

Environmental Assessment and Draft Finding of No Significant Impact



**Operations and Maintenance Action
Replace the Aging Waste Water Treatment Plant**

**William H Harsha Lake Flood Risk Management Project
Clermont County, Batavia, Ohio**

May 2019



**ENVIRONMENTAL ASSESSMENT
TABLE OF CONTENTS**

DRAFT FINDING OF NO SIGNIFICANT IMPACT

EXECUTIVE SUMMARY

	Page
1.0 PURPOSE, NEED, AND SCOPE	1
1.1 INTRODUCTION	1
1.2 PROBLEM IDENTIFICATION	1
1.2.1 Need for the Proposed Action	1
1.2.2 Purpose of the Proposed Action	1
1.3 SCOPE	4
1.4 PUBLIC INVOLVEMENT	5
1.5 AUTHORITY AND REGULATORY FRAMEWORK	5
2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES	6
2.1 INTRODUCTION	6
2.2 PROPOSED ACTION	7
2.3 ALTERNATIVES CONSIDERED FOR THE PROPOSED ACTION	7
2.3.1 Alternative 1, Construct a New Waste Water Treatment System Adjacent to Existing Wastewater Treatment Facility (Preferred Alternative).	8
2.3.2 Alternative 2, Repair and Upgrade the Existing Waste Water Treatment Plant	8
2.3.3 Alternative 3, Construct a New Wastewater Treatment Facility at Existing Site	9
2.3.4 Alternative 4, Tie in to existing Municipality Waste Water Treatment System	9
2.3.5 Alternative 5, Construct a Leach Field system within the Saddle Dam	9
2.3.6 Alternative 6, Construct Multiple Composting Toilets	10
2.3.7 Alternative 7, No Action Alternative	10
2.4 SITE SELECTION	10
3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES	11
3.1 INTRODUCTION	11
3.2 LAND USE AND RECREATION AREAS	11
3.2.1 Affected Environment	11
3.2.2 Consequences	12
3.3 SOILS AND GEOLOGY	12
3.3.1 Affected Environment	12
3.3.2 Consequences	13
3.4 BIOLOGICAL RESOURCES	14
3.4.1 Affected Environment	14
3.4.1.1 Vegetation	14
3.4.1.2 Wildlife Resources	14
3.4.1.3 Endangered and Threatened Species	14
3.4.2 Consequences	16
3.4.2.1 Vegetation	16

3.4.2.2	Wildlife Resources	16
3.4.2.3	Endangered and Threatened Species	17
3.5	WATER RESOURCES	18
3.5.1	Affected Environment	19
3.5.1.1	Groundwater	19
3.5.1.2	Surface Water	19
3.5.2	Consequences	19
3.5.2.1	Groundwater	19
3.5.2.2	Surface Water	20
3.6	HISTORIC AND ARCHAEOLOGICAL RESOURCES	20
3.6.1	Affected Environment	20
3.6.2	Consequences	20
3.7	SOCIOECONOMIC RESOURCES	21
3.7.1	Affected Environment	21
3.7.2	Consequences	22
3.8	AESTHETICS AND VISUAL RESOURCES	22
3.8.1	Affected Environment	22
3.8.2	Consequences	23
3.9	AIR QUALITY	23
3.9.1	Affected Environment	23
3.9.2	Consequences	23
3.10	CLIMATE CHANGE	24
3.10.1	Affected Environment	24
3.10.2	Consequences	24
3.11	CUMULATIVE IMPACTS	25
4.0	CONSULTATION	26
5.0	ACTIONS TO MINIMIZE ENVIRONMENTAL EFFECTS	26
6.0	REFERENCES	26
7.0	COMPLIANCE WITH FEDERAL ENVIRONMENTAL STATUTES, EXECUTIVE ORDERS AND EXECUTIVE MEMORANDUM	28

Figure 1	Project Location - USGS Topographic Map, Batavia, Ohio	2
Figure 2	Project Map - William H Harsha Lake Flood Risk Management Project	3
Figure 3	Project Area Showing Serviceable Area of the Wastewater Treatment Plant	4
Figure 4	Existing and Proposed Wastewater Treatment System	7
Figure 5	Potential Build Areas, Soil Testing Results for Mound System, Preferred Alternative	13

Appendix A	A Phase 1 Archaeological Survey of the Proposed Waste Water Treatment Site at William H Harsha Lake, Clermont County, Ohio
Appendix B	Air Emission Record of Non-Applicability
Appendix C	Coordination and Consultation Letters

DRAFT FINDING OF NO SIGNIFICANT IMPACT

OPERATIONS AND MAINTENANCE ACTION REPLACE THE AGING WASTEWATER TREATMENT PLANT WILLIAM H HARSHA LAKE FLOOD RISK MANAGEMENT PROJECT BATAVIA, OHIO

The U.S. Army Corps of Engineers, Louisville District (Corps) has conducted an environmental assessment in accordance with the National Environmental Policy Act of 1969, as amended. The Environmental Assessment evaluates the alternatives to replace the aging and inadequate waste water treatment plant that serves the Corps facilities at the William H Harsha Lake Flood Risk Management Project (Harsha Lake), and identifies the Corps' preferred alternative.

The Corps is proposing to phase out the current waste water treatment system at Harsha Lake and construct a septic treatment system to replace the aging one with one that is more environmentally efficient, able to meet the current and increasing demands at Harsha Lake, and requires less expenditure of operational maintenance funds over the long term.

In addition to a “no action” alternative, six alternatives were evaluated. The alternatives included:

Alternative 1, Construct a New Waste Water Treatment System Adjacent to Existing Wastewater Treatment Facility (Preferred Alternative).

Alternative 2, Repair and Upgrade the Existing Waste Water Treatment Plant

Alternative 3, Construct a New Wastewater Treatment Facility at Existing Site

Alternative 4, Tie in to existing Municipality Waste Water Treatment Systems

Alternative 5, Construct a Leach Field system within the Saddle Dam

Alternative 6, Construct Multiple Composting Toilets

Five of the alternatives were evaluated and were rejected from further consideration because they were not determined to be reasonable and/or would not meet the purpose and need of the project. Alternative 1, *Construct a New Waste Water Treatment System Adjacent to Existing Wastewater Treatment Facility* is the preferred alternative.

For the alternatives carried through for further analysis (Alternative 1 and the No Action Alternative), the potential effects were evaluated, as appropriate. A summary assessment of the potential effects of the proposed action are listed in Table 1:

Table 1: Summary of Potential Effects of the Recommended Plan

	Insignificant effects	Insignificant effects as a result of mitigation*	Resource unaffected by action
Aesthetics and Visual	☒	☐	☐
Air quality	☒	☐	☒
Vegetation	☒	☐	☐
Fish and wildlife habitat	☒	☐	☐
Soils and Geology	☒	☐	☐
Water Resources	☒	☐	☐
Threatened/Endangered species/critical habitat	☐	☒	☐
Historic properties	☐	☐	☒
Other cultural resources	☐	☐	☒
Hazardous, toxic & radioactive waste	☐	☐	☒
Land use and recreation areas	☒	☐	☐
Noise levels	☒	☐	☐
Socio-economics	☐	☐	☒
Environmental justice	☐	☐	☒
Soils	☒	☐	☐
Climate change	☒	☐	☐

All practicable and appropriate means to avoid or minimize adverse environmental effects were analyzed and incorporated into the preferred alternative. Best management practices (BMPs) will be implemented in accordance with a stormwater pollution prevention plan and sediment and erosion control plan to minimize impacts during construction activities.

* To minimize the potential for impacts to resources, the selected contractor will be required to obtain all permits for the wastewater treatment plant replacement. These include at a minimum:

- Ohio EPA Permit-to-Install an onsite sewage treatment and dispersal system.
- Ohio EPA National Pollutant Discharge Elimination System (NPDES) permit to discharge stormwater from construction activities for construction activities that disturb more than one acre of land.
- Stormwater Pollution Prevention Plan, Notice of Intent, and incorporation of best management practices for sediment and erosion control.

No compensatory mitigation is required from selection of the proposed action.

Public Notice of the Availability of the draft Finding of No Significant Impact and Environmental Assessment has been initiated on May 1, 2019, 2019 and sent to concerned agencies, organizations and the interested public in accordance with 40 CFR 1501.4(e)(1)). All comments received during the public review period will be responded to in the Final EA and FONSI.

OTHER ENVIRONMENTAL AND CULTURAL COMPLIANCE REQUIREMENTS:

ENDANGERED SPECIES ACT

Pursuant to section 7 of the Endangered Species Act of 1973, as amended, the U.S. Army Corps of Engineers determined that the recommended plan may affect but is not likely to adversely affect the following federally listed species or their designated critical habitat: Indiana bat and Northern Long-eared bat. To minimize the potential for impacts to summer habitat for bat species, tree removal activities will not occur between April 1 and September 30 (clearing between October 1 through March 31). The proposed action has been determined to have no effect on the Running Buffalo Clover. The U.S. Fish and Wildlife Service has concurred with this determination on April 25, 2019.

NATIONAL HISTORIC PRESERVATION ACT

Pursuant to section 106 of the National Historic Preservation Act of 1966, as amended, the U.S. Army Corps of Engineers determined that historic properties would not be adversely affected by the proposed action. The Ohio State Historic Preservation Office concurred with the determination on April 15, 2019.

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

Date

Antoinette R. Gant
Colonel, U.S. Army
District Commander

**OPERATIONS AND MAINTENANCE ACTION
REPLACE THE AGING WASTE WATER TREATMENT PLANT
WILLIAM H HARSHA LAKE FLOOD RISK MANAGEMENT PROJECT**

ENVIRONMENTAL ASSESSMENT

EXECUTIVE SUMMARY

The existing waste water treatment facility at Harsha Lake has been operating on old infrastructure resulting in increasing maintenance cost requirements and inefficient operations. The facility, while functioning, is in disrepair despite the ongoing maintenance actions to keep the facility operational. Increased regulatory mandates require additional costs to be incurred and requires the U.S. Army Corps of Engineers (USACE) staff to complete complex training programs for staff certification to operate the facility. Additionally, USACE has identified a need to increase the number of restroom facility units that will be operated and serviced by the waste water treatment plant (WWTP).

USACE proposes to provide a safe, reliable, and cost-effective waste water treatment system with adequate capacity to serve the needs of USACE operations at Harsha Lake. The proposed plan is to phase out the current waste water treatment system and construct a septic treatment system to replace the aging one with one that is more environmentally efficient; able to meet the current and increasing demands at Harsha Lake; and requires less expenditure of operational maintenance funds over the long-term.

Seven alternatives, including the No Action Alternative, were evaluated to determine whether they would be reasonable and meet the need of the wastewater treatment for the Harsha Lake facilities. These include:

- Alternative 1, Construct a New Waste Water Treatment System Adjacent to Existing Wastewater Treatment Facility (Preferred Alternative).
- Alternative 2, Repair and Upgrade the Existing Waste Water Treatment Plant
- Alternative 3, Construct a New Wastewater Treatment Facility at Existing Site
- Alternative 4, Tie in to existing Municipality Waste Water Treatment Systems
- Alternative 5, Construct a Leach Field system within the Saddle Dam
- Alternative 6, Construct Multiple Composting Toilets
- Alternative 7, No Action Alternative

Five of the alternatives were evaluated and were rejected from further consideration because of several specific or overlapping engineering, environmental or logistical reasons that resulted in the alternatives not being reasonable and/or not meeting the purpose and need for this project. The preferred alternative is Alternative 1, Construct a New Waste Water Treatment System.

This Environmental Assessment (EA) outlines the expected effects of implementing the Proposed Action and reasonable alternatives. Based on the analysis in the EA, the impacts to resources by implementing the Preferred Alternative (Alternative 1, Construct a New Waste Water Treatment System) are not expected to have significant adverse effects. The proposed site

for the project is within the designated operations area for Harsha Lake adjacent to the existing wastewater treatment plant and across the road from the existing visitor's center and project headquarters building. The proposed site is a forested area, which was not disturbed during construction of the flood risk management project. The large dominant forest trees have been significantly impacted by the emerald ash borer. There is sparse understory. The soils at the site meet the standards for use as a septic system.

To minimize the potential for impacts to resources, the selected contractor will be required to obtain all permits for the wastewater treatment plant replacement. These include at a minimum:

- Ohio EPA Permit-to-Install an onsite sewage treatment and dispersal system.
- Ohio EPA National Pollutant Discharge Elimination System (NPDES) permit to discharge stormwater from construction activities that disturb more than one acre of land.
- Stormwater Pollution Prevention Plan, Notice of Intent, and incorporation of best management practices for sediment and erosion control.

To protect the potential summer habitat for the Endangered Indiana Bat and the Threatened Northern Long-eared Bat, and potential nesting and breeding migratory birds, the clearing of vegetation and felling of large timber trees will not occur between April 1 and September 30.

ENVIRONMENTAL ASSESSMENT

1.0 PURPOSE, NEED AND SCOPE

1.1 INTRODUCTION

The U.S. Army Corps of Engineers (USACE), William H Harsha Lake Flood Risk Management Project (Harsha Lake) is a federally constructed multi-purpose project authorized for flood control, water supply, recreation, and fish and wildlife habitat. Construction on Harsha Lake began in 1970 and the lake was impounded in 1979. Originally called East Fork Lake, the dam and lake were renamed in 1981 to William H. Harsha Lake. It is located in Clermont County in southwestern Ohio, about 25 miles east of Cincinnati. The dam is about four miles south of Batavia, Ohio, on the East Fork of the Little Miami River.

William H. Harsha Lake consists of a cooperative management effort between USACE and the Ohio Department of Natural Resources, Divisions of Parks and Recreation, Watercraft, and Wildlife. This partnership along with a number of others are important to the management of the 10,000 plus acres of public lands at William H. Harsha Lake.

The project operates for flood control in the East Fork and Little Miami River Valleys, and as a unit of the general plan for the Ohio River Basin, for storage for water supply and water quality control and for recreation and fish and wildlife activities.

1.2 PROBLEM DESCRIPTION

1.2.1 Need for the Proposed Action

The existing waste water treatment facility at Harsha Lake is operating on old infrastructure resulting in increasing maintenance cost requirements and inefficient operations. The facility, while functioning, is in disrepair despite the ongoing maintenance actions to keep the facility operational. Increased EPA regulatory requirements for operator licensing require additional costs to be incurred and requires USACE staff to complete complex training programs for staff certification to operate the facility.

1.2.2 Purpose of the Proposed Action

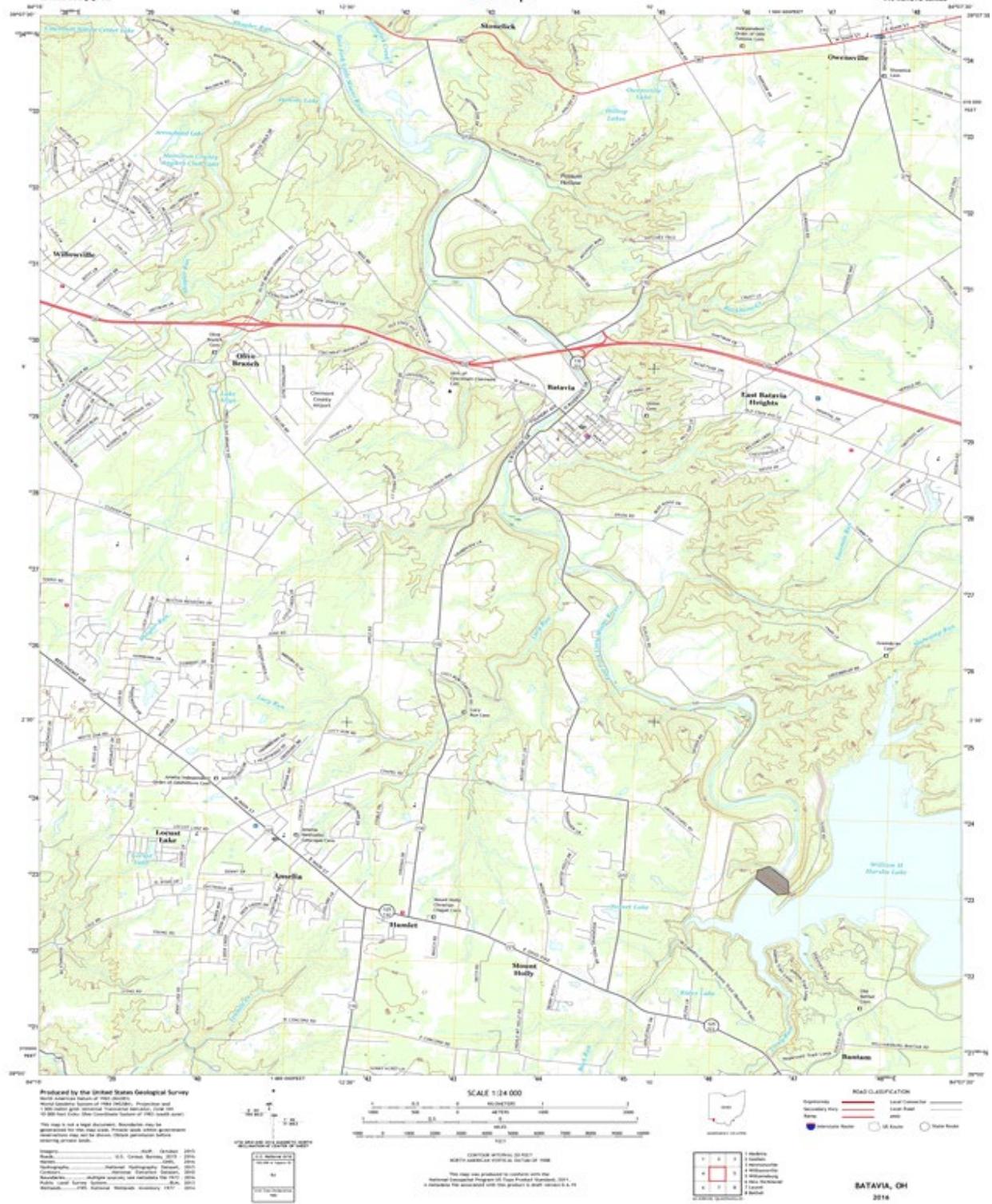
The purpose of the proposed action is to provide a safe, reliable, and cost-effective waste water treatment system with adequate capacity to serve the existing and future needs of USACE operations at Harsha Lake. Based on its evaluation of all reasonable alternatives to meet the identified need, USACE is proposing to phase out the current waste water treatment system and construct a septic treatment system to replace the aging one with one that is more environmentally efficient, able to meet the current and increasing demands at Harsha Lake, and requires less expenditure of operational maintenance funds over the long term.



U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



BATAVIA QUADRANGLE
OHIO-CLERMONT CO.
7.5-MINUTE SERIES



WILLIAM H. HARSHA F/C 62-5

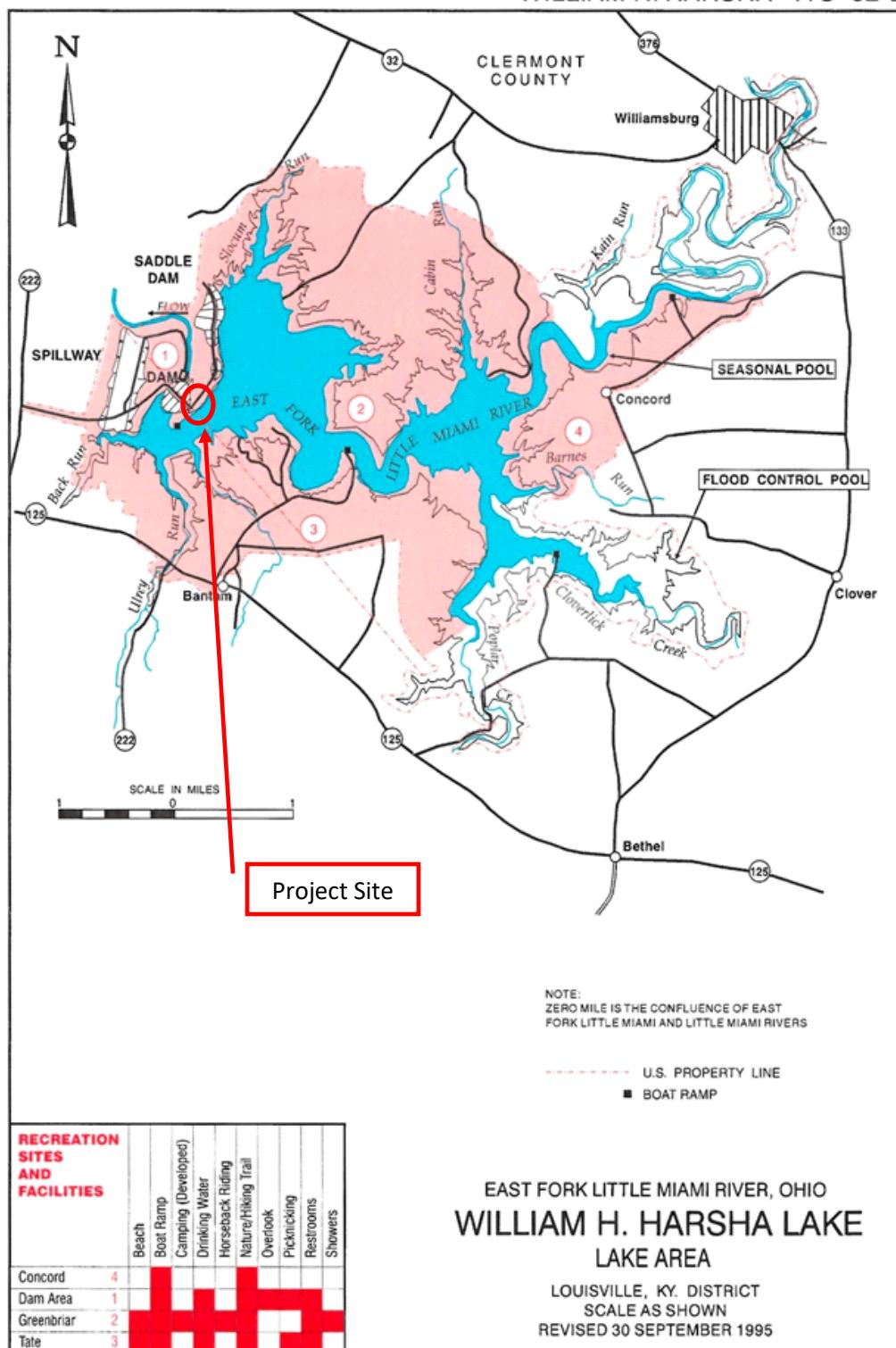


Figure 2: Project Map
U.S. Army Corps of Engineers
William H Harsha Lake Flood Risk Management Project

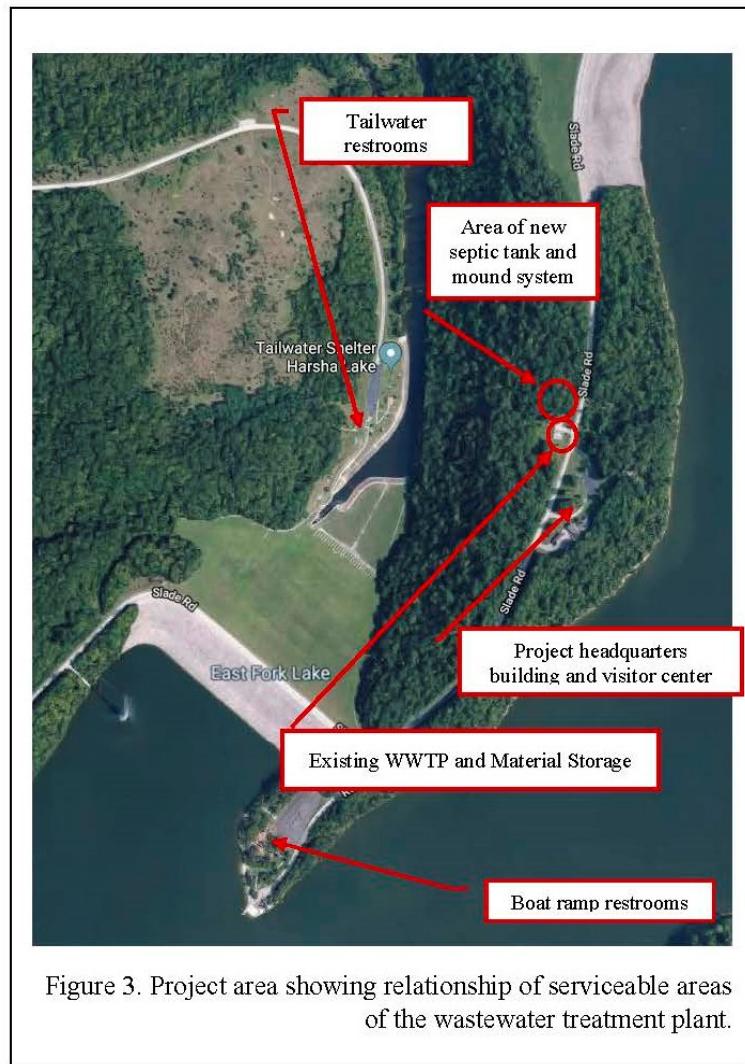
1.3 SCOPE

The geographic region of influence (ROI) of the proposed action is within the boundaries of the Harsha Lake Flood Risk Management Project. The geographical scope of the proposed federal action is limited to an estimated 2.0 to 3.0 acres at a site adjacent to the existing waste water treatment plant (the “site” or “project area”). The areas served by the WWTP includes the project headquarters building and visitor center, the boat ramp restroom facilities and the tailwater restrooms. Additional restroom facilities are planned for the Visitor Center and will be served by the new waste water treatment system (see Figure 3).

This EA identifies, documents, and evaluates environmental effects of constructing a new waste water treatment system to replace the existing waste water treatment plant that can no longer meet the needs of the existing operations and planned increases on the wastewater

treatment system. This EA does not evaluate the current wastewater treatment facilities or operations at the State operated East Fork State Park which is located approximately 3 miles from this site within Harsha Lake.

An interdisciplinary team consisting of environmental scientists/biologists, operations managers, engineers, and archaeologists analyzed the proposed action and alternatives in light of existing conditions and has identified relevant beneficial and adverse environmental effects associated with the action and its alternatives. The proposed action and alternatives, including the no action alternative, are described in Section 2.0. The existing conditions, considered to be the “baseline” conditions, are then described in Section 3.0. The expected effects of the proposed action, also described in Section 3.0, are presented immediately following the



description of baseline conditions for each environmental resource addressed in the EA. Section 4.0 addresses the potential for cumulative effects and addresses mitigation.

1.4 PUBLIC INVOLVEMENT

USACE invites public participation in the NEPA process. Consideration of the views and information of all interested persons promotes open communication and enables better decision making. All agencies, organizations, and members of the public having a potential interest in the proposed action including minority, low-income, disadvantaged, and Native American groups, are urged to participate in the decision making process.

Public participation opportunities with respect to this EA are guided by 33 Code of Federal Regulations Part 230. Upon completion, the EA will be made available to the public for 30 days, along with a draft Finding of No Significant Impact (FONSI). At the end of the 30-day public review period, the USACE will consider any comments submitted by individuals, agencies, or organizations on the proposed action, the EA, or draft FONSI. As appropriate, the USACE may then execute the FONSI and proceed with implementation of the proposed action. If it is determined prior to issuance of a final FONSI that implementation of the proposed action would result in significant impacts, the USACE will publish in the Federal Register a notice of intent to prepare an Environmental Impact Statement, commit to mitigation actions sufficient to reduce impacts below significance levels, or not take the action.

The EA, draft FONSI, and comment forms can be obtained through the USACE dedicated website <<https://go.usa.gov/xmDzX>>. Comments should be received within 30 days, June 5, 2019.

1.5 AUTHORITY AND REGULATORY FRAMEWORK

This Environmental Assessment (EA) is prepared pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) Regulations (40 CFR 1500-1517), and USACE implementing regulation, ER 200-2-2, 1988. The two major purposes of the NEPA review process are to provide decision makers an analysis to make better informed decisions and to allow public involvement in the process. The outcome of the NEPA review process aids in the determination of whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI). This EA provides sufficient evidence and analysis for determining whether to prepare an EIS or a FONSI (40 CFR 1508.9).

In addressing environmental considerations, USACE is guided by relevant statutes and their implementing regulations, and Executive Orders (EO) that establish standards and provide guidance on environmental and natural resources management and planning. The following statutes and EO's apply and include, but are not limited to:

Federal Statutes

- Archaeological Resources Protection Act of 1979 (16 U.S. Code [USC] 470)

- Clean Air Act (CAA) (42 USC 7401, et seq., as amended)
- Clean Water Act of 1977 (CWA) and the Water Quality Act of 1987 (33 USC 1251-9, et seq., as amended)
- Endangered Species Act (ESA) of 1973 (16 USC 1531-1543)
- Farmland Protection Act of 1981 (7 USC 4201, et seq., as amended)
- Fish and Wildlife Coordination Act (16 USC 661, et seq.)
- Migratory Bird Treaty Act (16 USC 701, et seq.)
- National Historic Preservation Act of 1966 (NHPA) (16 USC 470, et seq., as amended)
- National Environmental Policy Act (NEPA) (42 USC 4321-4370)
- Noise Control Act (NCA) of 1972 (42 USC 4901 - 4918)
- Toxic Substances Control Act (TSCA) (15 USC 2601, et seq., as amended)

Regulations

- CEQ Regulations for Implementing NEPA (Title 40 CFR, Parts 1500-1508 (40 CFR 1500-22 1508))
- Engineering Regulations (ER) 200-2 Procedures for Implementing NEPA (Title 32 CFR, Part 230)

Executive Orders

- EO 11988, Floodplain Management
- EO 11990, Protection of Wetlands
- EO 12088, Federal Compliance with Pollution Control Standards
- EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- EO 13045, Protection of Children from Environmental Health Risks and Safety Risk
- EO 13175, Consultation and Coordination with Indian Tribal Governments
- EO 13186, Responsibilities of Federal Agencies to Protect Migratory Birds
- EO 13423, Strengthening Federal Environmental, Energy, and Transportation Management.

Section 6.0 of this EA, *Compliance With Federal Environmental Statutes, Executive Orders And Executive Memorandum*, outlines the compliance status of each of these along with other relevant statutes with respect to the federal action outlined in this EA. Informational resources regarding the laws, regulations, and EOs are available on the NEPAnet web site at <https://www.epa.gov/nepa>.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

Engineering Regulations (ER) 1105-2-100 requires civil works studies and projects to be in compliance with all applicable Federal environmental statutes and regulations and with applicable State laws and regulations where the Federal government has clearly waived sovereign immunity. NEPA requires Federal agencies, including USACE, to comply with a process that includes the inventory and assessment of the environmental resources within the study area. NEPA also requires the evaluation and comparison of reasonable alternatives to determine the impacts to those ecological, cultural, and aesthetic resources identified and investigated. Involvement by resource agencies and the general public during the study process is also required. USACE NEPA guidance can be found in ER 200-2-2. This should also include all

measures required for compliance with other applicable environmental statutes, such as the Endangered Species Act, the Clean Air Act, the Clean Water Act, the Fish and Wildlife Coordination Act, and the Historic Preservation Act, among others.

A bedrock principle of NEPA is that an agency should consider reasonable alternatives to a proposed action. Considering alternatives helps to avoid unnecessary impacts and allows for the analysis of ways to achieve the stated purpose. An alternative must be capable of implementation, and satisfactory with respect to meeting the purpose of and need for the action to be considered reasonable. This section discusses the proposed action and the alternatives that were considered, including the No Action Alternative.

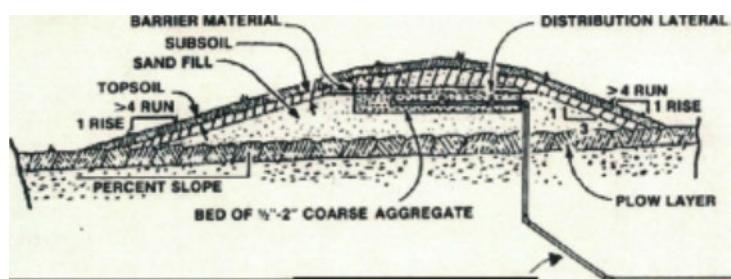
2.2 PROPOSED ACTION

The proposed action is to provide a waste water treatment system to replace the existing system. This will allow USACE operations to meet the waste water treatment needs of Harsha Lake, will require less expenditure of operational maintenance funds over the long term, and replace an aging waste water treatment facility.

The preferred alternative is the construction of new septic treatment system consisting of a septic tank and mound system with a lateral discharge that will replace the existing obsolete waste water treatment facility that would be decommissioned (see Figure 4).



Existing Wastewater treatment plant



Example replacement sand mound section view

Figure 4: Existing and Proposed Wastewater Treatment System

The Alternatives considered to accomplish this are discussed in greater detail in Section 2.3, Alternatives Considered for the Proposed Action.

The preferred site for the new system is located within the designated operations area for Harsha Lake on a forested site of about two to three acres adjacent to the existing WWTP on Slade Road, across from the existing visitor's center and project headquarters building.

2.3 ALTERNATIVES CONSIDERED FOR THE PROPOSED ACTION

Seven alternatives, including the No Action Alternative, were evaluated to determine whether they would be reasonable and meet the need of the wastewater treatment for the Harsha Lake facilities. These include:

Alternative 1, Construct a New Waste Water Treatment System Adjacent to Existing Wastewater Treatment Facility (Preferred Alternative).

Alternative 2, Repair and Upgrade the Existing Waste Water Treatment Plant

Alternative 3, Construct a New Wastewater Treatment Facility at Existing Site.

Alternative 4, Tie in to existing Municipality Waste Water Treatment Systems

Alternative 5, Construct a Leach Field system within the Saddle Dam

Alternative 6, Construct Multiple Composting Toilets

Alternative 7, No Action Alternative

Five of the alternatives were evaluated and were rejected from further consideration because of several specific or overlapping reasons. The reasons for their rejection are discussed within each alternative description.

The preferred alternative to accomplish the proposed action is Alternative 1, *Construct a New Waste Water Treatment System Adjacent to Existing Wastewater Treatment Facility*. This alternative and Alternative, 7, No Action Alternative will be carried through in the evaluation of potential effects through this EA.

2.3.1 Alternative 1, Construct a New Waste Water Treatment System Adjacent to Existing Wastewater Treatment Facility (Preferred Alternative)

The preferred alternative is the construction of new septic treatment system consisting of a septic tank and mound system with a lateral discharge that will replace the existing obsolete waste water treatment facility that would be decommissioned. The preferred site is a two to three acre forested area adjacent to the current wastewater treatment plant and material storage yard.

Based on the site investigations and coordination with a certified septic designer, USACE has proposed the septic treatment system consisting of a septic tank and mound system with a lateral discharge to replace the existing waste water treatment facility that would be decommissioned.

To implement this alternative, the proposed work would include closure and abandonment of existing wastewater treatment plant, tree clearing, construction of septic system absorption field(s), upslope shallow diversion swale, sanitary sewer gravity and force main piping, precast concrete septic tanks, lift station, and electrical panel and conduit, and restoration seeding. In addition, USACE would remove the existing wastewater treatment plant, backfill the resultant void, and restore the surface to match the adjacent material storage gravel surface conditions. The influent and effluent sewer lines would be cut and capped, and abandoned in place. One advantage of this alternative is that USCAE will have no need for a certified plant operator for a wastewater treatment facility and incur costs associated ongoing training and certification.

2.3.2 Alternative 2, Repair and Upgrade the Existing Waste Water Treatment Plant

This alternative would rehabilitate and upgrade the existing waste water treatment plant. All

existing waste water treatment collection lines associated with USACE facilities at Harsha Lake are directed to this plant. One consideration for this alternative is the certification requirements for plant operator of a waste water treatment facility are extensive and the ability to maintain a certified operator along with associated ongoing training creates significant burden for USACE to meet the standard. Another consideration is the potential for ongoing exposure to biological hazards at the plant. During any part of treatment, transport, or application of sewage sludge, there is an increased chance of exposure to materials that can cause disease. Finally, the repair and upgrade of the existing facility would cost USACE approximately \$300,000, with another \$25,000 cost of annual operations, compared to the costs of installation and use of septic tank and mound system with a lateral discharge of approximately \$150,000, plus the annual or biannual cost of pumping. Because this alternative was determined not to meet the purpose and need to provide safe and cost-effective wastewater treatment, this alternative was not pursued further.

2.3.3 Alternative 3, Demolish the Existing Waste Water Treatment Facility and Build on Existing Site.

This alternative would demolish the existing waste water treatment facility and construct a septic tank and mound system on the same site. The site contains the appropriate acreage, and all piping and treatment collection occurs at this single point; however, this option was dropped from further consideration because installation of a septic tank and mound system requires undisturbed soils. Neither the footprint of the existing waste water treatment facility, nor the current open area near the existing treatment facility, is considered to be feasible.

2.3.4 Alternative 4, Tie in to existing Municipality Waste Water Treatment Systems

This alternative would convert the existing waste water treatment system to a forced main system that would interface with the County's existing sewer lines at the end of Slade Road. This alternative also considered a tie in to the existing wastewater treatment facilities at East Fork State Park. To interface with this system collection lines would have to cross the top of the Harsha Lake dam. This alternative, among other variations of this same option, were dismissed by the USACE dam safety program because of concerns over trench construction and impacts to the top of the dam structure. To tie into the East Fork State Park sewer system, which is also integrated into the County system, however, the existing county system tie would be geographically accessible once the top of the dam had been crossed. This alternative was dropped from consideration because it would not meet the purpose and need of the proposed action.

2.3.5 Alternative 5, Construct a Leach Field system within the Saddle Dam

This alternative would place a waste water septic treatment system into another structural component of the flood risk management project, the Saddle Dam, which is located approximately 0.5 miles from the existing waste water treatment facility. This alternative would increase costs of extending sewage collection lines and costs associated with increasing capacity to pump sewage to the new site in addition to constructing a new septic tank and leaching system. It would impact the existing Saddle Dam feature of the flood risk management project.

County regulations and incorrect soil conditions prevented further consideration of this alternative as it is not reasonable and would not meet the purpose and need of the project.

2.3.6 Alternative 6, Construct Multiple Composting Toilets

This alternative would construct a minimum of four composting toilets to accommodate septic treatment throughout the Harsha Lake facilities. To implement this alternative USACE would need to demolish the existing restroom structures. Water lines and collection systems would also need to be demolished and abandoned thereby increasing the overall cost. Vault and composting toilets are vulnerable to users depositing inappropriate materials in them. In addition, vault toilets frequently have unpleasant odors associated with them, and vault waste disposal is a problem in some areas of Harsha Lake. In a vault toilet system, the waste is concentrated has to be diluted or hauled to a larger wastewater treatment plant that can process undiluted sewage. Composting toilets are expensive, labor intensive, and potentially endanger employees through pathogen exposure and confined space entry. The installation of the composting toilets (vs. vault toilets) would be necessary in areas subject to inundation. Toilet facilities in flood plains need to be portable to prevent water pollution when the water level rises (U.S Forest Service, 2004). With these considerations, this alternative was rejected from further consideration because it would not meet the purpose and need of the project.

2.3.7 Alternative 7, No Action Alternative

The CEQ regulations require analysis of the No Action Alternative in an EA to serve as the baseline against which the impacts of the proposed action and alternatives will be evaluated. Accordingly, the No Action Alternative is evaluated in this EA.

Under the No Action Alternative, the USACE would not implement the proposed action and would not be able to provide efficient wastewater treatment for the facilities at the flood risk management project, which includes the project headquarters building and visitor center, the boat ramp restroom facilities and the tailwater restrooms. USACE would incur significant ongoing maintenance costs to ensure the existing WWTP can operate, and may not be able to provide certified staff to operate the current facility. The current outdated plant would continue to incur unnecessary maintenance costs to support the aging condition of the WWTP. USACE would be subject to loss of its operation because of costs, staffing, and regulatory mandates. Therefore operation, maintenance, and recreational activities and facilities that require use of a wastewater collection system with the Harsha Lake would be adversely affected by loss of wastewater treatment. Not having the means to process wastewater is not a feasible alternative.

2.4 SITE SELECTION

Engineer Manual (EM) 1110-2-501, *Design, Construction, and Operation of Small Wastewater Systems* provides a general level of guidance on siting wastewater systems. In general, the site selection factors are applied to ensure that a planned facility will not cause interference or detractions from the natural, scenic, aesthetic, scientific, or historical value of the area. In addition, topographic, geological, hydrogeological, and atmospheric factors and conditions are considered when designing the treatment facility to support the Harsha Lake project. USACE

included in its site selection process factors that included: necessary size (acreage), proximity to existing potable water and sewage collection system infrastructure, minimization of cost for extending existing collection system extention (pumps, lines, tie-in), an adjacent staging area for the work, continuity of service, land use, and soil compatibility.

The sites considered for the project included:

- Existing developed areas, including existing waste water treatment plant site
- Open fields within Harsha Lake
- Recreational/open field sites within developed areas at Harsha Lake
- Undeveloped areas near the current waste water treatment facility.

Based on an application of the factors described above, the existing waste water treatment plant site (Alternative 3) and the undeveloped area near the current waste water treatment facility (Alternative 1, as described in Section 2.3.1 and shown in Section Figure 3 above) were considered potentially appropriate sites. The existing waste water treatment plant site was determined not to be feasible based on soil requirements of a septic system, as described in Section 2.3.3. Therefore, the location described in Alternative 1 was identified as the preferred area to site the proposed new septic system.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 INTRODUCTION

This section describes the existing environmental and human resources that could potentially be affected by the proposed action and reasonable alternatives. The environment described in this chapter is the baseline for the consequences that are presented for each resource and each alternative. Most of the baseline information was taken from existing USACE data, existing documentation, and coordination with Federal and State resource agencies. This chapter also describes potential consequences and impacts for each environmental and human resource. An impact is defined as a consequence that could occur from modifying the existing environment due to a proposed action or alternative. Impacts can be beneficial or adverse, can be a primary result of an action (direct) or a secondary result (indirect), and can be permanent or long lasting (long term) or temporary and of short duration (short term).

CEQ Regulations state the environmental impact analysis is to describe in a clear, precise expression with few words the area(s) that will be affected. The description is to be no longer than is necessary to understand the effects of the alternatives. Data and analyses in an environmental assessment is to be commensurate with the importance of the impact, with less important material summarized, consolidated, or simply referenced. Subsequently, some resources that are typically addressed in an environmental assessment that are not addressed in this analysis include fish resources, wetlands and vernal pools, water quality, and floodplains. These resources are not present in the project area and are not discussed.

3.2 LAND USE AND RECREATION AREAS

3.2.1 Affected Environment

The total acreage of the reservoir and project lands consists of about 10,714 acres, including

about 10,566 acres in fee (owned by the federal government), about 112 acres in flowage easement, and about 36 acres in road easement. USACE manages the dam operations area and the Ohio DNR Division of Parks, East Fork State Park operates most of the recreation areas.

The project site is located in a 660 acre compartment established in the Harsha Lake Operational Management Plan. The compartment is managed by USACE and includes the dam, saddle dam, spillway, operations office, visitor center, and wastewater treatment plant. Recreational facilities and opportunities include boat ramps and boating, swimming and water-based recreation, camping, model airplane field, picnicking and grilling, fishing and hunting, cycling, and hiking trails. There is a visitor center that provides historical interpretive displays about area history, flood control, wildlife management and natural history. Other recreational facilities near the visitor center include an overlook, intimate picnic shelter, half-mile interpretive trail, and native wildflower gardens that attract butterflies and depict prairie plants.

The new septic treatment system would be placed on an undeveloped woodland within this compartment and adjacent to the existing wastewater treatment plant and materials storage yard.

3.2.2 Consequences

Alternative 1, Construct a New Waste Water Treatment System Adjacent to Existing Wastewater Treatment Facility

Land Use- The greatest impact to the preferred site is the conversion of two to three acres of undeveloped woodland adjacent to the existing WWTP. This would constitute a direct long-term change in land use from woodland to flood risk management operational areas. Though a permanent change in land use, the impact does not have a significant effect on the environment. The woodland is currently experiencing significant stress and change because of adverse effects of the emerald ash borer that has caused and continues to cause tremendous tree mortality. The land use would naturally convert to a more open field environment. USACE as part of its efforts to eradicate this pest in affected areas will have to eliminate the trees in at this location in the future.

Recreation Areas – There are no recreation areas present on the site that will be adversely affected by the conversion of the site to a septic tank and mound system with a lateral discharge.

Alternative, 7, No Action Alternative – Under the No Action Alternative, the USACE would not implement the proposed action or be able to provide wastewater treatment for the operational areas that require wastewater collection at the flood risk management project. The USACE land use designation would remain the same but the vegetation would be left to natural conditions and the forest habitat would be lost to EAB.

3.3 SOILS AND GEOLOGY

3.3.1 Affected Environment

Soils – The dominant soils on the site are primarily Cincinnati silt loam (CnC2), 6 to 12 percent slopes, eroded (NRCS, 2019). Cincinnati soils are very deep, well drained soils, with the depth

to the water table between 20 to 36 inches. These soils are characterized as occurring on side slopes. Cincinnati soils can be used for growing cultivated crops, mainly corn, wheat, soybeans, tobacco, and forages, both grasses and legumes. A considerable percentage of Cincinnati soil is used for pasture or woodland, or is idle. The soil is not designated as prime farmlands (US Department of Agriculture, 2019).

Geology – The geology of the site is of the Ordovician period and consists of sedimentary rocks, primarily shale and limestone of Marine origin (Ohio Department of Natural Resources, 2017). Climate is humid and temperate with the mean annual precipitation ranges from 35 to 45 inches annually. The mean annual air temperature range from 52 to 57 degrees F. The frost-free period is between 160 to 200 days. Elevation is 183 to 396 meters (600 to 1,300 feet) above mean sea level (US Department of Agriculture, 2019).

3.3.2 Consequences

Alternative 1, Construct a New Waste Water Treatment System Adjacent to Existing Wastewater Treatment Facility

– The construction and operation of a septic tank and mound system with a lateral discharge will permanently alter the site to accommodate the wastewater treatment. The location was specifically identified because of the undisturbed condition of the soils as opposed to the current site of the WWTP, and the results of soil testing showing the soils at the preferred site to be adequate to accommodate a mound system. Figure 4 shows the identified build areas within the two to three acres identified for the preferred location adjacent to the existing WWTP. The soil test points at the sites show three buildable locations with the capacity to support septic system field(s) (e.g. "mounds"). Based on the results of the final design for the system not all of the total buildable areas are expected to be utilized. There are no long term adverse effects to the soils or geology with the use of this site. Vegetation clearing would occur over these locations and once constructed the mounds would be maintained as lawn cover (see Figure 4).

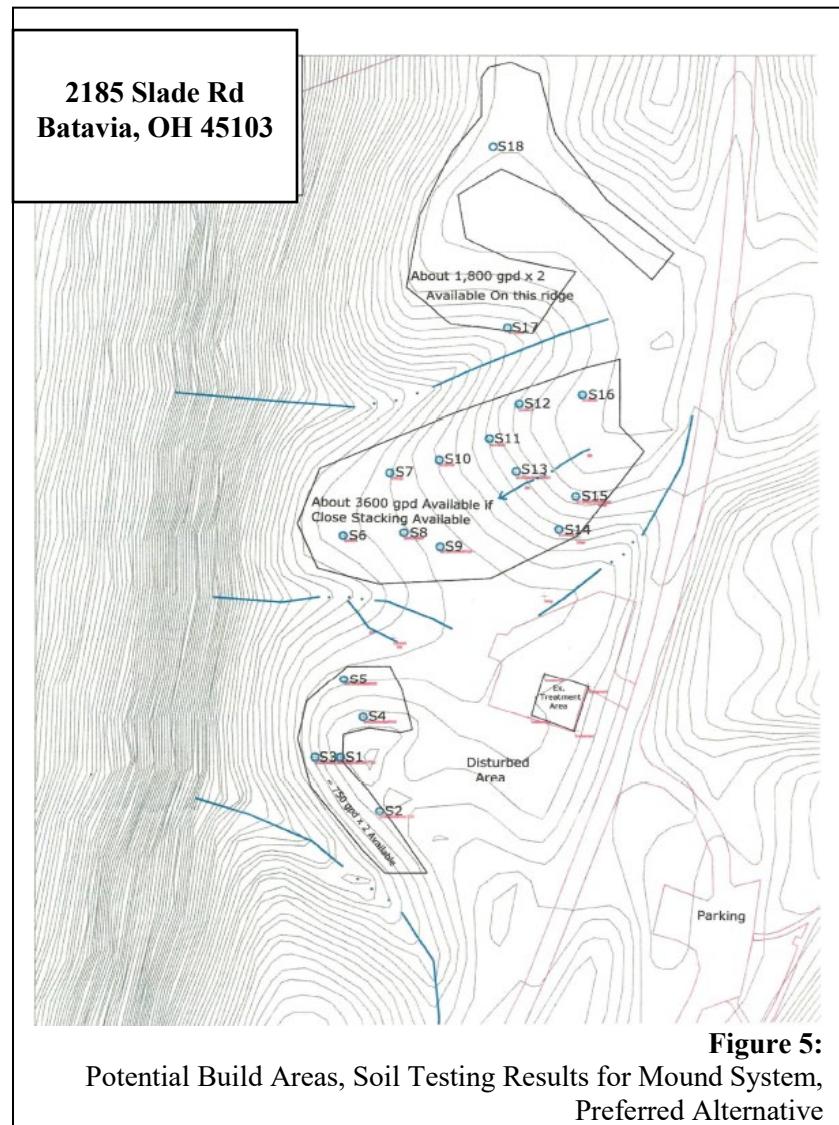


Figure 5:
Potential Build Areas, Soil Testing Results for Mound System,
Preferred Alternative

Alternative, 7, No Action Alternative - Under the No Action Alternative, the USACE would not implement the proposed action or be able to provide wastewater treatment for the operation of the flood risk management project. There would be no effects to soils or geology under the No Action Alternative.

3.4 BIOLOGICAL RESOURCES

3.4.1 Affected Environment

3.4.1.1 Vegetation

The forested site consists of mature deciduous mixed hardwoods, including oaks, ash, hickory, tulip poplar, maple, cherry, and beech. There is a sparse understory. The ash and other hardwoods on the entire site have been significantly impacted and altered by the infestation of the emerald ash borer.

3.4.1.2 Wildlife Resources

The forest habitat provides a valuable source of food, cover, and denning and nesting habitat that are used by a variety of wildlife species that includes white-tailed deer, fox and gray squirrels, bobwhite quails, cottontail rabbit, woodchuck, raccoon, opossum, muskrat, mink, weasel, skunk, red fox, and gray fox. Songbirds are typically present in these forest habitats (Ohio Division of Wildlife, 2019).

3.4.1.3 Endangered and Threatened Species

The USFWS's IPaC System was used to identify potential federally listed species in the project area. Federally listed endangered and threatened species that can potentially occur at Harsha Lake include two mammals (Indiana Bat, Northern Long-eared Bat), five freshwater mussels (Rayed Bean, Fanshell, Pink Mucket, Sheepnose, Snuffbox), and one plant species (Running Buffalo Clover) (USFWS, 2019). Twelve migratory bird species were reported by USFWS IPaC to potentially occur in the area. Of these 12, six may occur within the project area: Black-billed Cuckoo, Cerulean Warbler, Kentucky Warbler, Prothonotary Warbler, Red-headed Woodpecker, Rusty Blackbird.

The State of Ohio lists these species as either endangered or threatened. In addition the State also lists multiple other species as either endangered, threatened, species of concern, or of special interest (Ohio Department of Natural Resources (ODNR), 2019).

Federal and State Listed Wildlife Species Clermont County, Ohio			
Common Name	Species	State Status	Federal Status
Indiana Bat	<i>Myotis sodalis</i>	E	E
Eastern Harvest Mouse	<i>Reithrodontomys humulis</i>	T	

Eastern Cricket Frog	<i>Acris crepitans crepitans</i>	SC	
Big Brown Bat	<i>Eptesicus fuscus</i>	SC	
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	SC	
Red Bat	<i>Lasiurus borealis</i>	SC	
Hoary Bat	<i>Lasiurus cinereus</i>	SC	
Prairie Vole	<i>Microtus ochrogaster</i>	SC	
Woodland Vole	<i>Microtus pinetorum</i>	SC	
Little Brown Bat	<i>Myotis lucifugus</i>	SC	
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	T	T
Tri-colored Bat	<i>Perimyotis subflavus</i>	SC	
Deer Mouse	<i>Peromyscus maniculatus</i>	SC	
Southern Bog Lemming	<i>Synaptomys cooperi</i>	SC	
Eastern Box Turtle	<i>Terrapene carolina carolina</i>	SC	
Evening Bat	<i>Nycticeius humeralis</i>	SI	

Ohio Division of Wildlife, Division of Wildlife Database
 Updated June 2016,
 E = Endangered, T = Threatened, SC = Species of Concern, SI = Special Interest

Federal and State Listed Plant Species Clermont County, Ohio			
Common Name	Scientific Name	State Status	Federal Status
Elliott's Bent Grass	<i>Agrostis elliotiana</i>	E	
Red Chokeberry	<i>Aronia arbutifolia</i>	E	
Blue False Indigo	<i>Baptisia australis</i>	E	
Screw-stem	<i>Bartonia paniculata</i>	T	
Sparse-lobed Grape Fern	<i>Botrychium biternatum</i>	E	
Sugarberry	<i>Celtis laevigata</i>	E	
Spring Coral-root	<i>Corallorrhiza wisteriana</i>	P	
Potato-dandelion	<i>Krigia dandelion</i>	T	
Southern Woodrush	<i>Luzula bulbosa</i>	P	
Riverbank Paspalum	<i>Paspalum repens</i>	T	
Fern-leaved Scorpion-weed	<i>Phacelia bipinnatifida</i>	P	
Floating Pondweed	<i>Potamogeton natans</i>	P	
Low Spearwort	<i>Ranunculus pusillus</i>	T	
Missouri Gooseberry	<i>Ribes missouriense</i>	T	
Southern Dewberry	<i>Rubus trivialis</i>	E	
Carolina Willow	<i>Salix caroliniana</i>	P	
Virginia-mallow	<i>Sida hermaphrodita</i>	P	
Snowy Campion	<i>Silene nivea</i>	E	
Showy Goldenrod	<i>Solidago speciosa</i>	P	

Smooth Buttonweed	<i>Spermacoce glabra</i>	P	
Running Buffalo Clover	<i>Trifolium stoloniferum</i>	E	E
Prairie Wake-robin	<i>Trillium recurvatum</i>	P	
Southern Black-haw	<i>Viburnum rufidulum</i>	P	
Ohio Division of Wildlife, Ohio Natural Heritage Database			
Date Accessed: March 6, 2015			
Status based on 2014-15 Rare Plant List			
E = Endangered, T = Threatened, P = Potentially Threatened, X = Extirpated			

3.4.2 Consequences

3.4.2.1 Vegetation

Alternative 1, Construct a New Waste Water Treatment System Adjacent to Existing Wastewater Treatment Facility - Impacts to vegetation will result in the permanent loss of the mature trees and overstory that exists on the site. The trees on the two to three acre site have experienced significant damage caused by the Emerald Ash Borer (EAB). Harsha Lake has entered the stage of EAB infestation that has most, if not all, of the infested trees dead and dropping, or expected to do so within the next two to three years. The U.S. Forest Service reports that the EAB tends to kill trees and have them on the ground within 10 years of infestation. Therefore, this loss of the trees and sparse understory at this site as a result of the proposed action is not considered significant.

As part of the overall environmental stewardships mission at Harsha Lake, USACE personnel are mitigating the loss of the overall larger specimens on USACE fee-owned property by replanting areas that have experienced loss of significant portion of the tree canopy with native understory and shrub species that provide wildlife food and are pollinator host species. While the loss of the larger tree canopy from the proposed action does not represent a significant effect to forested areas at Harsha Lake with respect to the overall forested areas, the replanting efforts will, in part offset the loss of the larger trees on the project site. USACE plants larger trees and shrubs to aid in the prevention of invasive honeysuckle moving into the sites. All of the trees and shrubs used for replanting are Ohio genotypes, and the project staff work with a local nursery that specializes in Ohio natives bred from wild Ohio populations.

Alternative, 7, No Action Alternative - Under the No Action Alternative, the USACE would not implement the proposed action or be able to provide wastewater treatment for the operation of the flood risk management project. Overstory vegetation would eventually succumb to the Emerald Ash Borer impacts and USACE would need to implement replanting of vegetation at this site as an operational land management component of its environmental stewardship program.

3.4.2.2 Wildlife Resources

Alternative 1, Construct a New Waste Water Treatment System Adjacent to Existing Wastewater Treatment Facility - At the preferred site, construction and operation of the septic tank and mound system with a lateral discharge would result in temporary and permanent alteration of wildlife habitat, as well as direct impact on wildlife species including disturbance,

displacement, and potential mortality. The clearing of vegetation would reduce cover, nesting, and foraging habitat for some wildlife. During construction, the more mobile species would be displaced from the construction work areas and move to surrounding areas having similar habitats nearby. Some wildlife displaced would return to the newly disturbed area and adjacent, undisturbed habitats soon after completion of construction; however, with a change from a forested habitat to more open field area, different wildlife species are expected to be present. The less mobile species, such as small mammals, reptiles, and amphibians, and bird nests would be lost by construction activities.

The clearing of forest/woodland habitat for the septic system would result in a change of forested wildlife habitats to herbaceous and shrub cover habitat types. A total of two to three acres of upland forest would be cleared and converted to herbaceous cover types, and maintained in this condition through the lifetime of the system and through vegetation maintenance. The principal impact of the clearing on wildlife would be a change in species using the site-specific area from those favoring forest habitats to those using edge habitats and more open areas. Many species adapt well to this habitat reversal and take advantage of the increased populations of small mammals that prefer open areas. Species that do not adapt well to habitat reversal would not be significantly affected because of the abundance of similar habitat to what is being cleared in the immediate area. Predatory species such as red-tailed hawk, great horned owl, coyote, and gray fox commonly use utility rights-of-way for hunting. Overall, the impact to wildlife species at the preferred location for the new wastewater treatment system and overall within the Harsha Lake project area would be negligible.

Alternative, 7, No Action Alternative - Under the No Action Alternative, the USACE would not implement the proposed action or be able to provide wastewater treatment for the operation of the flood risk management project. Wildlife in the area would not be affected by the proposed action and the species present in the project area would continue to remain (unless otherwise affected by the EAB damage to the forested habitat).

3.4.2.3 Endangered and Threatened Species

Rayed Bean, Fanshell, Pink Mucket, Sheepnose, Snuffbox. None of the five freshwater mussels are found in the upland forest habitat. There will be no effect on the species and/or critical habitat from either Alternative 1 or the No Action Alternative.

Indiana Bat and Northern Long-eared Bat. The project location is outside the designated critical habitat for the Endangered Indiana Bat, and there is no designated critical habitat for the Threatened Northern Long-eared Bat. There are no known hibernacula, and the activity will not affect caves.

For the Northern Long-eared bat, the USFWS section 7 consultation was completed under the streamlined consultation process using the online Northern Long-Eared Bat 4(d) rule determination key. In Ohio, the USFWS's IPaC System indicates if a project is located near a known hibernaculum or maternity roost tree. The project is not located near a hibernaculum or maternity roost trees. The IPaC determination key indicated the project may affect the threatened Northern long-eared bat; therefore, consultation with the Service pursuant to Section 7(a)(2) of

the Endangered Species Act of 1973 (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) is required. Based on the project specifics, the proposed action is consistent with the Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions. Under this Programmatic Biological Opinion, no further action is required if tree removal for the project is limited to the designated window. To minimize the potential for impact to summer habitat, USFWS requires tree removal activities to occur outside of the pup season (June 1 to September 29).

USACE determines the project may affect, but is not likely to adversely affect the Indiana Bat. The U.S. Fish and Wildlife Service concurred on April 25, 2019, with USACE's determination that the project, as proposed, is not likely to adversely affect the endangered Indiana bat (*Myotis sodalis*) based on the implementation of a commitment to cut all trees greater than three inches dbh only between October 1 and March 31 to avoid adverse effects to the Indiana bat.

Running buffalo clover (RBC). Running buffalo clover is found in Ohio, and in Indiana, Kentucky, Missouri, and West Virginia. Clermont County, Ohio is listed within the range of Running buffalo clover by the USFWS.

Running buffalo requires periodic disturbance and a somewhat open habitat to successfully flourish, but it cannot tolerate full-sun, full-shade, or severe disturbance. Historically Running buffalo clover was found in rich soils in the ecotone between open forest and prairie. The USFWS reports that Running buffalo clover occurs in mesic habitats with partial to filtered sunlight, where there is a prolonged pattern of moderate, periodic disturbance, such as mowing, trampling, or grazing. It is most often found in regions underlain with limestone or other calcareous bedrock, but not exclusively. It has been reported from a variety of habitats, including mesic woodlands, savannahs, floodplains, stream banks, sandbars (especially where old trails cross or parallel intermittent streams), grazed woodlots, mowed paths (e.g. in cemeteries, parks, and lawns), old logging roads, jeep trails, skidder trails, mowed wildlife openings within mature forest, and steep ravines.

For the Running Buffalo Clover at Harsha Lake, project staff indicate the species was reported in the northeast section of the lake and not within the designated operations area of the project where this project would occur. The northeast area of the lake is a significant distance from the project area. Consultation with project staff and qualified Running Buffalo Surveyors in Ohio indicate that with the canopy layer and the amount of leaf litter the site appears to be too dense and wooded for the wooded for RBC, and this species is not likely to colonize even if the site thins out. Informal consultation with the USFWS indicates the project area to contain too much leaf litter, and to be too dense and wooded for RBC to occur or colonize. Based on this consultation, USACE concludes the proposed action would have no effect on the Running Buffalo Clover.

State-listed species occurring in the project area are not expected to experience a significant reduction in available supporting habitats and are not likely to experience adverse impact. Although there are state-listed species that may be present in Clermont County, USACE staff has no records of these species in the project area. There are no adverse impacts to these species that are expected from the proposed action. This EA will be provided to the Ohio Department of

Natural Resources (ODNR) for comment during the 30-day public review period, and USACE will address any ODNR concerns in the final EA prior to signing a FONSI.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. To avoid the potential take of the six species that may potentially occur in the project area, cutting of trees would be delayed until after August 31, similar to the window for protection of potential summer habitat for the federally threatened and endangered bats.

3.5 WATER RESOURCES

3.5.1 Affected Environment

This section describes groundwater and surface water resources in the project area.

3.5.1.1 Groundwater

In Clermont County, Ohio, in general, a large part of the county is served by regional water systems. In the area surrounding the project area, groundwater well yields seldom exceed three gallons per minute. The underlying bedrock consists of interbedded plastic shales and thin limestone layers. If water is present in the rock, it usually occurs in the upper few feet where the strata have been somewhat weathered and broken. Many wells are inadequate (Ohio Department of Natural Resources, 1986). The depth to the water table at the site is greater than 72 inches.

The Clermont County drinking water treatment plant in Batavia Township draws water from Harsha Lake, and was upgraded in 2012 and retrofitted with granular activated carbon filtration. This public water supply well can withdrawal between up to 18 million gallons of water per day to supply the demands within Clermont County.

3.5.1.2 Surface water

The site is located in an upland habitat adjacent to Slade Road. There are no perennial waterbodies on site. An intermittent drainage bisects the section of land considered for placement of the mound system.

3.5.2 Consequences

3.5.2.1 Groundwater

Alternative 1, Construct a New Waste Water Treatment System Adjacent to Existing Wastewater Treatment Facility – Groundwater will not be adversely affected by the installation and utilization of the wastewater treatment field. The contractor working on behalf of USACE will obtain an Ohio EPA Permit-to-Install an onsite sewage treatment and dispersal system. The Board of Health of the Clermont County General Health District regulations for sewage treatment systems involve the siting, design, installation, alteration, operation, monitoring, maintenance, and abandonment of a sewage treatment system to protect public health and the environment. Once constructed in accordance with State and local permits, the proposed septic treatment system would have no significant impact on groundwater resources.

Alternative, 7, No Action Alternative - Under the No Action Alternative, the USACE would not implement the proposed action or be able to provide wastewater treatment for the operation of the flood risk management project. There would be no changes in groundwater resources.

3.5.2.2 Surface Water

Alternative 1, Construct a New Waste Water Treatment System Adjacent to Existing Wastewater Treatment Facility – There are no perennial waterbodies on the site. An intermittent drainage ravine bisects the property that flows with rain storms. The project site is on the side slope of a high terrace overlooking the Harsha Lake outlet works. Proper drainage from the site will be integrated into the project design. There are no identified adverse effects to surface water runoff for the site that would result with the implementation of Alternative 1.

Alternative 7, No Action Alternative – Under the No Action Alternative, there would be no construction or operational impacts to the site. USACE would not implement the proposed action or be able to provide wastewater treatment for the operation of the flood risk management project.

3.6 HISTORIC AND ARCHAEOLOGICAL RESOURCES

3.6.1 Affected Environment

The proposed project area is located northwest of the William H. Harsha Lake visitor center on the west side of Slade Road. The project area includes three potential areas within the two to three acre location proposed for the waste water treatment facility. The proposed archaeological Area of Potential Effects (APE) measures approximately four acres and consists of: (1) the three areas proposed for the waste water treatment facility under Alternative 1; (2) the existing waste water treatment site; and (3) the contractor laydown area.

3.6.2 Consequences

Alternative 1, Construct a New Waste Water Treatment System – A Phase 1 archaeological survey of the proposed wastewater treatment site at Harsha Lake was completed on March 21, 2019. This archaeological survey was completed in compliance with the requirements of Section 106 and 110 of the National Historic Preservation Act of 1966 (as amended). The work conducted followed the professional standards and guidelines in the Secretary of the Interior Standards and Guidelines for Archaeology and Historic Preservation (Secretary of the Interior 1983) and the Ohio Historical Society's Archaeology Guidelines (Ohio Historic Preservation Office 1994). The survey was performed by personnel from the United States Army Corps of Engineers-Louisville District (USACE). Appendix A includes the report and the results of the Phase 1 archaeological survey.

The objective of the survey was to identify any prehistoric and historic sites that could be eligible for the National Register of Historic Places (NRHP) within the APE. This objective was met through a literature review and records search to identify any known cultural resources and a field survey to locate any previously unknown cultural resources in the project area.

The USACE archaeological survey of the APE revealed no evidence of significant prehistoric or historic sites. Given the negative results of the USACE archaeological survey of the APE, no further cultural resources studies were recommended. The Ohio State Historic Preservation Office (SHPO) concurred with this recommendation in a letter dated April 15, 2019. The SHPO agrees that further archaeological investigations are not required and that this project will not affect historic properties. USACE also coordinated with the following Tribes regarding the project in an email dated April 18, 2019: Osage Nation, Absentee-Shawnee Tribe of Oklahoma, Eastern Shawnee Tribe of Oklahoma, Shawnee Tribe of Oklahoma, Citizen Potawatomi Nation, Forest County Potawatomi, Hannahville Indian Community, Gun Lake Tribe, Nottawaseppi Huron Band of Potawatomi, Pokagon Band of Potawatomi, Miami Tribe of Oklahoma, Saginaw Chippewa Indian Tribe of Michigan, Lac Vieux Desert Band of Lake Superior, Lac du Flambeau Band of Lake Superior, Sault Ste Marie Tribe of Chippewa, Bad River Band of Lake Superior Chippewa, Keweenaw Bay Indian Community, Lac Courte Oreilles Band of Chippewa, Red Cliff Band of Lake Superior Chippewa, Red Lake Chippewa, St. Croix Chippewa, Fon du lac Band of Lake Superior, Bois Fort Band of Chippewa, Grand Portage Band of Lake Superior Chippewa, Leech Lake Band of Ojibwe, Mille Lacs Band of Ojibwe, Grand Traverse Band of Ottawa and Chippewa, Little River Band of Ottawa, Ottawa Tribe of Oklahoma, Little Traverse Bay Band of Odawa, Peoria Tribe of Oklahoma, Sac and Fox Tribe of Mississippi in Iowa, Sac and Fox Nation of Oklahoma, Oneida Nation of New York, Oneida Nation of Wisconsin, Delaware Nation of Oklahoma, Delaware Tribe of Indiana Oklahoma, and Wyandotte Nation of Oklahoma. We are awaiting response from these Tribes. No further coordination is required for the project unless the scope of work changes or archaeological remains are discovered during the course of the project. The SHPO concurrence letter is included in Appendix A.

Alternative 7, No Action Alternative – Under the No Action Alternative, USACE would not implement the proposed action or be able to provide wastewater treatment for the operation of the flood risk management project. As there would be no construction or operational impacts to the site, there would be no impacts to cultural or archaeological resources.

3.7 SOCIOECONOMIC RESOURCES

3.7.1 Affected Environment

Socioeconomic factors include economic development, demographics, housing, quality of life, environmental justice, and protection of children.

Environmental justice is the fair treatment for people of all races, cultures, and incomes, regarding the development and implementation (or lack thereof) of environmental laws, regulations, and policies. Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, directs Federal agencies to address environmental and human health conditions in minority and low-income communities. EO 12898 states that federal agencies would collect and analyze information concerning a project's effects on minorities or low-income groups when required by NEPA. If such investigations find that minority or low-income groups experience a disproportionate adverse effect, then avoidance or mitigation measures are necessary.

Executive Order 13045, *Protection of Children from Environmental Health and Safety Risks*, requires federal agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks that might disproportionately affect children. The Army takes special precautions for the safety of children, including the use of fencing and signage.

3.7.2 Consequences

USACE considers the potential social and economic impacts to communities that would result if the proposed action were implemented. The socioeconomic impacts are considered significant if the proposed action would cause:

- Substantial gains or losses in population and/or employment; or
- Disequilibrium in the housing market, such as severe housing shortages or surpluses, resulting in substantial property value changes.

Potential environmental justice impacts are considered significant if the proposed action would cause disproportionate effects on low-income and/or minority populations.

Potential impacts to protection of children are considered significant if the preferred alternative would cause environmental health and safety risks that might disproportionately affect children. USACE takes special precautions for the safety of children, including the use of fencing and signage.

Alternative 1, Construct a New Waste Water Treatment System – Social and economic impacts. The proposed action will be located on existing federal fee-owned lands. Its implementation is an important component of the facilities that support project operations and recreational opportunities for the public. Implementing this alternative would not result in substantial gains or losses in local populations and employment opportunities in the region. Neither would it support a disequilibrium in the local housing market that would negatively affect available housing, or result in a severe housing shortages or surplus that would have a substantial property value changes. There is no expected change in the social or economic conditions in the region with implementation of the project.

Environmental justice impacts - There have been no adverse impacts identified with would affect low income or minority populations that use the recreational areas of Harsha Lake.

Impacts to protection of children - To ensure the safety of children, USACE will install signage that identifies the project area to be for authorized personnel only, and warning signs near the back of the property to identify the dangers of the steep drop off. USACE will evaluate the need for implanting safety fence at the back section of the property where the slope takes a direct increase.

Implementing this alternatives is not expected to adversely affect the region or local economic development, demographics, housing, quality of life, environmental justice, and the protection of children from increased environmental health and safety risks.

Alternative 7, No Action Alternative – Under the No Action Alternative, USACE would not implement the proposed action or be able to provide wastewater treatment for the operation of the flood risk management project. There would be no construction or operational impacts to the site, and no change to the current conditions that would change the current socioeconomic conditions.

3.8 AESTHETICS AND VISUAL RESOURCES

3.8.1 Affected Environment

The site is bordered by the existing WWTP and materials storage yard, Slade Road, and by older forest vegetation affected by EAB infestation with a generally open understory.

3.8.2 Consequences

Alternative 1, Construct a New Waste Water Treatment System – The potential impact on visual and aesthetic resources associated with construction and operation of the septic tank and mound system with a lateral discharge is primarily from the permanent change of forest vegetation to open field. The visual and aesthetic impact would be moderate, especially from viewpoints along roadways where a vegetation strip of approximately 50 feet would be maintained between the road and the open nature of a septic field. Construction of the mound system is not expected to result in the removal of identified larger trees that occur within the footprint. Generally, visual impact resulting from construction would be temporary and confined to the construction period. Only a minor impact on visual and aesthetic resources would be associated with final installation of the septic tank and mound system.

Alternative 7, No Action Alternative – Under the No Action Alternative, USACE would not implement the proposed action or be able to provide wastewater treatment for the operation of the flood risk management project. As there would be no construction or operational impacts to the site, no impacts to visual and aesthetic resources would occur.

3.9 AIR QUALITY

3.9.1 Affected Environment

Ambient air quality is protected by Federal and State regulations. The US Environmental Protection Agency (EPA) has developed the National Ambient Air Quality Standards (NAAQS) for certain air pollutants; state air quality standards cannot be less stringent than the NAAQS.

Clermont County, Ohio is in non-attainment status for Ozone. Part of the county is in non-attainment status for Sulfur Dioxide, but this designated area is outside of the Harsha Lake area (EPA, 2019a; EPA, 2019b; EPA, 2019c).

3.9.2 Consequences

Alternative 1, Construct a New Waste Water Treatment System - Clean Air Act compliance, specifically with EPA's General Conformity Rules, requires that all Federal agencies, including

the Department of the Army review their actions that take place in non-attainment or maintenance areas for conformity with state plans to attain and maintain national standards for air quality. If the total direct and indirect emissions caused by the operation of the facility are less than de minimis levels established in the rule, then a Record of Non-Applicability is prepared and signed by the installation's environmental coordinator (Appendix B). EPA has allowed that certain actions are exempt from the General Conformity Rule because the expected air emissions are not likely to impact the State Implementation Plan. The list of exempt actions appears in 40 CFR 93.153 (c), and includes the action to be conducted at Harsha Lake for the wastewater treatment system. Air quality is not expected to be impacted by the proposed action.

Alternative 7, No Action Alternative – Under the No Action Alternative, USACE would not implement the proposed action and there would be no impacts to air quality.

3.10 CLIMATE CHANGE

3.10.1 Affected Environment

The regional climate where Harsha Lake is located is humid and temperate. The mean annual precipitation ranges from 889 to 1143 mm (35 to 45 inches) with the mean annual air temperature ranges from 52 to 57 degrees F (11 to 14 degrees C). The elevation is 600 to 1,300 feet (183 to 396 meters) above mean sea level.

3.10.2 Consequences

Alternative 1, Construct a New Waste Water Treatment System – It is the policy of USACE to integrate climate change adaptation planning and actions into the Agency's missions, operations, programs, and projects. USACE projects, programs, missions, and operations have generally proven to be robust enough to accommodate the range of natural climate variability over their operating life spans. Recent scientific evidence shows that in some places and for some impacts relevant to USACE operations, climate change is shifting the climatological baseline about which that natural climate variability occurs, and may be changing the range of that variability as well. This is relevant to USACE because the assumptions of stationary climatic baselines and a fixed range of natural variability as captured in the historic hydrologic record may no longer be appropriate for long-term projections of the climatologic parameters, which are important in hydrologic assessments for inland watersheds, such as the East Fork and Little Miami River Valleys.

A January 2015 report by the USACE Institute for Water Resources summarizes the available literature for the Ohio Region, which includes the East Fork and Little Miami River Valleys, within the Ohio River Basin. The report focuses on both observed climatic trends, as well as projected future findings. The report finds a strong consensus supporting trends of increasing air temperatures. Average minimum temperatures are expected to experience a small increase, while temperature maximums are predicted to undergo a large increase. Projected increases of mean annual air temperature range from 0 to 8°C by the latter half of the 21st century. Projections regarding precipitation and hydrologic streamflow trends are less certain, with some studies calling for increases whereas others call for decreases.

USACE's Screening-Level Climate Change Vulnerability Assessment Tool at the Watershed-Scale for the Southeast US region presents a high-level summary of the major trends projected to occur from climate change. Among the trends are changes in precipitation, temperature, flooding and drought at the national level, sediments and soil quality, water quality, vegetation, and wildlife. The VA Tool targets increasing temperatures and the associated increase in frequency, intensity, and duration of extreme heat events that will affect several resources, including forestry. The narrative to support the climate assessment indicates that the forest disturbances caused by insects and pathogens are altered by climate changes due to factors such as increased tree stress, shifting phenology, and altered insect and pathogen lifecycles. Current knowledge provides limited insights into specific impacts on epidemics, associated tree growth and mortality, and economic loss in the Southeast. Due to southern forests' vast size and the high cost of management options, climate adaptation strategies are limited, except through post-epidemic management responses – for example, sanitation cuts and species replacement. Accordingly, the narratives suggests increases in temperatures and the associated increase in extreme heat events will affect many components of the natural and built environment in the Southeast.

The area of Alternative 1 is an existing forest area. The potential effects to the overall watershed from the conversion of two to three acres that is undergoing significant mortality of large tree species from EAB infestations to a grassy leach field mound system is difficult to conclude as a significant contributor to increasing temperatures within the Ohio River Basin. Overall, no strong signal exists to indicate what definitive impacts climate change will have that result from climate change temperature increases in the project area, or how the project could contribute to increases in temperature for the overall Ohio River Basin. The small size of the impact area is considered negligible. Based on the review of material, the recommendation is to treat the potential effects related to climate change as occurring within a range of uncertainty.

Alternative 7, No Action Alternative – Under the No Action Alternative, USACE would not implement the proposed action or be able to provide wastewater treatment for the operation of the flood risk management project. As there would be no construction or operational impacts to the site, no impacts related to climate change are expected.

3.11 CUMULATIVE EFFECTS

Federal agencies must consider the cumulative effects of the proposed project on the environment as stipulated in NEPA and its implementing regulations. Cumulative effects are "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or Non-Federal) or person undertakes such actions". Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR Part 1508.7 Council on Environmental Quality [CEQ] Regulations).

The cumulative effects analysis is based on the potential effects of the proposed project when added to similar impacts from other projects in the region. An inherent part of the cumulative effects analysis is the uncertainty surrounding actions that have not yet been fully developed. The CEQ regulations provide for the inclusion of uncertainties in the analysis and states that

"when an agency is evaluating reasonably foreseeable significant adverse effects on the human environment...and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking" (40 CFR 1502.22).

The wastewater collection system at Harsha Lake is a self-contained system. There are no identified past and present actions from regional or local developments that would tie into Harsha Lake system. There are no identified actions involving the need for further improvements to the self-contained wastewater treatment system at the WH Harsha Lake. Additional restroom facilities may be added for public use at the existing project visitor center; however, the wastewater treatment system evaluated in the EA is designed to accommodate future increases. If USACE determines additional restroom facilities are necessary to support recreational activities in the immediate area, this could represent a "reasonably foreseeable future action." Because these two scope and size of these type of actions is relatively minor, the cumulative effects of these two actions are expected to be insignificant. There are no other known past projects or reasonably anticipated future projects in the area that, when considered along with the proposed action, would be expected to result in any significant adverse cumulative effects.

4.0 CONSULTATION

The following agencies were provided copies of the Notice of Availability and/or copies of the Environmental Assessment to request comments on the proposed federal action. Responses to comments received during the 30-day public review period will be included in this section prior to the District Engineer's decision on whether to sign a Finding of No Significant Impact or to complete an Environmental Impact Statement based on the evaluation of impacts and public comments.

US Fish and Wildlife Service
US Natural Resources Conservation Service
Ohio Department of Natural Resources

5.0 ACTIONS TO MINIMIZE ENVIRONMENTAL IMPACTS

The following activities will be incorporated into the project to minimize the potential for adverse environmental effects.

1. The selected contractor will be required to obtain all permits for the wastewater treatment plant replacement. These include at a minimum:
 - Ohio EPA Permit-to-Install an onsite sewage treatment and dispersal system.
 - Ohio EPA National Pollutant Discharge Elimination System (NPDES) permit to discharge stormwater from construction activities for construction activities that disturb more than one acre of land.
 - Stormwater Pollution Prevention Plan, Notice of Intent, and incorporation of best management practices for sediment and erosion control.

2. Avoid site clearing between April 1 and September 30 to protect the potential summer habitat for the Threatened Northern Long-eared Bat, and potential nesting and breeding migratory birds.

6.0 REFERENCES

- Land, Brenda. 2004. Micro-flush toilets. Tech Tip 0423–1310P–SDTDC. San Dimas, CA: U.S. Department of Agriculture, Forest Service, San Dimas Technology and Development Center. 4p. <<https://www.fs.fed.us/eng/pubs/html/04231310/04231310.html>>
- Marks, K. 2013. Resources to help prevent flooding of vault toilets in recreation sites on national forests.1373–2314–MTDC. Missoula, MT: U.S. Department of Agriculture, Forest Service, Missoula Technology and Development Center. 4 p.
<<https://www.fs.fed.us/t-d/pubs/pdfpubs/pdf13732314/pdf13732314Pdpi150.pdf>>
- U.S. Environmental Protection Agency. 2019a. Ohio Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants.
https://www3.epa.gov/airquality/greenbook/anayo_oh.html
- U.S. Environmental Protection Agency. 2019b. Sulfur Dioxide (2010) Designated Area Partial County Descriptions.
<<https://www3.epa.gov/airquality/greenbook/tbp.html#SO2.2010.Cincinnati>>
- U.S. Environmental Protection Agency. 2019c. Current Nonattainment Counties for All Criteria Pollutants. Data is current as of March 31, 2019
<<https://www3.epa.gov/airquality/greenbook/ancl.html>>
- U.S. Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey. 2019. Clermont County, Ohio. National Cooperative Soil Survey.
- Ohio Department of Natural Resources, Division of Geological Survey. 2006. Bedrock geologic map of Ohio: Ohio Department of Natural Resources, Division of Geological Survey Map BG-1, generalized page-size version with text, 2 p., scale 1:2,000,000. [Revised 2017.]
- Ohio Department of Natural Resources, Division of Wildlife. 2019. East Fork Wildlife Area.
<<http://wildlife.ohiodnr.gov/eastforkwa#tabr3>>
- Ohio Department of Natural Resources, Division of Wildlife. 2019. State Listed Wildlife and Plant Species by County. <http://wildlife.ohiodnr.gov/species-and-habitats/state-listed-species/state-listed-species-by-county>
- U.S. Army Corps of Engineers. 1999. Engineer Manual 1110-2-501, Design, Construction, and Operation, SMALL WASTEWATER SYSTEMS.
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2019. Official Soil

Series Description: Cincinnati Fine-Silty, Mixed, Active, Mesic Oxyaquaic Fragiudalf.
https://soilseries.sc.egov.usda.gov/OSD_Docs/C/CINCINNATI.html

U.S. Fish and Wildlife Service. 2019. The Information, Planning, and Consultation System (IPAC System). Accessed March 2019.

U.S. Fish and Wildlife Service. 2005. Running buffalo clover (*Trifolium stoloniferum*) Draft Recovery Plan: First Revision. U.S. Fish and Wildlife Service, Fort Snelling, MN. 65 pp.

U.S. Fish and Wildlife Service. 2003. Running buffalo clover (*Trifolium stoloniferum*) Fact Sheet. U.S. Fish and Wildlife Service, Fort Snelling, MN.

Walker, A.C. Ohio Department of Natural Resources. 1986. Ground-Water Resources of Clermont County. Orr, D. Cartography.
<http://water.ohiodnr.gov/portals/soilwater/pdf/maps/groundwater/Clermont_GWR_27x40.pdf>

7.0 COMPLIANCE WITH FEDERAL ENVIRONMENTAL STATUTES, EXECUTIVE ORDERS AND EXECUTIVE MEMORANDA

FEDERAL STATUTES

Archaeological Resources Protection Act of 1979, as amended, 16 USC 470 et seq.

Compliance: A survey was conducted by a USACE archaeologist and coordinated with the Ohio State Historic Preservation Office.

Preservation of Historic and Archeological Data Act of 1974, as amended, 16 U.S.C. 469 et seq.

Compliance: The proposed federal action has been coordinated with the Ohio State Historic Preservation Office.

American Indian Religious Freedom Act of 1978, 42 U.S.C. 1996.

Compliance: Must ensure access by Native Americans to sacred sites, possession of sacred objects, and the freedom to worship through ceremonials and traditional rites, if identified.

Clean Air Act, as amended, 42 U.S.C. 7401 e t seq.

Compliance: Public notice of the availability of this report to the Environmental Protection Agency is required for compliance pursuant to Sections 176c and 309 of the Clean Air Act.

Clean Water Act of 1977 (Federal Water Pollution Control Act Amendments of 1972) 33 U.S.C. 1251 e t s eq.

Compliance: There is no fill into wetlands or waters of the U.S., or discharge of pollutants into waters of the U.S. associated with the proposed action. The Clean Water Act will not apply to the proposed action.

Coastal Zone Management Act of 1982, as amended, 16 U.S.C. 1451 et s eq.

Compliance: Not Applicable. The project does not occur in the coastal zone.

Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 e t seq.

Compliance: The U.S. Fish and Wildlife Service (USFWS) concurrence with the determination of effects to federally listed species, pursuant to section 7(a)(2) of the Endangered Species Act of 1973, as amended (ESA) as outlined in the EA on April 25, 2019. Coordination with the National Marine Fisheries Service (NMFS) pursuant to Section 7 of the Endangered Species Act is not required.

Estuarine Areas Act, 16 U.S.C. 1221 e t seq.

Compliance: Not Applicable. This report is not being submitted to Congress.

Federal Water Project Recreation Act, as amended, 16 U.S.C. 4601-12 e t seq.

Compliance: Public notice of availability of the EA to the National Park Service (NPS) and Office of Statewide Planning relative to the Federal and State comprehensive outdoor recreation plans signifies compliance with this Act.

Fish and Wildlife Coordination Act, as amended, 16 U.S.C. 661 e t s eq.

Compliance: Coordination and full consideration of comments from the US Fish and Wildlife Service and Ohio Department of Natural Resources signifies compliance with the Fish and Wildlife Coordination Act.

Land and Water Conservation Fund Act of 1965, as amended, 16 U.S.C. 4601-4 e t seq.

Compliance: Public notice of the availability of this report to the National Park Service (NPS) and the Office of Statewide Planning relative to the Federal and State comprehensive outdoor recreation plans signifies compliance with this Act.

Marine Protection, Research, and Sanctuaries Act of 1971, as amended, 33 U.S.C. 1401 e t seq.

Compliance: Not Applicable. The proposed action does involve the transportation or disposal of dredged material in ocean waters pursuant to Sections 102 and 103 of the Act, respectively.

National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470 et seq.

Compliance: This proposed action has been coordinated with the Ohio State Historic Preservation Office. The Ohio State Historic Preservation Office concurred with the results of the archaeological survey carried out by USACE archaeologist in a letter dated April 15, 2019. USACE also coordinated with the following Tribes regarding the project in an email dated April 18, 2019: Osage Nation, Absentee-Shawnee Tribe of Oklahoma, Eastern Shawnee Tribe of Oklahoma, Shawnee Tribe of Oklahoma, Citizen Potawatomi Nation, Forest County Potawatomi, Hannahville Indian Community, Gun Lake Tribe, Nottawaseppi Huron Band of Potawatomi, Pokagon Band of Potawatomi, Miami Tribe of Oklahoma, Saginaw Chippewa Indian Tribe of Michigan, Lac Vieux Desert Band of Lake Superior, Lac du Flambeau Band of Lake Superior, Sault Ste Marie Tribe of Chippewa, Bad River Band of Lake Superior Chippewa, Keweenaw Bay Indian Community, Lac Courte Oreilles Band of Chippewa, Red Cliff Band of Lake Superior Chippewa, Red Lake Chippewa, St. Croix Chippewa, Fon du lac Band of Lake Superior, Bois Fort Band of Chippewa, Grand Portage Band of Lake Superior Chippewa, Leech Lake Band of Ojibwe, Mille Lacs Band of Ojibwe, Grand Traverse Band of Ottawa and Chippewa, Little River Band of Ottawa, Ottawa Tribe of Oklahoma, Little Traverse Bay Band of Odawa, Peoria Tribe of Oklahoma, Sac and Fox Tribe of Mississippi in Iowa, Sac and Fox Nation of Oklahoma, Oneida Nation of New York, Oneida Nation of Wisconsin, Delaware

Nation of Oklahoma, Delaware Tribe of Indiana Oklahoma, and Wyandotte Nation of Oklahoma.

Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. 3000-3013, 18 U.S.C. 1170

Compliance: Regulations implementing NAGPRA will be followed if discovery of human remains and/or funerary items occur during implementation of this project.

National Environmental Policy Act of 1969, as amended, 42 U.S.C 4321 et seq.

Compliance: Preparation of the Environmental Assessment signifies partial compliance with NEPA. Full compliance shall be noted at the time the Finding of No Significant Impact is signed by the District Commander.

Rivers and Harbors Act of 1899, as amended, 33 U.S.C. 401 et seq.

Compliance: Not Applicable. No requirements for projects or programs authorized by Congress. The project is operated pursuant to the Congressionally-approved authority.

Watershed Protection and Flood Prevention Act as amended, 16 U.S.C 1001 et seq.

Compliance: Floodplain impacts have been considered in project planning. The project does not occur in the floodplain.

Wild and Scenic Rivers Act, as amended, 16 U.S.C 1271 et seq.

Compliance: Not applicable. The project does not impact waters of the U.S. Coordination with the Department of the Interior is not required for the activity.

Magnuson-Stevens Act, as amended, 16 U.S.C. 1801 et seq.

Compliance: Not applicable. The project does not require coordination with the National Marine Fisheries Service for an Essential Fish Habitat (EFH) Assessment.

EXECUTIVE ORDERS

Executive Order 11593, Protection and Enhancement of the Cultural Environment, 13 May 1971

Compliance: Coordination with the Kentucky Historic Preservation Officer in the process of implementing the consultation requirements of the PEA signifies compliance.

Executive Order 11988, Floodplain Management, 24 May 1977 amended by Executive Order 12148, 20 July 1979.

Compliance: Public notice of the availability of this report for public review fulfills the requirements of Executive Order 11988, Section 2(a) (2).

Executive Order 11990, Protection of Wetlands, 24 May 1977.

Compliance: Public notice of the availability if this report for public review fulfills the requirements of Executive Order 11990, Section 2 (b).

Executive Order 12114, Environmental Effects Abroad of Major Federal Actions, 4 January 1979.

Compliance: Not applicable to projects located in the United States geographical boundaries.

Executive Order 12898, Environmental Justice, 11 February 1994.

Compliance: The project will not have a significant impact on minority or low-income population, or any other population in the United States.

Executive Order 13007, Accommodation of Sacred Sites, 24 May 1996

Compliance: Consultation with Federally Recognized Indian Tribes, where appropriate, signifies compliance. Coordination with Tribal Nations is in progress for the proposed action. A final determination will be made on accommodations necessary for any sacred sites at the signing of a FONSI for the proposed action.

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. 21 April, 1997.

Compliance: Not applicable. The project would not create a disproportionate environmental health or safety risk for children.

Executive Order 13061, and Amendments – Federal Support of Community Efforts along American Heritage Rivers

Compliance: Not Applicable. The project is in an upland forest and not along a designated American Heritage River.

Executive Order 13112, Invasive Species, 3 February 1999

Compliance: The proposed action would not violate this EO.

Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, 6 November 2000.

Compliance: Consultation with Indian Tribal Governments, where applicable, and consistent with executive memoranda, DoD Indian policy, and USACE Tribal Policy Principles signifies compliance.

EXECUTIVE MEMORANDUM

Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing NEPA, 11 August 1980.

Compliance: There are no Prime or Unique Agricultural Lands affected by the action.

White House Memorandum, Government-to-Government Relations with Indian Tribes, 29 April 1994.

Compliance: Consultation with Federally Recognized Indian Tribes, where appropriate, signifies compliance.