project.

For the purpose of describing existing conditions and environmental effects, the project area is defined as the proposed LOD, as well as any adjacent areas directly affected by project construction for a particular aspect of the human and natural environment (Appendix A, Figure 2). The project area is located along existing state and borough road ROWs and new ROWs through private property on or extending from Church Street and Gardner Road. Online environmental resource information, and Google Earth Pro and Google Maps imagery were used to assess existing conditions. Information provided by the MSA in the "Minor Act 537 Sewage Facilities Plan Update Revision, Component 3M" prepared by Engineering Surveying Consultants & Design, Inc., for the MSA was also used to identify existing conditions and project impacts.

4.1 Land Use

The primary land uses in the project area are residential and commercial. The majority of properties along Church Street and Gardner Road contain residential or commercial buildings. There are wooded areas along the northern and eastern edge of Gardner Road. There are wooded areas and fields along the southern edge of Church Street. The northern edge of the project area along Church Street is characterized as having multiple driveways leading to residential properties or parking lots of commercial buildings. The eastern end of the project area is adjacent to an elementary school. South of Church Street, the project area is characterized by residential areas and agricultural fields.

Alternative #2 proposes to convert a total of 0.26 acres of existing tree canopy to permanently cleared right of ways. All existing vegetated areas will be revegetated with appropriate grasses; however, trees cannot be replanted in the project area as tree roots may eventually impact the installed pipes. All agricultural areas will be returned to pre-construction conditions.

4.2 Geology and Topography

The project area lies within the Appalachian Mountain section of the Ridge and Valley geologic province. The area, known as the Anthracite Coal Region, is oriented in a southwest-northeast direction and contains vast beds of anthracite coal. The main rock type is fine to coarse-grained sandstone and conglomerate with siltstone and shale (PA DCNR). The project area is located within the Northern Anthracite Coal Field, which extends through the Lackawanna-Wyoming Valley. The Lackawanna-Wyoming Valley forms a physiographic boundary dividing the Allegheny and Pocono Plateau provinces and is bounded by the Lackawanna Range on the west and the Moosic Mountains on the east.

The estimated project area is 6.84 acres. The proposed sewer line expansion would occur within existing state and borough ROW, as well as new ROWs established through private properties, and the land will be returned to its existing condition to the extent practicable immediately after construction with the exception of limited permanent tree clearing (See Section 4.1). Therefore, impacts from the proposed action to the topography of the project area are minor, temporary and local. No impacts to geology are anticipated from the proposed action or alternatives.

4.3 Soils

The web-based U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) mapping program determined the soil types found within the proposed project area to be primarily Wellsboro channery loam (WcB and WgB), Norwich and Chippewa channery silt loams (NxB), Lackawanna channery loam (LaC), Oquaga channery loams (OcC, OxD, OcD, OcB), Lackawanna channery loam (LaB), Oquaga and Lordstown channery loams (OYE), Holly silt loam (HO), Morris channery loam (MxB and MrB), Philo silt loam (Ph), and Morris flaggy loam (MsB). A soil report is included in Appendix B.

The soil analysis included in the Component 3M identifies the suitability of the soil within the project area for OLDS (the system currently in use and proposed under the No-Action Alternative) as being "generally very limited" to "moderately limited." Very limited indicates that the soil has one or more features that are unfavorable for the specified on-lot systems use, which cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Moderately limited indicates that the soil has features that are somewhat favorable for the specified use, and these can be overcome or minimized by special planning design or installation. These limitations can lead to poor to fair performance of OLDS, and high to moderate maintenance requirements. The soil analysis thus indicates that the No-Action Alternative lacks acceptable functionality within the project area.

The proposed work (Alternative #2) would occur within existing state and borough ROW and new ROWs established through private properties. The soil that would be disturbed has likely been subject to previous construction activities due to road construction, home and business construction, and/or agriculture. The proposed project construction would cause minor, short-term impacts to soil due to excavation for sewer line placements. An Erosion and Sediment Control (E&SC) Plan, included as part of the individual NPDES permit application submitted by the non-federal sponsor, was approved by the Pennsylvania Department of Environmental Protection (PADEP) on 29 March 2023.

4.4 Prime and Unique Farmlands

A review of soil farmland class within the project area was performed using the USDA NRCS USA Soil Farmland Class data imagery layer on ArcGIS Online by Esri. Prime farmland (2.4 acres) and farmland of statewide importance (2.4 acres) is mapped within and adjacent to the project area. The project area will be located within existing borough and state ROWs or in new ROWs established along driveways and through residential yards and agricultural fields. Any disturbed agricultural fields will be returned to the existing condition after construction; therefore, impacts of the project action and alternatives to prime and unique farmlands are expected to be temporary and minor.

4.5 Surface Waters

The proposed sewer mains will cross Van Brunt Creek and one of its tributaries (Trib. 28477) at four points: south of the bridge on Church Street located east of the intersection with Gardner Road; under the driveway to 102 Gardner Road; and under two unnamed roads running north

and west from Church Street, west of its intersection with Gardner Road (Appendix A, Figure 2). Van Brunt Creek is classified as riverine, upper perennial, unconsolidated bottom, and permanently flooded (R3UBH).

The Crossing of Van Brunt Creek south of Church Street will be made via open-cut trenching with a 4" diameter force main, while the remaining three stream crossings will be made via trenchless methods using pipeline 2" in diameter or less.

Van Brunt Creek has been designated a Natural Reproduction Wild Trout Stream by the Pennsylvania Fish and Boat Commission (PFBC). PFBC defines a Natural Reproduction Wild Trout Stream as a stream that supports naturally reproducing trout populations but that may also be stocked. This designation carries a time-of-year restriction (TOYR) imposed by PFBC from October 1-December 31 to protect trout spawning areas; no project work will occur in Van Brunt Creek during this period without prior written approval from PFBC. Van Brunt Creek and its tributaries are also classified as high-quality, cold-water fisheries; as a condition of this classification, all instream project construction will take place during normal low flow.

The non-federal sponsor has obtained through PADEP'S Joint Permit Application (JPA) process a Pennsylvania State Programmatic General Permit-6 (PASPGP-6) and a Water Obstruction and Encroachment Permit (WOEP), issued 26 September 2023 (Permit No. E3502223-001). The WOEP included a Pennsylvania Department of Environmental Protection General Permit-5 (PADEP GP-5) and Pennsylvania Department of Environmental Protection General Permit-8 (PADEP GP-8) for stream crossings and wetland impacts, respectively. PADEP also issued the non-federal sponsor a Water Quality Management General Permit for Sewer Extensions and Pump Stations (WQC-02) on 5 December 2023 (Permit No. WQG02352301). An individual NPDES permit for discharges of stormwater associated with construction activities, a Post-Construction Stormwater Management Plan, and the aforementioned E&SC Plan, was obtained by the non-federal sponsor on 29 March 2023 (No. PAD350035). The acquisition of these permits meets the requirements of the Clean Water Act (CWA) Section 404(b)(1), and all work is expected to be compliant with the permits and approved plans.

Temporary, minor impacts to the surface waters are expected from Alternative #2. No permanent discharges to surface water are expected. The proposed project would reduce negative impacts to surface water and groundwater resources from malfunctioning OLDS.

4.6 Wetlands

Executive Order number 11,990 requires federal agencies to evaluate potential impacts to wetlands, consider alternatives to wetland sites and limit damage to wetlands if impacts cannot be avoided. Wetlands are defined as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands perform important water quality functions such as filtration, and provide food and habitat for fish and other wildlife. Along with open water, they are breeding, spawning,

feeding, cover and nursery areas for fish and are important nesting, migrating, and wintering areas for waterfowl and other wildlife.

ILSI Engineering & Arcadis U.S., Inc. Joint Venture delineated the limits of roadside palustrine emergent wetlands in a wetland report dated July 2021. Wetland W6 (Appendix A, Figure 3), is located adjacent to an unnamed perennial tributary to Van Brunt Creek. The wetland sits on the edge of an open field adjacent to Gardner Road. Any potential disturbance from Alternative #2 to this wetland would be temporary and no excavation would occur in the wetland area.

A wetland report provided by PennDOT identified another roadside palustrine emergent wetland, W11, adjacent to Church Street and on either side of Van Brunt Creek (Appendix A, Figure 4). This area contains some small trees. As part of this sanitary sewer extension project, a limited area will be excavated for open-cut trenching before being returned to its original grade and condition. Impacts to W11 from Alternative #2 are therefore considered minor and temporary and no net loss of wetlands will occur.

The non-federal sponsor has obtained a PADEP GP-5 permit authorizing the installation, operation, and maintenance of utility line stream crossings for Van Brunt Creek and its tributaries, as well as a PADEP GP-8 permit authorizing temporary road crossings across the relevant regulated wetlands and waterways. Work is expected to be performed in accordance with the conditions included in these permits.

4.7 Floodplains

Issued in 1977, Executive Order number 11,988, requires the Federal government to take into consideration the effects that its actions will have on floodplains. According to the Federal Emergency Management Agency mapping, portions of the project area are located within the 100-year floodplain. The selected alternative would be installed along existing borough and state ROW or in new ROWs established in residential and agricultural areas. All disturbed areas within the floodplain will be returned to their original elevations, therefore impacts to floodplains are considered minor and temporary. The non-federal sponsor has obtained PADEP GP-5 and PADEP GP-8 permits for proposed impacts to surface waters and wetlands through PADEP's JPA process, and any work is expected to be completed in compliance with these permits.

4.8 Wild and Scenic Rivers

The National Park Service's National Wild and Scenic Rivers Systems was used to assess the presence of wild and scenic rivers within the project area. There are no federally designated Wild and Scenic Rivers within the project area.

4.9 Terrestrial Resources

According to the Pennsylvania Game Commission, the principal species of game in Lackawanna County are white-tailed deer, turkey, and a variety of small mammals, including squirrel and rabbit (Pennsylvania Game Commission, 2024). The project area is adjacent to and/or includes wooded areas as well as residential, agricultural, and commercial lots. Due to the proximity to

borough and state roads, the vegetation within the project area is predominantly grass, shrubs, and cultivated areas. However, approximately 0.26 acres of tree canopy will be permanently converted to non-woody vegetation.

The construction is limited to existing ROW or new ROW in existing cleared areas and would have short-term, minor impacts to wildlife. Temporary displacement of wildlife may occur during construction, but wildlife is expected to return to the area after construction is complete.

4.10 Rare, Threatened and Endangered Species

The USFWS IPaC System website was consulted to identify federally listed species potentially occurring in the project area. An Endangered Species Act species list was generated on 23 January 2024 (Appendix B) and it identified four species as potentially occurring within the project area: the federally endangered Northern long-eared bat (*Myotis septentrionalis*), the proposed federally endangered Tricolored bat (*Perimyotis sublavus*), federally endangered Northeastern bulrush (*Scirpus ancistrochaetus*), and the candidate species Monarch butterfly (*Danaus plexippus*). The Pennsylvania Natural Diversity Inventory (PNDI) report for this project was generated on 23 January 2024. The PNDI report indicated that no impact is anticipated to state-listed threatened and endangered species and/or special concern species and resources (Appendix B).

Winter hibernacula for the Northern long-eared bat will not be impacted by the project. Summer roosting trees are unlikely to be present within the project area due to the project being located at the edges of right of ways and the minimal amount of tree cover to be impacted by the project. In accordance with avoidance measures provided by USFWS, the project will include specifications that no tree trimming, cutting or clearing shall be performed between May 15th and August 15th to protect potential roosting of Northern long-eared bats. If the project scope and schedule is revised to involve tree clearing, trimming or cutting during this time frame, additional coordination with USFWS will be necessary.

According to USFWS's 2024 Species Status Assessment Report for the Northeastern bulrush, this species occurs in sinkhole ponds, wet depressions, vernal pools, beaver flowages, and other riparian areas and often grows in open areas surrounded by forest. The Tricolored bat, meanwhile, often roosts in road-associated culverts or among leaves and deciduous hardwood trees.

Due to the project's location alongside well-used state and local roads and previously disturbed areas, as well as the lack of permanent impacts to potential habitat, USACE determined that the likelihood of impact to either the Northern long-eared bat, the Tricolored bat, or the Northeastern bulrush is minimal, and that no further information is required to make a determination of no effect.

The Monarch butterfly is a candidate species and is not yet listed or proposed to be listed as threatened or endangered. During the breeding season (year-round where they are found), monarch butterflies lay their eggs on their obligate milkweed species, which is frequently found

in sunny roadsides, fence lines, fields, prairies and pastures (USFWS, 2024; USFS, n.d.). Alternative #2 will temporarily disturb roadside ROWs but impacted areas will be returned to pre-existing conditions; thus, the project will not permanently impact monarch butterfly habitat.

4.11 Air Quality

Lackawanna County is listed as being in attainment for all criteria pollutants in the United States Environmental Protection Agency's (USEPA) Green Book National Area and County-Level Multi-Pollutant Information list but was in non-attainment for 1-Hour and 8-Hour Ozone until it was redesignated to maintenance status in 2004 and 2006, respectively (USEPA, 2024c). Minor, short-term and localized direct impacts to air quality would occur as a result of construction activities that generate exhaust emissions and fugitive dust. Emissions from the proposed action would not pose a significant risk to the environment or the health of workers or the public because they would be minor in quantity and short-term in nature. Emissions from the proposed action would cease once construction stops and no new stationary emission sources would be created.

4.12 Greenhouse Gases

The largest direct emitters of greenhouse gases in Lackawanna County, Pennsylvania include the Lackawanna Energy Center and the PEI Power Corporation, which emitted 3,308,604 and 67,041 metric tons of carbon dioxide (C02) in 2022, respectively. Other large direct emitters are the Alliance Sanitary Landfill and Keystone Sanitary Landfill, which emitted 46,423 and 4,057 metric tons of CO2 in 2022, respectively (USEPA, 2024b). Statewide net emissions decreased 25.9 percent from the 2005 baseline. While PA is on track to achieve the 26 percent greenhouse gas emissions reduction goal by 2025, this achievement is likely fleeting and not durable, as the temporary impacts from the COVID-19 pandemic on the economy appear to be a main driver of the decrease.

Construction activities associated with the proposed action would utilize motorized equipment such as backhoes, excavators, trenching equipment, and dump trucks across an anticipated construction period of approximately 263 days. The following table estimates likely emissions of greenhouse gases from the project, assuming average equipment use and an eight-hour window of construction work per day (South Coast AQMD).

Equipment	Average CO_2 Emitted Per Hour (lbs)	CO_2 Emissions Across Project Duration (metric tons)
Backhoe	66.8	63.75
Excavator	120.0	114.52
Off-Highway Truck	260.0	248.13
Trencher	58.7	56.02

While it is unlikely that all equipment will be used continuously for eight hours every day, based on the table above, an aggressive estimate of total direct emissions from construction activities amounts to approximately 482.43 metric tons of CO_2. By comparison, construction of a typical family home produces 83.46 metric tons of CO_2 (U.S. Department of Energy, 2023) and according

to the USEPA (2024d), the typical family home emits 10.97 metric tons of CO2 every year for operations (e.g., heating, cooling, etc.). The proposed action would not significantly contribute to greenhouse gas emissions in Lackawanna County.

4.13 Noise

Noise levels are measured in decibels (dBA) for regulatory purposes. The threshold of human hearing is 0 dBA, with values above 85-90 dBA considered to be loud and potentially harmful to hearing if given sufficient exposure time. Noise levels above 140 dBA can cause damage to hearing after a single exposure (Occupational Safety and Health Administration). The project area is adjacent to both residential and commercial areas. A common source of noise within the project area includes vehicular traffic.

With the exception of noise generated during construction, there would be no permanent changes to the noise levels in the project area. Construction activities are anticipated to extend across 263 days and equipment is expected to be in use for up to 8 hours per day. The following table provides typical dBA values for machinery and equipment likely to be used in project construction (U.S. Federal Highway Administration, 2017).

Equipment	**Spec. 721.560 L_{max} @ 50 feet distance from machinery (dBA, slow)**
Backhoe	80
Dump Truck	84
Excavator	85
Slurry Trenching Machine	82

Due to the relatively close proximity of the project to residential areas and an elementary school, prior notification of the hours/dates of construction would be given and measures to minimize noise, such as equipment mufflers, would be used. The rise in noise levels would be minor and temporary, and would primarily occur during the daylight hours of construction. Protective equipment would be recommended to protect workers from excessive noise levels during construction.

4.14 Cultural Resources

USACE is required by Section 106 of the National Historic Preservation Act and Executive Order 11,593, to identify all archaeological resources and historic properties within a project's area of potential effect that are eligible for listing in the National Register of Historic Places, and to assess the project's effect on those properties.

Consultation was initiated with the Pennsylvania Historical and Museum Commission (PHMC) SHPO for the proposed project. The non-federal sponsor submitted a request to PHMC SHPO on behalf of the MSA, to identify potential cultural resource issues of the proposed project. A PHMC SHPO Project Review Form, dated 17 May 2016, indicated that the project will have no effect on historic properties. The USACE sent a request to the PHMC SHPO to recertify the "no effect

determination" by email letter on 04 December 2019, due to length of time since the first one had been obtained. On 04 December 2019, the PHMC SHPO replied via email correspondence indicating that since the footprint of the project has not changed, the "no effect determination" would still apply. USACE reinitiated consultation with PHMC SHPO due to the changes in the project footprint. A letter from PHMC SHPO dated 16 February 2024, confirmed the "no effect determination" for the new project footprint (Appendix B).

USACE provided information about the new project footprint to federally-listed tribes with potential interest in the area by letter. These consultation letters were e-mailed on 19 July 2022 to Delaware Nation, the Delaware Tribe of Indians, Onondaga Nation, and the Seneca-Cayuga Nation. Delaware Nation Historic Preservation Department responded in a letter dated 21 July 2022 accepting USACE's invitation to consult and noted that the project should have no adverse effect on any known cultural or religious sites of interest to Delaware Nation (Appendix B). Delaware Nation identified no issues with the project continuing as planned, keeping in mind the potential for discovery of archaeological resources. During construction should human remains and/or any Native American archaeological resources inadvertently be uncovered, all construction and ground disturbing activities should immediately be halted until the appropriate state agencies, as well as the Delaware Nation Historic Preservation Office, are notified (within 24 hours) and a proper archaeological assessment can be made. No other responses were received.

4.15 Aesthetics and Recreation

The project area is predominantly residential and/or commercial. An elementary school is located near the eastern end of the project area on the south side of Church Street. The school grounds contain athletic fields, open spaces, and a playground. Temporary impacts to aesthetics could occur during construction. Individual trees will be removed across the project area during sewer line installation and this may negatively impact aesthetics. However, tree removal is not expected to be a significant permanent aesthetic or recreational impact based on its limited size and conformity with the existing character and land use of the surrounding area.

4.16 Transportation

Church Street is the major road within the project area with an exit to Highway 380 near the western end. The project is located in a predominantly residential area with some commercial properties. The project area has low traffic conditions. The sanitary sewer line would be installed along Church Street and Gardner Road, which are single lane roads, with additional main and lateral lines branching down small roads and private driveways. Short term, minor, adverse impacts to transportation are likely to occur as a result of the sewer line construction. Traffic may be stopped or rerouted during construction. The road rerouting and closing would follow PennDOT regulations. No roads would be allowed to remain closed overnight. Roads, driveways and sidewalks damaged during construction would be repaired and replaced as needed. The non-federal sponsor has applied for a PennDOT Highway Occupancy permit (HOP) and will obtain said permit prior to the start of construction.

4.17 Demographic and Socioeconomic Conditions

According to the U.S. Census Bureau's (USCB) Five-year American Community Survey (ACS) reports, there was a population of 1,838 in Moscow Borough in 2022. The median age was 46.8 years, with 4.4% of the population under the age of 5, and 18.6% over 64 years of age. Minorities comprised 3.1% of the borough's population compared with 19.1% statewide. The median household income was $77,708 for the Borough of Moscow compared to $71,798 for Lackawanna County. The 2022 estimated poverty rate of 10.4% for the Borough of Moscow was lower than the state average of 11.8% (USCB, 2024).

Lackawanna County has above average high school graduation rates, 90.9% in 2022, and a number of colleges, universities and business schools within its boundaries, including Scranton University and Lackawanna College. The Borough of Moscow had a high school graduation rate of 97.3% for the same year (USCB, 2024).

The social impact of the proposed project is based on the quality of living in regards to having a public sewage system within the project area that does not pose a threat to human health and the environment. Extending the sewage line to cover the project area would improve the quality of the area by replacing the malfunctioning on-lot sewage systems.

Roadways will remain open during the anticipated 263-day construction period and traffic rerouted around project activities; no significant traffic-related impacts are anticipated for residents or businesses within the project area. Thus, implementation of the proposed action would result in improved quality of life for the residents and business owners within the proposed service area.

4.18 Hazardous, Toxic, and Radioactive Substances

Based upon a review of the USEPA Envirofacts database, there are no known sources of hazardous, toxic, and radioactive wastes (HTRW) in the proposed project area or within 1,000 feet of the project area (USEPA, 2024a). Therefore, no impacts from HTRW are anticipated. If any contamination is discovered, work at the site of the contamination would cease until coordination with PADEP and USACE could occur and appropriate remediation and proper safety measures are implemented.

4.19 Environmental Justice

Executive Order (EO) 12,898 (1994), EO 14,096, and Council on Environmental Quality (CEQ) implementing guidance require Federal agencies to consider under NEPA whether there will be "disproportionate and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." In accordance with EO 14,008 (2021), the Council on Environmental Quality (CEQ) published the GIS-based Climate and Economic Justice Screening Tool (CEJST). CEJST identifies communities as disadvantaged if they meet the threshold for environmental, climate, or other burdens and meet the threshold for an associated socioeconomic burden.

The entire project and all foreseeable impacts are located within the Borough of Moscow in the wider census tract #42069111800. CEJST and U.S. Census data were used to screen the Borough of Moscow and the wider census tract #42069111800 for potential Environmental Justice impacts.

In the Borough of Moscow and wider census tract (#42069111800), minorities comprise 3% of the total population, with 16% of the total population living below the poverty line. Based on the burden and socioeconomic thresholds, CEJST identified that there are no disadvantaged communities located within the Borough of Moscow (CEQ, 2024). The proposed action is not expected to result in disproportionately high and adverse human health or environmental effects on disadvantaged communities and will benefit all populations in the area.

4.20 Cumulative Effects

Cumulative effects are defined as "effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions," (40 C.F.R. 1508). Evaluations of cumulative effects include consideration of the proposed action and its impacts alongside known past and present actions, as well as reasonably foreseeable future actions that may compound those impacts.

The MSA completed upgrades in 2008 to expand the WWTP from 0.180 MGD to 0.30 MGD. The WWTP improvement projects, as well as the proposed action, have and will continue to provide benefits to the area by effectively handling and treating sewage within the Borough of Moscow. The proposed action would contribute to the reduction in potential public health issues associated with improperly treated sewage from malfunctioning OLDS and the recurring costs on property owners associated with treating well water or otherwise acquiring safe drinking water. No known projects contributing directly to population or economic growth are in construction at this time; however, the proposed action or Alternative #3 could encourage additional development of undeveloped or underdeveloped parcels within the service area. Current and future residents in the Borough of Moscow would benefit from the extension of the sewer line via improved water quality, reductions in public health risks, and increased capacity for community and economic growth. Therefore, cumulatively, these projects could interact to have a beneficial impact to the human environment from the creation of safer sewage collection, conveyance, and treatment.

5 ENVIRONMENTAL COMPLIANCE

Table 5.1 summarizes the level of compliance of the proposed action with environmental protection statutes and other environmental regulations.

All necessary federal, state, and local erosion and sediment control and wetlands and waterways permits have been acquired prior to the start of construction. No tree clearing will occur between May 15th to August 15th to protect potential roosting Northern long-eared bats. Additionally, no instream construction will take place between October 1 and December 31 to comply with a PFBC

TOYR; all instream construction will occur during normal low flow. Based on these stipulations and the evaluation of environmental effects described in Section 4, there are no significant impacts from the proposed action, and a FONSI has been prepared.

Table 5.1: Compliance of the Proposed Action with Environmental Protection Statutes and Other Environmental Requirements

Federal Statutes, Executive Orders (EOs), and Memoranda	Level of Compliance	Impact
Archeological and Historic Preservation Act	Full	No archaeological sites identified within project area; no impact.
Bald and Golden Eagle Protection Act	Full	Species not present within project area; no impact.
Clean Air Act	Full	See Section 4.11.
Coastal Barrier Resources Act	N/A	No coastal resources within project area; no impact.
Coastal Zone Management Act	N/A	No coastal resources within project area; no impact.
Comprehensive Environmental Response, Compensation and Liability Act	Full	See Section 4.18
Endangered Species Act	Full	See Section 4.10.
Environmental Justice in Minority and Low-Income Populations (EO 12,898)	Full	See Section 4.19.
Farmland Protection Policy Act	N/A	No conversion of farmland to other uses within project area; no impact.
Federal Water Project Recreation Act	N/A	No federal water development project within project area; no impact.
Fish and Wildlife Coordination Act	Full	Requisite agencies consulted, see Section 4.10 & Appendix B.
Floodplain Management (EO 11,988)	Full	See section 4.7.
Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA)	N/A	No marine fisheries within project area; no impact.
National Historic Preservation Act	Full	See Section 4.14.
National Environmental Policy Act	Full	This environmental assessment fulfills the requirements of NEPA.

Prime and Unique Farmlands (Memorandum, Council on Environmental Quality, 11 August 1980)	Full	See Section 4.4.
Protection and Enhancement of Cultural Environment (EO 11,593)	N/A	No cultural resources identified within project area; no impact.
Protection of Wetlands (EO 11,990)	Full	See Section 4.6.
Resource Conservation and Recovery Act	Full	No HTRW concerns, see Section 4.18.
Revitalizing Our Nation's Commitment to Environmental Justice for All (EO 14,096)	Full	See Section 4.19.
River and Harbors Act	Full	No navigable waters within project area; no impact.
Watershed Protection and Flood Prevention Act	N/A	Project not eligible for technical assistance; no impact.
Wild and Scenic Rivers Act	N/A	See Section 4.8.

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