

# ENVIRONMENTAL ASSESSMENT

## Shenango River Lake 2023 Master Plan



October 2023

# Table of Contents

|  |    |
|--|----|
| List of Acronyms and Abbreviations .....                                   | 1  |
| 1 Introduction .....   | 3  |
| 1.1 Project Location .....   | 3  |
| 1.2 Project Overview .....   | 4  |
| 1.3 Authorization and Project Description .....                            | 5  |
| 1.4 National Environmental Policy Act Overview.....                        | 6  |
| 1.5 Previous MP NEPA Documentation .....                                   | 6  |
| 2 Purpose and Need .....   | 6  |
| 2.1 Master Plan Overview .....   | 6  |
| 2.2 Purpose and Need for the Updated Master Plan.....                      | 7  |
| 3 Alternatives .....   | 7  |
| 3.1 No Action.....   | 8  |
| 3.2 Proposed Action – Adoption of the Revised Master Plan.....             | 8  |
| 3.2.1 Scope and Objectives of the 2023 MP .....                            | 8  |
| 3.2.2 Land Allocation, Land Classifications, and Resource Objectives ..... | 9  |
| 3.2.3 Proposed Recommendations .....                                       | 10 |
| 4 Affected Environment and Environmental Consequences .....                | 16 |
| 4.1 Aesthetics.....  | 17 |
| 4.1.1 Existing Condition .....   | 17 |
| 4.1.2 Environmental Consequences.....                                      | 17 |
| 4.2 Air Quality.....   | 17 |
| 4.2.1 Existing Condition .....   | 18 |
| 4.2.2 Environmental Consequences.....                                      | 19 |
| 4.3 Aquatic Resources, Wetlands, Hydrology, and Water Quality.....         | 20 |
| 4.3.1 Existing Condition.....  | 20 |
| 4.3.2 Environmental Consequences.....                                      | 22 |
| 4.4 Invasive Species .....   | 23 |
| 4.4.1 Existing Condition.....  | 23 |
| 4.4.2 Environmental Consequences.....                                      | 23 |
| 4.5 Fish and Wildlife Habitat .....  | 24 |
| 4.5.1 Existing Condition.....  | 24 |

|        |  |    |
|--------|--|----|
| 4.5.2  | Environmental Consequences .....   | 25 |
| 4.6    | Federally Protected Species, including Threatened and Endangered Species | 25 |
| 4.6.1  | Existing Condition .....   | 26 |
| 4.6.2  | Environmental Consequences .....   | 28 |
| 4.7    | Historic Properties and Other Cultural Resources .....                   | 29 |
| 4.7.1  | Existing Condition .....   | 29 |
| 4.7.2  | Environmental Consequences .....   | 29 |
| 4.8    | Floodplains .....  | 30 |
| 4.8.1  | Existing Condition .....   | 30 |
| 4.8.2  | Environmental Consequences .....   | 30 |
| 4.9    | Hazardous, Toxic, and Radioactive Waste .....                            | 30 |
| 4.9.1  | Existing Condition .....   | 30 |
| 4.9.2  | Environmental Consequences .....   | 31 |
| 4.10   | Land Use .....   | 31 |
| 4.10.1 | Existing Condition .....   | 31 |
| 4.10.2 | Environmental Consequences .....   | 32 |
| 4.11   | Navigation .....   | 32 |
| 4.12   | Noise Levels .....   | 32 |
| 4.12.1 | Existing Condition .....   | 32 |
| 4.12.2 | Environmental Consequences .....   | 33 |
| 4.13   | Public Infrastructure .....  | 33 |
| 4.13.1 | Existing Condition .....   | 33 |
| 4.13.2 | Environmental Consequences .....   | 34 |
| 4.14   | Environmental Justice and Socioeconomics .....                           | 34 |
| 4.14.1 | Existing Condition .....   | 35 |
| 4.14.2 | Environmental Consequences .....   | 35 |
| 4.15   | Climate Change .....   | 36 |
| 4.15.1 | Existing Condition .....   | 36 |
| 4.15.2 | Environmental Consequences .....   | 36 |
| 4.16   | Child Health and Safety .....  | 37 |
| 4.16.1 | Existing Condition .....   | 37 |
| 4.16.2 | Environmental Consequences .....   | 37 |

|        |   |    |
|--------|---|----|
| 4.17   | Recreation .....  | 37 |
| 4.17.1 | Existing Condition.....   | 37 |
| 5      | Summary of Environmental Effects .....  | 39 |
| 6      | Compliance with Environmental Laws.....   | 40 |
| 6.1    | Bald and Golden Eagle Protection Act.....   | 40 |
| 6.2    | Clean Air Act.....  | 40 |
| 6.3    | Clean Water Act (CWA).....  | 41 |
| 6.4    | Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980..... | 42 |
| 6.5    | Endangered Species Act (ESA).....   | 43 |
| 6.6    | Environmental Justice Executive Orders.....   | 44 |
| 6.7    | Federal Water Project Recreation Act.....   | 44 |
| 6.8    | Fish and Wildlife Coordination Act (FWCA).....  | 44 |
| 6.9    | Migratory Bird Treaty Act (MBTA) of 1918 .....  | 45 |
| 6.10   | National Historic Preservation Act.....   | 45 |
| 6.11   | National Environmental Policy Act (NEPA).....   | 46 |
| 6.12   | Noise Control Act of 1972.....  | 46 |
| 6.13   | Section 10 of the Rivers and Harbors Act of 1899 .....                                      | 46 |
| 6.14   | Floodplain Management .....   | 46 |
| 6.15   | Invasive Species.....   | 47 |
| 6.16   | Protection of Wetlands.....   | 47 |
| 7      | Public Involvement.....   | 47 |
| 8      | References.....   | 48 |
| 9      | Public Comments and Responses .....   | 52 |

## List of Acronyms and Abbreviations

| <b>Acronym</b> | <b>Explanation</b>  |
|----------------|---|
| ADA            | Americans with Disabilities Act                                       |
| APE            | Area of Potential Effects   |
| AQI            | Air Quality Index   |
| CEJST          | Climate and Economic Justice Screening Tool                           |
| CEQ            | Council on Environmental Quality                                      |
| CERCLA         | Comprehensive Environmental Response, Compensation, and Liability Act |
| CFR            | Code of Federal Regulations   |
| CWA            | Clean Water Act   |
| dBA            | A-weighting Decibels  |
| DCNR           | Pennsylvania Department of Conservation and Natural Resources         |
| DO             | Dissolved Oxygen  |
| EA             | Environmental Assessment  |
| EIS            | Environmental Impact Statement  |
| EO             | Executive Order(s)  |
| EP             | Engineering Pamphlet  |
| ER             | Engineering Regulation  |
| ESA            | Endangered Species Act  |
| FONSI          | Finding of No Significant Impact                                      |
| FWCA           | Fish and Wildlife Coordination Act                                    |
| GIS            | Geographic Information System   |
| HABs           | Harmful Algal Blooms  |
| HTRW           | Hazardous, Toxic, and Radioactive Waste                               |
| IBA            | Important Bird and Biodiversity Area                                  |
| IPaC           | USFWS Information for Planning and Consultation Database              |
| MANLAA         | May Affect, But Not Likely to Adversely Affect                        |
| MBTA           | Migratory Bird Treaty Act   |
| MP             | Master Plan   |
| MSIM           | Multiple Species Inventory Monitoring                                 |
| N/A            | Not Applicable  |

|                |   |
|----------------|---|
| NAAQS          | National Ambient Air Quality Standards          |
| NAVD 88        | North American Vertical Datum of 1988           |
| NEPA           | National Environmental Policy Act               |
| NHPA           | National Historic Preservation Act              |
| NPDES          | National Pollution Discharge Elimination System |
| NRCS           | Natural Resource Conservation Service           |
| NWI            | National Wetland Inventory                      |
| NWP            | Nationwide Permit                               |
| ODNR           | Ohio Department of Natural Resources            |
| OEPA           | Ohio Environmental Protection Agency            |
| <b>Acronym</b> | <b>Explanation</b>                              |
| OH             | Ohio  |
| OPM            | Operational Management Plan                     |
| ORV            | Off-Road Vehicle(s)                             |
| PA             | Pennsylvania                                    |
| PCBs           | Polychlorinated Biphenyls                       |
| PFBC           | Pennsylvania Fish and Boat Commission           |
| PGC            | Pennsylvania Game Commission                    |
| PM             | Particulate Matter                              |
| PNDI           | Pennsylvania Natural Diversity Inventory        |
| Project        | Shenango River Lake Project                     |
| PSAs           | Project Site Areas                              |
| RCRA           | Resource Conservation and Recovery Act          |
| RM             | River Mile(s)                                   |
| SHPO           | State Historic Preservation Office              |
| TMDL           | Total Maximum Daily Load                        |
| USACE          | United States Army Corps of Engineers           |
| USC            | United States Code                              |
| USCB           | United States Census Bureau                     |
| USEPA          | United States Environmental Protection Agency   |
| USFWS          | United States Fish and Wildlife Service         |
| WOTUS          | Waters of the United States                     |

# 1 Introduction

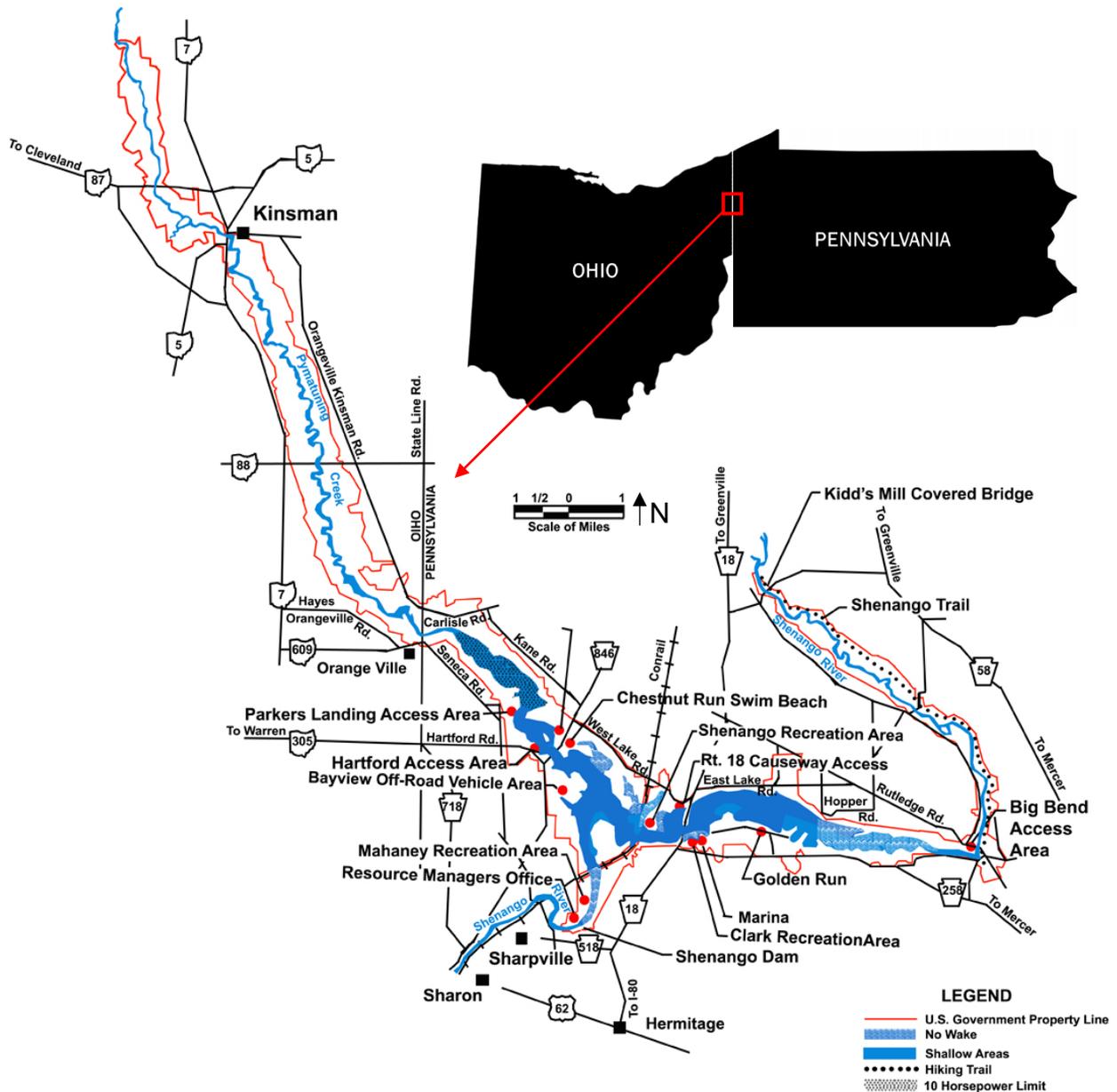
The U.S. Army Corps of Engineers (USACE) is responsible for the maintenance, restoration, and stewardship of natural resources on the multipurpose reservoir projects it manages. To facilitate the management and use of these lands, USACE maintains a Master Plan (MP) for each project. A MP is required for each Civil Works Project and all fee-owned lands for which USACE has administrative responsibility. The Shenango River Lake MP serves as a strategic land-use management document that guides the comprehensive management and development of all recreational, natural, and cultural resources throughout the life of the Shenango River Lake (Project). The existing Project MP was completed in 1998 (1998 MP) but has not been comprehensively revised since then (USACE, 1998). USACE is proposing to adopt and implement revisions to the Shenango River Lake MP.

The purpose of this Environmental Assessment (EA) is to assess the impact of proposed updates to the Project MP, and to ensure compliance with the National Environmental Policy Act (NEPA) and other environmental laws. The EA will also provide an opportunity for public involvement in the decision-making process. This EA has been prepared in accordance with NEPA and the Council on Environmental Quality's (CEQ) Regulations (40 CFR Part 1500-1508), and USACE Engineering Regulation (ER) 200-2-2, Procedures for Implementing NEPA.

## 1.1 Project Location

Shenango River Lake is located on the Shenango River in Mercer County, Pennsylvania (PA) and on Pymatuning Creek in Mercer County, PA and Trumbull County, Ohio (OH), approximately 20 miles northeast of Youngstown, OH and 75 miles northwest of Pittsburgh, PA (Figure 1).

The Pymatuning Creek headwaters begin in Ashtabula County, OH and flow to the south towards Shenango River Lake. The Shenango River headwaters begin in Crawford County, PA at the Pymatuning Reservoir, and flow to the south towards Shenango River Lake. The Shenango River Lake Dam is located at Shenango River mile 34.2 at the southern end of the Project near Sharpsville, PA. The Shenango River generally flows to the south until its confluence with the Mahoning River just south of New Castle, PA, where the two rivers form the Beaver River. The Beaver River generally flows south for 21.6 miles until it meets the Ohio River near Monaca, PA.



**Figure 1.** Project vicinity map.

## 1.2 Project Overview

The Shenango River Lake Dam is a concrete gravity dam authorized by the Flood Control Act of 1938 and completed in 1965. The dam is 67.7 feet in height above the Shenango Riverbed and 720 feet in length. Discharge is regulated by seven 5-feet by 7-foot vertical sluice gates and an uncontrolled concrete ogee weir center spillway.

The dam controls the runoff from 589 square miles of the Shenango River and Pymatuning Creek watersheds located in northeast OH and northwest PA (Appendix B, Plate 1 of the 2023 MP). This 589 square mile area is the area that channels rainfall and snowmelt to the creeks, streams, and rivers that fill Shenango River Lake. Within the Shenango River Lake, these waters are slowed and stored for various uses and benefits to the community. The quality and quantity of the inflow waters influence the reservoir.

The Project covers 14,773.1 acres of fee lands and flowage and road easements. USACE maintains the dam, a Resource Manager’s Office, two maintenance compounds, a ranger station, a disc golf course, multiple trail systems, a 200-acre off-road vehicle (ORV) park, a swim beach, seven reservable picnic pavilions, six playgrounds, five concrete boat launches, and several unimproved water access points.

USACE leases 4,888.6 acres of Project lands and waters to the Ohio Department of Natural Resources (ODNR), 3,809.8 acres to the Pennsylvania Game Commission (PGC), 18.9 acres to Northstar Marina, 12.5 acres to the Village of Orangeville, OH, 5.0 acres to the Mercer County Trails Association, and 2.0 acres to the Mercer Valley Soccer Club. Project lands, as referred to throughout this EA, include both fee lands owned by USACE (including lands with outgrants to other entities) and flowage and road easements. Project lands are depicted in Master Plan Boundary map (Appendix B, Plate 3 of the 2023 MP).

### 1.3 Authorization and Project Description

The Project’s primary purposes as authorized by the Flood Control Act of 1938 (Public Law 75-761) are reduction of downstream flood stages, augmentation of low flows, and control of water quality in the Shenango and Beaver Rivers. The Flood Control Act of 1944 subsequently authorized recreation and the Fish and Wildlife Coordination Act of 1958 authorized fish and wildlife management. See Table EA-1 for a list of Project purposes and authorities.

**Table EA-1. Project purposes and authorities.**

| <b>Operating Purpose</b> | <b>Authority</b>                                       | <b>Citation</b>        |
|--------------------------|--|------------------------|
| Flood Control            | Flood Control Act of 1938                              | PL 75-761              |
| Fish and Wildlife        | Fish and Wildlife Coordination Act                     | PL 85-624              |
| Recreation               | Flood Control Act of 1938<br>Flood Control Act of 1944 | PL 75-761<br>PL 78-534 |
| Water Quality            | Flood Control Act of 1938<br>Clean Water Act           | PL 75-761<br>PL 92-500 |
| Low Flow Augmentation    | Flood Control Act of 1938                              | PL 75-761              |

The Project is one of four USACE-operated flood control reservoirs in the Mahoning-Beaver River basin to reduce flooding in the Mahoning, Beaver, and upper Ohio River

valleys, and to improve water quality. The other three reservoirs are all located in the Mahoning River basin (Mosquito Creek Lake, Michael J. Kirwan Reservoir, and Berlin Lake).

#### **1.4 National Environmental Policy Act Overview**

Within NEPA, CEQ regulations, and USACE regulations, a process is set forth where USACE must assess the environmental effects of proposed federal actions and consider reasonable alternatives to their proposed actions. In general, NEPA requires federal agencies to make a series of evaluations and decisions that anticipate adverse effects on environmental resources. For those actions with the greatest potential to create significant environmental effects, the consideration of the proposed action and alternatives is presented in an Environmental Impact Statement (EIS). Where the potential effects of the proposed action are not determined to be significant, the agencies prepare an EA. The 2023 revision to the Shenango River Lake Project Master Plan is accompanied by this EA to support decision making.

The CEQ's NEPA Regulations do not contain a detailed discussion regarding the format and content of an EA, but an EA must briefly discuss the need for the proposed action, the proposed action and alternatives, probable environmental effects of the proposed action and alternatives, and agencies and persons consulted in the preparation of the EA.

#### **1.5 Previous MP NEPA Documentation**

An EA and Finding of No Significant Impact (FONSI) were drafted for the 1998 MP (USACE, 1998a and 1998b).

## **2 Purpose and Need**

### **2.1 Master Plan Overview**

A MP was developed for the Project in 1998. It is USACE policy that each MP shall be reviewed on a periodic basis and revised as required. ER 1130-2-550 establishes the policy for the management of recreation programs and activities, and for the operation and maintenance of USACE recreation facilities and related structures, at civil works water resource projects.

The MP 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. The MP guides efficient and cost-effective management, development, and use of Project lands. The MP also guides and articulates USACE responsibilities pursuant to Federal laws to preserve, conserve, restore, maintain, manage, and develop the Project lands, waters, and associated

resources. The MP is a dynamic operational document projecting what could and should happen over the life of the Project and is flexible based upon changing conditions. The MP deals in concepts, not in details of design or administration. Detailed management and administration functions are addressed in the Operational Management Plan (OMP), which implements the concepts of the MP as operational actions.

MPs are required for civil works projects and other fee-owned lands for which USACE has administrative responsibility for management of natural and manmade resources. Engineer Pamphlet (EP) 1130-2-550 establishes guidance for the preparation of MPs. As stated therein, the primary goals of the MPs are to prescribe an overall land and water management plan, resource objectives, and associated design and management concepts, which:

1. provide the best management practices to respond to regional needs, resource capabilities and suitabilities, and expressed public interests and desires consistent with authorized Project purposes.
2. protect and manage project natural and cultural resources through sustainable environmental stewardship programs.
3. provide public outdoor recreation opportunities that support project purposes and public demands created by the project itself while sustaining project natural resources.
4. recognize the particular qualities, characteristics, and potentials of the project.
5. provide consistency and compatibility with national objectives and other state and regional goals and programs.

## **2.2 Purpose and Need for the Updated Master Plan**

It is USACE policy that each MP shall be reviewed on a periodic basis and revised as required (ER 1130-2-550 and ER 1130-2-406). The existing Project MP was approved in 1998.

The newly drafted, Shenango River Lake 2023 Master Plan (2023 MP) provides a comprehensive description of the project; a discussion of factors influencing resource management and development; an identification and discussion of special problems; a synopsis of public involvement and input to the planning process; and descriptions of past, present, and proposed development.

## **3 Alternatives**

When preparing an EA, USACE should develop a range of alternatives that could reasonably achieve the need that the proposed action is intended to address. The alternatives being considered in this EA are a No Action Alternative of continuing to operate the Project under the 1998 MP, and the Proposed Action of operating the

Project consistent with the 2023 MP. The preparation of an EA, with only two alternatives (continuing to operate the Project without a new MP and operating the Project with a new MP) is appropriate because there are no other reasonable alternatives to consider for evaluation.

### **3.1 No Action**

NEPA requires that federal agencies describe and analyze a No Action Alternative. The No Action Alternative considers what would happen if USACE continued operating and managing the Project under the 1998 MP, which would not be revised or updated. The No Action Alternative provides a baseline from which other alternatives can be compared and evaluated.

Under the No Action Alternative, the 1998 MP would continue to be the document used for management of the Project. The 1998 MP would not account for any changes at the Project or in the surrounding areas that occurred after 1998. The 1998 MP does not include the updated land classifications (see 2023 MP Section 3.2) and is out of date with current USACE regulations. Without an updated MP, future development decisions would therefore be assessed on an ad hoc basis without the benefit of a comprehensive assessment of recreation and natural resource conditions and opportunities at the Project.

### **3.2 Proposed Action – Adoption of the Revised Master Plan**

Under this alternative, the 2023 MP would be approved for the Project and would replace the 1998 MP. The 2023 MP addresses important updates due to recreation demand, amenities within the project, current environmental conditions, and pertinent laws and policies. The 2023 MP updates the land classification nomenclature to be consistent with current USACE standards and accurately reflect resources within Project lands. The 2023 also lays out future management recommendations and development proposals to support both recreation and natural resources. The scope of the 2023 MP and this EA are limited to actions on Project lands.

#### **3.2.1 Scope and Objectives of the 2023 MP**

The 2023 MP provides guidelines and direction for future project development and use and is based on authorized project purposes, USACE policies and regulations on the operation of USACE projects, responses to regional and local needs, resource capabilities and suitable uses, and expressed public interests consistent with authorized project purposes and pertinent legislation. The 2023 MP provides a District-level policy consistent with national objectives and other state and regional goals and programs.

### 3.2.2 Land Allocation, Land Classifications, and Resource Objectives

Land allocations at all USACE Civil Works water resource projects are based on the Congressionally authorized purpose for which the project lands were acquired. Since the 1998 MP, USACE has changed the land classification nomenclature, which is consistent with the nomenclature used in the new land surveys. Land classification categories as defined by EP 1130-2-550, change 5, dated 30 January 2013, are as follows:

1. Project Operations
2. High Density Recreation
3. Mitigation
4. Environmentally Sensitive Areas
5. Multiple Resource Management
  - a. Low Density Recreation
  - b. Wildlife Management
  - c. Vegetative Management
  - d. Future or Inactive Recreation
6. Water Surface
  - a. Restricted
  - b. Designated No-Wake
  - c. Fish and Wildlife Sanctuary
  - d. Open Recreation

See the 2023 MP Section 3.2 for a description of each land classification. The land classification and land use changes are outlined below in Table EA-2.

**Table EA-2. Land classification and land use changes proposed.**

| 1998 Master Plan                        |                  | 2023 Master Plan                |                  |
|---|------------------|---------------------------------|------------------|
| Existing Classification                 | Existing Acreage | Proposed Classification         | Proposed Acreage |
| Wildlife Management, General            | 8,748.0          | Wildlife Management             | 5,393.1          |
| Environmentally Sensitive Areas         | 1,114.0          | Environmentally Sensitive Areas | 4,614.1          |
| Vegetative Management                   | N/A              | Vegetative Management           | N/A              |
| Recreation                              | 912.0            | High Density Recreation         | 803.8            |
| Recreation – Low Density                | 141.0            | Low Density Recreation          | 158.6            |
| Inactive and/or Future Recreation Areas | 64.0             | Future or Inactive Recreation   | 93.8             |
| Mitigation                              | N/A              | Mitigation                      | N/A              |
| Project Operations                      | 43.0             | Project Operations              | 30.6             |
| Unclassified                            | 72               | N/A                             | N/A              |
| Open Boating                            | 1,163.2          | Open Recreation                 | 2,466.1          |
| No Wake                                 | 883.2            | Designated No-Wake              | 548.0            |

|                     |       |   |       |
|---------------------|-------|---|-------|
| No Boating          | N/A   | Restricted                                      | 9.0   |
| 20 Horsepower Limit | 537.8 | Designated No-Wake                              | 537.8 |
| N/A                 | N/A   | (20 HP Limit)<br>Fish and Wildlife<br>Sanctuary | 0.0   |

Note: Acreage numbers for historical land use classifications were calculated in Geographic Information System (GIS) software by scanning, georeferencing, and digitizing the 1998 Land Use Classification Maps (Plate 2 and Plate 4 in 1998 MP). Due to the scale and other limitations of the original hand-drawn map, acreages should be considered approximate.

### 3.2.3 Proposed Recommendations

#### 3.2.3.1 Management Recommendations

The 2023 MP provides specific management recommendations. For a complete list, see Table 1-5 through Table 1-8 in Section 1.6 of the 2023 MP. Management recommendations in the 2023 MP include:

- Coordinate partnerships with state and federal agencies, stakeholders, and the community.
- Recruit and train volunteers to perform year-round administrative duties, develop programming, and assist with natural resource and recreation projects.
- Update land classifications to be consistent with current standards.
- Conserve wildlife management and environmentally sensitive areas through continued coordination with resource agency partners.
- Develop survey methods to identify sensitive habitats.
- Enhance natural areas and restoring sensitive habitats through native vegetation plantings, removal of invasive species along with other efforts targeted at non-game species habitat.
- Demarcate boundary lines including both fee and flowage easement areas.
- Manage threatened and endangered species through U.S. Fish & Wildlife Service (USFWS) Recovery Plans.
- Develop a Project app to act as a real time comment card for USACE facilities and activities such as fishing tournaments; include trail and park maps.
- Update or develop important Project plans and manuals, including the Water Control Manual; Sediment Management, Plan; Cultural Resource Management Plans; Invasive Species Management Plan; and the Forest, Fish, and Wildlife Management Plan.
- Pursue training opportunities and partnerships to enhance ranger and visitor safety.
- Expand winter recreation opportunities.
- Utilize emerging social media technologies for promotion and public outreach.

### 3.2.3.2 *Development Proposals*

The 2023 MP includes development proposals. For a complete list, see Sections 1.6 and 7.0 in the 2023 MP. Development proposals in the 2023 MP include:

- Modernize facilities within existing footprints and prioritizing actions that improve visitor safety and experience and ensure ADA accessibility.
- Install informational and directional signs around the Project.
- Improve roads leading to, and surrounding, the Project.
- Identify Project Site Areas (PSAs) with low use and degraded facilities/amenities and divest or improve PSAs when appropriate.
- Identify or establish a Project Information/Nature Center.
- Expand and improve existing trail systems, including the establishment new multipurpose trail system.
- Establish observation platform for wildlife viewing at East Lake Road Access Area.
- Establish a dog park at Mahaney Recreation area and Shenango Recreation Area.
- Improve Mercer Recreation Area to provide dispersed camping, 3D archery course, boat ramp, and/or picnic areas.
- Improve Shenango Recreation Area to include replacing fire rings, picnic tables, site posts, erosion control, playground upgrades, and more electric full hook up sites.
- Develop the 846 Access Area to include kayak launch and mountain bike trail.
- Designate old soccer fields at the Mahaney Recreation Area for model airplane and drone use.
- Replace the Shenango Trail bridge located in the Big Bend Recreation Area.
- Replace the Shenango Trail bridge located near New Hamburg.
- Development of a kayak/canoe access at the Mahaney Outflow Recreation Area to access the lower Shenango River.
- Establishment of an entertainment amphitheater at the Mahaney Recreation Area.
- Construction of concrete disc golf tees at the Mahaney Recreation Area.
- Development of the Bayview ORV area.

### 3.2.3.3 *Environmental Compliance of Recommendations*

Management recommendations and development proposals made in the 2023 MP, if implemented, require evaluation for their impact on the environment and compliance with federal environmental laws. While all the recommendations listed in the 2023 MP were considered in this EA, there are not enough details available to fully evaluate the environmental impacts of most the recommendations.

Some management recommendations, with no potential to directly affect the environment, require no further compliance effort. These include:

- Coordinate partnerships with state and federal agencies, academia, stakeholders, and the community.
- Prioritize actions that improve ranger safety and visitor safety and experience.
- Develop a Project mobile application for user feedback and Project maps.
- Demarcate property lines including fee areas and flowage easements.
- Conserve wildlife management and environmentally sensitive areas through continued coordination with resource agency partners.
- Develop survey methods to identify sensitive habitats.
- Manage threatened and endangered species through USFWS Recovery Plans.
- Train Project staff on natural and cultural resource management.

Environmental impacts and compliance for the replacement of the Shenango Trail Bridge are included in Section 4 and Section 6 of this EA. Details for other development proposals are not provided within the 2023 MP; when specific plans and details are available in the future, these proposed developments will need to be evaluated for environmental compliance with the Clean Water Act (CWA), Endangered Species Act (ESA), National Historic Preservation Act (NHPA), and other environmental laws as applicable.

The land classifications have been updated to be consistent with the current standards. This involves updating outdated nomenclature to contemporary land use nomenclature. Approximately 3,500 acres of Project land will change from “Wildlife Management, General” in the 1998 MP to “Environmentally Sensitive Areas” in the 2023 MP. These reclassifications are due to updated mapping of aquatic resources, primarily wetlands, within the Project lands aquatic resources included in the USFWS National Wetland Inventory (NWI) Maps are designated as Environmentally Sensitive Areas in the 2023 MP

The description and permitted uses of land classifications are designated in EP 1130-2-550, change 5 and Section 3.2 of the 2023 MP. Best management practices for these areas are listed in Sections 4.1.3 and 4.1.4.2 of the 2023 MP, respectively. As the description, permitted uses, and best management practices of Wildlife Management and Environmentally Sensitive Areas are similar, no significant changes to the management or use of these 3,500 acres are anticipated. If development actions are proposed within Environmentally Sensitive Areas, affected areas will be surveyed to verify the extent of the resource and determine if the proposed action can occur without negative impacts. USACE will continue to coordinate with resource agency partners to successfully manage these lands for the use and enjoyment of our visitors and the conservation of our valuable natural resources.

Table EA-3 details the proposed development proposals and lists whether the recommendations have been fully or partially evaluated for environmental impacts in this EA.

**Table EA-3. Management recommendations and development proposals made in the 2023 MP that require environmental compliance evaluation and the level of evaluation within the 2023 MP.**

| <b>Management Recommendation / Development Proposal</b>   | <b>Compliance Status</b> | <b>Notes</b>  |
|---|--------------------------|---|
| Improve roads leading to and surrounding Project  | Incomplete               | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Modernize facilities for Americans with Disabilities Act (ADA) compliance   | Incomplete               | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Identify Project Site Areas (PSAs) with low use and degraded facilities/amenities and divest or improve PSAs when appropriate | Incomplete               | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Install informational and directional signs around Project and trails   | Incomplete               | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Identify or establish a Project Information/Nature Center   | Incomplete               | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Expand and improve of existing trail systems and establish new multipurpose trail systems                                     | Incomplete               | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Establish wildlife observation platform at East Lake Road Access Area   | Incomplete               | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |

|  |  |   |
|--|--|---|
| Establish dog parks at Mahaney and Shenango Recreation Areas   | Incomplete   | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Improve Mercer Recreation Area to provide dispersed camping, 3D archery course, boat ramp, and/or picnic areas.                | Incomplete   | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Improve Shenango Recreation Area to include facility replacements, playground upgrades, and additional electric hook up sites. | Incomplete   | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Develop kayak/canoe access at Mahaney Outflow Recreation Area  | Incomplete   | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Install native vegetation plantings, remove invasive species, non-game species habitat improvements                            | Incomplete   | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Replace trail bridge on the Shenango Trail near New Hamburg  | Incomplete   | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Replace trail bridge on the Shenango Trail located in the Big Bend Recreation Area   | Complete. However, if bank protection is implemented, further compliance needed for in-water work. | Environmental compliance of this recommendation is discussed in Section 6, below.   |
| Install concrete disc golf tee boxes at the Mahaney Recreation Area  | Incomplete   | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Develop an entertainment   | Incomplete   | A separate evaluation for compliance with environmental   |

|   |            |   |
|---|------------|---|
| amphitheater at the Mahaney Recreation Area   |            | laws will need to be completed once specific plans are developed.   |
| Develop 846 Access area to include kayak launch and mountain bike trail   | Incomplete | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Designate old soccer fields at the upper Mahaney Recreation Area for model airplane and drone use   | Incomplete | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Develop the Bayview ORV Area  | Incomplete | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Implement erosion and pollution (soil, air, water) control methods, including procedures to reduce harmful algae blooms   | Incomplete | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Work with partners to establish floating islands  | Incomplete | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Update or develop important Project plans and manuals, including the Water Control Manual; Sediment Management, Plan; Cultural Resource Management Plans; Invasive Species Management Plan; and the Forest, Fish, and Wildlife Management Plan. | Incomplete | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Install enhanced security features, such as, but not limited to, video  | Incomplete | A separate evaluation for compliance with environmental laws will need to be completed                                    |

|  |            |   |
|--|------------|---|
| surveillance systems, panic buttons and emergency exits throughout the Project   |            | once specific plans are developed.  |
| Utilize Federal Highways transportation programs to assist with road repairs, and establish a road maintenance plan  | Incomplete | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |
| Expand and increase winter recreational opportunities a(e.g. hunting opportunities, viewing platform for migratory bird watching, snow shoeing, winter interpretive walks) | Incomplete | A separate evaluation for compliance with environmental laws will need to be completed once specific plans are developed. |

#### 4 Affected Environment and Environmental Consequences

NEPA and the CEQ’s NEPA Implementing Regulations require that an EA identify the likely environmental effects of a proposed project and that the agency determine whether those impacts may be significant. The determination of whether an impact significantly affects the quality of the human environment must consider the potentially affected environment and the degree of the effects of the impacts (40 CFR Part 1501.3).

The potentially affected environment is the area in which the proposed action would take place. The potentially affected environment is based on the specific location of the proposed action(s) and considers the entire affected region, the affected interests, and the locality.

The term “degree” refers to the intensity or severity of impact that would result if the proposed action were implemented. Some examples of factors considered when evaluating the degree of an impact include: the extent of both beneficial (positive) and adverse (negative) effects, the extent to which the proposed project affects public health or safety, the extent of impacts to unique characteristics of the geographic area (some examples include proximity to historic or cultural resources, wetlands, or ecologically critical areas), the extent to which the action may adversely affect an endangered or threatened species or its habitat, and whether the action is related to other actions that combined may cause long-term or short-term effects.

This section describes the existing environmental conditions within the affected environment of the Project, providing a baseline for measuring expected changes that would result from adopting the proposed 2023 MP.

This section provides a discussion of any beneficial or adverse environmental effects of the Proposed Action alternative and the No Action Alternative. The terms “impact” and “effect” are used interchangeably in this section. Effects may occur at the same time and place or may occur later or a distance away from an action but have a reasonably close causal relationship to the Proposed Action. The section also describes whether effects are temporary (short-term and occurring during the period of construction or implementation) or permanent (long-term and remaining for years into the future). The term “significant” means that an effect would result in a detectable change to the function or composition of the environment or resource. Minor effects do not substantially change the environment or resource.

## **4.1 Aesthetics**

### **4.1.1 Existing Condition**

The Project offers diverse scenic and natural resources comprised of forested, wetland, and open water habitats. Opportunities for wildlife viewing and scenic views exist within the Project and along the reservoir shoreline. The Pymatuning Creek Corridor and Shenango Reservoir within the Project are designated by the National Audubon Society as an Important Bird Area (IBA) (Audubon, 2023a,b). When the reservoir is drawn down in mid-summer, extensive areas of mudflats are exposed attracting migratory shorebirds. The birds utilize the Project’s shorelines and mudflats as stopover habitat and provide unique opportunities to the public for bird watching (Audubon, 2023c).

### **4.1.2 Environmental Consequences**

#### *4.1.2.1 No Action*

Under the No Action Alternative, the 2023 MP would not be approved for the Project. The current conditions would continue to exist. No impacts to aesthetics would occur.

#### *4.1.2.2 Proposed Action*

Implementation of the 2023 MP would be expected to have no long-term adverse effects on the aesthetic character of the Project. Future development may cause temporary and localized changes in aesthetics during construction; however, these changes would not be expected to cause significant or long-term adverse impacts to the aesthetics of the Project.

## **4.2 Air Quality**

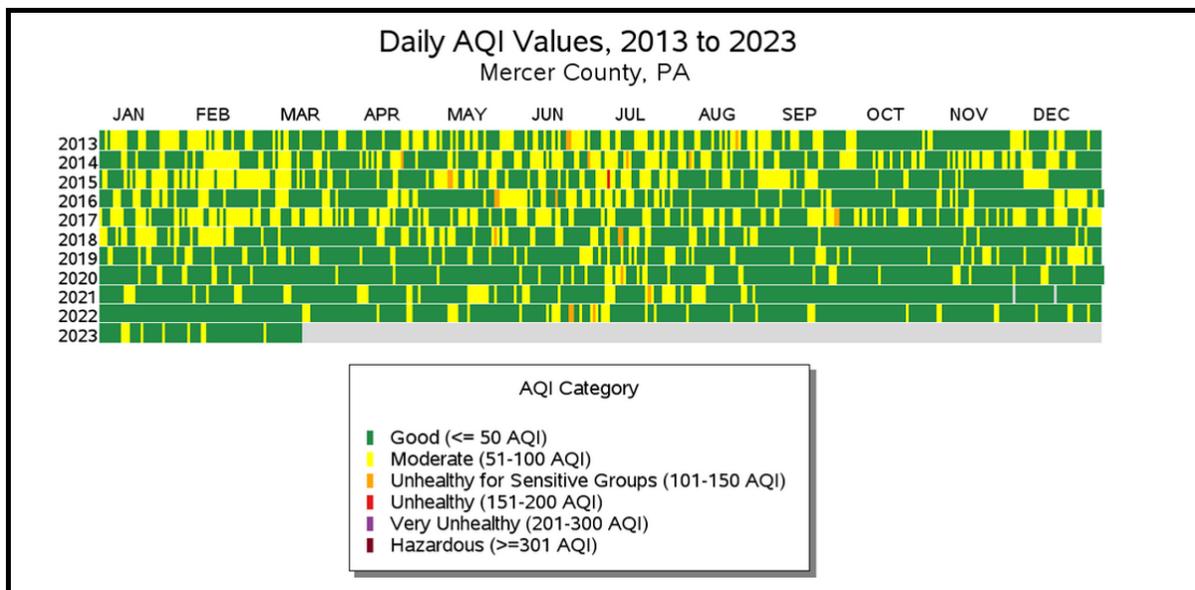
The Clean Air Act requires the United States Environmental Protection Agency (USEPA) to set National Ambient Air Quality Standards (NAAQS) for six common air pollutants, known as criteria air pollutants. These pollutants include lead, sulfur dioxide, particulate matter (PM-2.5 and PM-10), ozone, carbon monoxide, and nitrogen dioxide (USEPA, 2023a). The NAAQS are the concentrations of these principal pollutants, above which, adverse effects on human health may occur. Areas that persistently exceed the standards are designated as nonattainment areas. Federal actions must not

cause or contribute to new violations, worsen existing violations, or delay attainment of NAAQS.

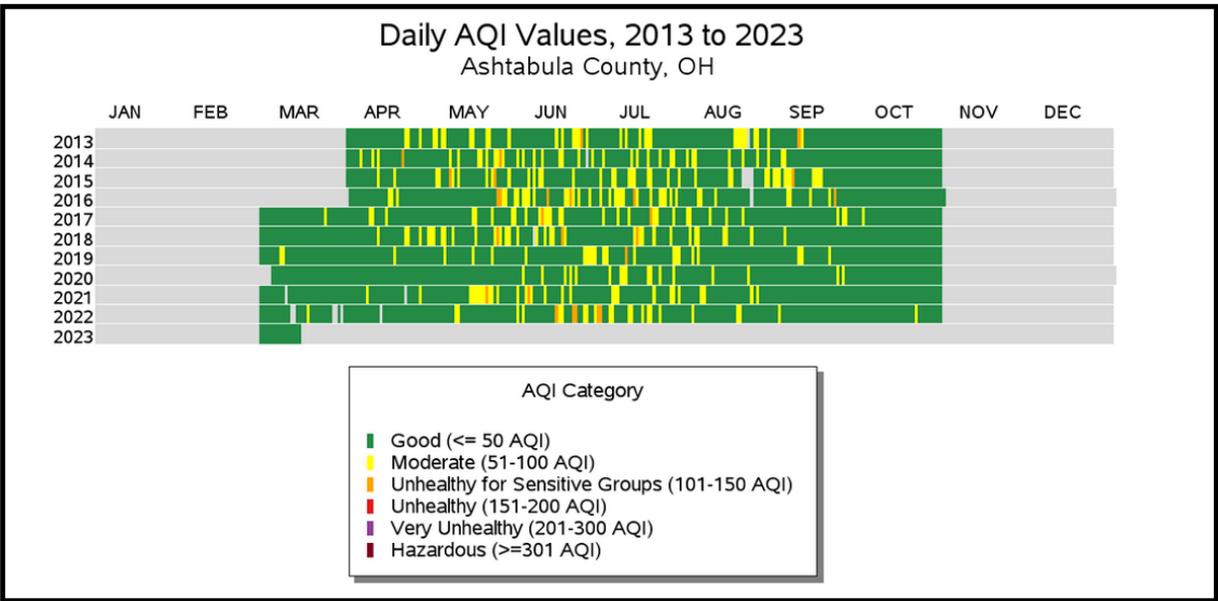
#### 4.2.1 Existing Condition

The Project is in the Northwest Pennsylvania-Youngstown Interstate Air Quality Control Region (40 CFR Part 81.74), which is in attainment for all NAAQS (USEPA, 2023b). The Project is located within a rural area and *de minimis* emissions likely occur from gasoline vapors, motor vehicle exhaust, and lawn care equipment exhaust on a regular basis, and construction equipment exhaust during construction work.

The USEPA index for reporting air quality is the U.S. Air Quality Index (AQI). Values range from 0 to 500. As AQI values increase, air pollution levels increase. An AQI value range between 0-50 is considered “good” with little to no risk of air pollution causing health problems. AQI values ranging from 51-100 are considered “moderate” where air quality is acceptable, but populations sensitive to air pollution may have an increased risk of health problems. AQI values greater than 100 are considered unhealthy (Airnow, 2023). Daily AQI values for Mercer County, PA and Ashtabula County, OH are shown in Figures 2 and 3.



**Figure 2.** Daily AQI values from January 2013 to March 2023 for Mercer County, PA (USEPA, 2023c)



**Figure 3.** Daily AQI values from March 2013 to March 2023 for Ashtabula County, OH (USEPA, 2023c)

**4.2.2 Environmental Consequences**

**4.2.2.1 No Action**

Under the No Action Alternative, the 2023 MP would not be approved for the Project. The Project would continue to be operated and managed under the 1998 MP. Temporary and minor impacts to air quality would still occur from construction activities, vehicle exhaust, boat exhaust, and the use of grills and firepits. These impacts are considered *de minimis* due to their temporary and localized nature.

**4.2.2.2 Proposed Action**

Air quality would not be predicted to change from existing conditions as the effects of implementing the 2023 MP, including the future development actions, on air quality would be minimal. Localized and temporary emissions associated with construction of new or improved amenities would occur. Emissions associated with construction equipment operation and construction would be considered *de minimis*, as they would be localized, of relatively short duration, and would occur when constructing any new or improved future development features. Temporary and minor impacts to air quality would continue to occur from typical recreation use at the Project (e.g., vehicle and boat exhaust, and the use of grills and firepits); however, these impacts are *de minimis* due to their temporary and localized nature.

## **4.3 Aquatic Resources, Wetlands, Hydrology, and Water Quality**

### **4.3.1 Existing Condition**

Shenango River Lake is located on the Shenango River, between the Pymatuning Reservoir upstream and its confluence with the Beaver River downstream. Pymatuning Creek, which flows into Shenango River Lake from the northwest near the PA-OH border, is the other large tributary that flows directly into the reservoir. Booth Run, Chestnut Run, and Brush Run flow into the reservoir from the north and Daley Run, Magargee Run, and Golden Run flow into the reservoir from the south. After its confluence with the Shenango River near New Castle, PA, the Beaver River flows into the Ohio River near Beaver, PA.

According to the National Wetland Inventory as of March 2023, the Project includes approximately 6,776 acres of aquatic resources. There are 151.8 acres of riverine habitat, 3,338 acres of lake habitat, 2,712 acres of freshwater forested/shrub wetlands, 511.6 acres of freshwater emergent wetlands, and 62.5 acres of freshwater ponds. See Appendix B, Plate 5 of the MP for the wetlands map.

Water quality standards are the provisions that describe the desired condition of a water body and how that condition will be achieved (USEPA, 2023d). Water quality standards for waters in Ohio and Pennsylvania are developed by the Ohio Environmental Protection Agency (OEPA) and Pennsylvania Department of Environmental Protection (PADEP), respectively. The USEPA approves water quality standards developed by states. Water quality standards form the legal basis for controlling pollutants entering Waters of the United States (WOTUS). Water quality standards consist of three core elements which are designated uses (recreation, water supply, aquatic life), criteria (numeric concentrations of chemical constituents and/or a narrative describing a condition), and antidegradation requirements (maintenance and protection of existing uses and high-quality waters) (USEPA, 2023d). States assess waters based on water quality standards to determine if waters are meeting designated uses, meeting water quality standard criteria and antidegradation requirements. Streams that do not meet these standards are considered impaired (USEPA, 2023d).

Pymatuning Creek in Ohio, which flows into Shenango River Lake from the west, has four locations that are non-attaining, two locations that are partially attaining, and two locations that are fully attaining for aquatic life use (OEPA, 2008). The water quality impairments in the watercourse are primarily due to low dissolved oxygen (DO), atypical wetland habitat, and flow alteration caused by the impoundment of water in the Shenango River Reservoir (OEPA, 2008). Because these impairments are either natural or the result of flow alteration due to dam impoundment (which is not considered a pollutant), no total maximum daily load (TMDL) plan was developed (OEPA, 2022).

Federal and state agencies are working with water-quality partners and landowners to focus watershed conservation efforts on priority or target areas in the watershed to meet water quality standards in the Project watershed.

USACE water quality program has collected water quality measurements at Shenango River Lake since 1969. Data collected include chemical, physical, and biological constituents at numerous sampling locations on tributaries, bays, the reservoir, and outflow. Routine water quality monitoring includes:

- monthly sample collection by Project staff from the outflow.
- yearly limnology surveys of the reservoir by water quality staff.
- monthly intensive limnology surveys once every ten years from the months of March through October to understand seasonal/spatial changes and reservoir dynamics.
- groundwater sampling once every five years at The Shenango Disposal Area.

Water quality typically improves as water moves through the Project. Settling, dilution, and biological processes remove or store sediments, metals, contaminants, and nutrients. Many of the primary water quality concerns within the reservoir are associated with adjacent land use, e.g., agriculture, former industrial areas, and development.

The Project can be classified as a shallow, eutrophic, mid-latitude, dimictic reservoir. The Project has seven gates all at invert elevations of 869.7' (North American Vertical Datum of 1988, NAVD 88), approximately five feet from the original stream bed, which does not provide substantial water quality control. Stratification, which is the development of different zones of water quality at varying depths based on water temperature/density, can lead to hypoxic areas in the deeper areas of the reservoir, especially by the dam in the summer. These hypoxic areas can result in reduced fish habitat and increased dissolved metal concentrations such as manganese and iron that are transported from reservoir tributaries. Waters released from the bottom of the reservoir is reaerated as it passes through the dam gates, resulting in waters with sufficient DO to satisfy the congressionally authorized operating purposes of water quality and low flow augmentation in the Shenango and Beaver rivers.

The outflow of the reservoir is listed as impaired on the Pennsylvania 303(d) list for metals and polychlorinated biphenyls (PCBs). A TMDL plan was developed to reduce PCB and chlordane concentrations to achieve water quality standards in the impaired reach of the Shenango River below the Project (PADEP, 2001). The primary PCB sources identified in the plan are all downstream of the Project, though the entire Shenango River watershed is impacted by atmospheric deposition of PCBs (PADEP, 2001).

When property was purchased for flood easement lands in 1968, it included a hazardous waste disposal site which had a variety of names including "The Shenango Disposal Area", "The Vernon Township Ohio Waste Disposal Site" and the "Horodyski Dump". The site accepted a variety of wastes including industrial, commercial, and municipal wastes like paint, oil, solvents, automotive parts, copper wire, and food processing wastes. In 1980, USEPA (Region 5) identified the site as contaminated and coordinated the removal of surface hazardous wastes. In 1981, USACE, remediated the

site by capping it with clay and drilling four groundwater sampling wells. USACE has subsequently sampled ground water every five years to ensure there is no migration of contaminants from the former disposal site into either groundwater or surface water. To date, no migration of contaminants to groundwater or surface water have been observed.

## **4.3.2 Environmental Consequences**

### *4.3.2.1 No Action*

Under the No Action Alternative, the 2023 MP would not be approved for the Project. The Project would continue to be managed under the existing 1998 MP. There are no known extensive development plans in the area that would be expected to cause water quality degradation in the reservoir. Continued water quality monitoring would occur with the No Action Alternative to track any changes caused by local development, allowing corrective measures to be considered if needed. Impacts that would occur from proposed future development would continue to be evaluated for compliance with the Clean Water Act.

### *4.3.2.2 Proposed Action*

Under the Proposed Action, future development under the 2023 MP would occur without significant adverse effects to the hydrology and water quality of the reservoir or its tributaries.

Future development in areas surrounding the reservoir would require the use of appropriate best management practices to avoid adverse impacts to water quality. Construction activities would result in ground-surface disturbances that could increase runoff, but best management practices during construction would be expected to minimize the potential for adverse water quality impacts. After construction is completed, disturbed areas would be revegetated to minimize erosion and sedimentation, and to protect surface soils. Those developments would be evaluated for water quality impacts and CWA permits would be obtained, as needed, once project specific plans and details are available.

The existing water quality in the reservoir is primarily affected by land use and discharges to the watershed upstream of the Project and not a result of management actions on Project lands. Given the large contributing area and limited nature of development actions proposed in the 2023 MP, no significant impacts to aquatic resources, wetlands, hydrology, or water quality are expected to occur under this alternative. The 2023 MP proposes the improvement of riparian habitat and vegetation and establishment procedures to reduce Harmful Algal Blooms (HABs), such as the creation of floating islands. These actions would likely result in minor, though likely insignificant water quality benefits.

## 4.4 Invasive Species

### 4.4.1 Existing Condition

The most common invasive terrestrial plant species observed by staff at the Project are: Japanese honeysuckle (*Lonicera japonica*), Japanese knotweed (*Polygonum cuspidatum*), autumn-olive (*Elaeagnus umbellata*), buckthorns (*Rhamnus frangula*, *R. cathartica*), purple loosestrife (*Lythrum salicaria*), common reed or phragmites (*Phragmites australis*), reed canary grass (*Phalaris arundinacea*), garlic mustard (*Alliaria petiolata*), multiflora rose (*Rosa multiflora*), giant hogweed (*Heracleum mantegazzianum*), and bush honeysuckles (*Lonicera maackii*, *L. tatarica*, *L. morrowii*). The most common invasive insects are: Asian long-horned beetle (*Anoplophora glabripennis*), emerald ash borer (*Agrilus planipennis*), spongy moth (*Lymantria dispar*), and the hemlock woolly adelgid (*Adelges tsugae*). The most common aquatic invasive species are the hydrilla (*Hydrilla verticillata*) and the zebra mussel (*Dreissena polymorpha*) (OIPC, 2018).

Climate change will likely benefit non-native plant and animal species, potentially enhancing their ability to outcompete native species. Left unchecked, invasive species have the potential to undermine ecosystem structure and function, resulting in a degraded resource that fails to meet many of the key objectives of the Project.

### 4.4.2 Environmental Consequences

#### 4.4.2.1 No Action

Currently there is no management plan for invasive species, though best management practices are taken when performing tasks on the Project to prevent the spread or introduction of invasive species. Under the No Action Alternative, USACE would continue to implement best management practices with regards to invasive species management, but not under a wholistic plan. Adverse impacts from invasive species would be expected to continue.

#### 4.4.2.2 Proposed Action

The 2023 MP proposes several development activities to proactively address eliminating and managing invasive species. These include:

- Develop an invasive species management plan within five years.
- Work with the Pennsylvania Department of Conservation and Natural Resources (DCNR) to conduct invasive species inspections on vessels within five years.
- Establish on-site and roving education programs for USACE staff on invasive species within five years.
- Update the Forest, Fish, and Wildlife Management Plan (which will include items such as best management practices for timber, protection of shoreline buffers, protection of USACE-owned and managed riparian habitat) within ten years.
- Improve riparian habitat/vegetation for water quality purposes within ten years.

It is expected that there will be a minor beneficial impact from the control and reduction of invasive species at the Project and further beneficial impacts when the management plan has been developed and implemented.

## **4.5 Fish and Wildlife Habitat**

### **4.5.1 Existing Condition**

The Project's forested habitat, scrub-shrub uplands, wetlands, watercourses, and reservoir support a variety of wildlife species common to Pennsylvania and Ohio. A few of the more common avian species likely to occur at the Project include osprey (*Pandion haliaetus*), turkey (*Meleagris gallopavo*), red-winged blackbirds (*Agelaius phoeniceus*), robins (*Turdus migratorius*), song sparrows (*Melospiza melodia*), common mergansers (*Mergus merganser*), and mallards (*Anas platyrhynchos*) (ODNR, 2015).

The Pymatuning Creek Corridor and the Shenango Reservoir are designated as IBAs. The IBA program is a partnership between BirdLife International and the National Audubon Society and recognizes those areas which provide breeding, wintering, or migration habitat (Audubon, 2023a). IBA sites are categorized by their priority (state, global, or continental), and the Pymatuning Creek Corridor and Shenango Reservoir IBAs are both recognized as a state priority (Audubon, 2023b and c). Large numbers of migrant waterfowl pass through the Pymatuning Creek Corridor IBA in spring and fall (Audubon, 2023b). Beaver impoundments provide much of the wetland acreage for waterfowl. A variety of species visit the shoreline and mudflats of the Shenango Reservoir IBA when lake levels drop beginning in mid-summer through the fall, making it one of the most productive migratory stopovers for shorebirds in western Pennsylvania (Audubon, 2023c).

Mammal species of the region commonly observed by project staff include white-tailed deer (*Odocoileus virginianus*), red fox (*Vulpes vulpes*), opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), and gray squirrel (*Sciurus carolinensis*). In addition, the Project supports a variety of amphibians and reptiles, including multiple frog, turtle, salamander, and snake species (ODNR, 2015).

The Project also provides habitat for a diverse assemblage of fish species. Project staff have observed species including smallmouth/largemouth bass (*Micropterus sp.*), walleye (*Sander vitreus*), yellow perch (*Perca flavescens*), black crappie (*Pomoxis nigromaculatus*), catfish (e.g., *Ictalurus punctatus*, *Ameiurus catus*, etc.), common carp (*Cyprinus carpio*), white sucker (*Catostomus commersonii*), golden redhorse (*Moxostoma erythrurum*), green sunfish (*Lepomis cyanellus*), pumpkinseed (*Lepomis gibbosus*), bluegill (*Lepomis macrochirus*), bluntnose minnow (*Pimephales notatus*), and white crappie (*Pomoxis annularis*) (ODNR, 2015).

## **4.5.2 Environmental Consequences**

### *4.5.2.1 No Action*

Continued use of the existing 1998 MP would not be expected to affect fish and wildlife habitat.

### *4.5.2.2 Proposed Action*

Proposed development actions on the Project must comply with the NEPA and all other laws pertaining to the conservation of natural resources, including fish and wildlife habitat. Prior to implementation of any development activity that could adversely impact wetlands, terrestrial habitats, or aquatic habitats, field surveys and all appropriate coordination with state and/or federal agencies will be conducted by USACE. As such, future development would occur with minimal effects to the habitats of the Project. No major impacts to fish and wildlife habitat are expected with the 2023 MP.

Under the 2023 MP, the Forest, Fish, and Wildlife Management Plan will be updated to include items such as: best management practices for timber; controlled burns; protection of shoreline buffers for wildlife and water quality; protection of USACE-owned and managed riparian habitat; protection of contiguous habitat corridors. This will likely result in minor beneficial impacts to fish and wildlife habitat at the Project. Minor beneficial impacts to fish and wildlife habitat are also expected with native plantings and invasive species removal.

The 2023 MP also proposed the establishment of relationships with wildlife groups such as Whitetail Unlimited, Audubon Society, and Ducks Unlimited to establish educational, safety, and wildlife improvement projects and practices. Such partnerships would further protect and enhance natural resources.

The 2023 MP suggests that USACE develop survey methods to identify sensitive habitats, possibly using Multiple Species Inventory Monitoring (MSIM), and use the results to designate additional Environmentally Sensitive Areas. These lands should be protected from human disturbance and development activities to the extent possible in compliance with all applicable laws and regulations. Some areas may be highly sensitive to change, while other areas may need prescribed management to remain viable. The goal of managing these areas is to protect and preserve known areas that contribute to the diversity and health of the Project. These management actions would result in minor benefits to fish and wildlife habitat within the Project.

## **4.6 Federally Protected Species, including Threatened and Endangered Species**

Under the Endangered Species Act (ESA) of 1973 (16 U.S.C. § 1531-1544), endangered species are defined as any species in danger of extinction throughout all or portions of its range. A threatened species is any species likely to become endangered in the foreseeable future. The ESA defines critical habitat of the above species as a geographic area that contains the physical or biological features that are essential to the conservation of a particular species and that may need special management or

protection. This section also covers birds listed under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C § 703-712) as birds of conservation concern and birds listed under the Bald and Golden Eagle Protection Act (16 U.S.C. § 668-668d).

#### 4.6.1 Existing Condition

The USFWS Information for Planning and Consultation Database (IPaC) provides site specific information regarding the presence of threatened or endangered species may in a particular location. The species information is made available through IPaC (USFWS, 2023a). A review of this information, as of June 6, 2023, included ten species (Enclosure 1):

- Indiana bat (*Myotis sodalis*) - endangered
- Northern long-eared bat (*Myotis septentrionalis*) - endangered
- Tricolored bat (*Perimyotis subflavus*) – proposed endangered
- Eastern massasauga rattlesnake (*Sistrurus catenatus*) - threatened
- Clubshell (*Pleurobema clava*) - endangered
- Longsolid (*Fusconaia subrotunda*) - threatened
- Rabbitsfoot (*Quadrula cylindrica cylindrica*) - threatened
- Round hickorynut (*Obovaria subrotunda*) - threatened
- Snuffbox (*Epioblasma triquetra*) – engaged
- Monarch butterfly (*Danaus plexippus*) – candidate

Potentially occupied habitat exists for the endangered Indiana bat at the Project. The Indiana bat roosts under the peeling bark of dead and dying trees during the summer months and hibernates during the winter months in caves or abandoned mines (USFWS, 2023b). No critical habitat for this species exists within the Project area (USFWS, 2023c).

Potentially occupied habitat exists for the endangered northern long-eared bat at the Project. During the summer months, the northern long-eared bat resides underneath bark, in cavities or crevices of both live trees and snags (dead trees) and hibernates during winter months in caves and mines (USFWS, 2023d). Critical habitat has not been designated for this species (USFWS, 2023d).

Potentially occupied habitat exists at the Project for the tricolored bat, which is proposed for an endangered listing. During the spring, summer and fall, tricolored bats primarily roost among live and dead leaf clusters of live or recently dead deciduous hardwood trees (USFWS, 2023e). Additionally, tricolored bats have been observed roosting during summer among pine needles, eastern red cedar (*Juniperus virginiana*), within artificial roosts like barns, beneath porch roofs, bridges, concrete bunkers, and rarely within caves (USFWS, 2023e). Critical habitat has not been designated for this species (USFWS, 2023f).

The eastern massasauga rattlesnake is threatened and inhabits wet areas including wetlands, wet prairies, and low areas along rivers and lakes (USFWS, 2016). Woody

plant incursion reduces the amount of available habitat in some areas, therefore vegetation controls such as prescribed fire and mowing can be used to preserve massasauga habitat (USFWS, 2016). Critical habitat has not been designated for this species (USFWS, 2023g).

The clubshell is an endangered mussel species with potential habitat within the Project. The clubshell prefers clean, loose sand and gravel in small to medium rivers and streams (USFWS, 1997). The clubshell needs stable, undisturbed habitat and sufficient population of fish hosts to complete the mussel's larval development (USFWS, 1997). Critical habitat has not been designated for this species (USFWS, 2023h).

The longsolid is a threatened mussel species with potentially occupied habitat within the Project. The longsolid prefers sand and gravel in streams and small rivers for habitat but may be found in coarse gravel and cobble in larger rivers (USFWS, 2023i). Approximately 22.0 river miles (RM) of the Shenango River from the Pymatuning Dam to the point of inundation by Shenango River Lake is designated as critical habitat for the longsolid (USFWS, 2023j). This includes approximately 7.0 RM within the Project.

The rabbitsfoot is a threatened mussel species with potentially occupied habitat within the Project. Suitable habitat for the rabbitsfoot occurs in small to medium-sized streams and some larger rivers, in substrates typically composed of sand and gravel (USFWS, 2023k). Adults do not typically burrow into sediment but rather lie horizontally on the surface, therefore slow velocity reaches and flow refuges are particularly important to the rabbitsfoot (USFWS, 2023k). The Shenango River from Greenville, PA (RM 55.2) to the point of inundation by the Shenango River Lake (RM 39.9) is designated as critical habitat for the rabbitsfoot (USFWS, 2023l). This includes approximately 7.0 RM of the Shenango River within the Project.

The round hickorynut is a threatened mussel species with potentially occupied habitat within the Project. The round hickorynut exhibits a preference for sand and gravel in riffle, run, and pool habitats in streams and rivers (USFWS, 2023m). They also may be found in sandy mud and shallow habitats with gentle flows (USFWS, 2023m). Approximately 22.0 RM of the Shenango River from the Pymatuning Dam to the point of inundation by Shenango River Lake is designated as critical habitat for the round hickorynut (USFWS, 2023n). This includes approximately 7.0 RM within the Project.

The snuffbox is an endangered mussel species with potentially occupied habitat within the Project. The snuffbox is usually found in small to medium streams, inhabiting areas with a swift current, although it is also found in some larger rivers (USFWS, 2012). Habitat destruction and modification, sedimentation, and pollution have severely reduced snuffbox populations, but the Shenango River between the Shenango River Lake and Pymatuning Reservoir is host to an isolated population (USFWS, 2023o). Critical habitat has not been designated for this species (USFWS, 2023p).

The monarch butterfly is a candidate butterfly species with potentially occupied habitat within the Project. Monarchs feed on nectar of many flowers during breeding and migration, but they can only lay eggs on milkweed (*Asclepias spp.*) plants (USFWS, 2023q). Critical habitat has not been designated for this species (USFWS, 2023q).

Bald eagles are known to nest within the Project and are regularly sighted in the vicinity of the reservoir (Enclosure 2). Bald eagles were delisted from the ESA in 2007 but are still protected under the MBTA and the Bald and Golden Eagle Protection Act.

## **4.6.2 Environmental Consequences**

### *4.6.2.1 No Action*

Under the No Action Alternative, the Project would still be managed under the 1998 MP. No affect to federally listed threatened and endangered species or bald eagles would be anticipated.

### *4.6.2.2 Proposed Action*

The Proposed Action of adopting the 2023 MP would not affect the federally listed threatened, endangered, or candidate species. The Proposed Action would not affect bald eagles.

Best management practices, including seasonal restrictions on tree and vegetation removal, would ensure that no impact would occur. These restrictions would be species specific, based on recovery plans. Once site specific details are available for future proposed development, those plans will be reviewed to determine compliance with the ESA. Consultation with the USFWS under Section 7 of the ESA will be initiated if it is determined that those activities may affect ESA-listed species. Prior to any clearing of vegetation or construction activities, coordination with the USFWS will be performed and surveys for listed species may be conducted as necessary to ensure compliance. By avoiding sensitive areas and sensitive seasons (April-October for trees equal to or greater than 3-inches diameter at breast height that may be used as bat habitats) and using adaptive management as needed to correct any unforeseen impacts, no significant impact to threatened or endangered species is expected. To ensure that no impacts to bald eagles will occur, the USFWS *Bald Eagle Management Guidelines* will be followed (USFWS, 2021g.)

The effect of the Shenango Trail bridge replacement on federally listed species and critical habitat is discussed in Section 6 of this EA. Adverse effects to federally listed species and habitat are unlikely as no trees are proposed for removal and no discharge of fill or pollutants into WOTUS. All other proposed development projects will need to be evaluated for effects to threatened and endangered species once plan details are available.

## **4.7 Historic Properties and Other Cultural Resources**

### **4.7.1 Existing Condition**

The Project is one of rich cultural history. Project lands had been inhabited for thousands of years prior to the European settlement. This is evidenced in the archaeological record encountered during previous investigations. Four different cultural resource surveys have been completed within the Project (approximately 0.39% of lands at the Project). The intent of some these surveys was to identify cultural resources for the future management, while others were associated with specific projects and undertakings. Additional research is still necessary to fully understand and manage cultural resources within the Project.

Archaeological research indicates that the area has been inhabited from the Paleo-Indian Period (c.a. 14,000 B.C. – 8,500 B.C) to the 20th century. A total of 83 cultural resource sites have been identified within Project lands. Seventy-two of the known archaeological sites have been identified as prehistoric, including one Paleoindian site. Two sites have been identified as multicomponent sites, which contain both prehistoric and historic artifacts and nine archaeological sites are considered historic. The Shenango River Lake Dam and the damtenders' dwelling are historic structures over 50 years of age and therefore considered cultural resources. The four historical districts consist of: Big Bend Historical Area, New Hamburg Historical Area, Kidd's Mill Historical Area and a section of the New York, Lake Erie and Western Railroad. All three of these historical areas have been listed in the National Register of Historic Places. The National Register of Historic Places is the official list of the Nation's historic places worthy of preservation. Authorized by NHPA in 1966, the National Park Service's National Register of Historic Places is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archeological resources.

### **4.7.2 Environmental Consequences**

#### *4.7.2.1 No Action*

Under the No Action Alternative, the 2023 MP would not be approved for the Project. Section 106 of the NHPA of 1966, as amended, and its implementing regulations (36 CFR Part 800) require Federal agencies to consider the effect of an undertaking on historic and archeological resources if that project is under the direct or indirect jurisdiction of the agency or has been licensed or assisted by that agency. Compliance with the NHPA is required for any future development. The No Action Alternative will not impact cultural resources.

#### *4.7.2.2 Proposed Action*

Implementing the 2023 MP with future development actions would be expected to have no effect on the cultural resources of the Project as all proposed development actions would still be required to comply with the NHPA. Prior to implementation of any ground disturbing activity, including any of the future development proposed, field surveys and Section 106 NHPA coordination with the Ohio and Pennsylvania State Historic

Preservation Offices (SHPO) will be conducted by USACE. Federal and state laws require federal agencies to minimize or mitigate adverse impacts to historic properties (36 CFR Part 800.13). Should unanticipated historic or prehistoric resources be discovered during ground disturbing activities, work must cease immediately, and USACE will contact the appropriate state SHPO. NHPA compliance for the Shenango Trail bridge replacement is discussed in Section 6 of this EA. Consultation with the appropriate state SHPO will be initiated for the other proposed development activities in the 2023 MP when plan details are available.

The 2023 MP proposes the inventory and survey of cultural resources at the project, development of a geospatial database of cultural resources, and development of a cultural resources management plan. These actions would have minor beneficial impacts to cultural resources by improving effective management of these resources at the Project.

## **4.8 Floodplains**

### **4.8.1 Existing Condition**

Floodplains are present adjacent to areas along the Shenango River Lake and its tributaries.

### **4.8.2 Environmental Consequences**

#### *4.8.2.1 No Action*

Continuing to manage the Project under the 1998 MP would not be expected to impact floodplains.

#### *4.8.2.2 Proposed Action*

There would be no environmental consequences of adopting the 2023 MP expected to affect floodplains at the Project.

## **4.9 Hazardous, Toxic, and Radioactive Waste**

### **4.9.1 Existing Condition**

Hazardous materials are regulated by the Resource Conservation and Recovery Act (RCRA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); Oil Pollution Act; Toxic Substances Control Act; and related guidelines established by USACE, Pennsylvania, and Ohio. There are no active hazardous waste disposal facilities in proximity to the Project. A former hazardous waste disposal site, known as “The Shenango Disposal Area” or the “Horodyski Dump”, is located within the Project near Pymatuning Creek in Vernon Township, OH. The site accepted a variety of wastes including industrial, commercial, and municipal wastes like paint, oil, solvents, automotive parts, copper wire, and food processing wastes. In 1980 the USEPA (Region 5) identified the site as contaminated and coordinated the removal of surface hazardous wastes. In 1981, USACE, remediated the site by capping it with clay and

drilling four groundwater sampling wells. Since then, USACE has sampled ground water every five years to ensure there is no migration of contaminants from the fill into either groundwater or surface water. To date, no migration of contaminants to groundwater or surface water have been observed.

While petroleum is not regulated under CERCLA, there are areas within the Project where petroleum products are present and pose the potential for leaks and/or discharges. At the Project, the Northstar Marina provides watercraft refueling. Petroleum products are stored in underground and aboveground storage tanks. There are no active or abandoned coal mines located within the Project. There are ten inactive oil and gas wells, 14 abandoned wells, and six active oil and gas wells on USACE fee owned property.

#### **4.9.2 Environmental Consequences**

##### *4.9.2.1 No Action*

Under the No Action Alternative, the 2023 MP would not be approved for the Project. Future development would likely still occur, but without the benefit of a comprehensive planning document. Regardless, there would be no environmental consequences related to hazardous, toxic, and radioactive waste (HTRW). The Shenango Disposal Area would continue to be monitored to detect migration of contaminants into groundwater or surface water.

If any developments on USACE property are proposed, Federal law requires site-specific environmental due diligence on a case-by-case basis before development can occur. Any change in the storage or use of hazardous materials must comply with federal regulations.

##### *4.9.2.2 Proposed Action*

Implementing the 2023 MP would be expected to have no effect on HTRW materials. Any future development proposed requires site-specific environmental due diligence. Any change in the storage or use of HTRW materials must comply with federal regulations, and as such the implementation of the 2023 MP would not cause any environmental consequences. Monitoring of the Shenango Disposal Area would continue.

#### **4.10 Land Use**

##### **4.10.1 Existing Condition**

The Project includes a wide variety of land uses including lands designated for Project operations, recreation areas, open water, and wildlife management areas, including environmentally sensitive areas. Land use classifications are delineated under the existing 1998 MP.

## **4.10.2 Environmental Consequences**

### *4.10.2.1 No Action*

Under the No Action Alternative, the 2023 MP would not be approved for the Project. USACE land use classification nomenclature was updated in 2013; therefore, continued use of the 1998 MP mean land use classifications at the Project would not be consistent with current USACE standards. However, no adverse impacts to land use would be expected under this alternative.

### *4.10.2.2 Proposed Action*

Implementation of the 2023 MP would update land use classifications. This primarily involves solely updating nomenclature, with uses of those lands will remaining similar to their current uses. Approximately 3,500 acres of Project land will change from “Wildlife Management, General” in the 1998 MP to “Environmentally Sensitive Areas” in the 2023 MP. These reclassifications are due to updated mapping of aquatic resources, primarily wetlands, within the Project area; aquatic resources included in the USFWS NWI Maps are designated as Environmentally Sensitive Areas in the 2023 MP

The description and permitted uses of land classifications are designated in EP 1130-2-550, change 5 and Section 3.2 of the 2023 MP. Best management practices for these areas are listed As the description, permitted uses, and best management practices of Wildlife Management and Environmentally Sensitive Areas are similar, no significant changes to the management or use of these 3,500 acres are anticipated. If development actions are proposed within Environmentally Sensitive Areas, effected areas will be surveyed to verify the extent of the resource and determine if the Proposed Action can occur without negative impacts. USACE will continue to coordinate with resource agency partners to successfully manage these lands for the use and enjoyment of our visitors and the conservation of our valuable natural resources.

Minor impacts or changes in land use will occur with land use classification updates. But no significant changes to recreational capacity, facilities, or lands on account of this reclassification are anticipated.

## **4.11 Navigation**

There are no navigable waters, as defined in 33 CFR Part 329, within the Project. The Shenango River is only considered navigable from the confluence with the Beaver River at RM 0.0, upstream to RM 1.8, well downstream of the Project. Therefore, no impacts to navigable waters will occur with either the No Action Alternative or the Proposed Action alternative.

## **4.12 Noise Levels**

### **4.12.1 Existing Condition**

Noise levels are measured in units of sound pressure levels called decibels (A-weighting, dBA) which describe how the human ear perceives relative loudness (USDL,

2023). Typical noise sources at the Project such as those described in Table EA-4, would include commercial and residential vehicle traffic, lawn care, motorboats and jet skis, and temporary construction projects (USDL, 2023 and CDC, 2023). Noise levels above 85 dBA can damage hearing depending upon the duration of exposure (CDC, 2023).

**Table EA-4. Typical noise sources and levels (USDL, 2023 and CDC, 2023).**

| <b>Noise Source/Activity</b>                      | <b>Typical Noise Level (dBA)</b> |
|---|----------------------------------|
| Silent Room                                       | 20                               |
| Residence   | 50                               |
| Normal Conversation                               | 60                               |
| City Traffic                                      | 85                               |
| Lawn Mower  | 85                               |
| Motorboat and Jet Ski                             | 90                               |
| Motorcycle  | 95                               |
| Car Horn (at 16 feet)                             | 100                              |
| Construction Activity (Operating Heavy Equipment) | 120                              |

#### **4.12.2 Environmental Consequences**

##### *4.12.2.1 No Action*

Under the No Action Alternative, the 2023 MP would not be approved for the Project. No changes to typical noise levels at the Project would occur and no adverse impacts are expected. Temporary increases in noise would be expected during construction activities, but best management practices would be implemented to minimize noise from construction equipment and activities. Noise levels would be expected to return to typical levels once construction activities are complete.

##### *4.12.2.2 Proposed Action*

Implementing the 2023 MP would not result in long-term effects related to the level of background or ambient noise at the Project. Temporary increases in noise would be expected during future construction, but best management practices would be implemented to minimize noise from construction equipment and activities. Noise levels would be expected to return to typical levels once construction activities are complete.

#### **4.13 Public Infrastructure**

##### **4.13.1 Existing Condition**

Roadways within the Project allow access to camping, recreation areas, picnic areas, and fishing and boating access.

## **4.13.2 Environmental Consequences**

### *4.13.2.1 No Action*

Under the No Action Alternative, the Project would continue to be managed by the 1998 MP. Regular roadway maintenance would be expected to occur. No adverse impacts to public infrastructure are expected.

### *4.13.2.2 Proposed Action*

The 2023 MP proposed facility modernization including improvements to roads leading to and surrounding the Project, expansion and improvement to the existing trail network, and replacement of the pedestrian bridge on the Shenango Trail. Implementing the 2023 MP would provide minor beneficial impacts to public infrastructure (roadways) within the Project.

## **4.14 Environmental Justice and Socioeconomics**

Multiple Executive Orders (EO) direct federal agencies to integrate environmental justice into its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. EOs pertaining to environmental justice include:

- EO 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (11 February 1994)
- EO 13985 – Advancing Racial Equity and Support for Underserved Communities Through the Federal Government (20 January 2021)
- EO 13990 of Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis (20 January 2021)
- EO 14008 – Tackling the Climate Crisis at Home and Abroad (27 January 2021)
- EO 14052 – Implementation of the Infrastructure Investment and Jobs Act of (15 November 2021)
- EO 14057 – Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability (8 December 2021)
- EO 14082 – Implementation of the Energy and Infrastructure Provisions of the Inflation Reduction Act of 2022 (12 September 2022)
- EO 14091 – Further Advancing Racial Equity and Support for Underserved Communities Through the Federal Government (16 February 2023)
- EO 14096 – Revitalizing Our Nation’s Commitment to Environmental Justice for All (21 April 2023)

The CEQ has oversight of the federal government’s compliance with EO 12898 and other environmental justice EOs and NEPA. CEQ, in consultation with the USEPA and other affected agencies, developed NEPA guidance for addressing environmental justice requirements laid . This guidance was developed to further assist federal

agencies with their NEPA procedures so that environmental justice (EJ) concerns are effectively identified and addressed.

The CEQ has also identified six general principles for consideration in identifying and addressing EJ in the NEPA process which include: (1) area composition (demographics); (2) data (concerning cumulative exposure to human health or environmental hazards); (3) interrelated factors (recognize the interrelated cultural, social, occupational, or economic factors); (4) public participation; (5) community representation; and (6) tribal representation.

EO 14008 directed the CEQ to create the Climate and Economic Justice Screening Tool (CEJST), a geospatial database that identifies disadvantage communities that have been marginalized by society, overburdened by pollution, and underserved by infrastructure and other basic services (CEQ, 2023a). The CEQ directed federal agencies to use the CEJST when planning, analyzing, and implementing federal actions.

#### **4.14.1 Existing Condition**

The Project is in Mercer County, PA and Trumbull County, OH. Data from the U.S. Census Bureau (USCB) indicates that approximately 12.9% of the population in Mercer County and 15.5% of the population in Trumbull County are considered low-income (USCB, 2023). Approximately 10.4% of the population in Mercer County and 13.6% of the population in Trumbull County are considered minority populations (USCB, 2023).

The CEJST indicates that a census tract in Trumbull County, OH is disadvantaged due to disproportionate burdens (heart disease and transportation barriers) and the associated socioeconomic threshold (low-income) (CEQ, 2023b). Approximately 4.77 square miles of the Project are within Trumbull County. Additionally, several disadvantaged tracts are located within 20 miles of the Project, including the communities of Sharpsville, PA; Greenville, PA; New Castle, PA; Youngstown, OH; and Warren, OH (CEQb, 2023).

#### **4.14.2 Environmental Consequences**

##### *4.14.2.1 No Action*

Under the No Action Alternative, the 2023 MP would not be adopted, and the Project would continue to operate under the existing 1998 MP. The Project would continue to offer no- or low-cost recreation opportunities to nearby disadvantaged communities under the 1998 MP. No disproportional adverse effects to either minority or low-income communities are anticipated under this alternative.

##### *4.14.2.2 Proposed Action*

Implementing the 2023 MP would not cause disproportionate adverse effects to minority or low-income communities. The Project would continue to offer no- or low-cost recreation opportunities to nearby disadvantaged communities; development proposals

in the 2023 MP, if implemented, would provide minor beneficial impacts to users of the Project, including those from disadvantaged communities.

## **4.15 Climate Change**

### **4.15.1 Existing Condition**

Climate change is expected to continue to warm the region throughout the 21st century, with temperature increases projected to occur relatively evenly throughout the year (Drum et al., 2017). Climate change is also expected to affect the amount and distribution of precipitation - average annual precipitation is expected to increase 8-12 percent by 2050, generally occurring in less frequent but heavier rain events, resulting in more frequent flooding and drought conditions (PADEP, 2023).

Intolerant flora and fauna are at greatest risk of local extirpation from altered environmental conditions expected under climate change (USEPA, 2023e). Species currently existing on the edge of their range may also be positively or negatively impacted by climate change if future climate conditions expand or reduce their range near the Project (USEPA, 2023e).

There is potential for water management and water quality impacts, such as not being able to make summer pool in time for the recreation season due to drought conditions (USEPA, 2023f). Climate change may also cause increased storm runoff, which could potentially result in greater inputs of pollution, which in turn can affect water quality of the reservoir and downstream of the reservoir. Increased runoff may increase rates of sedimentation within the reservoir and reduce the lifetime of the reservoir (USEPA, 2023g).

### **4.15.2 Environmental Consequences**

#### **4.15.2.1 *No Action***

Under the No Action Alternative, the Project would continue to be operated under the 1998 MP. Climate change is not addressed in the 1998 MP. Therefore, no actions related to climate change would occur under the No Action Alternative.

#### **4.15.2.2 *Proposed Action***

Adopting the 2023 MP would not result in significant impacts to the climate.

Development activities proposed in the 2023 MP will involve construction that will create a *de minimis* increase in air pollutants, such as carbon monoxide, carbon dioxide, nitrogen oxides and hydrocarbons, but these emissions will be limited to construction activity and would not be ongoing.

The 2023 MP proposes several development actions that would have minor benefits to the Project's resiliency to climate change. These include development of an invasive species management plan, implementing erosion and pollution control methods, improving riparian habitat/vegetation, and ongoing coordination with Project partners, academia, and community and natural resource organizations. Additionally, the 2023

MP recommends developing a sediment monitoring system and sedimentation management plan to ensure that the reservoir is able to meet its flood risk reduction mission for the Project.

## **4.16 Child Health and Safety**

### **4.16.1 Existing Condition**

While there are no schools or daycares within the Project, children are expected to be present at the Project due to the variety of recreational opportunities, including campgrounds, trails, and water recreation.

### **4.16.2 Environmental Consequences**

#### *4.16.2.1 No Action*

Under the No Action Alternative, the Project would continue to be managed under the 1998 MP. Appropriate safety measures would be implemented during any construction activities to protect child health and safety. No adverse impacts to child health and safety would occur.

#### *4.16.2.2 Proposed Action*

The 2023 MP proposes several safety programs that would provide minor benefits to child health and safety. Proposed safety programs include:

- partnering with the Pennsylvania Fish and Boat Commission (PFBC) to conduct boating safety courses and vessel inspections.
- providing educational water safety and hypothermia programs at the Project.
- developing a Project/Public Safety Plan for accidents/incidents/severe weather.
- promoting water safety messages and public service announcements throughout the region.

The 2023 MP includes future construction and development. Appropriate safety measures would be implemented during any construction activities to protect child health and safety. No adverse impacts and minor beneficial impacts to child health and safety are expected with the 2023 MP.

## **4.17 Recreation**

### **4.17.1 Existing Condition**

The Flood Control Act of 1944 authorized recreation as a purpose of the Project. Accordingly, the Project provides a wide variety of recreational opportunities including camping, boating, and swimming and access for hunting and fishing. There are multiple recreation and picnic areas located throughout the Project.

#### *4.17.1.1 No Action*

Under the No Action Alternative, the Project would continue to be managed under the 1998 MP. The Project would continue to offer recreation opportunities; therefore, no impacts to recreation would occur.

#### *4.17.1.2 Proposed Action*

The 2023 MP allows for the continued use of the Project for recreational purposes and proposes multiple development actions that would benefit recreation at the Project including the establishment of a Project Information/Nature Center, expansion and improvement of existing trail systems, establishment of a wildlife viewing platform, establishment of dog park, picnic and campground improvements, playground upgrades, and development of a kayak/canoe access to the lower Shenango River. These proposals, if implemented, would provide minor beneficial impacts to recreation at the Project. The replacement of the pedestrian bridge on the Shenango Trail will provide minor beneficial impacts upon completion.

The 2023 MP also reclassifies 3,500 acres of Project land from Wildlife Management to Environmentally Sensitive Areas. Recreation in Project lands classified as Environmentally Sensitive Areas is not prohibited within Environmentally Sensitive Areas, though recreation and recreation related development within these areas must be analyzed to ensure no impacts to resources and follow the BMPs listed in Section 4.1.3 of the 2023 MP. Therefore, no impacts to recreation are anticipated as a result of this reclassification.

### **4.18 Cumulative Effects**

The CEQ regulations that implement NEPA require assessment of cumulative impacts in the decision-making process for Federal projects. Cumulative impacts are defined as impacts which result when the impact of the preferred alternative is added to the impacts of other present and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 CFR 1508.7).

Past, present, and reasonably foreseeable future actions have and continue to contribute to the cumulative impacts of activities in and around the Project. Past actions include the construction and operation of the Shenango Dam that forms Shenango River Lake, as well as the Pymatuning Reservoir on the Shenango River, upstream of the Project.

The development of Shenango River Lake and the upstream Pymatuning Reservoir created new hydrologic and physical conditions, which, through careful management by USACE and other management partners, have created new and successful habitats and other natural resource conditions, though altered from their historic characteristics.

Concurrent regional development includes residential and commercial construction throughout the region, natural gas exploration and extraction, in addition to historical industries including coal mining. All these developments have had varying levels of adverse impacts on the physical and natural resources in the region. Many of these developments have had beneficial impacts on the region's socioeconomic resources.

Existing and future actions also contribute to the noise and traffic cumulative impacts in and around the Project, including the operation of project facilities, dam maintenance, upgrades to and maintenance of recreation sites, as well as residential, commercial, and industrial development throughout the region. Development

Under the No Action Alternative, land management and Project operation would continue, somewhat inefficiently, using out-of-date guidance from a MP that does not adequately reflect current standards and conditions.

Under the Proposed Action Alternative, the MP will be updated to reflect operations under current congressional authorizations, consider changes in basin hydrology and demands from years of growth and development, new or rehabilitated infrastructure and recreational features, and current and future environmental issues. The updated MP includes numerous management and development proposals to ensure that the Project continues to provide recreation opportunities and environmental services to the surrounding community while effectively managing environmental and cultural resources within the Project. However, implementing the 2023 MP will not significantly alter recreation demand or Project operations and all development proposals will be implemented in accordance with federal laws, regulations, and current USACE policies. Therefore, implementing the Proposed Action Alternative will not contribute new or augment existing cumulative environmental impacts, but will allow the Project to reduce the negative contribution of its activities to regional cumulative impacts through proactive and adaptive resource management strategies.

## **5 Summary of Environmental Effects**

The 2023 MP provides guidelines and direction for future Project development and use, and are based on authorized Project purposes, USACE policies, and regulations on the operation of USACE projects, responses to regional and local needs, resource capabilities and suitable uses, and expressed public interests consistent with authorized Project purposes and pertinent legislation. Careful planning, sound engineering, appropriate coordination with resource agencies and effective execution have developed the recreational resources at the Project while protecting and enhancing the important environmental resources; these practices would be expected to continue.

The Proposed Action would have no significant adverse impact to any of the environmental resources. When future development projects are implemented, localized and temporary construction-related effects (e.g., diesel/gasoline engine emissions,

noise, fugitive dust, minor earth-moving) will be the extent of the environmental consequences. Compliance with the CWA, ESA, NHPA, and other environmental laws as applicable, will be completed prior to future development projects to ensure that no significant environmental effects occur. Environmental compliance for the Shenango Trail bridge replacement is discussed in Section 6 below.

## **6 Compliance with Environmental Laws**

Acceptance of the 2023 MP requires compliance with applicable environmental laws and regulations, as described below. Environmental compliance for any proposed actions would be achieved upon coordination of this EA with appropriate agencies, organizations, and individuals for their review and comments. Environmental compliance for one development proposal in the 2023 MP, the replacement of a pedestrian bridge on the Shenango Trail, is discussed below. Other modifications to existing infrastructure as well as new features proposed in the 2023 MP will be evaluated for environmental compliance once specific plans and details are developed

### **6.1 Bald and Golden Eagle Protection Act, 16 U.S.C. §668-668d**

***In compliance.*** The Bald and Golden Eagle Protection Act prohibits the taking, possession or commerce of bald and golden eagles, except under certain circumstances. Amendments in 1972 added penalties for violations of the Act or related regulations. While no nests are mapped within Project lands, several are in close proximity to Project boundaries (Enclosure 2); therefore, activities on Project lands could affect these eagle nests.

Land use reclassification will not affect these known eagles' nests as Project lands within 1,000 feet of these nests will remain similar to their previous classification. The bridge replacement on the Shenango Trail will occur near two mapped bald eagles' nests. However, these nests are over 1,000 feet from the trail bridge replacement so construction activities from the bridge replacement will not impact the eagles (Enclosure 3). Once plan details are available, all other development proposals will be evaluated to ensure compliance with the Bald Eagle Protection Act.

### **6.2 Clean Air Act, as amended, 42 U.S.C. § 1857h-7, et seq.**

***In compliance.*** The purpose of this Act is to protect public health and welfare by the control of air pollution at its source, and to set forth primary and secondary National Ambient Air Quality Standards to establish criteria for States to attain or maintain. Minor and temporary releases would occur during construction activities for actions to maintain or improve facilities at the Project, including the bridge replacement on the Shenango Trail. However, these emissions would be short-term, small-scale, and would be considered *de minimis*. No significant impacts to air quality are expected with the adoption of the 2023 MP.

### **6.3 Clean Water Act (CWA), as amended, (Federal Water Pollution Control Act) 33 U.S.C. § 1251, et seq.**

***In compliance.*** The CWA is the primary legislative vehicle for federal water pollution control programs and the basic structure for regulating discharges of pollutants into WOTUS, which includes navigable waters, rivers, streams, and wetlands. The CWA was established to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” The CWA sets goals to eliminate discharges of pollutants into navigable waters, protect fish and wildlife, and prohibit the discharge of toxic pollutants in quantities that could adversely affect the environment. USACE regulates discharges of dredge or fill material into WOTUS pursuant to Section 404 of the CWA. Section 404 authorization is required to place dredge or fill material into WOTUS. If authorization under Section 404 is required, then Section 401 water quality certification (WQC) is required from the states of Pennsylvania or Ohio, depending on the project’s location. A National Pollution Discharge Elimination System (NPDES) permit would be required under Section 402 of the CWA if the proposed action will result in the discharge of pollutants into a WOTUS or construction activities would disturb greater than one acre of land.

The replacement of the Shenango Trail bridge will be constructed by building two concrete footers on opposite banks of the watercourse that support a single-span truss bridge (Enclosures 4 and 5). Based on information obtained from the USFWS National Wetlands Inventory (accessed 5 June 2023, Enclosure 6) and a site visit by USACE personal on 17 August 2023, wetlands are not present within the area of the proposed trail bridge, along the northern access route or along the southern access route. Access to the southern side of the bridge site will be via the southern access route.

USACE personnel did observe a possible wetland and an ephemeral and small perennial watercourse on alternate access route (see Enclosure 4). To access the northern side of the bridge site, the northern access route will be utilized. This route is the primary choice due to the water course being narrow, shallow and potentially dry in the late summer months. To cross this watercourse, a temporary plank type structure would be placed above the ordinary high-water mark to allow equipment, personal and materials to cross. Should the alternate access route be used, USACE will navigate equipment around or over these resources to avoid impacts to the wetlands. Watercourse crossing by equipment will be limited to avoid disturbing the banks and beds of the watercourse; temporary plank structures, placed above the ordinary high-water mark, will be used to avoid impacts to the watercourses.

Construction of the bridge will take place at the bridge site; items will not be assembled within the equipment staging and laydown area. The bridge is designed to be installed in place using heavy equipment. The equipment that will potentially be utilized during the construction process will be limited to a skid steer and excavator. The equipment staging and laydown area will be used to stage equipment and materials before use at

the bridge site. When utilizing the northern access route, equipment, and materials will be loaded onto trailers at the equipment staging and laydown area and then trailered on the roadway to the head of the access route.

As currently designed and planned, replacement of the trail bridge will not result in the discharge of effluent or dredged/fill material into WOTUS, including wetlands; and construction activities will be limited to less than one acre of earth disturbance. All construction activities will occur above the Ordinary High-Water Mark. The bridge concrete footers will be placed 15 to 20 feet from the edges of the watercourse. Therefore, Sections 404 (33 USC § 1344) and 402 (33 USC § 1342) are not applicable to the replacement of the Shenango Trail bridge. Because the proposed design does not result in a discharge to WOTUS that necessitates either Section 404 compliance, a Section 402 permit, or other Federal permit or license (e.g., FERC hydropower), WQC from the state is not required under Section 401 of the CWA (33 USC § 1341).

Although incorporating streambank protection around the new trail bridge was previously considered it is not currently within the scope of the project. If stream bank protection is ultimately incorporated into the design of the trail bridge replacement, this would constitute discharge of fill within WOTUS and would require compliance with Sections 404 and 401 of the CWA. Designing the streambank protection to fit within the terms and conditions of nationwide permit (NWP) 13, which covers bank stabilization activities, would achieve Section 404 compliance. Obtaining WQC from the PADEP would be necessary for compliance with Section 401.

All other proposed projects in section 7.4 Development Requests in the 2023 MP would likely not result in the placement of dredge or fill material into WOTUS; however, once plan details are available the project sites will be evaluated to ensure compliance with NEPA, the CWA, and other environmental laws.

#### **6.4 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980.**

**Not applicable.** CERCLA was passed in response to numerous abandoned, leaking hazardous waste sites, discovered in the late 1970s, which posed serious threats to human health and the environment. CERCLA was designed to impose cleanup and reporting requirements on the private sector, as well as federal facilities, by identifying those sites where releases of hazardous substances had occurred or might occur, and pose a serious threat to human health, welfare, or the environment; taking appropriate action to remedy those releases; and seeking that the parties responsible for the releases pay for the cleanup activities. CERCLA authorizes cleanup responses when there is a release or threat of a release of a hazardous substance into the environment and sets a framework for accomplishing those actions. To the extent such knowledge is available, 40 CFR Part 373 requires notification of CERCLA hazardous substances in a

land transfer. The implementation of the 2023 MP, including the pedestrian bridge replacement on the Shenango Trail, would not involve real estate transactions.

#### **6.5 Endangered Species Act (ESA), as amended. 16 U.S.C. § 1531, et seq.**

***In compliance.*** The ESA establishes a national program for the conservation of threatened and endangered species of fish, wildlife, and plants and the habitat upon which they depend. Section 7(a) of the ESA requires that federal agencies consult with USFWS to ensure that proposed actions are not likely to jeopardize the continued existence of endangered or threatened species or to adversely modify or destroy designated critical habitats.

The adoption of the 2023 MP would not affect threatened or endangered species. Effects to federally listed from the Shenango Trail bridge replacement project are discussed below; other future development will be evaluated for compliance with the ESA once specific plans and details are developed. Agency consultations, if necessary, will be conducted for future developments once plans are established.

A Pennsylvania Natural Diversity Inventory report (PNDI) specifically for the Shenango Trail replacement bridge project area identified a potential impact to federally listed species (PNDI-788816, Enclosure 7). A threatened and endangered species list requested through the USFWS's IPaC tool included the following federally-listed species for the Shenango Trail bridge replacement project area (Enclosure 8):

- Indiana bat (*Myotis sodalis*) - endangered
- Northern long-eared bat (*Myotis septentrionalis*) - endangered
- Tricolored bat (*Perimyotis subflavus*) – proposed endangered
- Eastern massasauga rattlesnake (*Sistrurus catenatus*) - threatened
- Clubshell (*Pleurobema clava*) - endangered
- Longsolid (*Fusconaia subrotunda*) - threatened
- Rabbitsfoot (*Quadrula cylindrica cylindrica*) - threatened
- Round hickorynut (*Obovaria subrotunda*) - threatened
- Snuffbox (*Epioblasma triquetra*) – endangered
- Monarch butterfly (*Danaus plexippus*) – candidate

The Shenango Trail bridge replacement will not result in either the removal of trees or structures that could potentially be used as summer roosting habitat for any of the above bat species. The bridge replacement will not occur in proximity to any known hibernacula. Therefore, USACE has determined that the bridge replacement will have no effect on the Indiana bat, Northern long-eared bat, or the tricolor bat.

The Shenango Trail bridge replacement will not result in the discharge of fill into WOTUS and proper erosion and sedimentation controls will be used before, during, and after construction. Therefore, USACE determined that the bridge replacement will have no effect on the snuffbox mussel, clubshell, longsolid, rabbitsfoot, and round hickorynut.

The eastern massasauga rattlesnake commonly utilizes wet areas including wet prairies, marshes and low areas along rivers and lakes as habitat. Massasauga habitats generally appear to be characterized by a mix of open and shaded areas, a high water table, and variable elevations between adjoining lowland and upland habitats. While the area directly impacted by the Shenango Trail bridge replacement is unlikely to provide habitat for the massasauga as it heavily forested and does not contain wetlands (Enclosure 9), suitable massasauga habitat may exist in adjacent areas close to bridge replacement based on aerial photography, USFWS NWI maps, and Natural Resource Conservation Service (NRCS) soil survey maps. While the Shenango Trail bridge replacement will only directly affect the portion of the Shenango Trail used to access the bridge replacement area, the project will likely result in increased pedestrian traffic on the trail. Therefore, USACE has determined that the Shenango Trail bridge replacement may affect, but not likely adversely affect (MANLAA) the eastern massasauga rattlesnake.

USACE initiated an informal consultation with USFWS on impacts to federally listed species as required by Section 7 of the ESA on 14 August 2023. USFWS concurrence with the USACE's determination was received on 31 October 2023, completing the consultation requirement under Section 7 of the ESA (Enclosure 10)..

#### **6.6 Environmental Justice Executive Orders**

***In compliance.*** EO 12898, as well as the subsequent EOs listed in Section 4.14 of this EA, mandates that “each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.” The proposed updates to the MP, including the Shenango Trail bridge replacement, do not disproportionately affect minority or low-income populations.

#### **6.7 Federal Water Project Recreation Act, 16 U.S.C. § 460(l)(12), et. seq.**

***In compliance.*** In the planning of any federal navigation, flood control, reclamation, or water resources project, the Federal Water Project Recreation Act, as amended, requires that full consideration be given to opportunities that the Project affords for outdoor recreation and fish and wildlife enhancement. The Act requires planning with respect to development of recreation potential. Projects must be constructed, maintained, and operated in such a manner if recreational opportunities are consistent with the purpose of the Project. The proposed development actions of the 2023 MP include recreational opportunities and fish and wildlife enhancement. The Shenango Trail bridge replacement will allow for use of the Shenango Trail within the Project.

#### **6.8 Fish and Wildlife Coordination Act (FWCA), as amended, 16 U.S.C. § 661, et seq.**

***In compliance.*** FWCA requires governmental agencies, including USACE, to coordinate activities so that adverse effects on fish and wildlife would be minimized when water bodies are proposed to be impounded, diverted, deepened, or otherwise controlled or modified. The results of the consultation are not binding, but USACE must strongly consider input received during consultation to prevent loss or damage to wildlife resources and provide for any measures taken to mitigate such impacts. No development proposals in the 2023 MP involve the impoundment, diversion, deepening, control, or modification of water bodies, therefore FWCA consultation is not required. Consultation for the Shenango Trail bridge replacement is not necessary as the watercourse crossed by the bridge is not proposed to be impounded, diverted, deepened, controlled, or modified. However, FWCA consultation for any other proposed development action at the Project will occur, if necessary.

### **6.9 Migratory Bird Treaty Act (MBTA) of 1918**

***In compliance.*** The MBTA is the domestic law that affirms, or implements, the United States' commitment to four international conventions with Canada, Japan, Mexico, and Russia for the protection of shared migratory bird resources. The MBTA governs the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. The take of any migratory bird is governed by the MBTA's regulation of taking migratory birds for educational, scientific, and recreational purposes and requiring harvest to be limited to levels that prevent overutilization. Executive Order 13186 (2001) directs agencies to take certain actions to implement the act. USACE will consult with the USFWS regarding their consideration of the effects of the actions identified in the MP revision for potential effects on migratory birds for future development projects once specific plans and details are available. No effects are anticipated from the adoption of the 2023 MP, including the Shenango Trail bridge replacement.

### **6.10 National Historic Preservation Act, as amended, 16 U.S.C. § 470a, et seq.**

***In compliance.*** Section 106 of the NHPA of 1966 and its implementing regulations (36 CFR Part 800) require federal agencies to identify and resolve adverse effects to historic properties within the Area of Potential Effects (APE) of projects, activities, or programs funded in whole or in part under direct or indirect jurisdiction of a federal agency. Historic properties include buildings, structures, objects, sites, and historic districts worthy of preservation due to historic significance. This process is carried out in consultation with Advisory Council on Historic Preservation, State Historic Preservation Offices (SHPO), Certified Local Governments, Indian Tribes, and the interested public.

USACE Pittsburgh District has made the determination that the actions identified in the proposed 2023 MP update are unlikely to adversely impact cultural resources. Potential cultural resource impacts from the replacement of the Shenango Trail bridge were assessed by USACE Pittsburgh District. USACE determined that the Shenango Trail

bridge replacement had no potential to cause effect to cultural resources. Consultation with the PA SHPO was initiated on 2 October 2023. SHPO concurrence with USACE's determination was received on 11 December 2023. Consultation with the Ohio and Pennsylvania SHPOs will be initiated for the other proposed development projects identified in Section 3.2 of this EA once plan details are available.

#### **6.11 National Environmental Policy Act (NEPA), as amended, 42 U.S.C. § 4321, et seq.**

***In compliance.*** This EA and FONSI have been prepared in accordance with the CEQ's NEPA Implementing Regulations (40 CFR Part 1500-1508). An EIS is not required.

#### **6.12 Noise Control Act of 1972, 42 U.S.C. § 4901 to 4918.**

***In compliance.*** The Noise Control Act establishes a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. Federal agencies are required to limit noise emissions to within compliance levels. Noise emission levels at the Project site would increase above current levels due to construction of improvements or features identified in the 2023 MP, including the Shenango Trail bridge replacement. However, these increases would be temporary and appropriate measures would be taken to keep the noise level within the compliance levels.

#### **6.13 Section 10 of the Rivers and Harbors Act of 1899, 33 U.S.C. § 403**

***In compliance.*** This law prohibits the unauthorized obstruction or alteration of any navigable water of the United States. This section provides that the construction of any structure in or over any navigable water of the United States, or the accomplishment of any other work affecting the course, location, condition, or physical capacity of such waters is unlawful unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of the Army. The Shenango River is defined as a navigable water, but only from RM 0.0, located at the Shenango River's confluence with the Beaver River, to RM 1.8. The Shenango Dam is located upstream at RM 30.6. Therefore, the actions identified in the 2023 MP would not involve the construction of structures within navigable waters of the United States, including the Shenango Trail bridge replacement.

#### **6.14 Floodplain Management, EO 11988**

***In compliance.*** Executive Order 11988 requires federal agencies to avoid, to the extent possible, long- and short-term adverse impacts associated with occupancy of the floodplain, and to avoid direct and indirect support of floodplain development where there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the

impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by flood plains.” The actions identified in the 2023 MP would not significantly affect the flood holding capacity or flood surface profiles of the reservoir or other watercourses within the Project, including the Shenango Trail bridge replacement.

#### **6.15 Invasive Species, E.O. 13312**

***In compliance.*** Federal agencies shall not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless, pursuant to guidelines that it has prescribed, the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions. Invasive species will not be introduced to the Project due to proposed updates to the MP, including the Shenango Trail bridge replacement. Invasive species will be managed and controlled at the Project through invasive species removal and the development of control methods.

#### **6.16 Protection of Wetlands, EO 11990**

***In compliance.*** Executive Order 11990 encourages federal agencies to take actions to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands when undertaking federal activities and programs. Each agency, to the extent permitted by law, shall avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds (1) that there is no practicable alternative to such construction, and (2) that the proposed action includes all practicable measures to minimize harm to wetlands, which may result from such use. The actions identified in the 2023 MP would not involve construction in, or effects to, wetlands. Potential wetlands have not been identified in within the Shenango Trail bridge replacement project area during site visits and on the USFWS NWI Map (Enclosure 6). Other future development proposed will be evaluated for compliance under the CWA and EO 11990 once specific plans and details are developed.

## **7 Public Involvement**

Throughout the Master Plan update process, USACE involved the public, engaged with partners and stakeholders representing interests at the local, regional, state, and federal levels. A virtual public scoping meeting was held on June 29, 2022 with USACE staff, Project partners, and key stakeholders. A 30-day public comment period on the MP update was held from June 29, 2022 to July 29, 2022. In compliance with 40 CFR Part 1501.4(e)(2), this EA was circulated for a 30-day review to concerned agencies, organizations, and the interested public from [dates to be provided after public review].

See Section 9 for comment summary and response. The EA and FONSI will be retained in the Pittsburgh District's administrative files for future reference and as a record of NEPA compliance.

## 8 References

Airnow.gov. 2023. <https://www.airnow.gov/aqi/aqi-basics>. Accessed 6 June 2023.

Centers for Disease Control and Prevention (CDC). 2023. What Noises Cause Hearing Loss? [https://www.cdc.gov/nceh/hearing\\_loss/what\\_noises\\_cause\\_hearing\\_loss.html](https://www.cdc.gov/nceh/hearing_loss/what_noises_cause_hearing_loss.html). Accessed 10 April 2023.

Council on Environmental Quality (CEQ). 2023a. Instructions to Federal Agencies on Using the Climate and Economic Justice Screening Tool. <https://static-data-screeningtool.geoplatform.gov/data-versions/1.0/data/score/downloadable/CEQ-CEJST-Instructions.pdf>.

Council on Environmental Quality (CEQ). 2023b. Climate and Economic Justice Screening Tool. <https://screeningtool.geoplatform.gov/en#13.67/41.39406/-80.55285>. Accessed 29 September 2023.

Drum, R. G., J. Noel, J. Kovatch, L. Yeghiazarian, H. Stone, J. Stark, P. Kirshen, E. Best, E. Emery, J. Trimboli, J. Arnold, and D. Raff (2017), Ohio River Basin—Formulating Climate Change Mitigation/Adaptation Strategies Through Regional Collaboration with the ORB Alliance, May 2017. Civil Works Technical Report, CWTS 2017-01, U.S. Army Corps of Engineers, Institute for Water Resources: Alexandria, VA.

National Audubon Society (Audubon). 2023a. *Important Bird Areas*. [https://wa.audubon.org/sites/default/files/ibas\\_policyuse.pdf](https://wa.audubon.org/sites/default/files/ibas_policyuse.pdf). Accessed 15 March 2023.

National Audubon Society (Audubon). 2023b. *Important Bird Areas Pymatuning Creek Corridor Ohio*. <https://www.audubon.org/important-bird-areas/pymatuning-creek-corridor>. Accessed 15 March 2023.

National Audubon Society (Audubon). 2023c. *Important Bird Areas Shenango Reservoir Pennsylvania*. <https://www.audubon.org/important-bird-areas/shenango-reservoir>. Accessed 15 March 2023.

Ohio Department of Natural Resources (ODNR). 2015. Ohio's State Wildlife Action Plan (SWAP). [https://ohiodnr.gov/static/documents/wildlife/wildlife-management/OH\\_SWAP\\_2015.pdf](https://ohiodnr.gov/static/documents/wildlife/wildlife-management/OH_SWAP_2015.pdf). Retrieved 5 April 2023.

Ohio Environmental Protection Agency (OEPA). 2008. 2008 Biological and Water Quality Study of the Ohio Tributaries to the Shenango River. Online at: <https://epa.ohio.gov/static/Portals/35/documents/ShenangoRiverTributariesTSD2008.pdf>. Accessed 31 March 2023.

Ohio Environmental Protection Agency (OEPA). 2022. Quality Assurance Project Plan (QAPP) for the Biological and Water Quality Survey of the Pymatuning Creek, Yankee Run, Little Yankee Run, Little Beaver Creek, and Yellow Creek Watersheds. Online at: <https://epa.ohio.gov/static/Portals/35/tmdl/UpperOhioRTribs2022QAPP.pdf>.

Ohio Invasive Plants Council (OIPC). 2018. Invasive Plants of Ohio. Available at: <https://www.oipc.info/invasive-plants-of-ohio.html>. Accessed 5 April 2023.

Pennsylvania Department of Environmental Protection (PADEP). 2001. Total Maximum Daily Load – PCB and Chlordane – Shenango River. [https://spcwater.org/wp-content/uploads/2020/01/ShenangoRiver\\_TMDL\\_030501.pdf](https://spcwater.org/wp-content/uploads/2020/01/ShenangoRiver_TMDL_030501.pdf). Accessed 3 April 2023.

Pennsylvania Department of Environmental Protection (PADEP). 2021. Pennsylvania Climate Impacts Assessment 2021. <https://www.dep.pa.gov/Citizens/climate/Pages/Impacts.aspx>. Accessed 10 April 2023.

United States Census Bureau (USCB). 2023. <https://www.census.gov/quickfacts/fact/table/trumbullcountyohio,mercercountypennsylvania,US/PST045222>. Accessed 10 April 2023.

United States Department of Labor (USDOL). 2023. Occupational and Safety Health Administration. Occupational Noise Exposure. <https://www.osha.gov/noise>. Accessed 10 April 2023.

United States Environmental Protection Agency (USEPA) 2023a. Criteria Air Pollutants website. Available online at: <https://www.epa.gov/criteria-air-pollutants>. Accessed 16 March 2023.

United States Environmental Protection Agency (USEPA) 2023b. Green Book. <https://www.epa.gov/green-book>. Accessed 16 March 2023.

United States Environmental Protection Agency (USEPA) 2023c. <https://www.epa.gov/outdoor-air-quality-data/air-data-multiyear-tile-plot>. Accessed 16 March 2023.

United States Environmental Protection Agency (USEPA). 2023d. <https://www.epa.gov/standards-water-body-health/what-are-water-quality-standards>. Accessed 30 March 2023.

United States Environmental Protection Agency (USEPA). 2023e. <https://www.epa.gov/climate-indicators/ecosystems>. Accessed 10 April 2023.

United States Environmental Protection Agency (USEPA). 2023f. <https://www.epa.gov/climate-indicators/climate-change-indicators-drought>. Accessed 10 April 2023.

United States Environmental Protection Agency (USEPA). 2023g.  
<https://www.epa.gov/climate-indicators/climate-change-indicators-river-flooding>.  
Accessed 10 April 2023.

United States Fish and Wildlife Service (USFWS). 1997. Clubshell.  
[https://www.fws.gov/sites/default/files/documents/508\\_clubshell%20factsheet.pdf](https://www.fws.gov/sites/default/files/documents/508_clubshell%20factsheet.pdf).  
Accessed 6 June 2023.

United States Fish and Wildlife Service (USFWS). 2007. *Bald Eagle Management Guidelines*. [https://www.fws.gov/sites/default/files/documents/national-bald-eagle-management-guidelines\\_0.pdf](https://www.fws.gov/sites/default/files/documents/national-bald-eagle-management-guidelines_0.pdf). Accessed 6 June 2023.

United States Fish and Wildlife Service (USFWS). 2012. Snuffbox (freshwater mussel).  
[https://www.fws.gov/sites/default/files/documents/508\\_snuffbox%20fact%20sheet.pdf](https://www.fws.gov/sites/default/files/documents/508_snuffbox%20fact%20sheet.pdf).  
Accessed 6 June 2023.

United States Fish and Wildlife Service (USFWS). 2015. Designation of Critical Habitat for Neosho Mucket and Rabbitsfoot.  
[https://www.fws.gov/sites/default/files/federal\\_register\\_document/2015-09200.pdf](https://www.fws.gov/sites/default/files/federal_register_document/2015-09200.pdf).  
Accessed 6 June 2023.

United States Fish and Wildlife Service (USFWS). 2016. Eastern Massasauga.  
<https://www.fws.gov/sites/default/files/documents/EMRfactsheetSept2016.pdf>.  
Accessed 6 June 2023.

United States Fish and Wildlife Service (USFWS). 2023a.  
<https://ipac.ecosphere.fws.gov/>. Access 6 June 2023.

United States Fish and Wildlife Service (USFWS). 2023b.  
<https://www.fws.gov/species/indiana-bat-myotis-sodalis>. Accessed 6 June 2023.

United States Fish and Wildlife Service (USFWS). 2023c.  
<https://ecos.fws.gov/ecp/species/5949#crithab>. Accessed 26 September 2023.

United States Fish and Wildlife Service (USFWS). 2023d.  
<https://ecos.fws.gov/ecp/species/9045>. Accessed 6 June 2023.

United States Fish and Wildlife Service (USFWS). 2023e.  
<https://www.fws.gov/species/tricolored-bat-perimyotis-subflavus>. Accessed 6 June 2023.

United States Fish and Wildlife Service (USFWS). 2023f.  
<https://ecos.fws.gov/ecp/species/10515#crithab>. Accessed 26 September 2023.

United States Fish and Wildlife Service (USFWS). 2023g.  
<https://ecos.fws.gov/ecp/species/2202#crithab>. Accessed 26 September 2023.

- United States Fish and Wildlife Service (USFWS). 2023h.  
<https://ecos.fws.gov/ecp/species/3789>. Accessed 26 September 2023.
- United States Fish and Wildlife Service (USFWS). 2023i.  
<https://www.fws.gov/species/long-solid-fusconaia-subrotunda>. Accessed 6 June 2023.
- United States Fish and Wildlife Service (USFWS). 2023j.  
<https://ecos.fws.gov/ecp/species/9880>. Accessed 26 September 2023.
- United States Fish and Wildlife Service (USFWS). 2023k.  
<https://www.fws.gov/species/rabbitsfoot-quadrula-cylindrica-cylindrica>. Accessed 6 June 2023.
- United States Fish and Wildlife Service (USFWS). 2023l.  
<https://ecos.fws.gov/ecp/species/5165>. Accessed 26 September 2023.
- United States Fish and Wildlife Service (USFWS). 2023m.  
<https://www.fws.gov/species/round-hickorynut-obovaria-subrotunda>. Accessed 6 June 2023.
- United States Fish and Wildlife Service (USFWS). 2023n.  
<https://ecos.fws.gov/ecp/species/9879>. Accessed 26 September 2023.
- United States Fish and Wildlife Service (USFWS). 2023o.  
<https://www.fws.gov/species/snuffbox-epioblasma-triquetra>. Accessed 6 June 2023.
- United States Fish and Wildlife Service (USFWS). 2023p.  
<https://ecos.fws.gov/ecp/species/4135>. Accessed 26 September 2023.
- United States Fish and Wildlife Service (USFWS). 2023q.  
<https://ecos.fws.gov/ecp/species/9743>. Accessed 6 June 2023.
- U.S. Army Corps of Engineers (USACE). 1998. *Shenango River Lake Master Plan*.
- U.S. Army Corps of Engineers (USACE). 1998a. *Shenango River Lake Master Plan Environmental Assessment*.
- U.S. Army Corps of Engineers (USACE). 1998b. *Shenango River Lake Master Plan Finding of No Significant Impact (FONSI)*.

## 9 Public Comments and Responses

### *Environmental Assessment*

[to be completed after public comment period] comment letter(s) was received with the following comments pertaining specifically to the EA. Other public comments received related to the Master Plan are addressed in the Master Plan document (see Appendix C), with the summary included below.

#### **Comment 1: [SUBJECT]**

[to be completed after public comment period]

#### **USACE Response:**

[to be completed after public comment period]

DRAFT