

**US Army Corps  
of Engineers**  
Baltimore District

**DRAFT FINDING OF NO SIGNIFICANT IMPACT AND  
ENVIRONMENTAL ASSESSMENT  
FOR CURWENSVILLE LAKE 2022 MASTER PLAN**

**CURWENSVILLE DAM AND RESERVOIR  
CLEARFIELD COUNTY, PENNSYLVANIA**

**March 2022**

This Environmental Assessment follows 40 CFR Parts 1500-1508, National Environmental Policy Act Implementing Regulations dated 1978

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***Prepared by:* U.S. Army Corps of Engineers, Baltimore District  
2 Hopkins Plaza  
Baltimore, Maryland 21201**

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# FINDING OF NO SIGNIFICANT IMPACT

## Environmental Assessment for the Curwensville Lake 2022 Master Plan

### Clearfield County, Pennsylvania

In accordance with the National Environmental Policy Act of 1969 (NEPA), including guidelines in 33 Code of Federal Regulations (CFR), Part 230 (Procedures for Implementing NEPA), the Baltimore District of the U.S. Army Corps of Engineers (USACE), has assessed the potential impacts of the 2022 Curwensville Lake Master Plan (2022 Master Plan). The Curwensville Lake Project was authorized and constructed for the primary purpose of flood risk management on the West Branch Susquehanna River. Secondary uses of the project lands and waters are water supply, water quality, recreation, and environmental stewardship of natural and cultural resources. Implementation of the 2022 Master Plan and proposed land changes must recognize and be compatible with the primary project mission of flood risk management, and the secondary purposes of water supply, water quality, recreation, and environmental stewardship of natural and cultural resources.

The 2022 Master Plan will provide guidance for stewardship of natural resources and management for long-term public access to, and use of, the natural resources at Curwensville Lake, including the land classification of the USACE-managed lands. USACE manages project lands in accordance with land classifications that have been determined in the 2022 Master Plan for the project lands. Thus, land classifications are fundamental to project lands management. Land classifications (see Table S-1) provide for development and resource management consistent with authorized purposes and other federal laws. The 2022 Master Plan provides a comprehensive description of Curwensville Lake (the Project), a discussion of factors influencing resource management and development, new resource management objectives, a synopsis of public involvement and input into the planning process, descriptions of existing development, and considerations of future development activities.

Under the No Action Alternative, USACE would take no action, which means no new resource analyses or land reclassifications would occur. The operation and management of the Project would continue as outlined in the 1968 Master Plan.

The Proposed Action includes adopting the 2022 Master Plan to reflect changes in land management and land uses, USACE regulations and guidance that have occurred since the release of the 1968 Master Plan, and coordination with the public. The 2022 Master Plan refines land classifications to meet authorized project purposes and current resource objectives. This includes a mix of natural resource and recreation management objectives that are compatible with regional goals established by stakeholders and USACE during the master planning process, recognize outdoor recreation trends, and are responsive to public comment. The purpose of the Proposed Action is to update the Curwensville Lake Master Plan. The action is needed as required by Engineer Regulation (ER) 1130-2-550 "Recreation Operations and Maintenance Policies," and Engineering Pamphlet (EP) 1130-2-550 "Recreation Operations and Maintenance Guidance and Procedures." The 2022 Master Plan is intended to serve as a comprehensive land and recreation management plan for the next

15 to 25 years and is needed to update the Curwensville Lake Master Plan in accordance with January 2013 updates to the ER and EP 1130-2-550.

Table S-1 identifies the required land and water surface classification changes associated with the Proposed Action.

**Table S-1: Proposed Changes to Land Classifications at Curwensville Lake**

<b>Classification</b>	<b>1968 Master Plan (acres)</b>	<b>2022 Master Plan (acres)</b>	<b>Description*</b>
<b>Project Operations</b>	273.8	217.2	Lands are associated with the dam and spillway structures that are operated and maintained for the flood risk management mission of the Project. The project operations area has changed slightly along Curwensville Tyrone Highway. The change in acres of the Project Operations area is converted to Vegetative Management in the 2022 Master Plan to more accurately reflect the activities on this land.
<b>High Density Recreation</b>	314.6	300.7	Lands are currently developed for intensive recreational activities and include boat launches, day use areas, and campgrounds. The new criteria for this land classification includes areas developed specifically to support intensive recreational activities. This land classification has been developed to support concentrated visitation and use of the recreational facilities they host. Dependent on available space, funding, and public demand, these areas may support additional outdoor recreation development in the future.
<b>Multiple Resource Management Land</b>			
<b>Low Density Recreation</b>	0	213.5	Management of this land classification calls for maintaining a healthy, ecologically adapted vegetative cover to reduce erosion and improve aesthetics, while also supporting low impact recreational opportunities such as bank fishing, hiking, wildlife viewing, and access to the shoreline. Hunting may also be allowed in select areas that are a reasonable and safe distance from high density recreational areas, dam operations, and adjacent residential properties. The new land classification criteria exclude vegetation and wildlife management areas, leaving only areas with minimal development to support passive recreation use (i.e., primitive camping, hunting, trails, wildlife viewing, etc.).

<b>Classification</b>	<b>1968 Master Plan (acres)</b>	<b>2022 Master Plan (acres)</b>	<b>Description*</b>
<b>Wildlife Management</b>	1,290.6	(2,195.3)	This land classification was considered in the 1968 Master Plan and will continue in the 2022 Master Plan. However, because the wildlife management acres all overlap with other land classifications, the wildlife management acres are excluded from the total acres of the project. Wildlife management activities will continue to occur throughout the Curwensville Lake Project area. See Figure 2-1 in the Curwensville Lake 2022 Master Plan to see where wildlife management activities occur.
<b>Vegetative Management</b>	0	1,146.8	This land classification was not considered in the 1968 Master Plan. This classification includes an ecosystem-based management approach and is designated for stewardship of forest, prairie, and other native vegetative cover. These lands may or may not be protected from development. In general, vegetative resources on USACE lands are managed for multiple purposes, including wildlife habitat, recreational activities in parks, landscape aesthetics, and timber management.
<b>Water Surface</b>			
<b>Designated No-Wake</b>	0	142.3	Designated No-Wake areas are intended to protect environmentally sensitive shorelines and improve boating safety near key recreational water access areas such as boat ramps, mooring areas, swimming areas, and shallow areas. This change reflects new classification criteria and no actual change in water use. This designation has always existed at Curwensville Lake; however, it was included within the overall Conservation Pool acreage in the 1968 Master Plan. The 2022 Master Plan separates this designation into its own category within the Water Surface classification.
<b>Restricted</b>	0	1.4	Restricted water surface includes those areas where recreational boating is prohibited or restricted for project operations, safety, and security purposes. The Restricted water surface at Curwensville Lake includes a small area around the dam and intake tower. The restricted area is marked year-round by a cable across the intake channel with hanging restricted area signs. This change reflects new classification criteria and no actual change in water use. This

<b>Classification</b>	<b>1968 Master Plan (acres)</b>	<b>2022 Master Plan (acres)</b>	<b>Description*</b>
			designation has always existed at Curwensville Lake; however, it was included within the overall Conservation Pool acreage in the 1968 Master Plan. The 2022 Master Plan separates this designation into its own category within the Water Surface classification.
<b>Open Recreation Area</b>	772.8	629.1	Open Recreation area includes all water surface areas available for year-round or seasonal water-based recreational use. This change reflects new classification criteria and no actual change in water use. This area includes all remaining water surface area outside of the Restricted and No-Wake Zones.
<b>Total</b>	4063.7*	4016.1*	

\* Mapping for the Master Plan update has been compiled using the best information available and is believed to be accurate. Prior land classification acres are based on original acquisition real estate deed records and mapping completed for the 1968 Master Plan. Due to improved mapping technologies, minor discrepancies exist when comparing prior and proposed land classification acreages.

USACE chose the Proposed Action because it would meet regional goals associated with good stewardship of land and water resources, meet regional recreation goals, and allow for continued use and development of project lands without violating national policies or public laws.

USACE used the Environmental Assessment (EA) and comments received from other agencies to determine whether the Proposed Action requires the preparation of an Environmental Impact Statement (EIS). This included an assessment of environmental, social, and economic factors that are relevant to the recommended alternative considered in this assessment. The EA determined no/negligible impact would occur to the following resources: air quality, greenhouse gasses and climate, noise, geology, cultural resources, groundwater, utilities, hazardous materials and waste, socioeconomics and environmental justice, and traffic and transportation (see Section 3.1 of the EA). Minor impacts could occur to water resources, soils, and biological resources, primarily during construction of future master planning projects (See Sections 3.2 through 3.5 of the EA). Efforts would be made to reduce adverse impacts by using standard construction best management practices (BMPs) to reduce disturbance, soil erosion, and sedimentation into adjacent surface waters and wetlands. Construction and operations of future master planning projects would use BMPs associated with prevention of impacts to sensitive species. These recommendations would occur during the time future projects are proposed and would include environmental reviews of each project.

Beneficial impacts would occur to water resources, soils, biological resources, and land use and recreation due to land reclassification. Beneficial impacts to water, soil, biological resources, and land use and recreation would occur through the establishment of separating the land classification between high and low density recreation areas, the vegetative

management land classification, and no wake zone classification. Additional beneficial impacts to the land use and recreation would also occur with the separation of the water surface classifications in no wake zone, restricted, and open recreation area.

**Conclusion**

All applicable laws, executive orders, regulations, and local government plans were considered in evaluation of alternatives. Based on this report, the reviews by other federal, state and local agencies, Tribes, input of the public, and the review of my staff, it is my determination that the Proposed Action alternative would not cause significant adverse effects on the quality of the human environment; therefore, preparation of an Environmental Impact Statement is not required.

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Date

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Esther S. Pinchasin  
Colonel, U.S. Army  
Commander and District Engineer

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## ACRONYMS and ABBREVIATIONS

<b>Acronym</b>	<b>Definition</b>
2022 Master Plan	2022 Curwensville Lake Master Plan
BMPs	Best Management Practices
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
cfs	cubic feet per second
DCNR	Pennsylvania Department of Conservation and Natural Resources
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EP	Engineering Pamphlet
ER	Engineer Regulation
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GIS	Geographical Information System
IPaC	Information for Planning and Consultation
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NGVD	National Geodetic Vertical Datum
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
PADEP	Pennsylvania Department of Environmental Protection
PCD	Project Construction Datum
PFBC	Pennsylvania Fish and Boat Commission
PGC	Pennsylvania Game Commission
PNDI	Pennsylvania Natural Diversity Index
Project	Curwensville Dam and Reservoir Project
ROI	Region of Influence
SME	Subject Matter Expert
USACE	United States Army Corps of Engineers
USDA APHIS	United States Department of Agriculture, Animal & Plant Health
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
VUM	Visitor Use Monitoring

# **1 INTRODUCTION**

## **1.1 PROJECT BACKGROUND**

The Curwensville Dam and Reservoir Project (hereafter “Curwensville Lake Project” or “Project”) was authorized and constructed under the Flood Control Act of 3 September 1954 in accordance with House Document 29, 84<sup>th</sup> Congress, 1<sup>st</sup> session, as a unit of the comprehensive flood control plan for the protection of communities in the West Branch Susquehanna River basin. Secondary uses of the project lands and waters are water supply, water quality, recreation, and environmental stewardship of natural and cultural resources. The Master Plan for the Project is the strategic land use management document that guides the comprehensive management and development actions related to all project recreational, natural, and cultural resources throughout the life of the Project. Implementation of the Master Plan and proposed land classifications changes must recognize and be compatible with the primary project mission of flood risk management.

The U.S. Army Corps of Engineers (USACE) produces and uses the Master Plan to guide the responsible stewardship of USACE-administered lands and resources for the benefit of present and future generations. The Master Plan presents an inventory and analysis of land resources, resource management objectives, land classifications, resource use plans for each land classification, current and projected park facility needs, an analysis of existing and anticipated resource use, and anticipated influences on overall project operation and management. Specific to the Project, the Master Plan presents an evaluation of the assets, needs, and potential uses of the Project reservoir and lands and provides direction for appropriate management, use, development, enhancement, protection, and conservation of the natural and man-made resources at the Project. The Master Plan is guided by Engineer Regulation (ER) 1130-2-550, titled “Recreation Operations and Maintenance Policies,” and Engineering Pamphlet (EP) 1130-2-550, titled “Recreation Operations and Maintenance Guidance and Procedures”. Per guidance, USACE land classifications provide for development and resource management consistent with authorized purposes and other federal laws.

USACE is proposing adoption of a new Master Plan at the Curwensville Lake Project to reflect changes that have occurred to the Project, in the region, in recreation trends, and in USACE policy since the release of the 1968 Master Plan for the Project. This Environmental Assessment (EA) considers the potential impacts to the natural and human environment from the implementation of the Curwensville Lake 2022 Master Plan (hereafter “2022 Master Plan”).

### **1.1.1 Project Location and Setting**

The Curwensville Lake Project is located on the West Branch of the Susquehanna River in Clearfield County, Pennsylvania. The Curwensville Dam formed the Curwensville Lake, which has a drainage area of 365 square miles. The dam manages 98 percent of the flow on the West Branch of the Susquehanna River at the borough of Curwensville (about 2 miles from the Curwensville Dam at borough center) and 75 percent of the flow at the borough of Clearfield (about 8 miles from Curwensville Dam at borough center). The project reduces the flood risk along the West Branch below the dam and provides a lake for recreation.

The Project area is located in a narrow valley with steep slopes at the downstream portion and gentler slopes in the upstream reaches (Figure 1-1). The surrounding ridges and slopes are wooded, and the valley floor contains some agriculture and low density residential housing.

### **1.1.2 Project History**

The Curwensville Lake Project was authorized by the Flood Control Act of 3 September 1954 in accordance with House Document 29, 84th Congress, 1st session, as a unit of the comprehensive flood control plan for the protection of communities in the West Branch Susquehanna River basin. The Project was designed and constructed under the direction of the U.S. Army Corps of Engineers, Baltimore District. Construction of the dam and associated works commenced in April 1963, and the dam was operationally complete in November 1965.

The Curwensville Dam consists of a rolled earthfill embankment 2,850 feet long having a width at its top of 25 feet and a maximum height of 131 feet above the streambed. The top of the dam elevation is 1,257 feet Project Construction Datum (PCD)<sup>1</sup>. The uncontrolled spillway is constructed in rock in a saddle adjacent to the left abutment. It is 480 feet long and has a crest elevation of 1,228 feet PCD. The spillway consists of a concrete sill excavated in a natural rock saddle. The design discharge capacity of the spillway is 154,000 cubic feet per second (cfs) under a total surcharge of 23 feet. To date, spillway flow has not occurred. The outlet works are located on bedrock at the left end of the dam and consist of three hydraulic slide (flood) gates (5.5-ft by 12-ft each) located in the intake control tower, a 594-foot-long, 15-foot-diameter conduit that is under the main embankment, and a stilling basin. In addition, two 30-inch diameter bypass outlet gates are located on either side of the gated outlet system. The total length of the outlet works (tower, tunnel and stilling basin) is about 918 feet. The maximum discharge through these outlet works, with the lake at spillway crest and all gates completely opened, is 9,800 cfs.

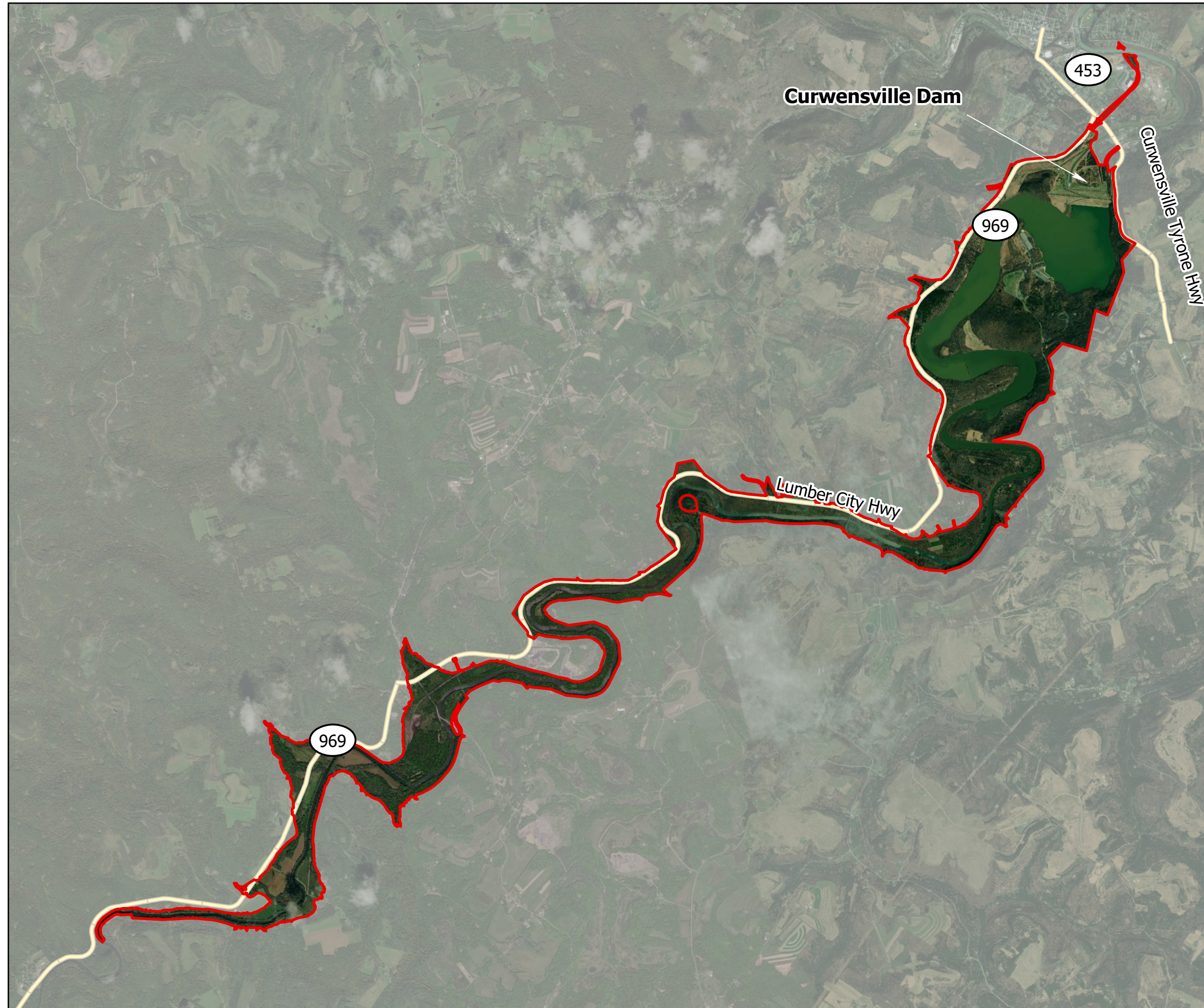
## **1.2 PURPOSE AND NEED FOR THE ACTION**

The purpose of the action is to update the Curwensville Lake Master Plan. The action is needed as required by ER and EP 1130-2-550. The 2022 Master Plan is intended to serve as a comprehensive land and recreation management plan for the next 15 to 25 years, which reflects changes that have occurred since 1968 in outdoor recreation trends, regional land use, population, legislative requirements, USACE management policy, and wildlife habitat at the Project.

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<sup>1</sup> All elevations cited in this manual, unless otherwise noted, are referenced to the original project construction datum (PCD). In previous versions of the Water Control Manual, elevations were incorrectly referenced as NGVD29. In 2009, the Corps of Engineers began a Comprehensive Evaluation of Project Datums (CEPD). The CEPD effort was specifically intended to ensure that project elevations and datums are properly and accurately referenced to nationwide spatial reference systems used by other Corps Districts as well as federal, state, and local agencies. To that end, a new project benchmark was established and linked to the 1988 North American Vertical Datum (NAVD88). To convert PCD elevation for Curwensville Lake and its physical components to NAVD88, subtract 0.53 feet from the PCD elevation (USACE 2020a).


Figure 1-1 Site Vicinity



# Curwensville Lake Environmental Assessment

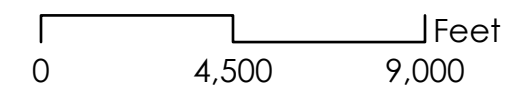
## Site Vicinity

### Legend

 Curwensville Study Area



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community



### **1.3 SCOPE OF THE EA**

USACE prepared this EA pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations [CFR] 1500-1517) dated 1978, and the USACE implementing regulations, Policy and Procedures for Implementing NEPA, ER 200-2-2 (USACE 1988) to evaluate existing conditions and potential impacts of implementing the 2022 Master Plan. NEPA requires federal agencies to review potential environmental effects of federal actions, which includes the adoption of formal plans, such as master plans, approved by federal agencies upon which future agency actions will be based. Since the NEPA process for this action began in June 2019, this EA follows the NEPA regulations in place at that time and does not apply the NEPA regulations that became effective on September 14, 2020. See 40 C.F.R. 1506.13.

Alternatives considered within this EA focus on the proposed land classifications as presented in the 2022 Master Plan and the types of future development projects that could occur within the land classifications. The EA does not consider implementation of specific projects identified within the 2022 Master Plan during the master planning process as those projects are conceptual in nature. The USACE would conduct further NEPA analysis on projects on USACE owned land identified within the 2022 Master Plan once funding is available and detailed project planning and design occurs, nor does it consider specific future development opportunities for leased areas, such as the Curwensville Lake recreation area (managed by Clearfield County). The USACE would conduct further NEPA analysis on projects on USACE owned land identified within the 2022 Master Plan once funding and detailed project plans and design are provided by Clearfield County or its partners.

### **1.4 COORDINATION AND PUBLIC REVIEW**

USACE coordinated with agencies, organizations, and members of the public with a potential interest in the Proposed Action during the development of the 2022 Master Plan and in the preparation of this EA. Appendix A provides a record of public involvement and agency coordination related to this EA.

A Public Notice of Intent to Prepare an Environmental Assessment was published on June 7, 2019 to the USACE web site and was distributed to project stakeholders, agencies, and the public.

Agency coordination was conducted by USACE with the United States Fish and Wildlife Service (USFWS) through the Information, Planning, and Consultation (IPaC) online system to ensure compliance with Section 7 of the Endangered Species Act (ESA). Review was also performed by the Pennsylvania Game Commission (PGC), Pennsylvania Fish and Boat Commission (PFBC), Pennsylvania Department of Conservation and Natural Resources (DCNR), Pennsylvania Department of Environmental Protection (PADEP), Pennsylvania Department of Topographic and Geologic Survey (PDTGS), and USFWS through the Pennsylvania Natural Diversity Index website (PNDI). Coordination results can be found in Section 9.

*This section will be updated as additional coordination and public review occur.*

info on public meeting]. Information on the progress of the Master Plan and instructions on participating in the public comment process were published on the Project's web page: <https://nab.usace.afpims.mil/Missions/Dams-Recreation/Curwensville-Lake/>.

The 2022 Master Plan and EA were made available for public review for a period of 30 days beginning on (date) and ending on (Date). [f [ADD: Comments received & any action taken]



## **2 PROPOSED ACTION AND ALTERNATIVES**

### **2.1 DEVELOPMENT OF ALTERNATIVES**

USACE identified alternatives considered within this EA as a part of the master planning process. This Chapter describes the master planning process, screening criteria for alternative development and the alternatives carried forth for detailed analysis within this EA.

#### **2.1.1 Master Planning Process**

USACE guidance recommends the establishment of resource goals and objectives for the purposes of development, conservation, and management of natural, cultural, and man-made resources at a project location. Goals describe the desired end state of overall management efforts, whereas objectives are concise statements describing measurable and attainable management activities that support the stated goals. Goals and objectives are hierarchical guidelines for obtaining maximum public benefits while minimizing adverse impacts on the human environment and are developed in accordance with 1) authorized project purposes, 2) applicable laws and regulations, 3) resource capabilities and suitability, 4) regional needs, 5) other governmental plans and programs, and 6) expressed public desires.

The 2022 Master Plan establishes the following management goals for the Curwensville Lake Project:

- **Goal A** – Provide the best management practices to respond to regional needs, resource capabilities and capacities, and expressed public interests consistent with authorized project purposes.
- **Goal B** - Protect and manage project natural and cultural resources through sustainable environmental stewardship programs.
- **Goal C** – Provide public outdoor recreation opportunities that support project purposes and public interests while sustaining project natural resources.
- **Goal D** – Recognize the unique qualities, characteristics, and potentials of the Project.
- **Goal E** – Provide consistency and compatibility with national objectives and other state and regional goals and programs.

#### **2.1.2 Screening Criteria**

For an alternative to be considered viable, it must be compatible with the primary project mission of flood risk management, and secondary missions of water quality control and water supply. In addition, the alternative must meet management goal objectives and USACE-wide Environmental Operating Principles. Based on these criteria, this EA evaluates the No Action Alternative and the Proposed Action Alternative.

### **2.2 ALTERNATIVE 1: NO ACTION ALTERNATIVE**

The No Action Alternative serves as a basis for comparison to the anticipated effects of the other action alternatives. Under the No Action Alternative, the USACE would take no action

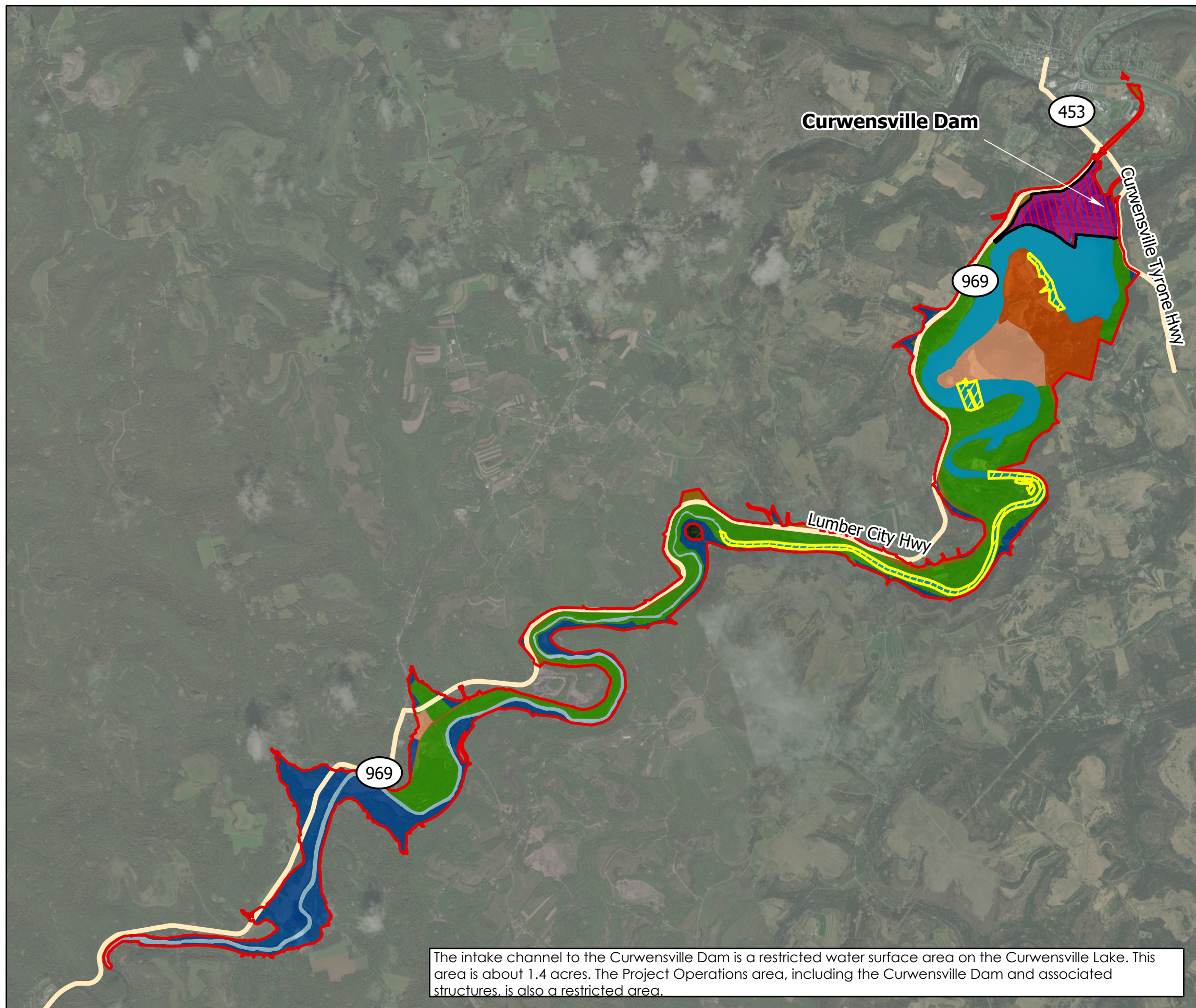
and would not adopt the 2022 Master Plan. The operation and management of the Project would continue as outlined in the existing 1968 Master Plan. No new land classifications would be designated. The No Action alternative would not meet the purpose and need for the action.

### **2.3 ALTERNATIVE 2: PROPOSED ACTION ALTERNATIVE (PREFERRED ALTERNATIVE)**

Under Alternative 2, the Proposed Action Alternative, the USACE would implement the 2022 Master Plan and associated changes in land management in compliance with USACE regulations and guidance. This alternative would revise the land classifications to updated USACE standards and include resource objectives that reflect current and projected needs compatible with regional goals. Required changes associated with the Proposed Action include reclassifications of land, classification of the water surface, and adoption of new resource management and recreation objectives. Figure 2-1 depicts the new land classifications within the 2022 Master Plan. Table 2-1 quantifies the updated land and water surface reclassifications and provides a description of the land classification along with types of future projects that could occur within each land classification, as applicable.

The Proposed Action would update the Curwensville Master Plan to make it compliant with ER 1130-2-550 and EP 1130-2-550 and would meet the goals and objectives outlined in the 2022 Master Plan. Therefore, this alternative is the Preferred Alternative and will carry forward as the Proposed Action.

Figure 2-1 Proposed Land Classifications



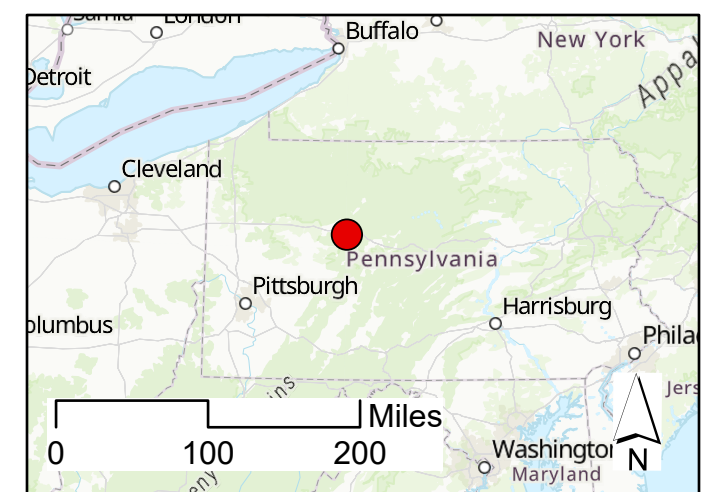
The intake channel to the Curwensville Dam is a restricted water surface area on the Curwensville Lake. This area is about 1.4 acres. The Project Operations area, including the Curwensville Dam and associated structures, is also a restricted area.

# Curwensville Lake Environmental Assessment

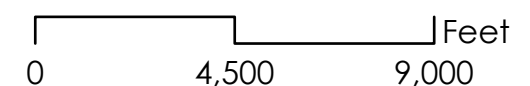
## Proposed Land Classifications

### Legend

- Curwensville Study Area
- Proposed Land Use Classifications**
- Project Operations
- High Density Recreation
- Highway and Railroad Relocations
- Restricted
- Multiple Resource Management Lands**
- Low Density Recreation
- Vegetative Management
- Water Surface**
- Open Recreation
- Flowage Easement
- River
- Designated No Wake Zone



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community



**Table 2-1. Proposed Changes to Land Classifications at Curwensville Lake**

<b>Classification</b>	<b>1968 Master Plan (acres)</b>	<b>2022 Master Plan (acres)</b>	<b>Description</b>
<b>Project Operations<sup>1</sup></b>	273.8	217.2	Lands are associated with the dam and spillway structures that are operated and maintained for the flood risk management mission of the Project. The project operations area has changed slightly along Curwensville Tyrone Highway. The change in acres of the Project Operations area is converted to Vegetative Management in the 2022 Master Plan to more accurately reflect the activities on this land.
<b>High Density Recreation</b>	314.6	300.7	Lands are currently developed for intensive recreational activities and include boat launches, day use areas, and campgrounds. The new criteria for this land classification includes areas developed specifically to support intensive recreational activities. This land classification has been developed to support concentrated visitation and use of the recreational facilities they host. Dependent on available space, funding, and public demand, these areas may support additional outdoor recreation development in the future.
<b>Multiple Resource Management Land</b>			
<b>Low Density Recreation</b>	0	213.5	Management of this land classification calls for maintaining a healthy, ecologically adapted vegetative cover to reduce erosion and improve aesthetics, while also supporting low impact recreational opportunities such as bank fishing, hiking, wildlife viewing, and access to the shoreline. Hunting may also be allowed in select areas that are a reasonable and safe distance from high density recreational areas, dam operations, and adjacent residential properties. The new land classification criteria excludes vegetation and wildlife management areas, leaving only areas with minimal development to support passive recreation use (i.e., primitive camping, hunting, trails, wildlife viewing, etc.).
<b>Wildlife Management<sup>3</sup></b>	1,290.6	(2,195.3)	This land classification was considered in the 1968 Master Plan and will continue in the 2022 Master Plan. However, because the wildlife management acres all overlap with other land classifications, the wildlife management acres are excluded from the total acres of the project. Wildlife management activities will continue to occur throughout the Curwensville Lake Project area. See Figure 2-1 in Section 2 of the Curwensville Lake 2022 Master Plan to see where wildlife management activities occur.

<b>Classification</b>	<b>1968 Master Plan (acres)</b>	<b>2022 Master Plan (acres)</b>	<b>Description</b>
<b>Vegetative Management</b>	0	1,146.8	This land classification was not considered in the 1968 Master Plan. This classification includes an ecosystem-based management approach and is designated for stewardship of forest, prairie, and other native vegetative cover. These lands may or may not be protected from development. In general, vegetative resources on USACE lands are managed for multiple purposes, including wildlife habitat, recreational activities in parks, landscape aesthetics, and timber management.
<b>Water Surface<sup>1</sup></b>			
<b>Designated No-Wake<sup>2</sup></b>	0	142.3	Designated No-Wake areas are intended to protect environmentally sensitive shorelines and improve boating safety near key recreational water access areas such as boat ramps, mooring areas, swimming areas, and shallow areas. This change reflects new classification criteria and no actual change in water use. This designation has always existed at Curwensville Lake; however, it was included within the overall Conservation Pool acreage in the 1968 Master Plan. The 2022 Master Plan separates this designation into its own category within the Water Surface classification.
<b>Restricted</b>	0	1.4	Restricted water surface includes those areas where recreational boating is prohibited or restricted for project operations, safety, and security purposes. The Restricted water surface at Curwensville Lake includes a small area around the dam and intake tower. The restricted area is marked year-round by a cable across the intake channel with hanging restricted area signs. This change reflects new classification criteria and no actual change in water use. This designation has always existed at Curwensville Lake; however, it was included within the overall Conservation Pool acreage in the 1968 Master Plan. The 2022 Master Plan separates this designation into its own category within the Water Surface classification.
<b>Open Recreation Area</b>	772.8	629.1	Open Recreation area includes all water surface areas available for year-round or seasonal water-based recreational use. This change reflects new classification criteria and no actual change in water use. This area includes all remaining water surface area outside of the restricted and No-Wake Zones.
<b>Total<sup>1,3,4,5,6,7</sup></b>	4,063.7	4,016.1	

<sup>1</sup>Includes old Susquehanna Riverbed acreages before the Curwensville Dam was built, which created the Recreation Pool. Fee Simple and Easement Lands total to 3,700.9 acres (does not include old riverbed acreage). GIS calculated total for Land of Curwensville Lake Project

lands is 3,714.4 acres (does not include old riverbed acreage). There is 0.5 additional acres in Multiple Resource Management Lands due to riverbed acreages.

<sup>2</sup> No-Wake Zone includes area by beach for swimmers, boat ramp, and boat mooring area (17.5 acres); area near old railroad crossing (21.7 acres); and along narrow, shallow riverbed and wetland areas (103.1 acres).

<sup>3</sup>Wildlife Management overlaps with the other land classifications. The Wildlife Management acres in the Proposed Land Classification column reflects the number of acres currently maintained by the Pennsylvania Game Commission for wildlife populations and their habitat areas upstream of and around Curwensville Lake. Since there is overlap the acres listed for Wildlife Management is not added to the total acres.

<sup>4</sup> Mapping for the Master Plan update has been compiled using the best information available and is believed to be accurate. Prior land classification acres are based on original acquisition real estate deed records and mapping completed for the 1968 Master Plan. Due to improved mapping technologies, minor discrepancies exist when comparing prior and proposed land classification acreages.

<sup>5</sup>The Highway and Railroad Relocation land classification with 345.6 acres includes 231 acres of divested land by conveyance to Beech Creek Railroad Company and New York Central Railroad Company in March 1966. The divested acres is not owned or managed by USACE.

<sup>6</sup>The Unutilized/Unmerchantable Lands (47.1 acres) were sold in 2006 and 2007 so they are no longer included in the project land totals, but are included in the 1964 project land totals.

<sup>7</sup> Other land classifications exist at Curwensville Lake Project, such as flowage easements, highway and railroad relocations, and unmodified river area. Thus, total project acres are not reflected in the above table, only the areas impacted by the update in land reclassification. For more information on the other project areas, see the Curwensville Lake 2022 Master Plan.

### **3 ENVIRONMENTAL SETTING AND CONSEQUENCES**

#### **3.1 INTRODUCTION**

This chapter describes the natural and human environments that exist at the Project and the potential impacts of the No Action Alternative and Proposed Action (Preferred Alternative), outlined in Chapter 2. The description of baseline data sources and an approach for analyzing impacts are discussed in Sections 3.1.1 and 3.1.2, respectively.

Several resources were determined not to be affected by the Proposed Action; therefore, a detailed analysis of these topics is not presented in this chapter. Section 3.1.3 provides a discussion of resources analyzed within the EA, and justification for those resources dismissed from further analysis.

##### **3.1.1 Description of Baseline Data and Data Sources**

The EA used the following types of data to characterize the affected environment of the Project:

- Geographical Information System (GIS), including waters and wetlands inventory, floodplain mapping, and vegetation;
- Aerial photography: [ESRI, Google Earth]
- Regional and local reports: including Natural Resources Conservation Service (NRCS) Soil Surveys and previous studies conducted at the Project;
- Agency databases including USFWS and the U.S. Environmental Protection Agency (USEPA); and Pennsylvania resource agencies.
- Information presented within the 2022 Master Plan; and
- Agency coordination

##### **3.1.2 Approach for Analyzing Impacts**

Impacts (consequence or effect) can be either beneficial or adverse and can be either directly related to the action or indirectly caused by the action. Direct effects are caused by the action and occur at the same time and place (40 CFR § 1508.8[a] (2019)). Indirect effects are caused by the action and are later in time or further removed in distance but are still reasonably foreseeable (40 CFR § 1508.8[b](2019)). As discussed in this chapter, the alternatives may create temporary (less than 1 year), short-term (up to 3 years), long term (3 to 10 years), or permanent effects.

Whether an impact is significant depends on the context in which the impact occurs and the intensity of the impact (40 CFR § 1508.27 (2019)). The context refers to the setting in which the impact occurs and may include society, the affected region, the affected interests, and the locality. Impacts on each resource can vary in degree or magnitude from a slightly noticeable change to a total change in the environment. This analysis classifies the intensity of impacts as beneficial, negligible, minor, moderate, or significant.

As stated in Section 1.3, Scope of the EA, the analysis focuses on the proposed land classifications as presented in the 2022 Master Plan and the types of future development projects that could occur within each land classification. Specific future projects contained within the 2022 Master Plan are qualitatively considered within this EA, as these projects are conceptual in nature. The USACE would conduct further NEPA analysis on projects on USACE

owned land identified within the 2022 Master Plan once funding and detailed project plans and design are provided by Clearfield County or its partners.

### **3.1.3 Level of Resource Area Analysis**

Potentially relevant resource areas were initially considered for analysis in this EA. Consistent with NEPA implementing regulations and guidance, USACE focused the analysis on topics with the greatest potential for environmental impacts. This sliding-scale approach is consistent with NEPA (40 CFR § 1502.2(b)(2019)), under which impacts, issues, and related regulatory requirements are investigated and addressed with a degree of effort commensurate with their importance. Some resource topics are limited in scope due to the lack of direct effect from the Proposed Action on the resource or because that resource is not located within the Project. For example, no body of water in the Curwensville Lake watershed is designated as a federally wild or scenic river, so this resource will not be discussed.

In conducting this analysis, a qualified subject matter expert (SME) from USACE reviewed the potential direct and indirect effects of the No Action Alternative and the Proposed Action relative to each environmental and socioeconomic resource. The SME carefully analyzed and considered the existing conditions of each resource area within the Proposed Action's region of influence (ROI). Through this analysis, it was determined that, for several resource areas, none/negligible adverse effects would occur. This included air quality, greenhouse gases and climate, noise, geology, groundwater, cultural resources, utilities, hazardous materials and waste, socioeconomics and environmental justice, and traffic and transportation. These resources were therefore eliminated from further analysis. Additional detail is provided in Section 3.6.

## **3.2 WATER RESOURCES**

### **3.2.1 Affected Environment**

#### **3.2.1.1 Surface Waters and Wetlands**

The Curwensville Dam is located on the West Branch Susquehanna River approximately 0.5 mile downstream of Pennsylvania Route 453, which is on the outskirts of Curwensville. The dam is located within the Upper West Branch Susquehanna Watershed (HUC # 02050201). Curwensville Dam manages approximately 365 square miles, or 98 percent of the flow on the West Branch of the Susquehanna River at Curwensville (about 2 miles from the Curwensville Dam at borough center) and 75 percent of the flow at the borough of Clearfield (about 8 miles from Curwensville Dam at borough center). The project reduces flood risk along the West Branch below the dam, supplies water downstream in support of the Susquehanna River Basin Commission's (SRBC) basin wide low flow management policies, and provides a lake for recreation, fish, and wildlife. Some tributaries contributing to the reservoir include Anderson Creek and Montgomery Creek.

Natural wetlands are associated with the lower reaches of the reservoir and project area. USFWS mapper captures three open water ponds that contain excavated bottoms. Man-made ditches are present throughout the project area but are used mostly as drainage features during large storm or flooding events (USFWS 2020).



### **3.2.1.2 Water Quality**

The water quality in Curwensville Lake is generally good, with pH values ranging between 6.5 and 7.0. The water quality is denoted by the U.S. Environmental Protection Agency (EPA) waterway impairment mapper (US EPA 2020b) as a good waterway, and water quality is not impaired with no impairments regarding aquatic life, including fish and shellfish consumption (US EPA 2020b).

Land use in the watershed is devoted mainly to woodland, mining, and agriculture. Several small communities and activities from farming in the watershed contribute to some nutrient loading. There are sporadic algae blooms in the lake following minor nutrient loading. No harmful algal blooms have been reported at Curwensville Lake to current date. Historically, when there are high nutrient levels and depletion of oxygen in the hypolimnion or the bottom layer of water, Curwensville Lake becomes a eutrophic lake. Yet, submerged aquatic vegetation (SAV) typically establishes in shallower areas during the summer.

Occasionally, localized leaks from a septic tank in the recreation area occur during high water events of three feet or higher. Parts of the recreation area are closed during this time because flooding tends to cover many of the recreation area's lands. The Curwensville Lake staff perform weekly *Escherichia coli* tests to ensure the water quality is safe for swimming in the lake and it is very rare that the beach will close for *E.coli* levels (only closed once, but sampling error was the likely explanation).

Some sources of acid mine drainage exist upstream and downstream of the lake. Presently, these have a minimal effect on the lake's water quality. However, there are still two continuing concerns about mitigating acid mine drainage and they are, the potential for large releases to cause an acid slug (concentrated acidic water) on the West Branch Susquehanna River downstream from the dam, and the need to dilute increases in acidic water entering the West Branch Susquehanna River from tributaries downstream of the dam. While conditions have improved in the past decade, acidic conditions remain a concern.

### **3.2.1.3 Floodplains**

Floodplains are areas of land adjacent to rivers and streams that convey overflows during flood events. The Federal Emergency Management Agency (FEMA) defines a floodplain as being any land area susceptible to being inundated by water from any source (FEMA 2017). FEMA prepares Flood Insurance Rate Maps (FIRM) that delineate flood hazard areas, such as floodplains, for communities. These maps are used to administer floodplain regulations and to reduce flood damage. Typically, these maps indicate the locations of 100-year floodplains. EO 11988, Floodplain Management, states that actions by federal agencies are to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplain development wherever there is a practicable alternative.

The National Flood Insurance Program (NFIP) requires state jurisdictions to issue permits for all development in the 100-year floodplain, as depicted on maps issued by FEMA. Development is broadly defined to include any man-made change to land, including grading, filling, clearing, dredging, extraction, storage, subdivision of land, and construction and improvement of structures and buildings. For any development to take place, all necessary permits must be obtained, which may include federal and state permits, as well as the local

permits. To be properly permitted, proposed development may not increase flooding or create a dangerous situation during flooding, especially on another person's property. If a structure is involved, it must be constructed to withstand damage during flooding events. The Pennsylvania Department of Environmental Protection (PADEP) is responsible for issuing floodplain development permits in Pennsylvania. FEMA classifies this area as Zone A (1% annual chance of flooding) (FIRM# 42033C0460D, 42033C0465D & 42033C0470D).

### **3.2.2 No Action – Environmental Consequences**

Under the No Action Alternative, USACE would not implement the 2022 Master Plan and no new land classifications, or future development projects contained within the proposed 2022 Master Plan would occur. The operation and management of Curwensville and USACE lands would continue as outlined in the 1968 Master Plan. Although this alternative does not result in a 2022 Master Plan that meets current regulations and guidance, there would be no significant impacts to resources on project lands.

### **3.2.3 Proposed Action – Environmental Consequences**

The reclassifications of land use required for the Proposed Action would result in none/negligible impact to the resources within the project area. Table 3-1 summarizes potential effects based on the proposed changes to land classifications and implementation of future master planning projects. These master planning projects are conceptual in nature and implementation of these would require further analysis under a separate NEPA document.

**Table 3-1. Potential Water Resource Impacts Associated with Changes to Land Classifications and Implementation of Future Master Planning Projects**

<b>Classification</b>	<b>Potential for Impact</b>
<b>Project Operations</b>	<b>Beneficial impact.</b> New or on-going projects consist of replacing safety railing at various locations throughout the operations area and resealing of pavement on top of the dam and parking areas. There will be beneficial impact to water resources from the 56.8 acres reclassification to Vegetation Management along Curwensville Tyrone Highway.
<b>High Density Recreation</b>	<b>Beneficial impact.</b> Future projects would occur within and adjacent to existing developed and intensively used areas, specifically to support recreation (managed by Clearfield County)*. No surface water or wetland resources are located within this land classification; however, use within these areas could indirectly affect surface water quality through erosion and sedimentation or increased runoff due to increased impervious surface. Construction and operations of future master planning projects would use best management practices (BMPs) associated with prevention of erosion and control of stormwater runoff. This includes obtaining a National Pollution Discharge Elimination System (NPDES) permit for projects involving earth disturbances exceeding one acre. Surface waters and wetlands, if present, would be avoided or permitted through the Section 404 process. USACE would consider the presence of the 100-year floodplain in design and siting future master planning projects within floodplain areas. While high density recreation can impact water quality due to potential erosion, the reduction in acres classified as high density recreation areas will beneficially impact water resources.
<b>Multiple Resource Management Land</b>	
<b>Low Density Recreation</b>	<b>None/Negligible Impact.</b> None/negligible impacts are expected to water resources from the land reclassification from former 1968 Wildlife Management lands. Construction and operations of future master planning projects* would use BMPs associated with prevention of erosion. Siting of hiking trails and shoreline access points would avoid disturbance to surface waters and wetlands. Any unavoidable impacts to water resources would be permitted through the Section 404 process.
<b>Wildlife and Forest Management</b>	<b>None/Negligible Impact.</b> Wildlife management activities will continue to occur throughout the Curwensville Lake Project area. None/negligible impacts on water resources are expected from this change in the land classification.
<b>Vegetation Management</b>	<b>Beneficial impact.</b> Beneficial impacts on water resources are expected from this land reclassification of former 1968 Wildlife Management lands and from some reclassification of former 1968 Project Operations lands.
<b>Water Surface</b>	
<b>Designated No-Wake</b>	<b>Beneficial impact.</b> This reclassification reflects new classification criteria and reflects the current water use practices. This reclassification will beneficially impact water resources.

Classification	Potential for Impact
<b>Restricted</b>	<b>None/Negligible Impact.</b> This reclassification reflects new land classification criteria and reflects the current water use practices. None/negligible impacts to water resources would occur.
<b>Open Recreation Area</b>	<b>None/Negligible Impact.</b> This reclassification reflects new classification criteria and reflects the current water use practices. None/negligible impact to water resources would occur.

*\* Any recreational improvements will be reviewed by USACE (including NEPA), but will be funded by Clearfield County and its partners.*

### 3.3 SOILS

#### 3.3.1 Affected Environment

Soil complexes within the Curwensville Lake project area range from occasionally flooded soils to extremely stony. Some of the soils commonly seen in floodplains that are occurring within the Curwensville study area are Atkins silt loam (At), Philo silt loam (Ph), and Pope loam (Po). Although, most of the soils found within the study area are located on gradual slopes such as, Allegheny silt loam (AIB), Cavode silt loam (CaB), Monongahela silt loam (MoB), and Tyler silt loam (TyB) to name a few. There are some instances where moderately to very steep slopes occur, such as the Cedar creek extremely channery loam (95D), Ernest silt loam (ErD), and Rayne-Gilpin complex (RcD).

#### 3.3.2 No Action – Environmental Consequences

Under the No Action Alternative, USACE would not implement the 2022 Master Plan and no new land classifications, or future development projects contained within the proposed 2022 Master Plan would occur. The operation and management of Curwensville Reservoir and USACE lands would continue as outlined in the 1968 Master Plan. Although this alternative would not result in a 2022 Master Plan that meets current regulations and guidance, there would be no significant impacts to soil resources on project lands.

#### 3.3.3 Proposed Action – Environmental Consequences

The land reclassifications required for the Proposed Action would result in none/negligible impact to soil resources. Table 3-2 summarizes potential effects to soil resources based on the proposed changes to land classifications and implementation of future master planning projects. These master planning projects are conceptual in nature and implementation of these would require further analysis under a separate NEPA document.

**Table 3-2. Potential Soil Resource Impacts Associated with Changes to Land Classifications and Implementation of Future Master Planning Projects**

<b>Classification</b>	<b>Potential for Impact</b>
<b>Project Operations</b>	<b>Beneficial impact.</b> New or on-going projects consist of replacing safety railing at various locations throughout operations area and resealing of pavement on top of the dam and parking areas. There will be beneficial impact to soil resources from the 56.8 acres reclassification to Vegetation Management along Curwensville Tyrone Highway.
<b>High Density Recreation</b>	<b>Beneficial impact.</b> Future projects would occur within and adjacent to existing developed and intensively used areas, specifically to support recreation (managed by Clearfield County) *. Use within these areas could directly impact soils through compaction and increased erosion potential due to recreational use and loss of soils from future development projects. Potential impacts, however, would be concentrated within areas already developed intensively for recreation, and therefore no new losses to areas of Prime Farmland or Farmland of Statewide Importance are anticipated. Construction and operations of future master planning projects would use BMPs associated with prevention of and control of erosion. USACE would consider the potential for erosion and occurrence of Prime Farmland soils in design and siting future master planning projects. While high density recreation can impact soil resources, the reduction in acres classified as high density recreation areas will beneficially impact soil resources.
<b>Multiple Resource Management Land</b>	
<b>Low Density Recreation</b>	<b>None/Negligible Impact.</b> Future projects in this area may cause minor erosion due to trail use and access to shoreline areas. Construction and operations of future master planning projects* would use BMPs associated with prevention of erosion. None/negligible impacts are expected to soil resources from the land reclassification from former 1968 Wildlife Management lands.
<b>Wildlife and Forest Management</b>	<b>None/Negligible Impact.</b> Wildlife management activities will continue to occur throughout the Curwensville Lake project area. None/negligible impacts on soil resources are expected from this change in land classification.
<b>Vegetative Management</b>	<b>Beneficial Impact.</b> Beneficial impacts on soil resources are expected from this land reclassification of former 1968 Wildlife Management lands and from some reclassification of former 1968 Project Operations lands.
<b>Water Surface</b>	
<b>Designated No-Wake</b>	<b>Beneficial Impact.</b> This reclassification reflects new classification criteria and reflects the current water use practices. This reclassification will beneficially impact soil resources on shorelines.
<b>Restricted</b>	<b>None/Negligible Impact.</b> This reclassification reflects new classification criteria and reflects the current water use practices. None/negligible impacts to soils would occur.

Classification	Potential for Impact
Open Recreation Area	<b>None/Negligible Impact.</b> This change reflects new classification criteria and no actual change in water use; therefore, None/negligible impact to soils would occur.

\* Any recreational improvements will be reviewed by USACE (including NEPA) but will be funded by Clearfield County and its partners.

### 3.4 BIOLOGICAL RESOURCES

#### 3.4.1 Affected Environment

##### 3.4.1.1 Vegetation

The Curwensville Lake Project supports numerous types of vegetation and habitats, including wetlands, open water, grassy areas, fields, and forests. According to the U.S. Forest Service (USFS), North Central Pennsylvania is characterized by more forest than any other cover type. The primary forest types present are deciduous forests, with significant amounts of mixed and evergreen forests. Other major cover types include pasture/hay and cultivated crops. Nearly 50 percent of the forests in North Central Pennsylvania belong to the maple/beech/birch group (50 percent of forests). The primary species within this group include red maple, sugar maple, and black cherry. Other forest groups present in North Central Pennsylvania are the oak/hickory, white pine/red pine/hemlock, and aspen/birch groups. Several types of wetlands and open water features are present throughout the Project and include riverine, lacustrine, palustrine, and emergent systems (USFWS, 2020b). Each wetland classification creates a unique ecosystem for specific types of wetland plants and wildlife. In addition, wetland vegetation provides several beneficial uses which include enhancing water quality, filtering runoff, preventing localized erosion, and providing habitat and food sources for wildlife.

##### 3.4.1.2 Wildlife and Fisheries

The Curwensville Lake Project provides an abundance of habitat for various types of wildlife. Mammalian wildlife found on Project lands include white-tailed deer (*Odocoileus virginianus*), bobcat (*Lynx rufus*), river otter (*Lontra canadensis*), Eastern cottontail rabbit (*Sylvilagus floridanus*), fisher (*Pekania pennanti*), grey squirrel (*Sciurus carolinensis*), and groundhogs (*Marmota monax*). Common avian species include a variety of waterfowl and wading birds, woodpeckers and songbirds, as well as common game species including wild turkey (*Meleagris gallopavo*) and ruffed grouse (*Bonasa umbellus*) (DCNR, 2018). The PGC has a license to perform wildlife management activities on approximately 2,195.3 acres over the Curwensville Project Area. The PGC manages wildlife populations through maintaining fields (e.g., mowing), gates, fruit trees, signage, food plots, and nesting structures, removal of fallen trees, and turkey tagging.

Curwensville Lake and its tributaries support healthy populations of many native and stocked fish species. Species that are present within the reservoir include small and largemouth bass (*Micropterus dolomieu* and *Micropterus salmoides*), panfish (*Centrarchidae spp.*), tiger muskellunge (*Esox masquinongy X Esox lucius*), northern pike (*Esox lucius*), walleye (*Sander vitreus*), black crappie (*Pomoxis nigromaculatus*), brown bullheads (*Ameiurus nebulosus*), and channel catfish (*Ictalurus punctatus*) among others. Access to the lake for fishing is available throughout the year. The Pennsylvania Fish and Boat Commission (PFBC) manages the lake's

fishery and stocks tiger muskellunge fingerlings in alternate years. Artificial fish habitat structures have been placed in the lake to improve its fishery and angling opportunities. Curwensville Lake supports recreational fisheries for bass, panfish, and tiger muskellunge. PFBC biologists sample the lake's fish populations periodically to guide management of the reservoir's fishery resources (DCNR 2020).

### **3.4.1.3 Threatened and Endangered Species**

#### 3.4.1.3.1 Federally-Listed Species

As of 2020, three federally-listed threatened or endangered species are known to exist within the project impact area, the Indiana bat (*Myotis sodalis*), the Northern long-eared bat (*Myotis septentrionalis*), and northeastern bulrush (*Scirpus ancistrochaetus*) (USFWS 2020a).

The Indiana bat is a small bat weighing only one-quarter of one ounce that was listed in 1967 and remains listed as federally endangered. In winter, Indiana bats hibernate in caves and mines. In summer, their habitat includes small to medium river and stream corridors with well-developed riparian woods, woodlots within 1 to 3 miles of small to medium rivers and streams, and upland forests. Major threats to their populations include winter disturbance of hibernacula, commercialization of caves, pesticides and other contaminants, summer habitat destruction and mortality due to the white-nose syndrome fungus (USFWS 2019).

Northern long-eared bats are medium sized bats (about 3-4 inches in length) associated with mature, interior forest environments. Unlike most other bats, northern long-eared bats forage along wooded hillsides and ridgelines – not above valley-bottom streams and along the edges of riparian forests. The species is listed as threatened throughout its range, primarily due to impacts of white-nose syndrome. Populations at northern long-eared bat hibernation sites have declined by 99 percent since the discovery of white-nose syndrome. Forest fragmentation and conversion are also major threats to the species due to its association with large blocks of mature forest (USFWS 2020a).

#### 3.4.1.3.2 Pennsylvania State Threatened and Endangered Species

According to the Pennsylvania Natural Heritage Program screening tool, the state threatened Allegheny woodrat (*Neotoma magister*) is known to occur in the project area (PNDI, 2020).

The Allegheny woodrat is listed as threatened in Pennsylvania and vulnerable nationally. They are related to packrats found in the Western United States and can be distinguished from common Norway rats based on their furred tail, larger ears and eyes, heavier head, and longer whiskers. Their preferred habitat includes extensive expanses of abundant, closely spaced surface rock surrounded by unfragmented forest. While they may be found in deciduous, coniferous, or mixed forests, mast-producing trees are important as a food source. Rocky areas are important habitat for Allegheny woodrats, as they nest deep within rock outcrops, use rock crevices and protected ledges for storing food, and establish latrines on flat rock surfaces protected by an overhang. Several factors are thought to have contributed to the population's decline, including the decline of the mast producing trees, such as the American chestnut (reduced by chestnut blight) and oak trees (reduced by gypsy moth infestations); infection by the racoon roundworm parasite; predation pressure from increasing great horned owl populations; competition with growing porcupine populations for habitat;

and forest fragmentation. Populations in some of the Allegheny woodrat's range, including North Central Pennsylvania, are thought to be relatively healthy (Butchkowski 2014).

#### **3.4.1.4 Other Protected Species**

Bald Eagles (*Haliaeetus leucocephalus*), a previously federally and Pennsylvania state-listed endangered species, were removed from the federal list in August 2007 and Pennsylvania's list in 2013. Although this species is not listed as an endangered or threatened species, it is protected under the Bald and Golden Eagle Protection Act, as noted by the USFWS Information for Planning and Consultation (IPaC) system (USFWS 2020a). According to Cornell Lab of Ornithology's (2020) and Curwensville State Park staff, both immature and adult Bald Eagles were sighted at Curwensville Reservoir during the 2020 breeding season.

The timber rattlesnake (*Crotalus horridus*) is state protected species in Pennsylvania. Pennsylvania. Killing timber rattlesnakes is prohibited by PFBC. Timber rattlesnakes are large snakes of the pit viper family that can be identified by their "V"-shaped dark bands on a grey, yellow, black or brown body. In Pennsylvania, timber rattlesnakes are typically found at elevations greater than 1,800 feet. They prefer southern-facing upland forested areas with talus slopes, rocky ledges and outcrops, and boulder fields, which are used for basking (thermoregulation), and dens. Threats to timber rattlesnake populations include human activities related to habitat alteration, overhunting and poaching (Urban 2004).

#### **3.4.1.5 Invasive and Nuisance Species**

Invasive species are non-native species whose introduction into an ecosystem is likely to cause environmental, human, or economic harm. Non-native species may not be affected by existing predators, disease, or other limiting factors in their introduced range and therefore may thrive and outcompete native species. Non-native invasive species are therefore often difficult and expensive to manage (NWF, 2020). The Curwensville Lake and associated lands are experiencing several terrestrial invasive species. No aquatic invasive species are documented within the lake. Some of the invasive and nuisance species found at the project area are described below.

Species native to eastern Asia have been observed within and/or adjacent to the Project area. The emerald ash borer (*Agrilus planipennis Fairmarie*), for example, was destructive for many years at the Project area before the host species (*Fraxinus* spp.) populations became too low to support emerald ash borer populations. Other invasive insect pests found in surrounding regions that may affect the Project area in the future include the hemlock wooly adelgid (*Adelges tsugae*) and the spotted lanternfly (*Lycorma delicatula*). The Spotted lanternfly was found in Pennsylvania in 2014 and has since spread to 34 counties, all of which are under a state-imposed quarantine. Clearfield County is not one of the counties that are affected yet; however, neighboring counties to the south and southeast are showing large numbers of the invasive pest (USDA Penn. 2020).

Both invasive and native nuisance bird species are present in the project area. The European starling (*Sturnis vulgaris*) was introduced to Central Park, New York City in 1890 and is now a common resident of both urban and rural areas in the United States. European starlings outcompete native cavity nesting species by evicting birds occupying a cavity and using it for their own nests (USDA APHIS 2017). Starlings are present in the project but are not actively



managed. Canada geese have been historically problematic at the Project area and there are concerns of the geese causing elevated E. coli levels in the lake. The Curwensville Recreation Areas are proposing nonlethal population control including harassment and egg addling, but these methods have yet to be implemented.

Zebra Mussels (*Dreissena polymorpha*) were initially discovered at Curwensville Lake in March 2013, attached to the trash racks at the intake tower. The density and abundance of the Zebra Mussel population were characterized as low and sparse. Project staff has monitored the lake since the initial discovery and noted a decline in the population. No Zebra Mussels were seen from 2018 to 2020. In April 2021, Zebra Mussels were spotted on woody debris that had been recently removed from the base of the intake tower. Coordination with PFBC's Aquatic Invasive Species Coordinator has been initiated and the siting of the Zebra Mussels at the lake has been documented on both the State of Pennsylvania's Invasive Species website (<https://www.paimapinvasives.org/>) and the U.S. Geological Service Nonindigenous Aquatic Species website (<https://www.nas.er.usgs.gov/>). The USACE and Curwensville Lake park staff will continue to monitor the lake for the presence, density, and abundance of the species and continue to coordinate with PFBC.

#### **3.4.2 No Action – Environmental Consequences**

Under the No Action Alternative, USACE would not implement the 2022 Master Plan and no new land classifications or future development projects contained within the proposed 2022 Master Plan would occur. The operation and management of the Curwensville Lake Project would continue as outlined in the 1968 Master Plan. Although this alternative does not result in a 2022 Master Plan that meets current regulations and guidance, there would be no significant impacts to biological resources on project lands.

#### **3.4.3 Proposed Action – Environmental Consequences**

The land reclassifications required for the Proposed Action would result in none/negligible impacts to beneficial impacts to biological resources. Table 3-3 summarizes potential effects to biological resources based on the proposed changes to land classifications and implementation of future master planning projects. These master planning projects are conceptual in nature and implementation of these would require further analysis under a separate NEPA document.

**Table 3-3. Potential Biological Resource Impacts from Changes to Land Classifications and Implementation of Future Master Planning Projects**

Classification	Potential for Impact
<b>Project Operations</b>	<b>Beneficial impact.</b> New or on-going projects consist of replacing safety railing at various locations throughout operations area and resealing of pavement on top of the dam and parking areas. There will be beneficial impact to biological resources from the 56.8 acres reclassification to Vegetation Management along Curwensville Tyrone Highway.
<b>High Density Recreation</b>	<b>Beneficial impact.</b> Future projects would occur within and adjacent to existing developed and intensively used areas, specifically to support recreation (managed by Clearfield County)*. Land use within these areas could directly impact vegetation and wildlife habitat from recreational development and use. Potential impacts, however, would be concentrated within existing high density recreation areas. The Master Plan does not propose any loss of forest due to recreational development. While intensive use may increase the potential for invasive species introduction and spread, maintaining a high density recreation area focuses management and control of invasive species in higher use areas which would have the greater potential for presence of invasive species. Construction and operations of future master planning projects would use any BMPs associated with prevention of impacts to sensitive species recommended during future separate environmental review of projects proposed in the 2022 Master Plan. While high density recreation can impact biological resources, the reduction in acres classified as high density recreation areas will beneficially impact biological resources.
<b>Multiple Resource Management Land</b>	
<b>Low Density Recreation</b>	<b>None/Negligible impact.</b> Future projects would have minor impacts on biological resources, primarily resulting from potential minor amounts of vegetation crushing or removal due to trail use, access to shoreline areas, and implementation of other proposed master planning projects in the area. Construction and operations of future master planning projects* would use any BMPs associated with prevention of impacts to sensitive species recommended during future separate environmental review of projects proposed in the 2022 Master Plan. Construction and operations of future master planning projects* would use BMPs associated with prevention of erosion. Siting of hiking trails and shoreline access points would avoid disturbance to surface waters and wetlands. Any unavoidable impacts would be permitted through the Section 404 process. While low density recreation can impact biological resources, none/negligible impacts are expected to biological resources from the land reclassification from former 1968 Wildlife Management lands.
<b>Wildlife and Forest Management</b>	<b>None/Negligible impact.</b> Wildlife management activities will continue to occur throughout the Curwensville Lake project area. None/negligible

Classification	Potential for Impact
	impacts on biological resources are expected from this change in land classification.
<b>Vegetative Management</b>	<b>Beneficial Impact.</b> Beneficial impacts on biological resources are expected from this land reclassification of former 1968 Wildlife Management lands and from some reclassification of former 1968 Project Operations lands.
<b>Water Surface</b>	
<b>Designated No-Wake</b>	<b>Beneficial Impact.</b> This reclassification reflects new classification criteria and reflects the current water use practices. This reclassification will beneficially impact biological resources in and around Curwensville Lake.
<b>Restricted</b>	<b>None/Negligible impact.</b> This reclassification reflects new classification criteria and reflects the current water use practices. None/negligible impacts to biological resources would occur.
<b>Open Recreation Area</b>	<b>None/Negligible impact.</b> This change reflects new classification criteria and no actual change in water use; therefore, None/negligible impacts to biological resources would occur.

\* Any recreational improvements will be reviewed by USACE (including NEPA) but will be funded by Clearfield County and its partners.

### 3.5 LAND USE AND RECREATION

#### 3.5.1 Affected Environment

The primary function of the Curwensville Lake Project is flood risk management, but the project also supports recreation opportunities. Visitors at Curwensville Lake Project take part in a wide range of recreational activities such as, fishing, viewing natural features, sightseeing, walking and hiking, camping, picnicking and family gatherings, swimming, etc. Existing recreational facilities include a picnic/day use area with pavilions, sanitary facilities, camp sites, hiking trails, disc golf, playgrounds, beach, dog swimming area, dog park, sports and open fields, a boat mooring area, and boat launch. USACE maintains the recreational pool at 1,162 feet PCD year-round, which provides visitors boating, fishing, and swimming opportunities.

Portions of the Curwensville Lake Project not used for operation and maintenance of the Curwensville Dam are leased to Clearfield County and licensed to the PGC. Clearfield County operates and maintains the Curwensville Lake recreation area. The PGC maintains wildlife populations and habitat areas upstream and around the Curwensville Lake. The Pennsylvania Fish and Boat Commission (PFBC) manages the lake's fishery and stocks tiger muskellunge fingerlings in alternate years. Species that are present within the reservoir include small and largemouth bass (*Micropterus dolomieu* and *Micropterus salmoides*), panfish (*Centrarchidae* spp), tiger muskellunge (*Esox masquinongy* X *Esox Lucius*), northern pike (*Esox Lucius*), walleye (*Sander vitreus*), black crappie (*Pomoxis nigromaculatus*), brown bullheads (*Ameiurus nebulosus*), and channel catfish (*Ictalurus punctatus*) among others. A number of artificial fish habitat structures have been placed in the lake to improve its fishery and angling opportunities. Curwensville Lake supports recreational fisheries for bass, panfish, and tiger muskellunge. PFBC biologists sample the lake's fish populations periodically to guide management of the reservoir's fishery resources (DCNR 2020).

### **3.5.2 No Action – Environmental Consequences**

Under the No Action Alternative, USACE would not implement the 2022 Master Plan and no new land classifications, or future development projects contained within the proposed 2022 Master Plan would occur. The operation and management of Curwensville Reservoir and USACE lands would continue as outlined in the 1968 Master Plan and there would be no short-, and mid-range planning of future projects for recreational improvements and development at the Curwensville Lake Project. Therefore, the No Action Alternative is anticipated to have none/negligible impacts to minor negative impacts to land use and recreation. Although this alternative does not result in a 2022 Master Plan that meets current regulations and guidance regarding land classifications, there would be no significant impacts to land use and recreation.

### **3.5.3 Proposed Action – Environmental Consequences**

The reclassifications required for the Proposed Action would result in none/negligible impact to beneficial impacts to recreation. Table 3-4 summarizes potential effects to biological resources based on the proposed changes to land classifications.

**Table 3-4. Potential Land Use and Recreation Impacts from Changes to Land Classifications**

<b>Classification</b>	<b>Potential for Impact</b>
<b>Project Operations</b>	<b>Beneficial impact.</b> New or on-going projects consist of replacing safety railing at various locations throughout operations area, and resealing of pavement on top of the dam and parking areas. There will be beneficial impact to recreation from the 56.8 acres reclassification to Vegetation Management along Curwensville Tyrone Highway because it opens the land for multiple purposes, including wildlife habitat, recreational activities in parks, landscape aesthetics, and timber.
<b>High Density Recreation</b>	<b>Beneficial impact.</b> Future projects would occur within and adjacent to existing developed and intensively used areas, specifically to support recreation (managed by Clearfield County)*. The reduction of intensive recreation acres leaves other acreages available for other uses such as low density recreation. Thus, benefiting the range of recreation opportunities available.
<b>Multiple Resource Management Land</b>	
<b>Low Density Recreation</b>	<b>Beneficial impact.</b> The new land classification identifies recreation as a primary use; however, vegetation and wildlife management also occur as important secondary uses throughout this classification. This new classification will benefit low density recreation opportunities.
<b>Wildlife and Forest Management</b>	<b>None/Negligible impact.</b> Wildlife management activities will continue to occur throughout the Curwensville Lake project area. None/negligible impact to recreation expected from this change in land classification.
<b>Vegetative Management</b>	<b>Beneficial Impact.</b> In general, vegetative resources on USACE lands are managed for multiple purposes, including wildlife habitat, recreational activities in parks, landscape aesthetics, and timber. This new classification would assist USACE with their goal of protection and management of natural resources while beneficially allowing for some recreational opportunities.
<b>Water Surface</b>	
<b>Designated No-Wake</b>	<b>Beneficial Impact.</b> This reclassification will beneficially impact recreation in and around Curwensville Lake by protecting natural, man-made, and human resources.
<b>Restricted</b>	<b>Beneficial Impact.</b> This reclassification will beneficially impact recreation in and around Curwensville Lake by designating the areas not safe for recreation on Curwensville Lake.
<b>Open Recreation Area</b>	<b>Beneficial Impact.</b> This reclassification will beneficially impact recreation in and around Curwensville Lake by designating the safe areas to operate boats above the No Wake speeds designated.

\* Any recreational improvements will be reviewed by USACE (including NEPA) but will be funded by Clearfield County and its partners.

### **3.6 ADDITIONAL RESOURCES NOT ANALYZED IN THIS EA**

Impacts on the following resources were determined to be negligible; therefore these resources were not further analyzed in this EA.

### **3.6.1 Air Quality**

The Curwensville Lake Project is in Clearfield County, Pennsylvania which meets attainment for all criteria pollutants, therefore the Clean Air Act's General Conformity Rule does not apply. Changes to land classifications under the Proposed Action would not affect air quality. Implementation of future master planning projects may generate temporary emissions from construction activities, including particulate matter and other criteria pollutants. Future development and increased recreational opportunities may also generate increased visitation and corresponding vehicle emissions. These impacts are outside the scope of this EA and will be evaluated under future EAs as funding becomes available to implement the future master planning projects. As a result, this resource area is not discussed further in this EA.

### **3.6.2 Greenhouse Gases and Climate**

The Curwensville Lake Project is geographically located within the National Oceanic and Atmospheric Administration (NOAA) Climate Division 36-07 – Pennsylvania Central Mountains (NOAA 2020.). This area is characterized by a temperate climate, with the average annual temperature being between 38- and 58-degrees Fahrenheit and an average annual precipitation of 41.6 inches. Changes to land classifications under the Proposed Action would not affect greenhouse gas emissions or climate. Potential greenhouse gas emissions and climate change impacts associated with the implementation of future master planning projects will be evaluated in the future associated with project development and are outside of the scope of this EA. As a result, this resource area is not discussed further in this EA.

### **3.6.3 Geology and Topography**

The Curwensville Lake Project is located within the Pittsburgh Low Plateau Section of the Appalachian Plateaus Province, which is characterized by smooth to irregular, undulating surface; narrow, relatively shallow valleys; strip mines and reclaimed land. The underlying rock type consists of shale, siltstone, sandstone, limestone, and coal. The origin of the landforms come from fluvial erosion; periglacial mass wasting and strip mining (Sevan 2000). Changes to land classifications under the Proposed Action would not affect geology or topography. Construction activities associated with implementation of proposed future projects will be evaluated for impacts to geology and topography during the project planning process. As a result, this resource area is not discussed further in this EA.

### **3.6.4 Groundwater**

Changes to land classifications will not adversely affect the quality or availability of groundwater. Assessment of future master planning project's water use would be performed during detailed project-specific planning. Therefore, groundwater resources are not discussed further in this EA.

### **3.6.5 Noise**

The Project area is in a physical setting characterized as rural. In rural areas, most noise comes from transportation, farming operations, and other miscellaneous human and animal sources. Changes to land classifications under the Proposed Action would not change the existing noise environment. Assessment of any future master planning project's impact on noise would be performed during detailed project-specific planning. As a result, this resource area is not discussed further in this EA.

### **3.6.6 Cultural Resources**

The ROI for the Curwensville Lake Project includes potential cultural resources within and adjacent to (i.e., within 50 feet) of master planning project footprints. The cultural resource analysis includes a Threshold of Significance, which is defined as significant impacts to cultural resources that have the potential to occur within the project footprints. Significant impacts to cultural resources would occur if the Proposed Action:

1. Causes substantial adverse change in the significance of historical or archaeological resources as defined in the National Historic Preservation Act (NHPA); or
2. Disturbs any human remains, including those buried outside of formal cemeteries.

There are 22 known archaeological sites within the Curwensville Dam project area. Eleven sites were documented through informant or amateur archaeological survey and feature unidentified prehistoric components. Three sites are associated with work completed as part of a Pennsylvania Historical and Museum Commission (PHMC) research grant and are associated with unidentified prehistoric components. Three sites were documented through institutional-affiliated research and are associated with unidentified prehistoric components. Four sites were documented as part of Section 106 compliance excavations; two of these are nineteenth and early twentieth century, while the other two feature unidentified prehistoric components. One site originates from an unknown project but featured an unidentified historic component.

Known architectural or above-ground resources are associated with the Curwensville Dam such as the assistant dam tender's residence, the main office and maintenance building, the intake tower, spillway, and earthen embankment. Other above-ground resources include those associated with the Curwensville recreation area such as the main office, comfort stations, campgrounds, boat launches, and a beach. The Curwensville Dam and its associated structures are currently being evaluated to determine its eligibility for inclusion in the National Register of Historic Places (NRHP).

There are no known historic structures or archaeological sites within the Project footprints that are eligible for or listed in the NRHP. Structures present before the Project were razed as part of dam construction. If specific project actions are proposed in the future due to changes in land classification, they will be subject to consultation and review under Section 106 of the NHPA. As a result, this resource area is not further discussed in this EA and is dismissed from further analysis.

### **3.6.7 Utilities**

Changes to land classifications under the Proposed Action would not affect utilities. An assessment of utilities associated with any future master planning projects would be performed during detailed project-specific planning. Therefore, utilities are not discussed further in this EA.

### **3.6.8 Hazardous Materials and Wastes**

An ammonium sulfate incident was reported in 1987, 1988, and 1989 adjacent to but outside of the Project area. A Toxic Release Inventory (TRI) report was filed in 1989 (TRI # 16833SPRRGCOOPE). The incident occurred at RTE 2 Cooper Road, Curwensville, PA 16833 and at the time of the incident, the facility name was Superior Brands Inc. The incident has

been rectified and no known contaminated sites have occurred since this incident within the Project area (US EPA 2020a). Changes to land classifications under the Proposed Action would not affect hazardous materials and wastes. An assessment of hazardous materials and wastes associated with any future master planning projects would be performed during detailed project-specific planning. As a result, this topic is not discussed further in this EA.

### **3.6.9 Socioeconomics and Environmental Justice**

The Proposed Action would not result in any appreciable effects to the local or regional socioeconomic environment. Changes to land classification would have no impact on socioeconomics or environmental justice. Impacts to socioeconomics and environmental justice associated with any future master planning projects would be assessed during detailed project-specific planning. As a result, this resource area is not discussed further in this EA.

### **3.6.10 Traffic and Transportation**

Changes to land classification would have no impact on traffic and transportation. Any temporary impacts from increased truck traffic during construction of future master planning projects would be assessed during detailed project-specific planning. As a result, traffic and transportation are not discussed further in this EA.



## **4 CUMULATIVE IMPACTS**

As defined by CEQ, cumulative effects are those that "result from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, without regard to the agency (federal or non-federal) or individual who undertakes such other actions" (40 CFR 1508.7(2019)). Cumulative effects analysis captures the effects that result from the Proposed Action in combination with the effects of other actions taken during the duration of the Proposed Action at the same time and place. Cumulative effects may be accrued over time and/or in conjunction with other pre-existing effects from other activities in the area (40 CFR 1508.25); therefore, pre-existing impacts and multiple smaller impacts should also be considered. Overall, assessing cumulative effects involves defining the scope of the other actions and their interrelationship with the Proposed Action to determine if they overlap in space and time.

The geographic scope or region of the cumulative effects analysis includes the county the project is located in (Clearfield County) and its surrounding counties (Centre, Cambria, Indiana, Jefferson, Elk, Cameron, and Clinton counties). The temporal scope is 15 to 25-year timeframe.

The NEPA and CEQ regulations require the analysis of cumulative environmental effects of a Proposed Action on resources that may often manifest only at the cumulative level. Cumulative effects can result from individually minor, but collectively significant, actions taking place. As noted above, cumulative effects are most likely to arise when a Proposed Action is related to other actions that could occur in the same location and at a similar time.

The Proposed Action focuses solely on the implementation of the proposed land classifications presented in the 2022 Master Plan. This EA does not consider implementation of specific projects identified within the 2022 Master Plan during the master planning process, as those projects are conceptual in nature, nor does it consider specific future development opportunities for leased areas, such as Kettle Creek State Park. Projects identified during the master planning process within the 2022 Master Plan would require separate NEPA analyses prior to construction.

### **4.1 CURRENT AND REASONABLY FORESEEABLE PROJECTS WITHIN AND NEAR THE ROI**

This section identifies reasonably foreseeable projects that may have cumulative, incremental impacts in conjunction with the Proposed Action. Beyond the future master planning projects identified in the 2022 Master Plan, no other projects were identified within or near the Project area that would lead to cumulative impacts.

### **4.2 ANALYSIS OF CUMULATIVE IMPACTS**

Impacts on each resource were analyzed according to how other actions and projects within the ROI might be affected by the No Action Alternative and Proposed Action. Impacts can vary in degree or magnitude from a slightly noticeable change to a total change in the environment.

As discussed above, minimal growth and development are expected to continue near Curwensville Lake. No cumulative impacts from this administrative action on resources are

expected when added to the impacts of activities associated with the Proposed Action or No Action Alternative or from the potential projects identified in the 2022 Master Plan.

## **5 IRRETRIEVABLE AND IRREVERSIBLE COMMITMENT OF RESOURCES**

NEPA requires that federal agencies identify “any irreversible and irretrievable commitments of resources which would be involved in the Proposed Action should it be implemented” (42 U.S. Code § 4332). An irreversible commitment of resources occurs when the primary or secondary impacts of an action result in the loss of future options for a resource. Usually, this is when the action affects the use of a nonrenewable resource, or it affects a renewable resource that takes a long time to renew. The impacts for this project from the reclassification of land use or future master planning projects centered on recreation enhancement and development would not be considered an irreversible commitment because much of the land could be converted back to prior use at a future date. An irretrievable commitment of resources is typically associated with the loss of productivity or use of a natural resource (e.g., loss of production or harvest). No irreversible or irretrievable impacts are anticipated from implementation of the 2022 Master Plan.

## 6 SUMMARY OF ENVIRONMENTAL CONSEQUENCES

Table 6-1 presents a summary of the environmental consequences by the alternative analyzed in this EA. As discussed in Chapter 4, selection of the Proposed Action Alternative would not be anticipated to cause cumulative adverse impacts. Table 6-2 presents conservation measures recommended within Chapter 3.

**Table 6-1. Summary of Potential Environmental Effects**

Alternative	Impact Type*			Intensity of Impact		
	Beneficial	None/Negligible	Negative	Minor	Moderate	Significant
<b>Water Resources</b>						
No Action Alternative		X				
Proposed Action Alternative	X	X				
<b>Soil Resources</b>						
No Action Alternative		X				
Proposed Action Alternative	X	X				
<b>Biological Resources</b>						
No Action Alternative		X				
Proposed Action Alternative	X	X				
<b>Land Use and Recreation</b>						
No Action Alternative		X	X	X		
Proposed Action Alternative	X	X				

\*Impacts on resource categories are based on applicable land classification changes. Section 3 describes anticipated impacts from changes to land classification under the Proposed Action alternative.

**Table 6-2. Conservation Measures for Future Master Planning Projects**

Measure	Resource Protected
Construction and operations of future master planning projects would use best management practices (BMPs) associated with prevention of erosion and control of stormwater runoff. This includes obtaining a National Pollutant Discharge Elimination System (NPDES) permit for projects involving earth disturbances exceeding one acre.	Water and Soil
Surface waters and wetlands, if present, would be avoided or permitted through the Section 404 process.	Water
USACE would consider the presence of the 100-year floodplain in design and siting future master planning projects within floodplain areas.	Water
USACE would consider the potential for erosion and occurrence of Prime Farmland soils in design and siting future master planning projects.	Soil
Construction and operations of future master planning projects would use BMPs associated with the prevention of impacts to sensitive species recommended by resource agencies during future environmental review of projects proposed in the 2022 Master Plan.	Biological
Impacts to sensitive receptors (e.g., adjacent residences and campers) would be minimized as these activities would be restricted to the daytime and would be temporary in nature	Noise Environment
Per the facility's Integrated Cultural Resources Management Plan, if any human remains or cultural items are found within or adjacent to Curwensville Dam and Reservoir that may be demonstrably related to one of the recognized tribal entities, then Public Law 101-601, the Native American Grave Protection and Repatriation Act, would be implemented and the affected group contacted.	Cultural Resources

Table 6-3 summarizes the level of compliance of the proposed alternative with environmental protection statutes and other environmental regulations. Based on the evaluation of project impacts described in Section 3, there are no significant impacts from the proposed action, and a Finding of No Significant Impact (FONSI) has been prepared.

**Table 6-3. Compliance of the Proposed Action with Environmental Protection Statutes and Other Environmental Requirements**

<b>Federal Statutes</b>	<b>Level of Compliance</b>
Anadromous Fish Conservation Act	Full
Archeological and Historic Preservation Act	N/A
Clean Air Act	N/A
Clean Water Act	N/A
Coastal Barrier Resources Act	N/A
Coastal Zone Management Act	N/A
Comprehensive Environmental Response, Compensation and Liability Act	N/A
Endangered Species Act	Full
Estuary Protection Act	N/A
Farmland Protection Policy Act	Full
Federal Water Project Recreation Act	Full
Fish and Wildlife Coordination Act	Full
Land and Water Conservation Fund Act	N/A
Magnuson-Stevens Act	N/A
Marine Mammal Protection Act	N/A
Marine Protection, Research and Sanctuaries Act	N/A
Migratory Bird Treaty Act	Full
National Environmental Policy Act	Full
National Historic Preservation Act	Full
Noise Control Act	Full
Resource Conservation and Recovery Act	N/A
River and Harbors Act	N/A
Safe Drinking Water Act	N/A
Solid Waste Disposal Act	N/A
Toxic Substances Control Act	N/A
Water Resources Planning Act	N/A
Watershed Protection and Flood Prevention Act	Full
Wetlands Conservation Act	N/A
Wild and Scenic Rivers Act	N/A
<b>Executive Orders (EOs), Memoranda, etc.</b>	
Protection and Enhancement of Environmental Quality (EO 11514)	Full
Protection and Enhancement of Cultural Environment (EO 11593)	Full
Floodplain Management (EO 11988)	Full
Protection of Wetlands (EO 11990)	Full
Environmental Justice in Minority and Low-Income Populations (EO 12898)	Full
Protection of Children from Health Risks and Safety Risks (EO 13045)	Full
Consultation and Coordination with Indian Tribal Governments (EO 13175)	N/A
Indian Sacred Sites (EO 13007)	N/A
Invasive Species (EO 13112)	Full
Migratory Bird (EO 13186)	Full
Facilitation of Cooperative Conservation (EO 13175)	N/A
Chesapeake Bay Protection and Restoration (EO 13508)	Full

<b>Federal Statutes</b>	<b>Level of Compliance</b>
Stewardship of the Oceans, Our Coasts, and the Great Lakes (EO 13547)	N/A
Streamlining Service Delivery and Improving Customer Service (EO 13571)	N/A
Prime and Unique Farmlands (CEQ Memorandum, 11 Aug 80)	Full

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## **8 APPENDIX**

### **A. PUBLIC AND AGENCY INVOLVEMENT**



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Pennsylvania Ecological Services Field Office  
110 Radnor Road Suite 101  
State College, PA 16801-7987  
Phone: (814) 234-4090 Fax: (814) 234-0748  
<http://www.fws.gov/northeast/pafo/>

In Reply Refer To:

February 17, 2021

Consultation Code: 05E2PA00-2021-SLI-0578

Event Code: 05E2PA00-2021-E-02398

Project Name: Curwensville Dam Master Plan Update

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>;

<http://www.towerkill.com>; and

[http://](http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html)

[www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html](http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html).

Any activity proposed on National Wildlife Refuge lands must undergo a "Compatibility Determination" conducted by the Refuge. Please contact the individual Refuge to discuss any questions or concerns.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries

## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Pennsylvania Ecological Services Field Office**

110 Radnor Road Suite 101  
State College, PA 16801-7987  
(814) 234-4090

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## Project Summary

Consultation Code: 05E2PA00-2021-SLI-0578

Event Code: 05E2PA00-2021-E-02398

Project Name: Curwensville Dam Master Plan Update

Project Type: LAND - MANAGEMENT PLANS

Project Description: The purpose of this project is to update the master Plan and Environmental Assessment for Curwensville Dam in Clearfield County, PA. The Curwensville Lake Master Plan is the strategic land use management document that guides the comprehensive management and development of all recreational, natural, and cultural resources throughout the life of the project. It is the basic document guiding USACE responsibilities pursuant to Federal Laws to preserve, conserve, restore, maintain, manage, and develop the project lands, waters, and associated resources.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@40.93349885,-78.54680024162437,14z>



Counties: Clearfield County, Pennsylvania

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## Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a>	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Threatened

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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# USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Pennsylvania Ecological Services Field Office  
110 Radnor Road Suite 101  
State College, PA 16801-7987  
Phone: (814) 234-4090 Fax: (814) 234-0748  
<http://www.fws.gov/northeast/pafo/>

In Reply Refer To:  
Consultation code: 05E2PA00-2021-TA-0578  
Event Code: 05E2PA00-2021-E-03597  
Project Name: Curwensville Dam Master Plan Update

April 19, 2021

Subject: Verification letter for the 'Curwensville Dam Master Plan Update' project under the January 5, 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions.

Dear Chris Johnson:

The U.S. Fish and Wildlife Service (Service) received on April 19, 2021 your effects determination for the 'Curwensville Dam Master Plan Update' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. This IPaC key assists users in determining whether a Federal action is consistent with the activities analyzed in the Service's January 5, 2016, Programmatic Biological Opinion (PBO). The PBO addresses activities excepted from "take"<sup>[1]</sup> prohibitions applicable to the northern long-eared bat under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, the Action is consistent with activities analyzed in the PBO. The Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the PBO satisfies and concludes your responsibilities for this Action under ESA Section 7(a)(2) with respect to the northern long-eared bat.

Please report to our office any changes to the information about the Action that you submitted in IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation. If the Action is not completed within one year of the date of this letter, you must update and resubmit the information required in the IPaC key.

This IPaC-assisted determination allows you to rely on the PBO for compliance with ESA Section 7(a)(2) only for the northern long-eared bat. It **does not** apply to the following ESA-protected species that also may occur in the Action area:

- Indiana Bat *Myotis sodalis* Endangered

If the Action may affect other federally listed species besides the northern long-eared bat, a proposed species, and/or designated critical habitat, additional consultation between you and this Service office is required. If the Action may disturb bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act is recommended.

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[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

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**Action Description**

You provided to IPaC the following name and description for the subject Action.

**1. Name**

Curwensville Dam Master Plan Update

**2. Description**

The following description was provided for the project 'Curwensville Dam Master Plan Update':

The purpose of this project is to update the master Plan and Environmental Assessment for Curwensville Dam in Clearfield County, PA. The Curwensville Lake Master Plan is the strategic land use management document that guides the comprehensive management and development of all recreational, natural, and cultural resources throughout the life of the project. It is the basic document guiding USACE responsibilities pursuant to Federal Laws to preserve, conserve, restore, maintain, manage, and develop the project lands, waters, and associated resources.

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@40.93349885,-78.54680024162437,14z>

**Determination Key Result**

This Federal Action may affect the northern long-eared bat in a manner consistent with the description of activities addressed by the Service's PBO dated January 5, 2016. Any taking that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o). Therefore, the PBO satisfies your responsibilities for this Action under ESA Section 7(a)(2) relative to the northern long-eared bat.

**Determination Key Description: Northern Long-eared Bat 4(d) Rule**

This key was last updated in IPaC on May 15, 2017. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

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The purpose of the key for Federal actions is to assist determinations as to whether proposed actions are consistent with those analyzed in the Service's PBO dated January 5, 2016.

Federal actions that may cause prohibited take of northern long-eared bats, affect ESA-listed species other than the northern long-eared bat, or affect any designated critical habitat, require ESA Section 7(a)(2) consultation in addition to the use of this key. Federal actions that may affect species proposed for listing or critical habitat proposed for designation may require a conference under ESA Section 7(a)(4).

## Determination Key Result

This project may affect the threatened Northern long-eared bat; therefore, consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) is required. However, based on the information you provided, this project may rely on the Service's January 5, 2016, *Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions* to fulfill its Section 7(a)(2) consultation obligation.

## Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?  
Yes
2. Have you determined that the proposed action will have "no effect" on the northern long-eared bat? (If you are unsure select "No")  
No
3. Will your activity purposefully **Take** northern long-eared bats?  
No
4. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?  
**Automatically answered**  
No
5. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at [www.fws.gov/midwest/angered/mammals/nleb/nhisites.html](http://www.fws.gov/midwest/angered/mammals/nleb/nhisites.html).

Yes

6. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?  
No
  7. Will the action involve Tree Removal?  
No
-

## Project Questionnaire

**If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.**

1. Estimated total acres of forest conversion:

0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

**If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.**

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

**If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.**

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

**If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.**

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

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## 1. PROJECT INFORMATION

Project Name: **Curwensville Dam Master Plan Update**

Date of Review: **9/21/2021 11:17:52 AM**

Project Category: **Recreation, Other**

Project Area: **2,687.64 acres**

County(s): **Clearfield**

Township/Municipality(s): **CURWENSVILLE; FERGUSON TOWNSHIP; GREENWOOD TOWNSHIP; PENN TOWNSHIP; PIKE TOWNSHIP**

ZIP Code:

Quadrangle Name(s): **CURWENSVILLE; MAHAFFEY**

Watersheds HUC 8: **Upper West Branch Susquehanna**

Watersheds HUC 12: **Bell Run; Curwensville Dam-West Branch Susquehanna River; Deer Run-West Branch Susquehanna River; Little Clearfield Creek**

Decimal Degrees: **40.932530, -78.553335**

Degrees Minutes Seconds: **40° 55' 57.1076" N, 78° 33' 12.67" W**

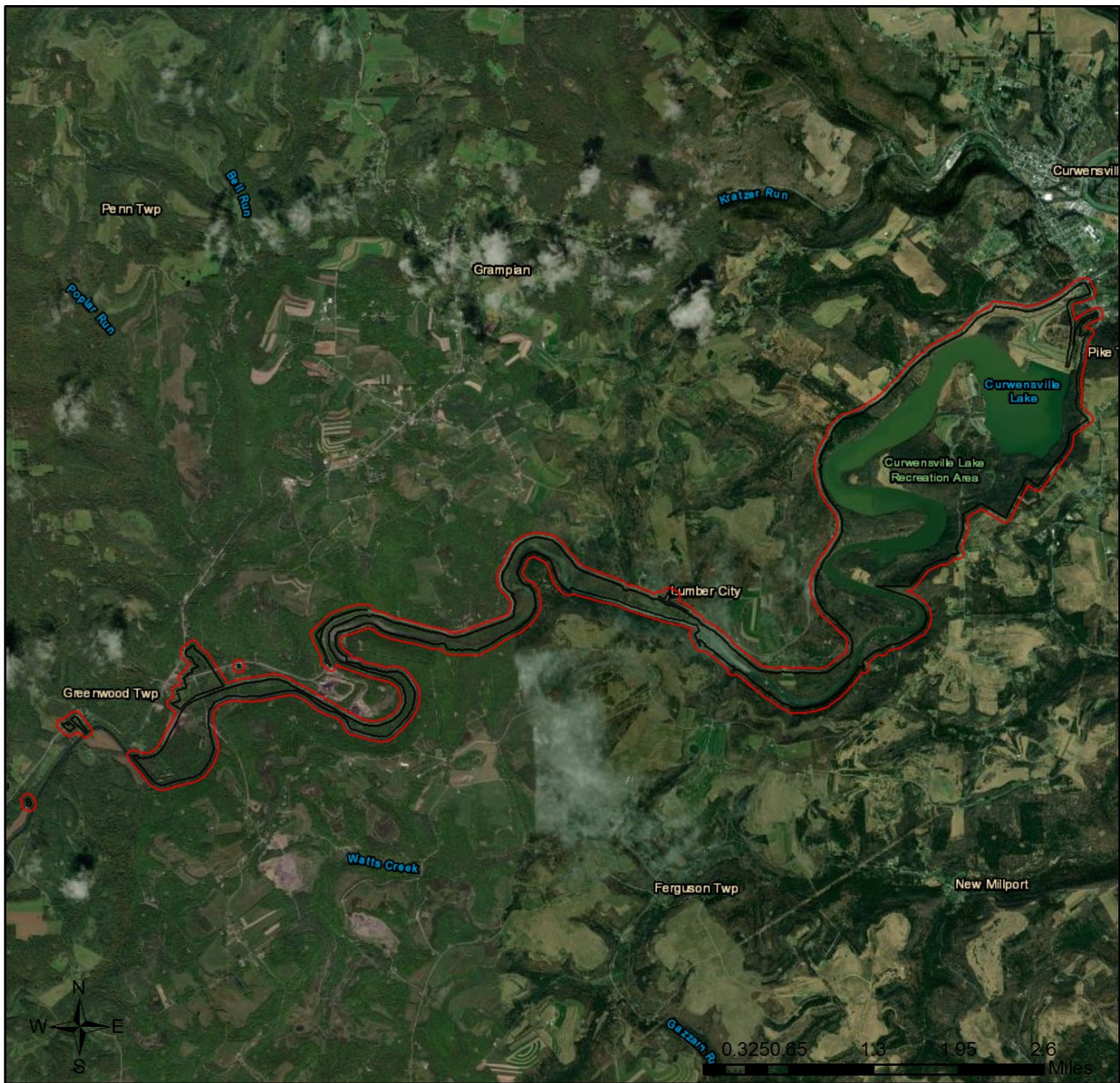
## 2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	<b>Conservation Measure</b>	<b>No Further Review Required, See Agency Comments</b>
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	<b>Potential Impact</b>	<b>MORE INFORMATION REQUIRED, See Agency Response</b>

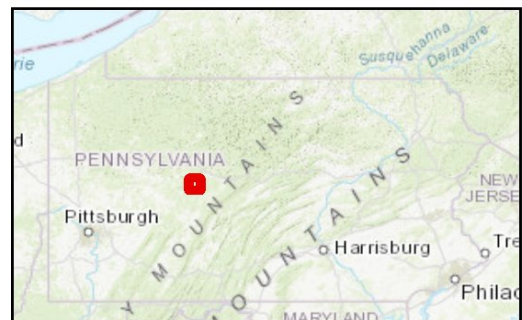
As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.



## Curwensville Dam Master Plan Update

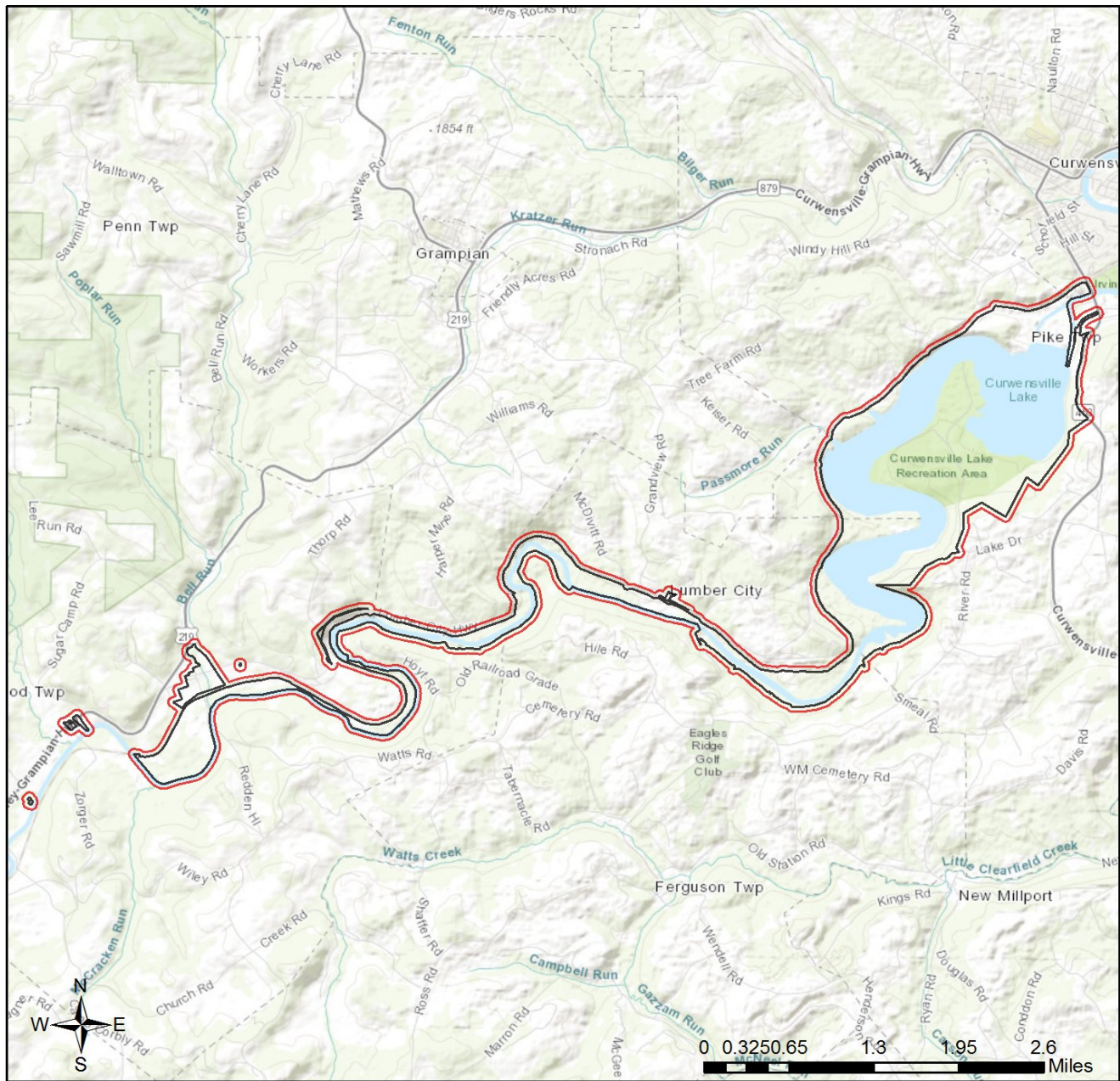




- Project Boundary
- Buffered Project Boundary

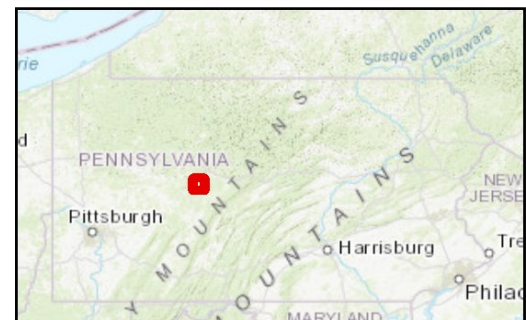


Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community  
 Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community  
 Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China

## Curwensville Dam Master Plan Update



-  Project Boundary
-  Buffered Project Boundary



Service Layer Credits: Sources: Esri, HERE, Garmin, Intemap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

## RESPONSE TO QUESTION(S) ASKED

**Q1:** The proposed project is in the range of the Indiana bat. Describe how the project will affect bat habitat (forests, woodlots and trees) and indicate what measures will be taken in consideration of this. Round acreages up to the nearest acre (e.g., 0.2 acres = 1 acre).

**Your answer is:** No forests, woodlots or trees will be affected by the project.

**Q2:** Is tree removal, tree cutting or forest clearing of 40 acres or more necessary to implement all aspects of this project?

**Your answer is:** No

### 3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

#### PA Game Commission

##### RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

#### PA Department of Conservation and Natural Resources

##### RESPONSE:

Conservation Measure: One or more geologic features of special concern is known on or near your site. There are voluntary options to augment, restore or reduce the impact to these resources. We encourage you to contact the PA Bureau of Topographic and Geologic Survey ([jshaulis@pa.gov](mailto:jshaulis@pa.gov) or 717-702-2037) for more information on the feature and specific recommendations.

**DCNR Species:** (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below. After desktop review, if a botanical survey is required by DCNR, we recommend the DCNR Botanical Survey Protocols, available here:

<https://conservationexplorer.dcnr.pa.gov/content/survey-protocols>)

Scientific Name	Common Name	Current Status	Proposed Status	Survey Window
Paleozoic earth history	Paleozoic Earth History	Special Concern Resource*	Special Concern Resource*	

#### PA Fish and Boat Commission

##### RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

#### U.S. Fish and Wildlife Service

##### RESPONSE:

Information Request: Due to the proximity of this project to a bald eagle nest, it is possible that project activities may disturb bald eagles, which is a form of "take" under the Bald and Golden Eagle Protection Act and may require a permit. The Service has prepared a project screening form to help you determine which specific measures may be necessary to avoid disturbing bald eagles and their nests, based on the type and scope of your proposed project or activity, and its distance from a bald eagle nest. Complete the "Bald Eagle Project Screening Form" (see [https://www.fws.gov/northeast/ecologicalservices/pdf/eagle/NE\\_Bald-Eagle\\_Project-Screening-Form\\_rev20200416.pdf](https://www.fws.gov/northeast/ecologicalservices/pdf/eagle/NE_Bald-Eagle_Project-Screening-Form_rev20200416.pdf)) and implement the measures identified on that form. Submit a copy of the completed Screening Form to the appropriate federal or state permitting agencies (e.g., PA DEP).

\* Special Concern Species or Resource - Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.

\*\* Sensitive Species - Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

## WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload\* or email the following information to the agency(s) (see AGENCY CONTACT INFORMATION). Instructions for uploading project materials can be found [here](#). This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies (but not USFWS).

\*If information was requested by USFWS, applicants must email, or mail, project information to [IR1\\_ESPenn@fws.gov](mailto:IR1_ESPenn@fws.gov) to initiate a review. USFWS will not accept uploaded project materials.

### Check-list of Minimum Materials to be submitted:

\_\_\_ Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.

\_\_\_ A map with the project boundary and/or a basic site plan (particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)

**In addition to the materials listed above, USFWS REQUIRES the following**

\_\_\_ **SIGNED** copy of a Final Project Environmental Review Receipt

### The inclusion of the following information may expedite the review process.

\_\_\_ Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)

\_\_\_ Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

## 4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <https://conservationexplorer.dcnr.pa.gov/content/resources>.

## 5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page ([www.naturalheritage.state.pa.us](http://www.naturalheritage.state.pa.us)). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

## 6. AGENCY CONTACT INFORMATION

### PA Department of Conservation and Natural Resources

Bureau of Forestry, Ecological Services Section  
400 Market Street, PO Box 8552  
Harrisburg, PA 17105-8552  
Email: [RA-HeritageReview@pa.gov](mailto:RA-HeritageReview@pa.gov)

### PA Fish and Boat Commission

Division of Environmental Services  
595 E. Rolling Ridge Dr., Bellefonte, PA 16823  
Email: [RA-FBPACENOTIFY@pa.gov](mailto:RA-FBPACENOTIFY@pa.gov)

### U.S. Fish and Wildlife Service

Pennsylvania Field Office  
Endangered Species Section  
110 Radnor Rd; Suite 101  
State College, PA 16801  
Email: [IR1\\_ESPenn@fws.gov](mailto:IR1_ESPenn@fws.gov)  
NO Faxes Please

### PA Game Commission

Bureau of Wildlife Habitat Management  
Division of Environmental Planning and Habitat Protection  
2001 Elmerton Avenue, Harrisburg, PA 17110-9797  
Email: [RA-PGC\\_PNDI@pa.gov](mailto:RA-PGC_PNDI@pa.gov)  
NO Faxes Please

## 7. PROJECT CONTACT INFORMATION

Name: Christopher Johnson  
Company/Business Name: US Army Corps of Engineers - Baltimore District  
Address: 2 Hopkins Plaza  
City, State, Zip: Baltimore, Maryland, 21201  
Phone: (\_\_\_\_) \_\_\_\_\_ Fax: (\_\_\_\_) \_\_\_\_\_  
Email: Christopher.a.Johnson@usace.army.mil

## 8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

\_\_\_\_\_  
applicant/project proponent signature

2022-Jan-03  
\_\_\_\_\_  
date

**From:** [Shaulis, James](#)  
**To:** [Johnson, Christopher A CIV USARMY CENAB \(US\)](#)  
**Cc:** [Mathesz, Melanie K CIV \(USA\)](#); [Reese, Stuart](#); [Hand, Kristen](#); [Schmid, Katherine](#); [Ebersole, Craig](#)  
**Subject:** [Non-DoD Source] RE: [External] FW: Curwensville Dam Master Plan Update  
**Date:** Monday, April 19, 2021 2:56:05 PM  
**Attachments:** [Curwensville MP\\_PNDI Draft Receipt.pdf](#)  
[Rocks at Curwensville Lake.docx](#)

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Christopher,

The geoheritage site of special concern referenced as “ Paleozoic Earth History” in the Project Search ID: PNDI-727653 is and outcrop that displays geologic relationships that are important for understanding the geologic history of Pennsylvania ( see attached word doc). Since you are updating your master plan please keep this site in mind as you move forward with your new management document and let us know if you anticipate any changes that may impact this site. Thank you for providing us the opportunity to comment about this site.

Sincerely,  
Jim Shaulis

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**From:** Johnson, Christopher A CIV USARMY CENAB (US)  
[mailto:Christopher.A.Johnson@usace.army.mil]  
**Sent:** Monday, April 19, 2021 10:54 AM  
**To:** Shaulis, James <jshaulis@pa.gov>  
**Cc:** Mathesz, Melanie K CIV (USA) <Melanie.K.Mathesz@usace.army.mil>  
**Subject:** [External] FW: Curwensville Dam Master Plan Update

***ATTENTION:** This email message is from an external sender. Do not open links or attachments from unknown sources. To report suspicious email, forward the message as an attachment to [CWOPA\\_SPAM@pa.gov](mailto:CWOPA_SPAM@pa.gov).*

Good Morning,

I wanted to follow-up on the previous email from February in order to complete the appropriate agency coordination. If any additional information is needed, please don't hesitate to contact me.

Thanks again,

Chris Johnson  
Biologist  
US Army Corps of Engineers  
Baltimore District, Planning Division  
443-807-7461

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**From:** Johnson, Christopher A CIV USARMY CENAB (US)  
**Sent:** Wednesday, February 17, 2021 11:38 AM  
**To:** [jshaulis@pa.gov](mailto:jshaulis@pa.gov)  
**Subject:** Curwensville Dam Master Plan Update

**From:** [Johnson, Christopher A CIV USARMY CENAB \(US\)](mailto:Johnson, Christopher A CIV USARMY CENAB (US))  
**To:** [jshaulis@pa.gov](mailto:jshaulis@pa.gov)  
**Subject:** Curwensville Dam Master Plan Update  
**Date:** Wednesday, February 17, 2021 11:37:00 AM  
**Attachments:** [Curwensville MP\\_PNDI Draft Receipt.pdf](#)

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Good Afternoon,

My name is Chris Johnson, and I am a Biologist working for the U.S. Army Corps of Engineers (USACE) in the Baltimore District. Our district is currently working to update the Curwensville Master Plan from the original 1968 version, as well as provide an Environmental Assessment (EA). The Curwensville Lake Master Plan is the strategic land use management document that guides the comprehensive management and development of all recreational, natural, and cultural resources throughout the life of the project. It is the basic document guiding USACE responsibilities pursuant to Federal Laws to preserve, conserve, restore, maintain, manage, and develop the project lands, waters, and associated resources.

As part of our preliminary coordination, I utilized the Pennsylvania Natural Heritage Program – Conservation Explorer program. A PNDI Draft receipt (attached) was received and indicated that I should contact the PA Bureau of Topographic and Geologic Survey due to one or more features of special concern known on or near the proposed site. However, the overall goal of this project is to only update and/or change land classifications from their existing status from the 1968 Master Plan to their current status in this new Master Plan – absolutely no construction or earth disturbance will take place within the project limits. Please allow this email to serve as our due diligence to coordinate with the appropriate agencies, and to ensure all parties are included and understand the scope of work.

If there are any questions or concerns with the information provided, please do not hesitate to contact me.

Thank you!

Chris Johnson  
Biologist  
US Army Corps of Engineers  
Baltimore District, Planning Division  
443-807-7461

Environmental Geology Report 7  
Part 2  
1987



# **OUTSTANDING SCENIC GEOLOGICAL FEATURES OF PENNSYLVANIA**

**PART 2**





### 396. ROCKS AT CURWENSVILLE LAKE

COUNTY: Clearfield TOWNSHIP: Pike

QUADRANGLE: Curwensville

LOCATION: Along Pa. Route 969, 3 miles southwest of Curwensville; along the west side of Curwensville Lake.

REMARKS: This site represents the best example of the discontinuous rock layers that are typical of the Pennsylvanian-age rocks in western Pennsylvania. The variable bedding dips and rock thicknesses are due to paleotopography (ancient topography), interrupted and uneven deposition of original sediments (differential sedimentation), and differential compaction.

This is the only known location where genetic relationships between the Mercer high-alumina flint clay and surrounding rocks can be interpreted. The Mercer clay is a unique economic mineral deposit whose origin has generated controversy for years.

REFERENCES: Edmunds, W. E., and Berg, T. M. (1971), *Geology and mineral resources of the southern half of the Penfield 15-minute quadrangle, Pennsylvania*, Pennsylvania Geological Survey, 4th ser., Atlas 74cd, 184 p.

Foose, R. M. (1944), *High-alumina clays of Pennsylvania*, *Economic Geology*, v. 39, p. 557-577.

Williams, E. G., and Bragonier, W. A. (1974), *Controls of Early Pennsylvanian sedimentation in western Pennsylvania*, in Briggs, Garrett, ed., *Carboniferous of the southeastern United States*, Geological Society of America Special Paper 148, p. 135-152.

APPALACHIAN PLATEAUS PROVINCE

PITTSBURGH PLATEAUS SECTION

