

# Environmental Assessment for the 2023 Eufaula Lake Supplement to the 2013 Shoreline Management Plan

Arkansas River Basin

Pittsburg, McIntosh, Haskell, Latimer, Muskogee, and Okmulgee Counties,  
Oklahoma

2023



US Army Corps  
of Engineers®  
Tulsa District

## ENVIRONMENTAL ASSESSMENT ORGANIZATION

This Environmental Assessment (EA) evaluates the potential environmental and socioeconomic impacts of the 2023 Eufaula Lake Supplement. This EA would facilitate the decision process regarding the Proposed Action and alternatives.

- SECTION 1*      *INTRODUCTION* of the Proposed Action summarizes the purpose of and need for the Proposed Action, provides relevant background information, and describes the scope of the EA.
- SECTION 2*      *PROPOSED ACTION AND ALTERNATIVES* examines alternatives for implementing the Proposed Action and describes the recommended alternative.
- SECTION 3*      *AFFECTED ENVIRONMENT* describes the existing environmental and socioeconomic setting.
- ENVIRONMENTAL CONSEQUENCES* identifies the potential environmental and socioeconomic effects of implementing the Proposed Action and alternatives.
- SECTION 4*      *CUMULATIVE IMPACTS* describes the impact on the environment that may result from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions.
- SECTION 5*      *COMPLIANCE WITH ENVIRONMENTAL LAWS* provides a listing of environmental protection statutes and other environmental requirements.
- SECTION 6*      *IRRETRIEVABLE AND IRREVERSIBLE COMMITMENT OF RESOURCES* identifies any irreversible and irretrievable commitments of resources that would be involved in the Proposed Action
- SECTION 7*      *PUBLIC AND AGENCY COORDINATION* provides a listing of individuals and agencies consulted during preparation of the EA.
- SECTION 8*      *REFERENCES* provides bibliographical information for cited sources.
- SECTION 9*      *ACRONYMS/ABBREVIATIONS*
- SECTION 10*     *LIST OF PREPARERS* identifies persons who prepared the document and their areas of expertise.
- ATTACHMENT A* National Environmental Policy Act (NEPA) Coordination and Scoping

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**ENVIRONMENTAL ASSESSMENT**  
**2023 Shoreline Management Plan Supplement**

**Eufaula Lake**  
**Pittsburg, McIntosh, Haskell, Latimer, Muskogee, and Okmulgee Counties,**  
**Oklahoma**

**SECTION 1: INTRODUCTION**

The United States Army Corps of Engineers (USACE) is proposing to supplement the 2013 Eufaula Lake Shoreline Management Plan (SMP). The 2023 Supplement is an update to the 2013 SMP. The existing 2013 SMP serves as a strategic land use management document that guides the efficient, cost-effective, comprehensive management, development, and use of recreation, natural resources, and cultural resources along the shoreline throughout the life of the Eufaula Lake project. It is a vital tool for responsible stewardship and sustainability of the project's natural and cultural resources, as well as the provision of outdoor recreation facilities and opportunities on federal land associated with Eufaula Lake for the benefit of present and future generations. The 2013 Master Plan (MP) and 2013 Environmental Impact Statement (EIS) are incorporated in this document by reference. The analysis, impacts, and information presented within this SMP supplemental EA, although subservient and complimentary to the 2013 MP will provide the Tulsa District with the necessary information to implement management decisions in compliance with each document's analysis.

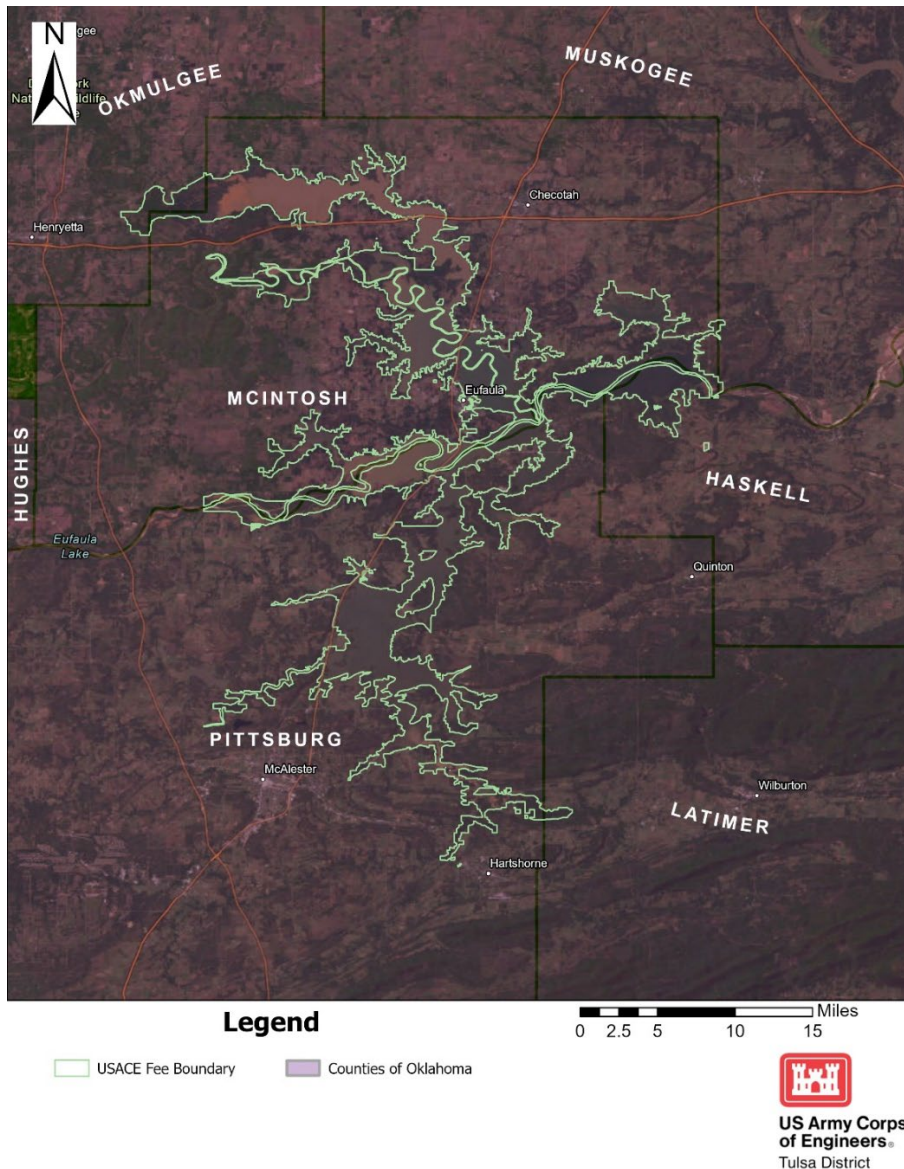
Adoption and implementation of the 2023 supplement to the 2013 SMP (Proposed Action) would create potential impacts on the natural and human environments, and as such, this Environmental Assessment (EA) was prepared pursuant to NEPA, Council on Environmental Quality (CEQ) regulations (40 CFR 1500–1508), and the USACE implementing regulations, Policy and Procedures for Implementing NEPA, ER 200-2-2 (USACE, 1988).

The SMP identifies conceptual types and levels of activities, but does not include designs, project sites, or estimated costs. All actions carried out by USACE, other agencies, and the public on USACE lands must be consistent with the MP. Therefore, the SMP must be kept current in order to provide effective guidance in USACE decision-making. The original Eufaula Lake SMP was completed in 1976 and was last revised in 2013, having supplements completed in 2015 and 2017, and a 5-year review of the MP and SMP memorandum completed in 2020.

**1.1 PROJECT LOCATION AND SETTING**

Eufaula Lake is a multi-purpose reservoir located approximately 12 miles east of the city of Eufaula in McIntosh County, Oklahoma. The Eufaula Dam impounding Eufaula Lake is located at river mile 27.0 on the Canadian River in McIntosh and Haskell counties, Oklahoma. Construction of the dam began in December 1956 and was placed in operation in 1964. Eufaula Lake is a unit of the Arkansas River basin on several major tributaries, which come together prior to entering the Arkansas River. These

major tributaries include the North Canadian River, Canadian River, Deep Fork River, and Gaines Creek, all of which come together in east-central Oklahoma immediately south of the Arkansas River. The counties that surround Eufaula Lake in east-central Oklahoma include Haskell, Latimer, McIntosh, Muskogee, Okmulgee, and Pittsburg Counties (Figure 1).



**Figure 1 - Oklahoma Counties Surrounding Eufaula Lake**

Construction of Eufaula Lake was authorized by the 1946 Rivers and Harbors Act and is currently managed by the Tulsa District of USACE for flood control, hydroelectric power, navigation, water supply, fish and wildlife management, and recreation purposes. The lake has 105,000 surface acres and over 800 miles of shoreline at the conservation pool elevation of 585 feet above mean sea level (AMSL). The top of the flood control pool is at 597 feet AMSL for a total difference in functional pool elevation of 12 feet.



The dam is a rolled earth structure 3,200 feet long, including the spillway and powerhouse intake, and rises to a maximum height of 114 feet above the streambed. The spillway is a concrete-gravity, ogee weir with eleven 40 by 32-foot electrically operated tainter gates. The gates are separated by ten 8-foot-wide piers, which support a bridge across the top of the structure. The spillway has a gross width of 520 feet and a net width of 440 feet. Spillway capacity at maximum pool is approximately 461,000 cubic feet per second (cfs). Bank-full capacity below the dam is approximately 40,000 cfs. The outlet works in the spillway structure is a 5-foot 8-inch by 7-foot low-flow sluice passing through the weir near the left end of the spillway. The sluice intake invert is at elevation 500 AMSL and flows are controlled by a hydraulically operated gate. Capacity of the sluice at the top of the flood control pool is 2,495 cfs. The dam at Eufaula Lake also produces hydropower with 3 turbines capable of producing 30 megawatt (MW) each.

Per the 2013 MP, the total fee-owned lands above the normal power pool elevation of 585 feet AMSL are 65,586 acres. The land classifications are summarized in **Table 1**.

**Table 1 - 2013 Eufaula Lake Master Plan Land Classifications**

<b>2013 Master Plan Land Classification</b>	<b>Acres</b>
Project Operations	133
High Density Recreation	10,661
Multiple Resource Management – Low Density Recreation	9,928
Multiple Resource Management – Low Density Recreation in Limited Development	7,872
Environmentally Sensitive or Multiple Resource Management – Vegetation Management	5,205
Multiple Resource Management – Future/Inactive Recreation	218
Multiple Resource Management – Wildlife Management	31,569
<b>Total</b>	<b>65,856</b>

The first SMP for Eufaula Lake was completed in 1976, originally accounting for 365 private floating facilities and 26 miles of shoreline adjacent to existing developments. The SMP was updated in 1981 to include 452 permitted private floating facilities and 42 miles of Limited Development shoreline, which was increased to 130 miles in 1986 following public outreach and 3 public meetings. All the expansion of Limited Development allocations between 1981 and 1986 were due to the conversion of Protected shoreline, with all other shoreline allocations remaining the same. The SMP was revised again in 1996 with no major changes, and again in 1998. The 1998 revision

increased Limited Development to 271 miles of shoreline, reallocated undeveloped shoreline from Public Recreation to Protected shoreline, and included approximately 1,100 private floating facilities. The most recent update, in 2013, permitted 1543 private floating facilities and removed over 300 unnecessary, duplicate, or invalid permits. The 2013 SMP allocated 265 miles of shoreline for Limited Development Areas (LDA), 111 miles for Public Recreation, 432 miles for Protected shoreline, and approximately 1 mile for Prohibited Access areas.

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

The purpose of the Proposed Action is to ensure that the 2023 Supplement to the 2013 Eufaula Lake SMP is in compliance with applicable environmental laws and regulations and to maintain quality lands for future public use. The 2023 Supplement is intended to balance certain private shoreline uses with resource protection for general public use. The existing 2013 SMP does not have a specified life span but is reviewed periodically to ensure the SMP complies with public law, USACE policy and is responsive to public needs and written commitments to private individuals.

The need for the Proposed Action is to add a requested vegetation modification feature to the existing 2013 SMP via document update in response to expressed public interest and concern.

## **1.3 SCOPE OF THE ACTION**

This EA was prepared to evaluate existing conditions and potential impacts of the proposed action and alternatives associated with the implementation of the 2023 Supplement. The alternative considerations were formulated with special attention given to shoreline allocations, revised permit administrative processes, construction and maintenance standards, shoreline allocation maps, and to ensure the Supplement compliments the 2013 Eufaula Lake MP. This EA was prepared pursuant to NEPA, Council on Environmental Quality (CEQ) regulations (40 CFR 1500–1508), and the USACE implementing regulations, Policy and Procedures for Implementing NEPA, ER 200-2-2 (USACE, 1988).

## SECTION 2: PROPOSED ACTION AND ALTERNATIVES

The project need is to supplement the 2013 SMP which includes public outreach and comment. A Proposed Action Alternative and a No Action Alternative were developed for evaluation to assist in the decision-making process.

The analysis of public comment, the review of USACE regulations at ER 1130-2-406, and the review of the 2013 Eufaula Lake MP resulted in adoption of the following goals for the revision of the SMP. These goals are unchanged from the 2013 SMP, since the 2023 SMP supplement solely focuses on vegetation management permit changes and does not change resource goals and objectives or shoreline allocations.

- Assure compliance with applicable regulations, policy, and laws.
- Improve and diversify recreational opportunities for the public at Eufaula Lake.
- Maintain the aesthetic and environmental characteristics of Eufaula Lake.
- Achieve a balance between private uses and the protection of natural and cultural resources.
- Allow commercial concessions and businesses that offer water-related services to the public.
- Provide for the protection of public lands and private investments and to honor past commitments.
- Provide adequate area for future recreational development.

The Proposed Action's only change to the 2013 SMP would allow landowners to submit a permit application to the Eufaula Lake Manager requesting a 6 foot (ft) wide meandering mowed path through the 45ft shoreline vegetation buffer in LDAs only. The Shoreline Allocations from the 2013 SMP would remain the same. Table 2 below describes the proposed change including the justification and compares it to the 2013 SMP's language for vegetation modification guidelines for the shoreline vegetation buffer.

**Table 2 - Summary of Shoreline Management Plan Changes**

<b>2013 Shoreline Management Plan</b>	<b>Proposed 2023 Shoreline Management Plan</b>	<b>Justification of the Proposed Action</b>
<p><u>Shoreline Vegetation Buffer:</u> The shoreline vegetation buffer is a strip of land between the shoreline and private property where only limited trimming of trees and shrubs is allowed. This area was established to reduce erosion, improve water quality and provide suitable habitat</p>	<p><u>6ft-wide meandering path:</u> A 6ft-wide meandering path is a mowed pathway through the 45ft vegetation buffer to the shoreline. The meandering path must follow a route, taking topographic conditions into account, that will prevent soil erosion. All routes are subject to</p>	<p>The public has requested this change in many complaints/reports to the Lake Office in order to make dock and boat access easier. This is expected to impact approximately 11.72 acres within Limited Development Areas (LDA) only, resulting from</p>

<b>2013 Shoreline Management Plan</b>	<b>Proposed 2023 Shoreline Management Plan</b>	<b>Justification of the Proposed Action</b>
<p>for native wildlife. Modification of grass and non-woody vegetation is prohibited. Trees and other woody vegetation within the shoreline vegetation buffer may be trimmed in accordance with the tree trimming guidelines of the vegetation modification permit.</p>	<p>designation and/or approval of the Eufaula Lake Manager.</p>	<p>1,891 existing vegetation modification permits.</p>

## **2.1 ALTERNATIVE 1: NO ACTION ALTERNATIVE**

The No Action Alternative serves as a basis for comparison to the anticipated effects of the other action alternatives, and its inclusion in this EA is required by NEPA and CEQ regulations (40 CFR § 1502.14(c)). Under the No Action Alternative, the USACE would not approve the adoption or implementation of the 2023 SMP Supplement. Instead, the USACE would continue to manage Eufaula Lake’s natural resources as set forth in the 2013 SMP. The 2013 SMP would continue to provide the only source of comprehensive management guidelines and philosophy. However, the 2013 SMP does not reflect the vegetation modification policies and management guidelines requested by the public.

## **2.2 ALTERNATIVE 2: PROPOSED ACTION**

Under the Proposed Action, the 2013 SMP would be reviewed, coordinated with the public, and officially supplemented to include updated vegetation management guidelines and vegetation permitting processes. The key change of this revision is the inclusion of landowners being able to request approval from the Eufaula Lake Manger to mow a 6ft-wide meandering path through the 45ft shoreline vegetation buffer on Corps owned lands. The expected acreage that would have the potential to be mowed under this change is approximately 11.72 acres within LDAs only. No other changes or additions to the 2013 SMP are proposed, meaning shoreline allocations and all other Eufaula Lake policies will remain the same.

## **2.3 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER CONSIDERATION**

Other alternatives to the Proposed Action were initially considered as part of the scoping process for this EA. However, none met the purpose of and need for the Proposed Action or the current USACE regulations and guidance. Furthermore, no other alternatives addressed public concerns. Therefore, no other alternatives are being carried forward for analysis in this EA.

## **SECTION 3: AFFECTED ENVIRONMENT AND CONSEQUENCES**

This section of the EA describes the natural and human environments that exist at the project and the potential impacts of the No Action Alternative (Alternative 1) and Proposed Action (Alternative 2), outlined in Section 2 of this document. Only those issues that have the potential to be affected by these alternatives are described, per CEQ guidance (40 CFR § 1501.3). Some topics are limited in scope due to the lack of direct effect from the Proposed Action on the resource or because that particular resource is not located within the project area. For example, no body of water in the Eufaula Lake watershed is designated as a Federally Wild or Scenic River, so this resource will not be discussed.

Impacts (consequence or effect) can be either beneficial or adverse and can be either directly related to the action or indirectly caused by the action. Direct effects are caused by the action and occur at the same time and place (40 CFR § 1508.1(g)). Indirect effects are caused by the action and are later in time or further removed in distance but are still reasonably foreseeable (40 CFR § 1508.1(g)). As discussed in this section, the alternatives may create temporary (less than 1 year), short-term (up to 3 years), long-term (3 to 10 years following the SMP revision), or permanent effects.

Whether an impact is significant depends on the context in which the impact occurs and the intensity of the impact. The context refers to the setting in which the impact occurs and may include society as a whole, the affected region, the affected interests, and the locality. Impacts on each resource can vary in degree or magnitude from a slightly noticeable change to a total change in the environment. For the purpose of this analysis, the intensity of impacts would be classified as negligible, minor, moderate, or major. The intensity thresholds are defined as follows:

- **Negligible:** A resource would not be affected, or the effects would be at or below the level of detection, and changes would not be of any measurable or perceptible consequence.
- **Minor:** Effects on a resource would be detectable, although the effects would be localized, small, and of little consequence to the sustainability of the resource. Mitigation measures, if needed to offset adverse effects, would be simple and achievable.
- **Moderate:** Effects on a resource would be readily detectable, long-term, localized, and measurable. Mitigation measures, if needed to offset adverse effects, would be extensive and likely achievable.
- **Major:** Effects on a resource would be obvious and long-term and would have substantial consequences on a regional scale. Mitigation measures to offset the adverse effects would be required and extensive, and success of the mitigation measures would not be guaranteed.

### **3.1 LAND USE**

The total shoreline length at Eufaula Lake at the conservation pool elevation of 585 AMSL is over 800 miles. The land surrounding the lake is predominately flat with intermittent rolling hills. The lake's shoreline varies from rocky bluffs to sandy beaches.

The adjacent landscape is composed of vast forests composed of mixed oak, hickory, hackberry, sand plum, and various other trees. Extensive fields of big bluestem, little bluestem, Indian grass, and switchgrass exist on the flat areas surrounding the lake.

The total fee-owned lands above the normal power pool elevation of 585.00 AMSL is 65,586 acres, of which 133 acres are used for Project Operations; 10,661 are used for High Density Recreation; 9,928 acres are used for Multiple Resource Management – Low Density Recreation; 7,872 Multiple Resource Management – Low Density Recreation in Limited Development, 5,205 acres are categorized as Environmentally Sensitive or Multiple Resource Management – Vegetation Management; 218 acres are categorized as Multiple Resource Management – Future/Inactive Recreation; 31,569 acres are used for Multiple Resource Management – Wildlife Management either managed directly by the Corps of Engineers or leased lands managed by the Oklahoma Department of Wildlife Conservation(ODWC). Land classification categories are established in the Eufaula Lake Master Plan and provide the basic framework that will guide the development, management, and operation of all Area resources and facilities. Shorelines adjacent to all reservoir lands have been further classified into shoreline allocations as described in the 2013 SMP, and in Section 1.1

There are 10 Corps-operated parks, 2 State Parks, 7 units of ODWC Eufaula Wildlife Management Areas, approximately 61 boat ramps, and several recreational areas operated by municipalities. As of 2017, there were approximately 200 private development subdivisions that surround Eufaula Lake.

### 3.1.1 Alternative 1: No Action Alternative

The No Action Alternative for Eufaula Lake is defined as the USACE taking no action, which means the 2013 SMP would not be supplemented. The addition of mowing permits to be able to mow a 6ft-wide path through the 45ft shoreline vegetation buffer would not be included into Eufaula Lake's vegetation modification guidelines. The shoreline vegetation buffer would continue to be managed under the vegetation modification guidelines from the 2013 SMP, where no mowing is allowed. The 2013 SMP would remain compliant with USACE operations and guidelines. Minor, long-term impacts to land use would occur as a result of the No Action Alternative, as it would continue to create public demand for shoreline access at Eufaula Lake.

### 3.1.2 Alternative 2: Proposed Action

The proposed action would allow the public to request vegetation modification permits from the Eufaula Lake manager to mow a 6ft-wide meandering path through the 45ft-wide shoreline vegetation buffer. There would be no change to existing shoreline allocations. The proposed action would present minor, long-term benefits to land use, as the public would gain the requested ability to mow an approved path to the shoreline to make boat and dock access easier in LDAs.

## 3.2 WATER RESOURCES

### Surface Water:

Eufaula Lake is located within the North Canadian River watershed, with the basin area covering approximately 9,097 square miles in Oklahoma. The lake has 105,000 surface acres of water (approximately 2.1 million acre-feet) and over 800 miles of shoreline at the conservation pool elevation of 585 feet AMSL. The top of the flood control pool is at 597 feet AMSL for a total difference in functional pool elevation of 12 feet.

### Hydrology and Groundwater:

The dam at Eufaula Lake provides approximately 56,000 acre-feet per year in water supply for the State of Oklahoma. Total water storage at Eufaula Lake is approximately 2.1 million acre-feet. The dam at Eufaula Lake also produces hydropower with 3 turbines capable of producing 30MW each. The dam and spillway structure are fully described in Section 1.1.

The main sources of water for Eufaula Lake are comprised of the combined inputs of Mud Creek, Deep Fork of the Canadian River, North Canadian River, Coal Creek, Brushy Creek, Gaines Creek, Ash Creek, and Longtown Creek. Groundwater inputs are contributed by the Canadian River and North Canadian River major alluvial aquifers, Ashland Isolated Terrace minor alluvial aquifer, the Garber-Wellington and Vamoosa-Ada major bedrock aquifers, and the East-Central Oklahoma, Kiamichi, and Pennsylvania minor bedrock aquifers.

The following represent general water quantity yields from aquifers within the Eufaula Lake area:

- Canadian River – from 100 to 400 gallons per minute (gpm) in the alluvium and from 50 to 100 gpm in the terrace
- North Canadian River – from 300 to 600 gpm in the alluvium and from 100 to 300 gpm in the terrace
- Ashland Isolated Terrace – less than 50 gpm
- Garber-Wellington – from 200 to 400 gpm
- Vamoosa-Ada – from 25 to 150 gpm

Alluvial groundwater in the Eufaula Lake watershed is predominantly of a calcium magnesium bicarbonate type, is variable in dissolved solids content, and is generally suitable for most purposes.

The Garber-Wellington bedrock groundwater in the Eufaula Lake watershed is predominately of a calcium magnesium bicarbonate type and ranges from hard to very hard. Water from this aquifer is generally suitable for public water supply, but local concentrations of nitrates, sulfate, chloride, fluoride, arsenic, chromium, and selenium may exceed drinking water standards.

The Vamoosa-Ada water quality is generally good but is impacted by iron infiltration and hardness. Except for areas of local contamination resulting from past oil and gas activities, chloride and sulfate concentrations are low and water quality is generally suitable for public water supply.

Water Quality:

The Oklahoma Department of Environmental Quality (ODEQ) published a 2022 303(d) and 305(b) Integrated Report that details all bodies of water in the State that are impaired. Table 3 identifies the different segments of Eufaula Lake in the 2022 Integrated Report – Appendix C and their respective impairments and cause of impairment. Cause category 5 means that the respective water quality standard is not in attainment and is impaired or threatened for one or more designated uses by a pollutant and requires a Total Maximum Daily Load (TMDL) (ODEQ, 2022). Cause category 5C specifically means that additional data and information need to be collected before a TMDL or a review of the Water Quality Standards are scheduled. All of the 6 segments of Eufaula Lake were impaired for fish consumption (FC), due to mercury. No other uses, such as primary body contact, secondary body contact, water supply, etc. were impaired for Eufaula Lake (ODEQ, 2022).

**Table 3 - Eufaula Lake Water Quality 2022 303(d) Impairments**

<b>Waterbody ID</b>	<b>Waterbody Name</b>	<b>Cause Category</b>	<b>Impaired Use</b>	<b>Cause of Impairment</b>
OK520700010020_00	Eufaula Lake, Canadian River Deep Fork	5C	FC	Mercury
OK220600010020_00	Eufaula Lake	5C	FC	Mercury
OK220600010050_00	Eufaula Lake, Canadian River Arm	5C	FC	Mercury
OK220600010060_00	Eufaula Lake, Longtown Creek Arm	5C	FC	Mercury
OK220600050010_00	Eufaula Lake, Gaines Creek Arm	5C	FC	Mercury
OK520500010020_00	Eufaula Lake, North Canadian River Arm	5C	FC	Mercury

The Oklahoma Water Resources Board (OWRB) also maintains a Beneficial Use Monitoring Program (BUMP) report every 5 years that includes repeated water quality sampling. Beneficial uses for water include fish and wildlife propagation, aesthetics,



agriculture, primary body contact recreation, and public and private water supply. Each sampling site's beneficial use capacity as reported in the 2017 BUMP report is summarized as follows.

Eufaula, Deep Fork Arm (sites 1-2) was sampled 17 times between October, 2016 and July, 2017. This site was determined to not support fish and wildlife propagation due to turbidity impairment; the pH for fish and wildlife propagation was reported to be fully supporting. Aesthetics and agriculture beneficial uses were determined to be fully supported by the trophic state index (TSI) and total dissolved solids characteristics, respectively.

Eufaula, North Canadian Arm (sites 3-4) was sampled 17 times between October, 2016 and July, 2017. This site was determined to not support fish and wildlife propagation due to turbidity impairment; the pH for fish and wildlife propagation was reported to be fully supporting. Aesthetics and agriculture beneficial uses were determined to be fully supported by the trophic state index (TSI) and total dissolved solids characteristics, respectively.

Eufaula (sites 5-7) was sampled 17 times between October, 2016 and July, 2017. This site was determined to fully support fish and wildlife propagation, with turbidity, and pH fully supporting that beneficial use. Aesthetics and agriculture beneficial uses were determined to be fully supported by the TSI and total dissolved solids characteristics, respectively.

Eufaula, Longtown Creek Arm (site 8) was sampled 17 times between October, 2016 and July, 2017. This site was determined to not support fish and wildlife propagation due to turbidity and dissolved oxygen impairments, otherwise the pH was determined to be fully supporting. Aesthetics and agriculture beneficial uses were determined to be fully supported by the TSI and total dissolved solids characteristics, respectively.

Eufaula, Canadian River Arm (sites 9-11) was sampled 17 times between October, 2016 and July, 2017. This site was determined to not support fish and wildlife propagation due to turbidity and dissolved oxygen impairments, otherwise the pH was determined to be fully supporting. Aesthetics and agriculture beneficial uses were determined to be fully supported by the TSI and total dissolved solids characteristics, respectively.

Eufaula, Gaines Creek Arm (sites 12-17) was sampled 17 times between October, 2016, and July, 2017. This site was determined to not support fish and wildlife propagation due to turbidity and dissolved oxygen impairments, otherwise the pH was determined to be fully supporting. Aesthetics and agriculture beneficial uses were determined to be fully supported by the TSI and total dissolved solids characteristics, respectively.

Overall, the 2017 BUMP report determined that Eufaula Lake has an overall turbidity impairment and is labelled as a eutrophic lake based on its TSI scores. Water quality and quantity concerns and future anticipated TMDL implementation by state and

Federal agencies will affect the selection and implementation of management plans throughout the watershed. Addressing water quality and quantity concerns in conjunction with TMDL implementation could allow Eufaula Lake to meet all authorized purposes and beneficial uses in the future (OWRB, 2017).

Wetlands:

The United States Fish and Wildlife Service (USFWS) maintains the National Wetlands Inventory (NWI), that documents wetland types and acreages across the United States. Using the NWI mapping tool, the official USACE fee boundary for Eufaula Lake was assessed for wetlands; Table 4 summarizes the data, whereas 2 shows NWI wetlands occurring inside the Eufaula Lake fee boundary by wetland type. Wetlands occurring inside of the fee boundary for Eufaula Lake are composed of 99% Lake wetlands, with the remaining 1% of NWI wetland acreage distributed into Freshwater Emergent wetlands, Freshwater Forested/Shrub wetlands, Riverine wetlands, and Freshwater Pond wetlands from largest to smallest, respectively (NWI, 2023).

**Table 4 - NWI Wetlands Occurring in Eufaula Lake**

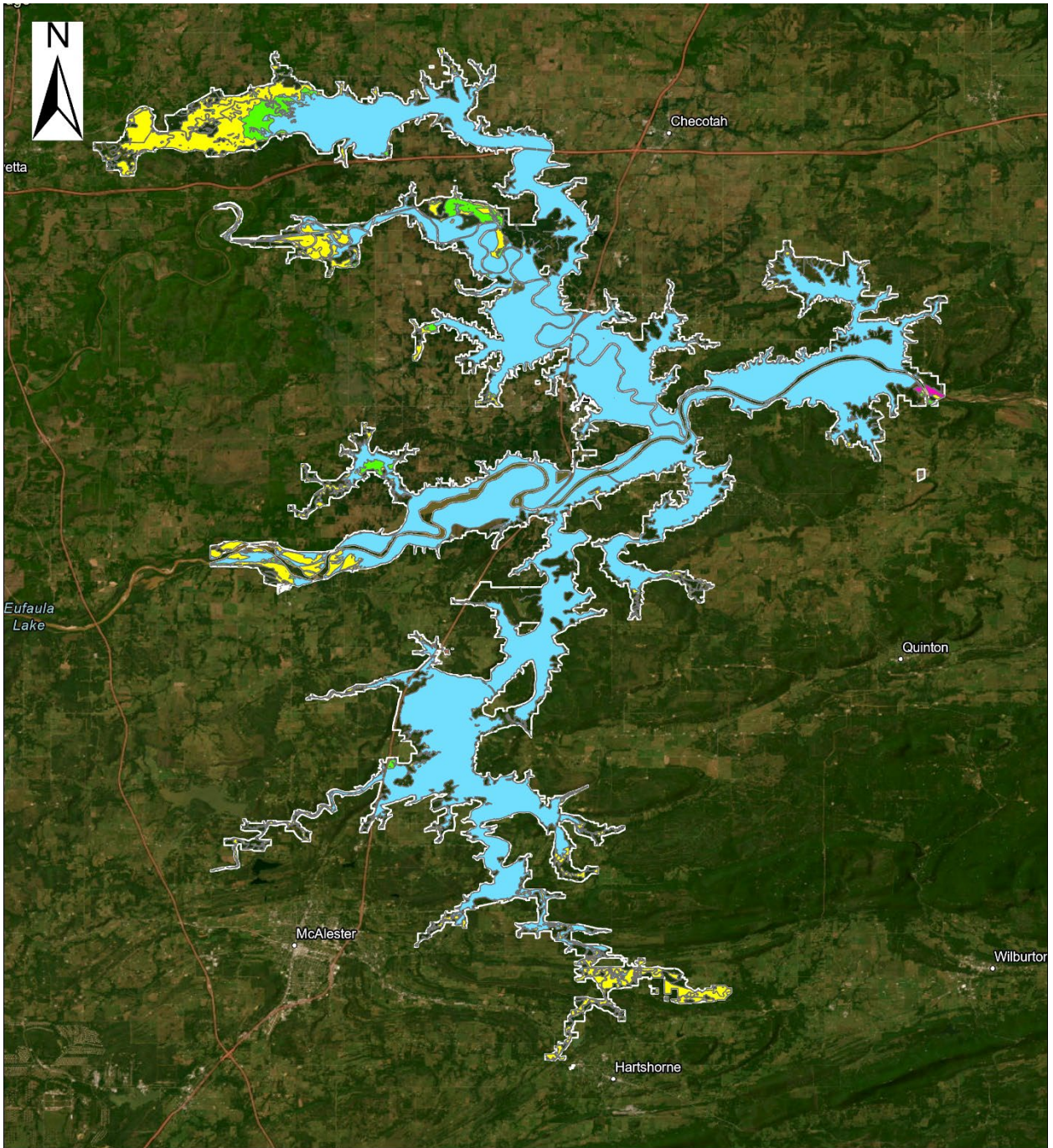
<b>NWI Wetland Type</b>	<b>Acreage</b>
Lake	83,185.3
Freshwater Pond	0.3
Freshwater Emergent Wetland	18.6
Freshwater Forested/Shrub Wetland	2.9
Riverine	6.6

3.2.1 Alternative 1: No Action Alternative

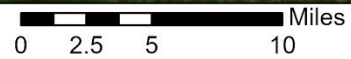
There would be no impacts to any water resources as a result of implementing the No Action Alternative, since there would be no changes or additions to the existing 2013 SMP that would affect any of these resources.

3.2.2 Alternative 2: Proposed Action

The proposed addition to the 2013 SMP would present minor, long-term impacts to wetlands only due to vegetation modification permits being issued to the public to mow through the 45ft shoreline vegetation buffer. Impacts would occur in approximately 11.72 acres in LDAs from disturbance and or removal of existing vegetation in wetland areas due to mowing. No other impacts to aquatic resources are expected from the proposed action.



**Legend**



- |                                    |                    |
|------------------------------------|--------------------|
| NWI Wetland Type                   | Freshwater Pond    |
| Freshwater Emergent Wetland        | Lake               |
| Freshwater Forested/ Shrub Wetland | Riverine           |
|                                    | USACE Fee Boundary |



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**Figure 2 - NWI Wetlands in Eufaula Lake Fee Boundary**

### 3.3 CLIMATE

The National Weather Service (NWS) maintains climate data by weather station across the United States. The closest weather station to Eufaula Lake is the McAlester Regional Airport station, approximately 6 miles from the closest Eufaula Lake shoreline edge, and approximately 34 miles from the USACE Eufaula Lake Office. The monthly precipitation, mean maximum and minimum temperature, and average temperatures for each month from 1991-2020 are summarized in Table 5. The regional average annual rainfall is 42.6 inches, the average maximum monthly temperature is 73.3 degrees Fahrenheit (°F), the average minimum monthly temperature is 51.3°F, and the average monthly temperature is 62.3°F (NWS, 2023).

**Table 5 - Monthly Climate Normals (1991-2020) McAlester Regional Airport, OK (NWS 2023)**

<b>Month</b>	<b>Total Precipitation Normal (inches)</b>	<b>Mean Max Temperature Normal (°F)</b>	<b>Mean Min Temperature Normal (°F)</b>	<b>Mean Average Temperature Normal (°F)</b>
January	2.2	52.0	30.2	41.1
February	2.4	56.7	34.2	45.5
March	3.4	65.3	42.4	53.9
April	4.6	73.3	50.1	61.7
May	5.3	80.0	59.8	69.9
June	4.5	88.2	68.2	78.2
July	3.4	93.2	72.0	82.6
August	3.0	93.2	70.7	81.9
September	3.7	85.8	62.9	74.3
October	4.2	75.2	51.5	63.3
November	3.0	63.3	40.9	52.1
December	3.0	53.6	32.9	43.3
<b>Annual</b>	<b>42.6</b>	<b>73.3</b>	<b>51.3</b>	<b>62.3</b>

#### 3.3.1 Alternative 1: No Action Alternative

The No Action Alternative would have no impacts to climate either localized to Eufaula Lake or within the region, since no changes to the 2013 SMP would be made.

#### 3.3.2 Alternative 2: Proposed Action

The Proposed Action would adopt the 2023 Eufaula Lake supplement which would establish the requested shoreline vegetation buffer mowing permitting process for LDAs. The proposed action would have no impact on climate, either localized or within the region.

### 3.4 CLIMATE CHANGE AND GREENHOUSE GAS

Federal agencies are required to consider Greenhouse Gas (GHG) emissions and climate change in EAs in accordance with NEPA. On August 1, 2016, the CEQ issued final guidance on the consideration of GHG emissions and climate change in NEPA reviews; however, Executive Order 13783 directed the CEQ to rescind that guidance. At the same time, case law in the Ninth Circuit Court still requires climate change analysis: “The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct” (Center for Biological Diversity vs. the National Highway Traffic Safety Administration, 538 F.3d 1172, 1217 (9th Cir., 2008)). Consistent with case law, an analysis of climate change impacts are conducted within EAs/EISs.

CEQ drafted guidelines for determining meaningful GHG decision-making analysis. The CEQ guidance states that if a project would be reasonably anticipated to cause direct emissions of 25,000 metric tons or more of carbon dioxide (CO<sub>2</sub>)-equivalent (CO<sub>2</sub>e) GHG emissions per year, the project should be considered in a qualitative and quantitative manner in NEPA reporting (CEQ, 2015). CEQ proposes this as an indicator of a minimum level of GHG emissions that may warrant some description in the appropriate NEPA analysis for agency actions involving direct emissions of GHG (CEQ, 2015).

EPA records show that there are 34 GHG contributors within a 25-mile radius of Eufaula Lake, with 18 of those facilities having recorded emissions in 2021. Table 6 describes these GHG contributors in Eufaula Lake’s vicinity. The GHG emissions quantities are reported by the EPA in Metric Tons of Carbon Dioxide equivalent (CO<sub>2</sub>e). The subparts column describes the type of industry the emitting facility participates in.

**Table 6 - EPA GHG Contributors within a 25-Mile Radius of Eufaula Lake (EPA,2021)**

Facility Name	County Name	GHG Quantity (Metric Tons CO <sub>2</sub> e)	Subpart*
Tenaska Kiamichi Generating Station	Pittsburg	1,862,560	D
Georgia Pacific Muskogee LLC	Muskogee	572,779	C,TT
Muskogee Community Landfill	Muskogee	107,607	HH
Chandler Compressor Station/Wilburton Compressor Station	Latimer	103,869	C,W
Anchor Glass Container	Okmulgee	96,363	C,N

<b>Facility Name</b>	<b>County Name</b>	<b>GHG Quantity (Metric Tons CO<sub>2</sub>e)</b>	<b>Subpart*</b>
Corporation - Plant 15			
DAL-ITALIA	Muskogee	67,883	C
Owens Brockway Glass Container Incorporated	Muskogee	66,358	C,N
Hickory Hills Gas Plant	Hughes	65,390	C,W
Scissortail Energy Cable Compressor Station McAlester, OK	Pittsburg	54,832	C,W
Scissortail Energy Featherston Station Quinton, OK	Pittsburg	53,009	C,W
CP Kelco US, Inc.- Okmulgee	Okmulgee	50,270	C
Wetumka Gas Processing Plant	Hughes	41,330	C,NN,W
Northridge Gas Plant	Hughes	37,529	C,W
City of Okmulgee Landfill	Okmulgee	31,399	HH
Catcher Ranch Gas Plant	Pittsburg	30,032	C,PP,W
Alderson Regional Landfill	Pittsburg	19,150	HH
Stuart Plant	Pittsburg	16,888	C,W
Weleetka Power Station	Okfuskee	1,959	C

\*Subpart codes: D – Electricity Generation; C – General Stationary Fuel Combustions Sources; HH – Municipal Solid Waste Landfills; NN – Suppliers of Natural Gas and Natural Gas Liquids; W – Petroleum and Natural Gas Systems.

#### 3.4.1 Alternative 1: No Action Alternative

The No Action Alternative would not have any effects on climate change or GHGs, since no changes to the 2013 SMP would occur. The 2013 SMP would continue to guide shoreline management at Eufaula Lake, and any USACE guidance or policy for climate change and GHGs established in the 2013 SMP would continue to be followed.

### 3.4.2 Alternative 2: Proposed Action

The Proposed Action would have no effect on climate change or GHGs. The supplement to the 2013 SMP would establish mowing of 6ft-wide paths through the shoreline vegetation buffer in LDAs. The effects of this change would be similar to vegetation management activities such as mowing already occurring at Eufaula Lake and would not contribute to GHG emissions for the region.

## **3.5 AIR QUALITY**

National Ambient Air Quality Standards (NAAQS) have been established by the USEPA, Office of Air Quality Planning and Standards (OAQPS), for six criteria pollutants that are deemed to potentially impact human health and the environment. These include 1) carbon monoxide (CO); 2) lead (Pb); 3) nitrogen dioxide (NO<sub>2</sub>); 4) ozone (O<sub>3</sub>); 5) particulate matter <10 microns (PM<sub>10</sub>) and <2.5 microns (PM<sub>2.5</sub>); and 6) sulfur dioxide (SO<sub>2</sub>). Ground level or "bad" O<sub>3</sub> is not emitted directly into the air, but is created by chemical reactions between oxides of nitrogen (NO<sub>x</sub>) and volatile organic compounds (VOC) in the presence of sunlight. Emissions from industrial facilities and electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents are some of the major sources of NO<sub>x</sub> and VOC (EPA, 2018).

On 30 November 1993, the USEPA published a Conformity Rule requiring all Federal actions to conform to appropriate State Implementation Plans that were established to improve ambient air quality. At this time, the Conformity Rule only applies to Federal actions in non-attainment areas. A non-attainment area is an area which does not meet one or more of the NAAQS for the criteria pollutants designated in the Clean Air Act (CAA).

To comply with this rule, a conformity determination based on air emission analysis is required for each proposed Federal action within a non-attainment area. As of July, 2023, there are no non-attainment areas in Oklahoma, so a conformity determination is not required.

### 3.5.1 Alternative 1: No Action Alternative

The No Action Alternative would have no impacts on air quality since there would be no additions or changes to the 2013 SMP.

### 3.5.2 Alternative 2: Proposed Action

The Proposed Action would have long-term, negligible impacts to air quality since the 2013 SMP would be supplemented to allow the public to mow a 6ft-wide meandering path through the shoreline vegetation buffer in LDAs. Negligible, long-term impacts to air quality may occur due to members of the public using gas powered equipment to mow approved meandering paths through the shoreline vegetation buffer, but any effects are expected to be similar to existing air quality conditions due to regular mowing and vegetation management activities occurring at Eufaula Lake.

### 3.6 TOPOGRAPHY, GEOLOGY, AND SOILS

#### Topography

Eufaula Lake and its surrounding area’s topography are characteristic of the larger Level II ecoregions as defined by the EPA. The EPA defines an ecoregion as an “...area where ecosystems (and the type, quality, and quantity of environmental resources) are generally similar”. Eufaula Lake and its vicinity are comprised of 3 different Level 2 ecoregions: the Ozark/Ouachita Appalachian Forests, the Temperate Prairies, and the South Central Semi-Arid Prairies (EPA, 2015). The Ozark/Ouachita Appalachian Forests’ topography are known for forested low mountains, upland plateaus, high relief terrain, steep slopes, and high gradient streams. The Temperate Prairies’ ecoregion topography is solely composed of smooth plains and many small lakes and wetlands. The South Central Semi-Arid Prairies’ topography is largely similar to the Temperate Prairies previously described, with less bodies of water occurring throughout. Ecoregions will be discussed in more detail in Section 3.7 (Natural Resources).

#### Geology

According to the United States Geological Survey (USGS), Eufaula Lake and its vicinity are made up of 16 unique geological formations; these geological formations are described in Table 7 (USGS, 2023).

**Table 7 - Eufaula Lake Geologic Formations (USGS, 2023)**

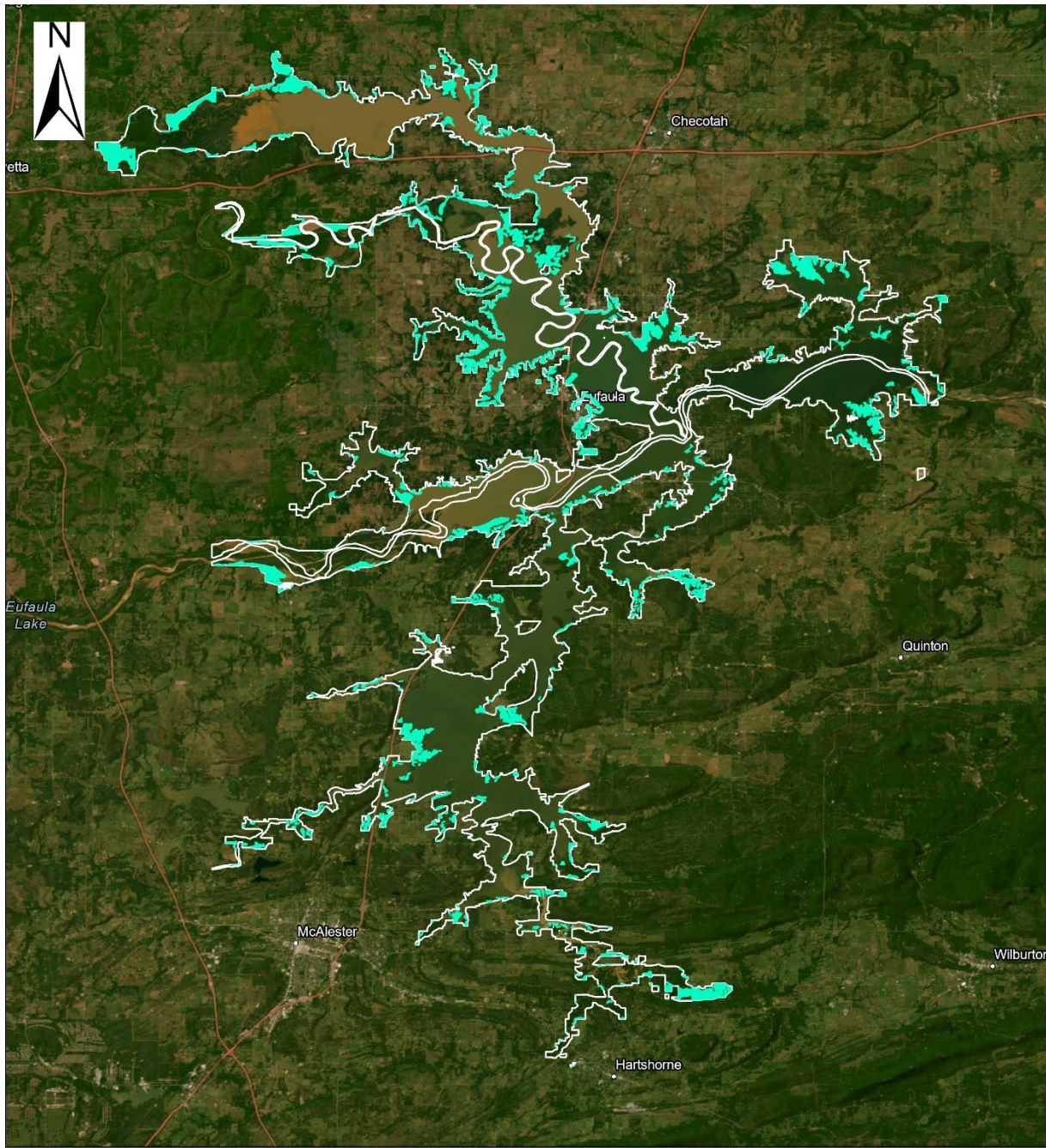
<b>Geologic Formation Name</b>	<b>Geological Age (Geological Time Scale)</b>	<b>Primary Components</b>
Atoka Formation	Carboniferous Pennsylvanian-Middle	Sandstone, Shale, Siltstone
Bluejacket Sandstone	Carboniferous Pennsylvanian-Middle	Sandstone, Coal
Boggy Formation	Carboniferous Pennsylvanian-Middle	Shale, Sandstone, Limestone, Coal
Calvin Sandstone	Carboniferous Pennsylvanian-Middle	Sandstone, Shale
Hartshorne Sandstone	Carboniferous Pennsylvanian-Middle	Sandstone, Shale, Coal
Limestone Gap	Carboniferous Pennsylvanian-Early	Shale, Sandstone
Lynn Mountain Formation	Carboniferous Pennsylvanian-Early	Shale, Sandstone
McAlester Formation	Carboniferous Pennsylvanian-Middle	Shale, Sandstone, Coal
McAlester and Hartshorne Formations	Carboniferous Pennsylvanian-Middle	Shale, Sandstone, Coal
Savanna Formation	Carboniferous Pennsylvanian-Middle	Shale, Sandstone, Limestone, Coal
Senora Formation	Carboniferous Pennsylvanian-Middle	Sandstone, Shale, Limestone, Coal
Stuart Shale	Carboniferous Pennsylvanian-Middle	Shale, Sandstone



Thurman Sandstone	Carboniferous Pennsylvanian-Middle	Sandstone, Shale, Conglomerate
Wapanucka Formation and Chickachoc Chert	Carboniferous Pennsylvanian-Early	Limestone, Sandstone, Shale, Chert
Alluvium	Holocene	Alluvium
Terrace Deposits	Pleistocene	Sand, Gravel, Volcanic Ash

Soils

The United States Department of Agriculture’s (USDA) Natural Resources Conservation Service (NRCS) maintains a soil database for the US, which can be accessed using their Web Soil Survey Tool (WSST). A WSST report using the fee boundary for Eufaula Lake as the area of interest reported over 152 unique soil series with varying compositions and soil characteristics (NRCS, 2023). Approximately 62% of the soil survey was determined to be water (96,656 acres). The soil report also showed that approximately 16,000 acres of soils are designated as Prime Farmland, accounting for 27% of the total soil survey area that is not water (58,804 acres). Figure 3 shows all areas designated as Prime Farmland within Eufaula Lake’s fee boundary. Table 8 lists the ten most ubiquitous soils found within Eufaula Lake’s fee boundary and their respective acreages.



**Legend**

-  USACE Fee Boundary
-  NRCS Web Soil Survey - Prime Farmland Soils



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**Figure 3 - NRCS Prime Farmland Soils at Eufaula Lake (NRCS, 2023)**

**Table 8 - 10 Most Prevalent Soil Series in Eufaula Lake (NRCS, 2023)**

<b>Soil Series Name</b>	<b>Area (Acres)</b>	<b>% of Total Soil Acreage That is Not Water</b>
Bengal-Clebit-Clearview complex, 5 to 30 percent slopes	5,066.2	8.6
Cupco silt loam, 0 to 1 percent slopes, occasionally flooded	3,274.8	5.6
Rexor and Verdigris soils, 0 to 1 percent slopes, frequently flooded	3,158.1	5.4
Verdigris silt loam, 0 to 1 percent slopes, frequently flooded	2,711.6	4.6
Verdigris-Madill complex, 0 to 1 percent slopes, frequently flooded	2,532.3	4.3
Counts-Rexor complex, 0 to 12 percent slopes	2,452.6	4.2
Dennis-Verdigris complex, 0 to 8 percent slopes	2,315.6	3.9
Verdigris silt loam, 0 to 1 percent slopes, occasionally flooded	1,887.5	3.2
Karma loamy fine sand, 3 to 8 percent slopes, severely eroded	1,670.0	2.8
Bengal-Clebit-Rock outcrop complex, 30 to 60 percent slopes	1,581.5	2.7
<b>Totals</b>	<b>26,650.2</b>	<b>45.3</b>

### 3.6.1 Alternative 1: No Action Alternative

The No Action Alternative would not have any impacts to topography, geology, or soils since the 2013 SMP would not be supplemented. No ground disturbing activities would take place that could potentially affect topography, geology, or soils resources, including the prime farmlands identified in Figure 3.

### 3.6.2 Alternative 2: Proposed Action

The Proposed Action would have negligible long-term impacts to topography, geology, or soils due to repeated vegetation removal within the 45ft shoreline vegetation buffer in LDAs as permitted by the Lake Office that could potentially contribute to negligible losses of soils or increases in erosion. The proposed supplement to the 2013 SMP would not involve any ground disturbing activities or actions that would otherwise contribute to erosion or loss of soils, including the prime farmlands identified in Figure 3.

## **3.7 NATURAL RESOURCES**

Natural resources include the fisheries and aquatic resources, wetlands, vegetation, and wildlife present in the vicinity of Eufaula Lake. Approximately 31,569 acres of USACE lands are dedicated to fish and wildlife habitat management for multiple purposes, including wildlife refuges, threatened and endangered species, improvement of habitat for migratory birds and Species of Greatest Conservation Need (SGCN) as

listed by Oklahoma, and sustainability of habitat for game species such as turkey and whitetail deer. USACE directly manages habitat, access, and public use on approximately 8,756 acres that are available for public hunting. The ODWC manages approximately 21,136 acres of USACE public lands under long-term license for fish and wildlife and public hunting within the 7 units of the Eufaula Wildlife Management Area (WMA). The Eufaula WMA consists of 6 protected areas spread throughout the Lake, with most of the WMA being located on the upper reaches of river and creek arms of Eufaula Lake, comprised of Deep Fork, North Canadian and Canadian Rivers, Mill Creek, and Gaines Creek. The ODWC also manages two wetland development units (WDU) totaling approximately 780 acres at Deep Fork and Mill Creek to provide important habitat and refuge resources to waterfowl and other migratory birds. Approximately 1,000 acres of crops such as corn, soybeans, milo, and wheat are farmed within WMA areas at Eufaula Lake. This section discusses non-threatened or endangered species, as well as species not included as SGCN or reported by the Oklahoma National Heritage Inventory (ONHI).

### Vegetation

Eufaula Lake's vegetation communities are made up of 5 EPA Level IV ecoregions: the Northern Cross timbers, the Scattered High Ridges and Mountains, the Osage Cuestas, the Arkansas Valley Plains, and the Lower Canadian Hills (EPA, 2015). Figure 4 shows where each of these Level IV ecoregions can be found across Eufaula Lake.

The Lower Canadian Hills dominates Eufaula Lake's environment, accounting for approximately 90,873 acres. Dominant vegetation in the Lower Canadian Hills includes blackjack oak (*Quercus marilandica*), post oak (*Quercus stellata*), little bluestem (*Schizachyrium scoparium*), oak-hickory-shortleaf pine forest, big bluestem (*Andropogon gerardi*), switchgrass (*Panicum virgatum*), Indiangrass (*Sorghastrum nutans*), and oak-hickory forest in cross timbers sections. The upland sections of this ecoregion are dominated by post oak, blackjack oak, southern red oak (*Quercus falcata*), hickory (*Carya sp.*), and native grasses. Floodplains in this ecoregion are dominated by eastern cottonwood (*Populus deltoides*), sycamore (*Platanus occidentalis*), southern red oak, green ash (*Fraxinus pennsylvanica*), hackberry (*Celtis occidentalis*), pecan (*Carya illinoensis*), sweetgum (*Liquidambar styraciflua*), black willow (*Salix nigra*), willow oak (*Quercus phellos*), white oak (*Quercus alba*), and water oak (*Quercus nigra*).

The second largest Level IV ecoregion at Eufaula Lake is the Northern Cross Timbers, accounting for approximately 59,193 acres. Dominant vegetation in the Northern Cross Timbers includes post oak, blackjack oak, little bluestem in cross timbers areas, whereas tall grass prairie areas include big bluestem, little bluestem, switchgrass, and Indiangrass. Upland areas may contain post oak, blackjack oak, persimmon (*Diospyros virginiana*), redbud (*Cercis canadensis*), sumac (*Rhus sp.*), and eastern redcedar (*Juniperus virginiana*). Riparian areas in this ecoregion are comprised of hackberry, American elm (*Ulmus americana*), post oak, black walnut (*Juglans nigra*), green ash, willow (*Salix sp.*), sycamore, and cottonwood.

The Osage Cuestas ecoregion at Eufaula Lake accounts for approximately 5,167 acres of habitat. Tallgrass prairies are the dominant vegetation community in the Osage Cuestas ecoregion which includes big bluestem, little bluestem, switchgrass and Indiangrass. Mixtures of tall grass prairies and oak-hickory forests, as well as cross timbers can be found on rocky hilltops, dominated by blackjack oak, post oak, and little bluestem. Riparian areas of the Osage Cuestas contain boxelder (*Acer negundo*), silver maple (*Acer saccharinum*), bur oak (*Quercus macrocarpa*), Shumard oak (*Quercus shumardii*), American elm, hackberry, pecan, walnut (*Juglans sp.*), sycamore, and eastern cottonwood.

The Scattered High Ridges and Mountains ecoregion at Eufaula Lake spans approximately 149 acres. Dominant vegetation in this ecoregion is mostly comprised of oak-hickory and oak-hickory-shortleaf pine forests. Uplands, savannas, open woodlands, and forests all contain post oak, blackjack oak, black hickory (*Carya texana*) shortleaf pine (*Pinus echinata*), planted loblolly pine (*Pinus taeda*), and eastern redcedar. Drier areas in this ecoregion are dominated by maples (*Acer sp.*), white oak, northern red oak (*Quercus rubra*), and chinquapin oak (*Quercus muehlenbergii*), whereas riparian areas contain white oak, southern red oak, sycamore, hackberry, ash (*Fraxinus sp.*), and blackgum (*Nyssa sylvatica*).

The Arkansas Valley Plains ecoregion at Eufaula Lake covers approximately 76 acres. Dominant vegetation in this ecoregion contains cross timber areas dominated by blackjack oak, post oak, little bluestem, and oak-hickory-shortleaf pine forests mixed with tall grass prairies comprised of little bluestem, big bluestem, switchgrass, and Indiangrass. High terrace areas are comprised of post oaks, black oak, southern red oak, and black hickory. Wooded hills and ridged areas often contain post oak, blackjack oak, white oak, hickories, eastern redcedar, and shortleaf pine. Floodplain and riparian area vegetation includes eastern cottonwood, sycamore, oaks (*Quercus sp.*), black willow, green ash, pecan, sweetgum and black walnut.

For more information on vegetation communities, please refer to Section 3.1 of the 2013 EIS.

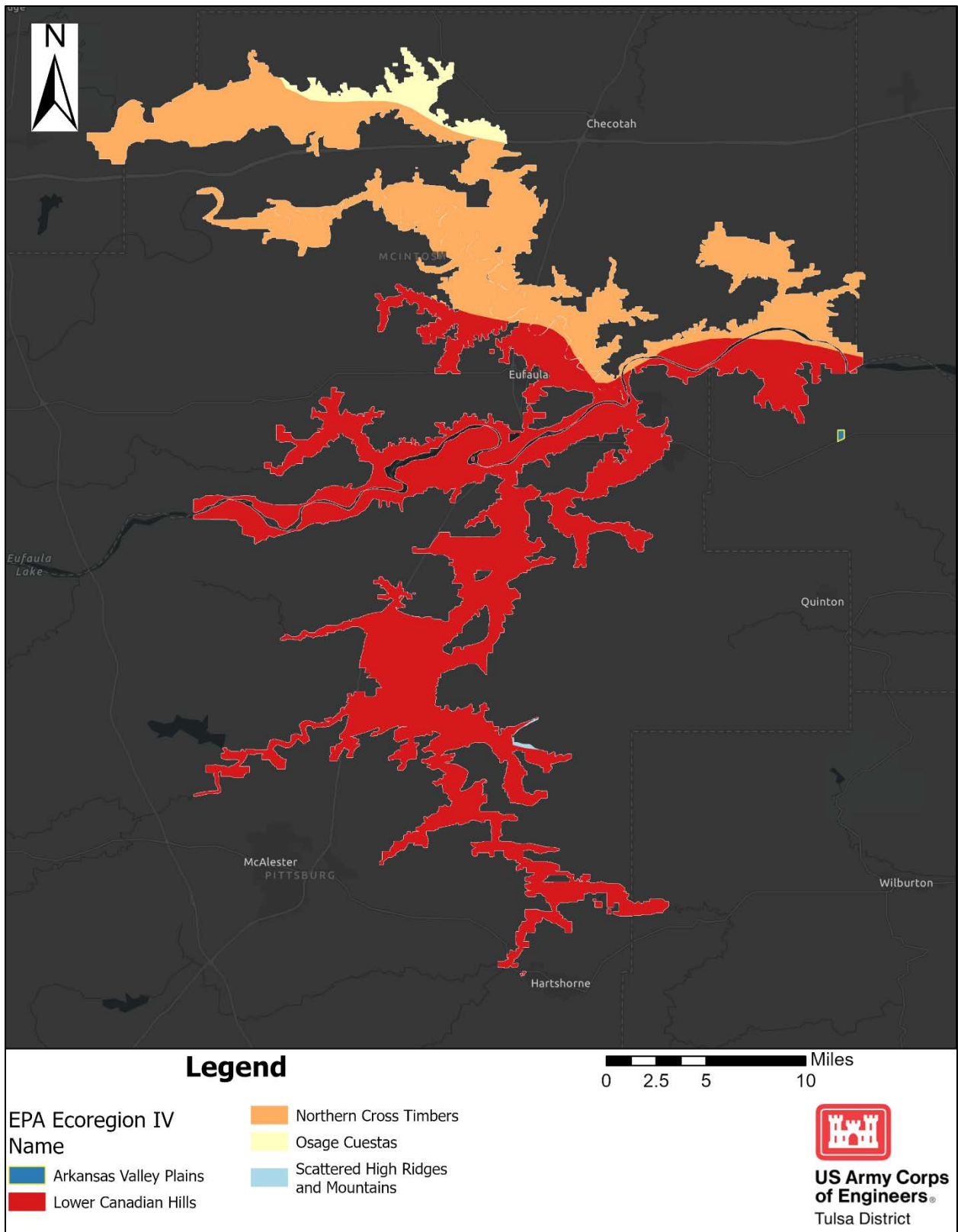
### Fisheries and Wildlife Resources

Eufaula Lake supports populations of several game fishes such as largemouth bass (*Micropterus salmoides*), smallmouth bass (*Micropterus dolomieu*), crappie (*Pomoxis spp.*), blue catfish (*Ictalurus furcatus*), white bass (*Morone chrysops*), channel catfish (*Ictalurus punctatus*), and sunfish (*Lepomis spp.*). Other species present includes walleye (*Stizostedion vitreum*), spotted bass (*Micropterus punctulatus*), flathead catfish (*Pylodictis olivaris*), striped bass (*Morone saxatilis*), gar (*Lepisosteidae*), carp (*Cyprinus carpio*), and buffalo (*Ictiobus sp.*). The bass fishery at Eufaula Lake is the most popular with local anglers. The alligator snapping turtle (*Machrochelys temminckii*) is a known visitor that is becoming rarer in presence at Eufaula Lake. Common amphibian species such as the bullfrog (*Rana catesbeiana*) and Southern leopard frog (*Rana utricularia*) dominate wetland habitats across Eufaula Lake, whereas forested wetlands are dominated primarily by the spring peeper (*Hyla crucifer*) and striped chorus frog (*Pseudacris triserata feriarium*).

Terrestrial wildlife at Eufaula Lake are represented primarily by game species such as white-tailed deer (*Odocoileus virginianus*), feral hogs (*Sus scrofa*), eastern cottontail (*Sylvilagus floridanus*), swamp rabbit (*Sylvilagus aquaticus*), gray squirrel (*Sciurus carolinensis*), and fox squirrel (*Sciurus niger*). Other terrestrial species present at Eufaula Lake include muskrat (*Ondatra zibethicus*), nutria (*Myocastor coypus*), raccoon (*Procyon lotor*), mink (*Neogale vison*), Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), river otter (*Lontra canadensis*), bobcat (*Lynx rufus*), beaver (*Castor canadensis*), gray fox (*Urocyon cinereoargenteus*), red fox (*Vulpes vulpes*), and coyote (*Canis latrans*). Rare terrestrial species known to occur at Eufaula Lake includes the black bear (*Ursus americanus*) and elk (*Cervus canadensis*).

Eufaula Lake also supports many bird species ranging from birds of prey, songbirds, and ground birds. Representative birds of prey species known to occur at Eufaula Lake includes red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), Cooper's hawk (*Accipiter cooperii*), American kestrel (*Falco sparverius*), barred owl (*Strix varia*), and black vulture (*Coragyps atratus*). Common songbirds at Eufaula Lake includes the tufted titmouse (*Thryothorus ludovicianus*), blue jay (*Cyanocitta cristata*), brown thrasher (*Toxostoma rufum*), Carolina wren (*Thryothorus ludovicianus*), Carolina chickadee (*Poecile carolinensis*), hermit thrush (*Catharus guttatus*), northern cardinal (*Cardinalis cardinalis*), northern mockingbird (*Mimus polyglottos*), swamp sparrow (*Melospiza georgiana*), and white-breasted nuthatch (*Sitta carolinensis*). Ground bird species such as the greater roadrunner (*Geococcyx californianus*), northern bobwhite (*Colinus virginianus*), mourning dove (*Zenaida macroura*), wild turkey (*Meleagris gallopavo*) are also found at Eufaula Lake. Other common bird species include woodpeckers (*Picoides spp.*), northern flicker (*Colaptes auratus*), and American crow (*Corvus brachyrhynchos*).

Known waterfowl species present at Eufaula Lake includes the gadwall (*Anas strepera*), American wigeon (*Anas americana*), green-winged teal (*Anas crecca*), ring-necked duck (*Aythya collaris*), mallard (*Anas platyrhynchos*), Canada goose (*Branta canadensis*), wood duck (*Aix sponsa*) and common goldeneye (*Bucephala clangula*). Waterbirds, which are not managed game species, are also present at Eufaula Lake including the American coot (*Fulica americana*), great egret (*Ardea alba*), great blue heron (*Ardea herodias*), double-crested cormorant (*Phalacrocorax auritus*), gulls (*Larus spp.*), and white pelicans (*Pelecanus erythrorhynchos*).



**Figure 4 - EPA Level IV Ecoregions at Eufaula Lake (EPA, 2015)**

### 3.7.1 Alternative 1: No Action Alternative

The No Action Alternative would have no effects on any of the natural resources discussed in Section 3.7. The 2013 SMP would not be supplemented to allow mowing 6ft-wide paths through the shoreline vegetation buffer, and natural resources would continue to be managed with the guidelines set by the 2013 MP with any later updates to natural resource management guidelines.

### 3.7.2 Alternative 2: Proposed Action

The Proposed Action would be expected to have minor, long-term impacts to natural resources as a result of allowing the public to mow 6ft-wide paths through the shoreline vegetation buffer in LDAs, with the potential to impact approximately 11.72 acres. Impacts would occur primarily as potential disturbance of animals and their respective habitats along the shoreline as well as repeated removal of vegetation due to mowing.

## **3.8 THREATENED AND ENDANGERED SPECIES**

The Endangered Species Act of 1973 (16 U.S.C. § 1531 et seq., as amended) defines an endangered species as a species “in danger of extinction throughout all or a significant portion of its range.” A threatened species is a species “likely to become endangered within the foreseeable future throughout all or a significant portion of its range.” Proposed species are those that have been proposed in the Federal Register (FR) to be listed under Section 4 of the Endangered Species Act. Species may be considered endangered or threatened “because of any of the following factors: (1) the present or threatened destruction, modification, or curtailment of its habitat or range; (2) overutilization for commercial, recreational, scientific, or educational purpose; (3) disease or predation; (4) the inadequacy of existing regulatory mechanisms; and (5) other natural or human-induced factors affecting continued existence.” USFWS has identified species that are candidates for listing as a result of identified threats to their continued existence. The candidate designation includes those species for which the USFWS has sufficient information to support proposals to list as endangered or threatened under the Endangered Species Act.

Section 7(a)(2) of the Endangered Species Act requires Federal agencies to ensure that any action authorized, funded, or carried out by such agency is not likely to 1) jeopardize the continued existence of any endangered or threatened species, or 2) result in the destruction or adverse modification of critical habitat. The term "jeopardize the continued existence of" means to appreciably reduce the likelihood of both the survival and recovery of listed species in the wild by reducing the species' reproduction, numbers, or distribution. Jeopardy opinions must present reasonable evidence that the project will jeopardize the continued existence of the listed species or result in destruction or adverse modification of critical habitat.

Using the Information for Planning and Consultation tool (IPaC), an official species list was obtained on July 17, 2023 from the USFWS Oklahoma Ecological Services Field Office. A copy of this list is available in Attachment A. All Federally listed Threatened and Endangered species reported on the official species list are described



in Table 9. The migratory bird species protected under the Migratory Bird Treaty Act (MBTA) are described in Table 10. The Oklahoma National Heritage Inventory (ONHI) was also consulted, and a copy of their report received on August 21, 2023 is included in Attachment A. The ONHI report was also used to determine the likelihood of occurrence for all Federally listed T&E species identified in the IPaC report described in Table 9

**Table 9 - Federally Listed Species Potentially Occurring at Eufaula Lake (USFWS, 2023A; ONHI, 2023A)**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Federal Conservation Status</b>	<b>Likelihood of Occurrence</b>
Gray Bat	<i>Myotis grisescens</i>	Endangered	Potentially Occurring
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Endangered	Potentially Occurring
Tricolored Bat	<i>Permyotis subflavus</i>	Proposed Endangered	Potentially Occurring
Piping Plover	<i>Charadrius melodus</i>	Threatened	Migratory Visitor
Red Knot	<i>Calidris canutus rufa</i>	Threatened	Migratory Visitor
Alligator Snapping Turtle	<i>Macrochelys temminckii</i>	Proposed Threatened	Likely
Arkansas River Shiner	<i>Notropis Girardi</i>	Threatened	Likely
Peppered Chub	<i>Macrhybopsis tetranema</i>	Endangered	Potentially Occurring
American Burying Beetle	<i>Nicrophorus americanus</i>	Threatened	Likely
Monarch Butterfly	<i>Danaus plexipus</i>	Candidate	Migratory or Seasonal Visitor

**Table 10 - Migratory Bird Species Potentially Occurring at Eufaula Lake (USFWS, 2023A)**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Breeding Season</b>
American Golden-plover	<i>Pluvialis dominica</i>	Breeds Elsewhere
American Kestrel	<i>Falco sparverius Paulus</i>	April 1 - August 31
Bald Eagle	<i>Haliaeetus leucocephalus</i>	September 1 - July 31
Chimney Swift	<i>Chaetura pelagica</i>	March 15 – August 25
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	May 1 – August 20

<b>Common Name</b>	<b>Scientific Name</b>	<b>Breeding Season</b>
Kentucky Warbler	<i>Oporornis formosus</i>	April 20 – August 20
Lesser Yellowlegs	<i>Tringa flavipes</i>	Breeds Elsewhere
Little Blue Heron	<i>Egretta caerulea</i>	March 10 – October 15
Prothonotary Warbler	<i>Protonotaria citrea</i>	April 1 – July 31
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	May 10 – September 10
Wood Thrush	<i>Hylocichla mustelina</i>	May 10 – August 31

The USFWS lists the gray bat as endangered wherever found (USFWS, 2023B). The USFWS lists the northeastern part of Eufaula Lake as a location where gray bats may occur (USFWS, 2023B). Gray bats seasonally migrate between summer and winter caves, ranging between 17 and 437 kilometers. This species is almost exclusively limited to caves throughout the year; non-cave sites such as buildings are occasionally used. Gray bats feed primarily on flying insects such as mayflies (*Choroterpes spp.*, *Stenocron spp.*), and beetles, with foraging areas generally being parallel to streams (NatureServe, 2023). No ONHI occurrences are recorded for this species within the Eufaula Lake fee boundary. This species is evaluated to be potentially occurring at Eufaula Lake based on information from the USFWS and ONHI occurrence records.

The USFWS lists the tricolored bat as proposed endangered (USFWS, 2023C), and the Eufaula Lake fee boundary as a location where the species may occur. Tricolored bats seasonally migrate between winter hibernacula and summer nursery sites. Roosting may take place in tree cavities, caves, mines, rock crevices, piles of dead leaves, under dead & live leaves, and buildings. Tricolored bats forage along the edge of forests and across waterways near roosting and hibernating sites. They emerge at dusk and feed on various insect species from over water and tops of trees (NatureServe, 2023A). No ONHI occurrences are recorded for this species within the Eufaula Lake fee boundary. This species is evaluated to be potentially occurring at Eufaula Lake based on information from the USFWS and ONHI occurrence records.

The USFWS lists the northern long-eared bat as endangered wherever it is found (USFWS, 2023D). The USFWS lists the Eufaula Lake fee boundary as a location where northern long-eared bats may occur. Northern long-eared bats seasonally migrate between winter hibernacula and summer maternity or bachelor colonies. Roosting may take place in tree bark, tree cavities, caves, mines, and barns. Northern long-eared bats forage along forested hillsides and ridges near roosting and hibernating caves. They emerge at dusk and feed on various insect species such as moths, flies, leafhoppers, caddisflies, and beetles from vegetation and water surfaces (NatureServe, 2023B). There are less than 5 recorded ONHI occurrences for this species at Eufaula Lake. This species is evaluated to be potentially occurring at Eufaula Lake based on information from the USFWS and ONHI occurrence records.

The piping plover is a shorebird listed as endangered in the watershed of the Great Lakes of North America and threatened in the remainder of its range, which includes the

Northern Great Plains, the Atlantic Coast, the Gulf Coast, the Bahama Islands, and the West Indies (USFWS, 2023E). The 2023 USFWS IPaC report states that Eufaula Lake does not contain any critical habitat for the piping plover, but does list the entire state of Oklahoma in the potential range for this species (USFWS, 2023D). No ONHI occurrences are recorded for this species within the Eufaula Lake fee boundary. This species is evaluated to occur as a migrant visitor at Eufaula Lake based on information from the USFWS and ONHI occurrence records.

The red knot (*Calidris canutus rufa*) is a migratory shorebird listed as threatened wherever it is found (USFWS, 2023F). Although sightings are rare, the project area is listed as a location where the red knot is “known or believed to occur” and is located within the probable migratory path, between breeding in the Arctic tundra and winter habitats in the southern U.S. and Central and South America. Red knots forage along sandy beaches and mud flats, and this species may use the study area for temporary stopover and foraging (NatureServe, 2023C). Any bare sandy shoreline along Eufaula Lake could provide suitable habitat during the red knot’s spring and fall migrations. No ONHI occurrences are recorded for this species within the Eufaula Lake fee boundary. This species is evaluated to occur as a migrant visitor at Eufaula Lake based on information from the USFWS and ONHI occurrence records.

The alligator snapping turtle is a reptile that is currently being considered by the USFWS as a threatened species wherever it may be found (USFWS, 2023G). The turtle is a carnivorous species that primarily inhabits freshwater bodies of water like marshes, swamps, creeks, rivers, ponds, and lakes. It is characterized by the three rows of points that run along the topside of its shell, as well as the jagged edges of its shell. The turtle can grow up to 250 lbs, and be over 2ft in length (USFWS, 2023G). It is primarily an ambush predator that attracts its prey while submerged by waving its tongue and waiting until something comes close enough for it to attack. It can also be an opportunistic scavenger that will feed on carrion that it comes across. There are less than 5 recorded ONHI occurrences for this species at Eufaula Lake. Based on information from the USFWS and ONHI occurrence records, this species is likely to occur at Eufaula Lake.

The Arkansas River shiner is a small, streamlined minnow the USFWS lists as Threatened in the Arkansas River Basin (USFWS, 2023H). The USFWS identifies the western part of Eufaula Lake as a potential occurrence area for the Arkansas River shiner. This species typically inhabits turbid waters of broad, shallow, unshaded channels of creeks and small to large rivers with a silt and sand type substrate (NatureServe, 2023D). Spawning occurs in mainstream channels where eggs are carried downstream by river currents, and larvae inhabiting backwater pools or side channels. The Arkansas River Shiner is primarily a plankton feeder that feeds on organisms in the water column or that are exposed on sandy substrates. There are multiple recorded ONHI occurrences for this species at Eufaula Lake. Based on information from the USFWS and ONHI occurrence records, this species is likely to occur at Eufaula Lake.

The peppered chub is a small minnow the USFWS lists as Endangered wherever found (USFWS, 2023I). The USFWS identifies the western part of Eufaula Lake as a

potential occurrence area for the peppered chub. This species typically inhabits shallow channels of permanently flowing sandy streams and avoids calmer silted stream bottoms (NatureServe, 2023E). No ONHI occurrences are recorded for this species within the Eufaula Lake fee boundary. Based on information from the USFWS and ONHI, this species may potentially occur at Eufaula Lake.

The American burying beetle is a member of the family Silphidae (carrion or burying beetles) that is listed threatened (USFWS, 2023J). It is the largest species of *Nicrophorus* in North America. Existing populations of this species includes eastern Oklahoma. The American burying beetle is known to inhabit level areas in grasslands, grazed pastures, bottomland forest, open woodlands, and riparian areas. Wetlands with standing water or saturated soils and vegetation typical of hydric soils and wetland hydrology are listed as unfavorable habitats. American burying beetles are habitat generalists; however, it is thought that undisturbed habitat and the availability of carrion is the most likely influence on species distribution. The species can occur within the Eufaula Lake Fee Boundary because the habitat and food are available for the species in plentiful supply. There are multiple recorded occurrences for this species at Eufaula Lake. Based on information from the USFWS and ONHI, this species is likely to occur at Eufaula Lake.

The Monarch butterfly is listed as a candidate species wherever it is found (USFWS, 2023K). It is an orange butterfly with black stripes and white dots on its wings, whose span can be up to 10 cm (NatureServe, 2023F). Its breeding habitat consists primarily of milkweed species (*Asclepias spp.*), which its larvae feed exclusively on. When it is in North America and is migrating, it is commonly found wherever blooming flowers are. Eufaula Lake and its federal fee boundary contains an abundance of blooming flowers and milkweed; this along with numerous recent sightings confirms that this species is common within the area when the species is migrating and during breeding season. No ONHI occurrences are recorded for this species within the Eufaula Lake fee boundary. Based on information from the USFWS and ONHI, this species is likely to visit Eufaula Lake seasonally as part of its migration pattern and known range.

Table 11 lists species that are State Listed and or are SGCN species in the State of Oklahoma, using ONHI's county data for each of the 6 surrounding counties for Eufaula Lake (ONHI, 2023). The State of Oklahoma uses a tiered system for their SGCN species, with Tier 1 having the highest conservation need, and Tier 3 having the lowest conservation need.

**Table 11 - SGCN and State Listed Species in Eufaula Lake's Vicinity (ONHI, 2023)**

Common Name	Species Name	County Occurrence	SGCN Species (Y/N)	SGCN Rank	State Listing
Alligator Snapping Turtle	<i>Macrochelys temminckii</i>	Muskogee, McIntosh, Okmulgee	Y	Tier 1	None

Common Name	Species Name	County Occurrence	SGCN Species (Y/N)	SGCN Rank	State Listing
American Burying Beetle	<i>Nicrophorus americanus</i>	All 6	Y	Tier 2	None
Arkansas River Shiner	<i>Notropis girardi</i>	Muskogee, McIntosh, Pittsburg, Okmulgee, Haskell	Y	Tier 1	None
Arkansas River Speckled Chub	<i>Macrhybopsis tetranema</i>	Muskogee, McIntosh, Haskell	Y	Tier 3	None
Blackside Darter	<i>Percina maculata</i>	Latimer, Okmulgee, Haskell	Y	Tier 3	Listed Threatened
Gray Bat	<i>Myotis grisescens</i>	Muskogee	Y	Tier 2	None
Indiana Bat	<i>Myotis sodalis</i>	Muskogee	Y	Tier 3	None
Neosho Madtom	<i>Noturus placidus</i>	Muskogee	Y	Tier 1	None
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Pittsburg	Y	Tier 2	None

### 3.8.1 Alternative 1: No Action Alternative

The No Action Alternative would have no effect on any Threatened and Endangered species, or species listed in the ONHI report that may occur at Eufaula Lake. Migratory bird species protected under the MBTA would also not be affected. Threatened and Endangered species and ONHI species would continue to be managed with existing USACE guidelines established under the 2013 MP and 2013 SMP, Section 7 of the ESA, the MBTA, and Title 29 of Oklahoma State Law.

### 3.8.2 Alternative 2: Proposed Action

The addition to the 2013 SMP that would allow mowing of 6ft-wide paths through the shoreline vegetation buffer in LDAs would be similar to existing vegetation modification permit activities already occurring at Eufaula Lake. Use of noisy, gas-powered equipment such as lawnmowers that may disturb fauna already occurs regularly at Eufaula Lake, and the Proposed Action would not differ from existing amounts of disturbance.

No critical habitat for Federally listed species reported by the USFWS exists at Eufaula Lake. Removal or modification of vegetation under the Proposed Action would only be allowed in LDAs where any listed species are less likely to occur, and any known habitat or occurrence areas for listed species would be avoided or given special consideration by the Lake office when issuing mowing permits. No changes to tree trimming or removal would occur because of the Proposed Action.

Removal of vegetation is expected to impact potential American Burying Beetle habitat. The Action may affect the American burying beetle; however, any incidental take that may occur as a result of the Proposed Action is not prohibited under the Act Section 4(d) rule adopted for this species at 50 CFR §17.47(d). The species 4(d) determination key was sent to the USFWS for review on July 17, 2023, in which they had 30 days to comment. No comments were received from the USFWS which concluded the informal consultation process and the 4(d) letter verifies the associated Programmatic Biological Opinion (PBO) satisfies and concludes USACE responsibility for this Action under Act Section 7(a)(2) with respect to the American burying beetle. The impacts of the Proposed Action on the American Burying Beetle are expected to be minor, long-term impacts. No other Threatened or Endangered Species, SGCN, or ONHI species would be affected by the Proposed Action.

### **3.9 INVASIVE SPECIES**

Using the most recent data from the USACE's Natural Resources Management (NRM) assessment tool, 4 invasive species are known to occur at Eufaula Lake. These 4 invasive species are the Sudden Oak Death pathogen (*Phytophthora ramorum*), kudzu (*Pueraria montana*), zebra mussel (*Dreissena polymorpha*), and wild boar (*Sus scrofa*). The most recent NRM data is from Fiscal Year (FY) 2022.

The Sudden Oak Death pathogen is a protist plant pathogen that causes sudden oak death. This disease kills oaks and other species of trees by causing bleeding cankers on the tree's trunk and causes dieback of foliage. This pathogen is also known to infect other trees like Rhododendrons, Viburnums, and Pieris. The Sudden Oak Death pathogen produces spores that primarily spread by rainfall or splashes of rainwater. The NRM FY2022 report estimates approximately 2,392 acres at Eufaula Lake are affected by the Sudden Oak Death pathogen, and is controlled using mechanical methods such as removal of infected trees (USACE-NRM, 2022).

Kudzu is a climbing, vine-like member of the Legume family (*Fabaceae*). The climbing, spreading nature of this plant coupled with its ability to reproduce asexually make it able to smother native species by shading them or crushing them with its weight. As a result of Kudzu invasion, many native species that serve as food sources for local wildlife are outcompeted, and an overall reduction in biodiversity. The NRM FY2022 report estimates that approximately 10 acres of habitat at Eufaula Lake are impacted (USACE-NRM, 2022). This species is primarily controlled with biological management techniques such as bioherbicides.

The zebra mussel is a small freshwater mussel that is able to attach to many different types of substrates with strong byssal fibers. This species is able to spread

rapidly in sites where they are introduced, attaching to anything from hard rock bottom habitat, wood piles, boats, plastics, etc. When introduced to bodies of water, zebra mussels will often produce colonies on top of other native clams or mussels which are subsequently trapped and suffocated. Other effects of zebra mussel invasion include fouling of boats, dams, and other man-made structures where the mussels attach themselves. This species also aggressively filters the water, which can cause sunlight to penetrate deeper into the water column and cause harmful blooms of aquatic plants. The NRM FY2022 report estimates that approximately 10,600 acres of habitat at Eufaula Lake are impacted by this species (USACE-NRM, 2022). The zebra mussels at Eufaula Lake are primarily controlled with chemical management techniques such as liquid fertilizers, biopesticides, or Niclosamide.

Wild boar are large, feral pigs that can either be the invasive Eurasian wild pig or feral domesticated pigs, as well as hybrids resulting from interbreeding between the two. These animals are responsible for large-scale amounts of agricultural land damage, as well as outcompeting other species native to the area they are introduced. The NRM FY2022 report estimates that approximately 1,000 acres of habitat at Eufaula Lake are impacted by this species (USACE-NRM, 2022). Wild boar are primarily managed by removal, including trapping and hunting.

#### 3.9.1 Alternative 1: No Action Alternative

The No Action Alternative would have no effect on invasive species. The supplement to 2013 SMP would not be implemented. No changes to policies or guidelines at Eufaula Lake concerning invasive species would occur as a result of the No Action Alternative.

#### 3.9.2 Alternative 2: Proposed Action

The proposed supplement to the 2013 SMP only concerns vegetation management permits to be able to mow 6ft-wide paths through the shoreline vegetation buffer. The proposed changes do not include anything related to invasive species management or associated policies at Eufaula Lake. Invasive species and their management would continue as established by the 2013 SMP and or the 2013 EIS and MP. The Proposed Action would have no effect on invasive species or their management at Eufaula Lake.

### **3.10 CULTURAL, HISTORICAL, AND ARCHAEOLOGICAL RESOURCES**

Cultural resources preservation and management is an equal and integral part of all resource management at USACE-administered operational projects. The term “cultural resources” is a broad term that includes but is not limited to historic and prehistoric archaeological sites, deposits, and features; burials and cemeteries; historic and prehistoric districts comprised of groups of structures or sites; cultural landscapes; built environment resources such as buildings, structures (such as bridges), and objects; Traditional Cultural Properties (TCP) and sacred sites. These property types may be listed on the National Register of Historic Places (NRHP) if they meet the criteria specified by 36 CFR 60.4 as authorized by the NHPA, reflecting significance in architecture, history, archaeology, engineering, and culture. Cultural resources that are

identified as eligible for listing in the NRHP are referred to as “historic properties,” regardless of category. A TCP is a property that is eligible for inclusion in the NRHP based on its associations with the cultural practices, traditions, beliefs, lifeways, arts, crafts, or social institutions of a living community. Ceremonies, hunting practices, plant-gathering, and social practices which are part of a culture’s traditional lifeways are also cultural resources.

Stewardship of cultural resources on USACE Civil Works water resources projects is an important part of the overall Federal responsibility. Numerous laws pertaining to identification, evaluation, and protection of cultural resources, Native American Indian rights, curation and collections management, and the protection of resources from looting and vandalism establish the importance of cultural resources to our Nation’s heritage. With the passage of these laws, the historical intent of Congress has been to ensure that the Federal government protects cultural resources. Guidance is derived from a number of cultural resources laws and regulations, including but not limited to Sections 106 and 110 of the National Historic Preservation Act (NHPA) of 1966 (as amended); Archaeological Resources Protection Act (ARPA) of 1979; Native American Graves Protection and Repatriation Act (NAGPRA); and 36 CFR Part 79, Curation of Federally Owned and Administered Archeological Collections. Implementing regulations for Section 106 of the NHPA and NAGPRA are 36 CFR Part 800 and 43 CFR Part 10, respectively. All cultural resources laws and regulations should be addressed under the requirements of the National Environmental Policy Act (NEPA) of 1969 (as amended), as applicable. USACE summarizes the guidance provided in these laws in ER and EP 1130-2-540.

Please refer to Section 3.6, Cultural and Historic Resources, in the 2013 Eufaula Lake EIS for an extended discussion on the Lake’s historical setting, historic periods, and details on archaeological surveys. The 2013 EIS also performed its own Phase I archaeological survey that was conducted on a proposed lease area for the Carlton Landing development, spanning across 301 acres and 7 sites. Of the 301-acres (121 hectare) surveyed along the shorelines at the proposed Carlton Landing development, five previously identified sites were re-evaluated and two new sites were identified. Four of the sites at Carlton Landing are prehistoric sites and one is a historic site. Only one of the sites was determined to be eligible for listing on the NRHP.

Currently, there are over 500 known archaeological sites within fee lands associated with the reservoir. Most of the archaeological sites are prehistoric, a few are historic, some have both historic and prehistoric occupations, and a few cannot be ascribed a cultural occupation. Most of the historic sites are associated with coal mining, historic Native American locations, or transportation related structures. Of the known archaeological and historic sites, 15 are listed on the NRHP or are eligible for listing. Many of the archaeological sites are under the waters of the lake. A USACE database of cultural resource sites on the lakeshore includes over 500 cultural and historic resources (USACE-NRM, 2022).

Numerous cultural resources laws establish the importance of cultural resources to our Nation’s heritage. With the passage of these laws, the historical intent of Congress has been to ensure that the Federal government protects cultural resources.



Stewardship of cultural resources on USACE Civil Works water resources projects is an important part of the overall Federal responsibility. The approved Cultural Resources/Historic Properties Management Plan (HPMP) approved on August 15, 2012, still applies.

### 3.10.1 Alternative 1: No Action Alternative

The No Action Alternative would have no potential to affect cultural, historical, or archaeological resources at Eufaula Lake. The established 2012 HPMP would continue to manage any cultural resources present at Eufaula Lake.

### 3.10.2 Alternative 2: Proposed Action

The Proposed Action would supplement the 2013 SMP to allow the public to mow 6ft-wide paths through the shoreline vegetation buffer in LDAs across 11.72 acres in Eufaula Lake. The Proposed Action also does not involve any ground-disturbing activities that could potentially affect cultural, historical, or archaeological resources. No changes to the policies or guidelines concerning the conservation or management of cultural, historical, or archaeological resources at Eufaula Lake would occur as a result of the Proposed Action. The established 2012 HPMP for Eufaula Lake would continue to protect and manage these resources, as well as guidance established in the 2013 EIS, MP, and SMP. Therefore, the Proposed Action has no potential to affect cultural, historical, or archaeological resources, including those eligible for listing on the National Register of Historic Places (historic properties).

## **3.11 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE**

The zone of influence for the socioeconomic analysis of Eufaula Lake consists of the 6 surrounding counties in Oklahoma in the immediate vicinity of Eufaula Lake. Available information indicates that an overwhelming majority of visitors to Eufaula Lake come from within the zone of interest which takes in all or portions of counties within the immediate vicinity of the lake.

### Environmental Justice

EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, was issued by President Clinton on 11 February 1994. It was intended to ensure that proposed federal actions do not have disproportionately high and adverse human health and environmental effects on minority and low-income populations and to ensure greater public participation by minority and low-income populations. It required each agency to develop an agency-wide environmental justice strategy. A Presidential Transmittal Memorandum issued with the EO states that “each federal agency shall analyze the environmental effects, including human health, economic and social effects, of federal actions, including effects on minority communities and low-income communities, when such analysis is required by the NEPA 42 U.S.C. section 4321, et seq.”

EO 12898 does not provide guidelines as to how to determine concentrations of minority or low-income populations. However, analysis of demographic data on race

and ethnicity and poverty provides information on minority and low-income populations that could be affected by the Proposed Actions. The U.S. Census American Community Survey provides the most recent estimates available for race, ethnicity, and poverty. Minority populations are those persons who identify themselves as Black, Hispanic, Asian American, American Indian/Alaskan Native, Pacific Islander, or Other. Poverty status is used to define low-income. Poverty is defined as the number of people with income below poverty level, which was \$24,588 for a family of four in 2017 with two children under 18 (US Census Bureau, 2018). A potential disproportionate impact may occur when the minority in the study area exceeds 50 percent or when the percent minority and/or low-income in the study area are meaningfully greater than those in the region.

EO 14008, Tackling the Climate Crisis at Home and Abroad, was issued by President Biden on January 27, 2021. EO 14008 establishes the Justice40 initiative, which direct 40% of the overall benefits of certain Federal investments, including investments in clean energy and energy efficiency; clean transit; affordable and sustainable housing; training and workforce development; the remediation and reduction of legacy pollution; and the development of clean water infrastructure – to flow to disadvantaged communities. EO 14008 defines a community as either geographic: a group of individuals living in a geographic proximity (such as a census tract) or with a common condition: a geographically dispersed set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions.

To evaluate if a community is disadvantaged, the Department of Energy (DOE) created the White House Climate and Economic Justice Screening Tool (CEJST). The CEJST evaluates defines thresholds for a community to be considered disadvantaged if it the census tract meets the threshold for environmental, climate, or other burdens, and an associated socioeconomic burden is marked as disadvantaged. The CEJST considers the following eight categories for burdens: climate change; energy; health; housing; legacy pollution; transportation; water and wastewater; and workforce development. The CEJST also considers a community disadvantaged if the census tract is completely surrounded by other disadvantaged communities and is at or above the 50% percentile for low income. A CEJST evaluation for Eufaula Lake and its zone of interest is included in this EA.

### Protection of Children

EO 13045 requires each federal agency “to identify and assess environmental health risks and safety risks that may disproportionately affect children” and “ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.” This EO was prompted by the recognition that children, still undergoing physiological growth and development, are more sensitive to adverse environmental health and safety risks than adults. The potential for impacts on the health and safety of children is greater where projects are located near residential areas.

The population estimates for the zone of interest and the State of Oklahoma are summarized in Table 12 using data from the United States Census Bureau's (USCB) American Community Survey (ACS) 5-Year estimates, and the Oklahoma Department of Commerce's (ODC) 2023 report on Oklahoma Population Projection 2020-2070. Table 11 shows an overall population decline for each of the 6 counties in the zone of interest from 2010 to 2021, as well as projected to 2050, however the State of Oklahoma grew from 2010 to 2021, and is projected to grow through 2050 (USCB, 2010, 2021; ODC,2023). The most populous county in the zone of interest is Muskogee County, whereas the least populous county is Latimer County.

**Table 12 - 2010 & 2021 Population Estimates with Population Projections for Year 2050 in the Zone of Interest (USCB, 2010,2021; ODC, 2023)**

<b>Geographical Area</b>	<b>2010 Population Estimate</b>	<b>2021 Population Estimate</b>	<b>2050 Population Projection</b>
Oklahoma	3,675,339	3,948,136	4,376,036
Haskell County	12,577	11,711	11,481
Latimer County	11,015	9,555	7,167
McIntosh County	20,012	19,105	15,296
Muskogee County	70,383	66,881	59,395
Okmulgee County	39,664	37,046	33,373
Pittsburg County	45,147	43,836	37,784
Zone of Interest Total	198,798	188,134	164,496

The distribution of the population by gender for the zone of interest and the State of Oklahoma is summarized in Table 13, using the ACS 2021 dataset from the USCB. Pittsburg county is the only county in the zone of interest reported to have a higher population of males to females, all other counties as well as the State of Oklahoma have a higher population of females to males (USCB, 2021).

**Table 13 - 2021 ACS Estimates of Population by Gender (USCB, 2021)**

<b>Geographical Area</b>	<b>Male</b>	<b>Female</b>
Oklahoma	1,964,927	1,983,209
Haskell County	5,822	5,889
Latimer County	4,867	4,688
McIntosh County	9,525	9,580
Muskogee County	32,792	34,089
Okmulgee County	18,445	18,601
Pittsburg County	22,433	21,403

The distribution of population by age group for the zone of interest and the State of Oklahoma is summarized in Table 14, using the ACS 2021 dataset from the USCB. All counties in the zone of interest have a median age older than the State of Oklahoma

(36.8 years). McIntosh County had the lowest percentage of people under 18 years of age, at 20.2% of its population, whereas Muskogee County had the highest, at 24.6%. The county with the highest median age was McIntosh County, with a median age of 47.5 years, whereas Muskogee County had the lowest median age of 37.9 years.

**Table 14 - 2021 ACS Estimates of Population by Age Group (USCB,2021)**

Age Group	State of Oklahoma	Haskell County	Latimer County	McIntosh County	Muskogee County	Okmulgee County	Pittsburg County
Under 5	252,929	689	551	1,039	4,344	2,186	2,567
5-9	266,855	708	490	1,147	4,732	2,415	2,958
10-14	279,147	908	686	961	4,634	2,637	2,715
15-19	269,963	755	684	990	4,577	2,739	2,628
20-24	271,501	609	625	994	4,255	2,478	2,275
25-34	535,616	1,328	1,019	1,863	8,421	4,322	5,813
35-44	503,103	1,413	1,092	2,023	8,554	4,179	5,387
45-54	459,972	1,354	1,099	2,205	7,660	4,349	5,101
55-59	250,962	793	649	1,494	4,120	2,394	3,096
60-64	242,256	801	645	1,544	4,569	2,592	2,799
65-74	367,032	1,376	1,038	2,771	6,494	3,901	4,776
75-84	182,204	754	765	1,477	3,426	2,161	2,651
85 or older	66,596	223	212	597	1,095	693	1,070
Median Age	36.8	40.8	41.4	47.5	37.9	39.3	40.2

The distribution of population by race and Hispanic Origin for the zone of interest and the State of Oklahoma is summarized in Table 15. The zone of interest's majority race is White, accounting for approximately 60.3% of the population, followed by 5.2% Hispanic or Latino, 5.7% Black or African American, 13.7% American Indian and Alaska Native, 0.5% Asian, 0.1% Native Hawaiian and Other Pacific Islander, and 1.7% Some other Race. Muskogee County had the highest percentage of minority races at 44.1%, and Pittsburg County had the lowest percentage at 28.8%, making them the most and least diverse counties respectively.

**Table 15 - 2021 ACS Estimate of Population by Race and Hispanic Origin (USCB, 2021)**

Geographical Area	White	Hispanic or Latino	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Some other race	Two or more Races
Oklahoma	2,617,058	467,246	274,632	297,937	90,192	5,247	142,966	558,607
Haskell County	8,224	554	80	1,183	28	0	122	2,074
Latimer County	6,175	428	105	2,149	86	0	47	993

McIntosh County	13,133	573	469	3,146	101	13	57	2,186
Muskogee County	37,376	4,561	6,795	12,415	425	6	2,606	7,258
Okmulgee County	23,540	1,662	2,813	5,724	186	19	235	4,529
Pittsburg County	31,205	2,454	1,080	2,573	200	70	321	8,387
<b>Zone of Interest Total</b>	<b>119,653</b>	<b>10,232</b>	<b>11,342</b>	<b>27,190</b>	<b>1,026</b>	<b>108</b>	<b>3,388</b>	<b>25,427</b>

Estimates of the population's distribution for educational attainment for the zone of interest and the State of Oklahoma are summarized in Table 16 using the 2021 ACS dataset from the USCB. The zone of interest compares similarly to the State of Oklahoma with percentage of adults over the age of 25 that are high school graduates. 36.9% and 38.7% respectively. The zone of interest has less adults over the age of 25 with a college degree (associates', bachelor's or graduate's) than the State of Oklahoma, 27.4% versus 36% respectively.

**Table 16 - 2021 ACS Estimate of Population by Educational Attainment (USCB, 2021)**

Geographical Area	Population 25 and Older	Less than 9 <sup>th</sup> Grade	9 <sup>th</sup> -12 <sup>th</sup> Grade, no diploma	High School Graduate	Some college, no degree	Associate's degree	Bachelor's degree	Graduate or Professional degree
Oklahoma	2,639,889	102,238	195,776	811,661	578,915	214,116	483,168	254,015
Haskell County	8,042	343	888	3,212	1,580	749	899	371
Latimer County	6,519	244	640	2,445	1,321	1,028	587	254
McIntosh County	13,974	561	1,353	6,111	3,166	1,007	1,233	543
Muskogee County	44,339	1,635	4,445	15,431	9,411	4,548	6,292	2,577
Okmulgee County	24,591	841	2,458	8,575	6,106	2,896	2,451	1,174
Pittsburg County	30,693	1,014	2,970	11,470	6,693	2,819	3,817	1,910
<b>Zone of Interest Total</b>	<b>128,158</b>	<b>4,638</b>	<b>12,754</b>	<b>47,244</b>	<b>28,277</b>	<b>13,047</b>	<b>15,279</b>	<b>6,829</b>

Estimates of employment by industry sector for the populations of the zone of interest and the State of Oklahoma are summarized in Table 17 using the 2021 ACS dataset from the USCB. The zone of interest has the most employment in the education sector, identical to the State of Oklahoma. The zone of interest also has the least employment in the information sector, also identical to the State of Oklahoma.

**Table 17 – ACS Estimate of Employment by Industry Sector (USCB, 2021)**

Employment Sector	Oklahoma	Haskell County	Latimer County	McIntosh County	Muskogee County	Okmulgee County	Pittsburg County	Zone of Interest Total
Civilian employed population 16 years and over	1,789,742	4,523	3,533	6,307	25,872	14,932	17,440	57,690

Employment Sector	Oklahoma	Haskell County	Latimer County	McIntosh County	Muskogee County	Okmulgee County	Pittsburg County	Zone of Interest Total
Agriculture, forestry, fishing and hunting, and mining	75,146	601	305	225	468	383	839	2,821
Construction	127,323	395	240	661	1,561	1,142	1,118	5,117
Manufacturing	170,052	343	205	604	3,691	1,494	1,678	8,015
Wholesale trade	43,614	50	59	118	691	339	369	1,626
Retail trade	206,484	384	384	818	2,631	2,224	1,943	8,384
Transportation, warehousing, and utilities	100,374	263	277	428	1,501	921	856	4,246
Information	27,555	23	67	5	333	155	288	871
Finance and insurance, real estate and rental and leasing	99,119	144	164	249	995	510	697	2,759
Professional, scientific, management, and administrative and waste management services	158,036	226	257	621	1,388	944	1,215	4,651
Educational services, health care and social assistance	407,799	1,122	890	1,332	6,803	3,536	4,021	17,704
Arts, entertainment, and recreation, and accommodation and food services	168,114	255	172	726	2,208	1,578	1,383	6,322
Other services, except public administration	92,997	370	191	281	1,455	627	909	3,833
Public administration	110,129	347	322	239	2,147	1,079	2,124	6,258

Estimates of employment, unemployment, and unemployment rate for the populations in the zone of interest and the State of Oklahoma are summarized in Table 18, using the 2021 ACS dataset from the USCB. All counties in the zone of interest, except McIntosh County, had unemployment rates higher than the State of Oklahoma, with an unemployment rate of 5%. Haskell and Latimer Counties had the highest rates of unemployment in the zone of interest, at 8.6% and 8.9%, respectively.

**Table 18 - ACS Estimates of Employment, Unemployment, and Unemployment Rate (USCB, 2021)**

Geographic Area	Civilian Labor Force	Number Employed	Number Unemployed	Unemployment Rate (%)
Oklahoma	1,881,598	1,786,742	94,856	5.0
Haskell County	4,947	4,523	424	8.6
Latimer County	3,879	3,533	346	8.9
McIntosh County	6,630	6,307	323	4.9
Muskogee County	27,548	25,872	1,676	6.1

Okmulgee County	16,141	14,932	1,209	7.5
Pittsburg County	18,751	17,440	1,311	7.0
<b>Zone of Interest Total</b>	77,896	72,607	5,289	7%*

\*Zone of interest total for unemployment rate is an average, not a sum.

Information on households, median household income, and per capita income for the zone of interest and the State of Oklahoma is presented in Table 19, using data from the 2021 ACS dataset from the USCB. Muskogee County contained the most households (25,455), and Latimer County contained the least (3,582). All counties in the zone of interest had a lower median household income and lower per capita income compared to the State of Oklahoma. Pittsburg County had the highest median household income in the zone of interest (\$49,669), whereas Latimer County had the lowest (\$39,939). Pittsburg County also had the highest per capita income (\$26,504), whereas McIntosh County had the lowest (\$23,606).

**Table 19 - ACS Estimates of Households, Median Household Income, and Per Capita Income (USCB, 2021)**

<b>Geographic Area</b>	<b>Total Households</b>	<b>Median Household Income (\$)</b>	<b>Per Capita Income (\$)</b>
Oklahoma	1,503,868	56,956	30,976
Haskell County	4,576	43,622	23,870
Latimer County	3,582	39,939	26,072
McIntosh County	7,233	40,792	23,606
Muskogee County	25,455	44,166	24,557
Okmulgee County	13,959	48,689	25,501
Pittsburg County	17,112	49,669	26,504
<b>Zone of Interest Total/Average</b>	71,917	44,480*	25,018*

\*Denotes an average instead of a total.

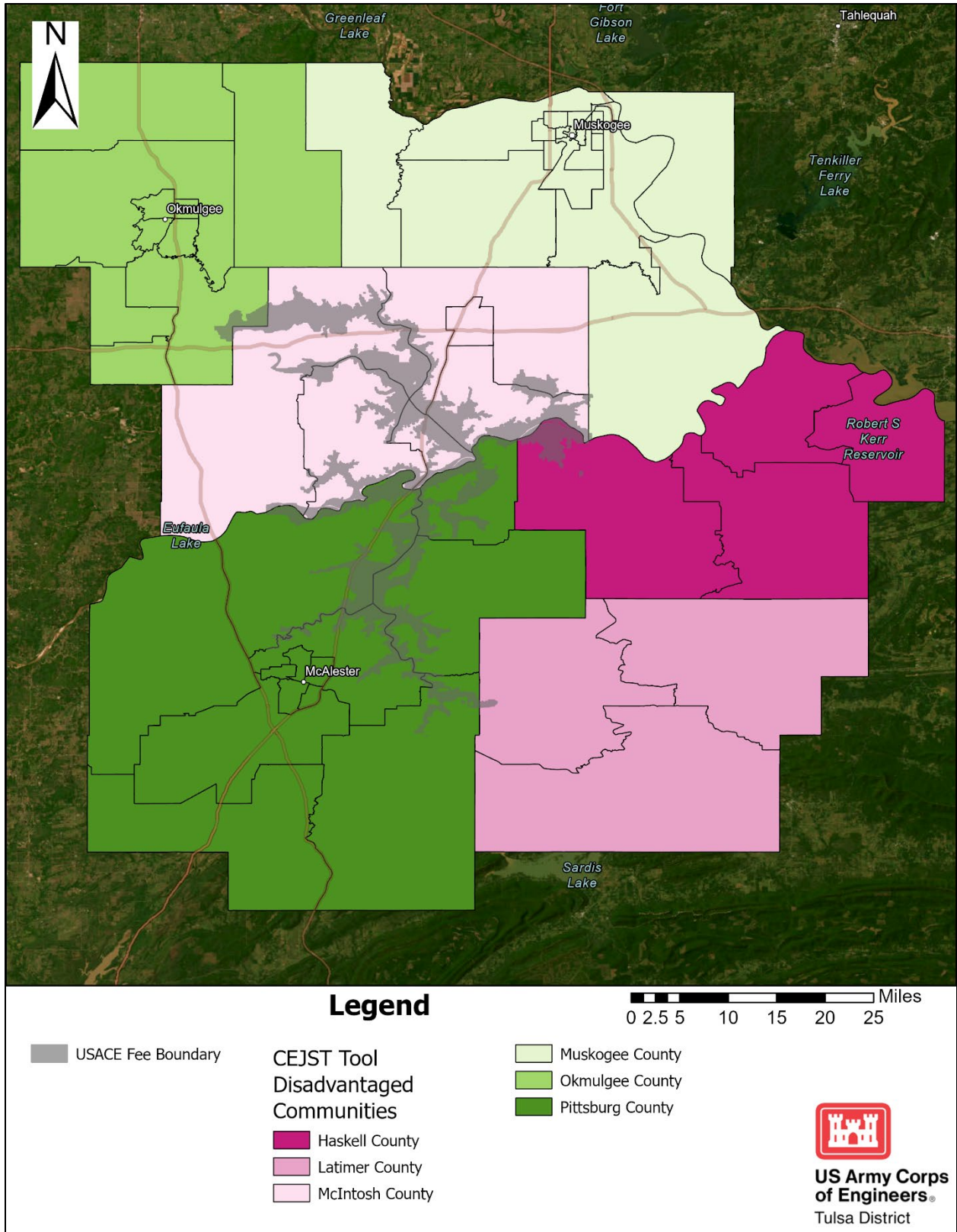
Information on all people and all families whose income in the last 12 months is below the poverty level for the zone of interest and the State of Oklahoma is presented in Table 20, using data from the 2021 ACS dataset from the USCB.

**Table 20 - ACS Estimates on Persons and Families whose Income in the Past 12 Months is Below the Poverty Level (USCB,2021)**

<b>Geographic Area</b>	<b>All Persons</b>	<b>All Persons (%)</b>	<b>All Families</b>	<b>All Families (%)</b>
Oklahoma	583,853	15.2	979,479	11.0
Haskell County	2,503	21.6	3,127	16.9
Latimer County	1,585	17.2	2,685	15.6
McIntosh County	4,119	22.0	4,714	15.8
Muskogee County	12,417	19.6	16,463	14.3
Okmulgee County	5,917	16.7	9,283	13.8
Pittsburg County	7,589	18.8	11,309	13.6
<b>Zone of Interest Average</b>	5,688	19.0	7,930	15

Using CEJST data, it was determined that all 6 of the counties at Eufaula Lake are considered disadvantaged communities by the CEQ. Figure 5 shows the disadvantaged community census tracts in all 6 counties that are considered disadvantaged based on CEQ data. All of the census tracts shown in Figure 5 are considered disadvantaged based on either meeting 1 burden threshold and an associated economic threshold, or the census tract is completely surrounded by other disadvantaged communities and meets an adjusted low-income threshold/socioeconomic threshold. The CEQ has 8 burden criteria categories: climate change, energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development. Each one of the 8 burden criteria have their own thresholds for certain data that establish a threshold burden.





**Figure 5 - CEJST Disadvantaged Census Tracts Surrounding Eufaula Lake (CEJST, 2023)**

### 3.11.1 Alternative 1: No Action Alternative

The No Action Alternative would not have any impacts on socioeconomics or environmental justice. The 2023 supplement to the 2013 SMP would not be implemented, and Eufaula Lake's shorelines would continue to be managed based on the 2013 SMP and subsequent updates. There would be no impacts to low-income populations, children, minority populations, or CEJST disadvantaged communities as a result of the No Action Alternative.

### 3.11.2 Alternative 2: Proposed Action

The Proposed Action would supplement the 2013 SMP to allow mowing 6ft-wide paths through the shoreline vegetation buffer in LDAs. The proposed addition to the 2013 SMP would not have any impacts on socioeconomics or environmental justice since no construction or changes that could affect local socioeconomic factors would occur; the change proposed in the 2023 supplement to the 2013 SMP would not affect the local economy or local populations in any perceivable way. There would be no impacts to low-income populations, children, minority populations, or CEJST disadvantaged communities as a result of the Proposed Action.

## **3.12 RECREATION**

The majority of visitors to Eufaula Lake come from neighboring counties. These visitors are a diverse group of people with a wide variety of interests. Examples of visitors include campers who utilize the county and federally operated campgrounds around the reservoir; adjacent residents; hunters and anglers who utilize public hunting areas and participate in fishing tournaments; marina customers who utilize the marinas on the reservoir; and day users who picnic, hike, bird watch, bicycle, and ride horses.

Per the 2013 MP, 10,661 acres of Eufaula Lake are dedicated to High Density Recreation, 9,928 acres are used for Multiple Resource Management – Low Density Recreation, 7,872 acres are used for Multiple Resource Management – Low Density Recreation in Limited Development, and 218 acres are categorized as Multiple Resource Management – Future/Inactive Recreation. If all the recreation classification acreages are combined, this amounts to approximately 28,679 acres at Eufaula Lake dedicated to recreation purposes. The 2013 SMP established 111 miles of Eufaula Lake shoreline as Public Recreation Shoreline, accounting for 14% of the total shoreline acreage.

In FY 2022, Eufaula Lake's total visitation was 863,077 people. The Lake has the following recreation features available to the public: 61 boat ramps; 13 parks; 509 campsites; 2 hiking trails; 7 marinas; 2 swim beaches; 33 restrooms; 9 courtesy docks; 29 picnic sites; and 7 dump stations.

### 3.12.1 Alternative 1: No Action Alternative

The No Action Alternative would not adopt the proposed change to the 2013 SMP, meaning no changes to vegetation management permits for 6ft-wide paths would occur.

The No Action Alternative would have minor, long-term impacts to recreation due to limited shoreline access through the shoreline vegetation buffer.

### 3.12.2 Alternative 2: Proposed Action

The Proposed Action would adopt the proposed change to the 2013 SMP, allowing the public the opportunity to mow 6ft-wide paths through the shoreline vegetation buffer with the Lake Office's approval. The Proposed Action would provide minor, long-term benefits to recreation because recreational access to shorelines and boat docks would be improved through the shoreline vegetation buffer.

## **3.13 AESTHETIC RESOURCES**

Eufaula Lake contains 4 unique Level IV ecoregions, the Northern Cross timbers, the Scattered High Ridges and Mountains, the Osage Cuestas, the Arkansas Valley Plains, and the Lower Canadian Hills, each having their own complex and unique habitat communities, offering different views and scenery in the region. The region supports a variety of different vegetation communities that are distinct with changes in topography and elevation. Eufaula Lake offers public, open space and scenic vistas that are unique in the region.

### 3.13.1 Alternative 1: No Action Alternative

There would be no impacts on aesthetic resources as a result of the No Action Alternative, as there would be no changes to the existing 2013 SMP.

### 3.13.2 Alternative 2: Proposed Action

The Proposed Action would allow the public to mow 6ft-wide paths through the shoreline vegetation buffer in LDAs at Eufaula Lake, with no changes to either MP or SMP land classifications. The Proposed Action may have negligible, long-term, positive, or negative impacts to aesthetic resources due to repeated mowing of paths through the existing shoreline buffer. Benefits to aesthetic resources as a result of mowing may occur due to being able to see the shoreline clearly through the 6ft-wide paths, whereas negative impacts may occur due to repeated removal of existing vegetation that contributes to the overall aesthetic value near the shoreline.

## **3.14 HAZARDOUS, TOXIC, RADIOACTIVE, OR SOLID WASTES (HTRW)**

This section describes existing condition with the Project area with regard to potential environmental contamination and the sources of releases to the environment. Contaminants could enter the lake environment via air or water pathways. The highways and roads, railroads, and oil and gas pipelines in the vicinity could also provide sources of contaminants to the project area. There are no known hazardous or solid waste advisories for Eufaula Lake, however ODEQ has issued fish consumption advisories as noted in Section 3.2 and Table 3, with the contaminant of concern being mercury.

### 3.14.1 Alternative 1: No Action Alternative

There would be no impacts to HTRW resources as a result of the No Action Alternative, as there would be no changes to the existing 2013 SMP, and no known HTRW resources are in the immediate vicinity of Eufaula Lake.

### 3.14.2 Alternative 2: Proposed Action

The Proposed Action would only change vegetation modification permitting at Eufaula Lake to allow 6ft-wide paths to be mowed through the shoreline vegetation buffer in LDAs. No other changes or additions to the 2013 SMP would be made, therefore no impacts to HTRW resources would occur as a result of the Proposed Action.

## **3.15 HEALTH AND SAFETY**

As mentioned earlier in this document, Eufaula Lake's authorized purposes include flood control, hydroelectric power, navigation, water supply, fish and wildlife management, and recreation. Compatible uses incorporated in project operation management plans include programs that establish recreation management practices to protect the public, such as water safety education, safe boating and swimming regulations, safe hunting regulations, and speed limit and pedestrian signs for park roads. The staff of Eufaula Lake are in place to enforce these policies, rules, and regulations during normal park hours.

### 3.15.1 Alternative 1: No Action Alternative

There would be no impacts to health and safety as a result of implementing the No Action Alternative, as there would be no changes made to the 2013 SMP. Health and safety would continue to be managed and follow guidelines from the 2013 SMP and MP.

### 3.15.2 Alternative 2: Proposed Action

The Proposed Action's supplemental change to the 2013 SMP only involves a vegetation modification permit update that would allow mowing of 6ft-wide paths through the shoreline vegetation buffer in LDAs. No impacts to health and safety are anticipated as a result of implementing the Proposed Action.

## **3.16 SUMMARY OF CONSEQUENCES AND BENEFITS**

Table 21 provides a tabular summary of the consequences and benefits for the No Action and Proposed Action alternatives for each of the assessed resource categories in Section 3.

**Table 21 - Summary of Consequences and Benefits**

<b>Resource</b>	<b>Change Resulting from the proposed Supplement to the 2013 SMP.</b>	<b>Environmental Consequences: No Action Alternative</b>	<b>Environmental Consequences: Proposed Action</b>	<b>Benefits Summary</b>
Land Use	Minor change to vegetation modification permits to allow mowing through the shoreline vegetation buffer in LDAs. Does not change any MP or SMP land use classifications.	Minor, long-term impacts because continued demand for recreational shoreline access would continue.	Provides minor, long-term benefits by giving the public a requested vegetation modification permit feature in LDA areas only. Does not change any MP or SMP land use classifications.	Updates vegetation modification permitting guidelines to allow the public to mow 6ft wide paths through the shoreline vegetation buffer in LDAs only. Allows better access to boat ramps and docks as requested by the public.
Water Resources Including Groundwater, Wetlands, and Water Quality	No change.	No effect.	Minor, long-term impacts to wetlands only as a result of repeated vegetation removal and or disturbance in LDAs.	No added benefit.
Climate, Climate Change, and Greenhouse Gases	No change.	No effect.	No effect.	No added benefit.
Air Quality	No change	No effect	Negligible impacts to air quality due to use of gas-powered machinery to mow 6ft paths.	No added benefit
Topography, Geology and Soils	No change	No effect	Negligible, long-term impacts to topography geology, and soils due to potential contributions to erosion or soil loss as a result of repeated mowing of 6ft paths in LDAs.	No added benefit

<b>Resource</b>	<b>Change Resulting from the proposed Supplement to the 2013 SMP.</b>	<b>Environmental Consequences: No Action Alternative</b>	<b>Environmental Consequences: Proposed Action</b>	<b>Benefits Summary</b>
Natural Resources	Minor change to vegetation modification permits to allow mowing through the shoreline vegetation buffer in LDAs.	No effect	Minor, long-term impacts on natural resources due to vegetation removal and animal disturbance as a result of repeated mowing of 6ft paths in LDAs.	No added benefit
Threatened and Endangered Species, including SGCN and ONHI species.	No change	No effect	Minor, long-term impacts on the American Burying Beetle due to removal of potential habitat and incidental take as coordinated with the USFWS.	No added benefit
Invasive Species	No change	No effect	No effect.	No added benefit
Cultural Resources	No change	No Potential to Affect	No Potential to Affect	No added benefit
Socioeconomics and Environmental Justice	No change	No effect	No effect	No added benefit
Recreation	No change	Minor, long-term impacts due to suboptimal recreational access to the shoreline through the shoreline vegetation buffer.	Minor, long-term benefits due to improved recreational access to the shoreline and boat docks.	The Proposed Action allows for mowing of 6-foot-wide paths through the shoreline vegetation buffer that would improve recreational access to boat ramps and docks.

<b>Resource</b>	<b>Change Resulting from the proposed Supplement to the 2013 SMP.</b>	<b>Environmental Consequences: No Action Alternative</b>	<b>Environmental Consequences: Proposed Action</b>	<b>Benefits Summary</b>
Aesthetic Resources	No change	No effect	Minor, long-term, positive or negative impacts due to repeated vegetation modification or removal that may either obstruct or contribute to aesthetic value.	Benefits may occur due to removal of vegetation in the shoreline vegetation buffer that may otherwise obstruct scenic views of the Lake.
Health and Safety	No change	No effect	No effect	No added benefit

## **SECTION 4: CUMULATIVE IMPACTS**

NEPA regulations updated May 20, 2023, require that cumulative impacts of a Proposed Action be assessed and disclosed in an EA. Council on Environmental Quality (CEQ) regulations define a cumulative impact as “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 other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” (40 CFR 1508.1 Definitions). Impacts can be positive or negative.

By Memorandum dated June 24, 2005 from the Chairman of the CEQ to the Heads of Federal Agencies entitled “Guidance on the Consideration of Past Actions in Cumulative Effects Analysis”, CEQ made clear its interpretation that “...generally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions...” and that the “...CEQ regulations do not require agencies to catalogue or exhaustively list and analyze all individual past actions.” CEQ guidance also recommends narrowing the focus of cumulative impacts analysis to important issues of national, regional, or local significance.

The initial step of the cumulative impact analysis uses information from the evaluation of direct and indirect impacts in the selection of environmental resources that should be evaluated for cumulative impacts. A Proposed Action would not contribute to a cumulative impact if it would not have a direct or indirect effect on the resource.

Based on a review of the likely environmental impacts analyzed in Section 3 (Affected Environment and Consequences) the USACE determined that the analysis of cumulative impacts will be limited to: land use, water resources, air quality, topography, geology, soils, natural resources, and aesthetic resources. With respect to the remaining resource topics in Section 3, both the No Action and Proposed Action alternatives will either:

1. Not result in any direct or indirect impacts and therefore will not contribute to a cumulative impact; or,
2. That the nature of the resource is such that impacts do not have the potential to cumulate. For example, impacts related to geology are site specific and do not cumulate; or,
3. That the future with or future without project condition analysis is a cumulative analysis and no further evaluation is required. For example, because climate change is global in nature, the future without project condition and future with project condition analysis is inherently a cumulative impact assessment.

For each resource topic carried forward for cumulative impact analysis, the timeframe for analysis is the time since the 2013 MP and 2013 SMP were implemented (past) and 25 years following the proposed 2023 SMP supplement (2023-2048). The



zone of interest for all resources are the 6 counties surrounding Eufaula Lake: Haskell, Latimer, Pittsburg, Okmulgee, Muskogee, and McIntosh counties.

#### **4.1 PAST IMPACTS WITHIN THE ZONE OF INTEREST**

Construction of Eufaula Lake was authorized by the 1946 Rivers and Harbors Act and is currently managed by the Tulsa District of USACE for flood control, hydroelectric power, navigation, water supply, fish and wildlife management, and recreation purposes. The lake has 105,000 surface acres and over 800 miles of shoreline at the conservation pool elevation of 585 feet AMSL. The top of the flood control pool is at 597 feet AMSL for a total difference in functional pool elevation of 12 feet.

#### **4.2 CURRENT AND REASONABLY FORESEEABLE PROJECTS WITHIN AND NEAR THE ZONE OF INTEREST**

Future management of the Flowage Easement Lands at Eufaula Lake includes routine inspection of these areas to ensure that the Government's rights specified in the easement deeds are protected. In almost all cases, the Government acquired the right to prevent placement of fill material or habitable structures on the easement area. Placement of any structure that may interfere with the USACE flood risk management and water conservation missions may also be prohibited.

At the time of this publication, the only foreseeable projects in zone of interest are Oklahoma Department of Transportation (ODOT) projects. There are no major highway expansions or new highways being built according to ODOT's FY2023 to FY2030 construction work plan report in Eufaula Lake's vicinity. All of the ODOT projects in Eufaula Lake's vicinity involve highway utilities work, regrading, resurfacing, or bridge construction or repair (ODOT, 2023).

National USACE policy set forth in ER 1130-2-550, Appendix H, states that USACE lands will, in most cases, only be made available for roads that are regional arterials or freeways (as defined in ER 1130-2-550). All other types of proposed roads, including driveways and alleys, are generally not permitted on USACE lands. Any proposed expansion or widening of existing roadways on USACE lands will be considered on a case-by-case basis.

#### **4.3 ANALYSIS OF CUMULATIVE IMPACTS**

Impacts on each resource were analyzed according to how other actions and projects within the zone of interest might be affected by the No Action Alternative and Proposed Action. Impacts can vary in degree or magnitude from a slightly noticeable change to a total change in the environment. For the purpose of this analysis the intensity of impacts will be classified as negligible, minor, moderate, or major. These intensity thresholds were previously defined in Section 3.0. Moderate growth and development are expected to continue in the vicinity of Eufaula Lake and cumulative adverse impacts on resources will not be expected when added to the impacts of activities associated with the Proposed Action or No Action Alternative. A summary of the anticipated cumulative impacts on each resource is presented below.

#### 4.3.1 Land Use

A major impact would occur if any action were inconsistent with adopted land use plans or if an action would substantially alter those resources required for, supporting, or benefiting the current use. Land use around Eufaula Lake has not experienced that much change in the past 20 years. Under the No Action Alternative, land use would not change. The Proposed Action also does not specifically change any land use classifications but would allow the public to manage vegetation as described for the Proposed Action. Other than the single change proposed by the 2023 supplement to the 2013 SMP, land use for Eufaula Lake would continue to be managed and guided by both the 2013 MP and 2013 SMP. Therefore, cumulative impacts on land use within the area surrounding Eufaula Lake, when combined with past and future actions in the region, are anticipated to be negligible.

#### 4.3.2 Water Resources

A major impact would occur if any Action were inconsistent with adopted surface water classifications or water use plans, or if an Action would substantially alter those resources required for, supporting, or benefiting the current use. Eufaula Lake was originally approved for flood control, hydroelectric power, navigation, water supply, fish and wildlife management, and recreation purposes. The No Action Alternative and the Proposed Action would not change any of the uses for water resources. The only effect the Proposed Action is anticipated to have is a minor impact on water resources, specific to wetland vegetation, since this type of vegetation may be repeatedly mowed by the public in LDAs. Therefore, cumulative impacts on water resources within the area surrounding Eufaula Lake, when combined with past and future actions in the region, are anticipated to be negligible.

#### 4.3.3 Air Quality

There are not any major highway projects scheduled near the zone of interest for Eufaula Lake nor any other proposed projects that will limit the amount of new emissions that could potentially affect air quality within the region. The Proposed Action will only have negligible impacts to air quality localized to Eufaula Lake. Vehicle traffic along park and area roadways and routine daily activities in nearby communities contribute to current and future emission sources; however, the impacts associated with the Proposed Action will be negligible in comparison. The use of gas-powered equipment by the public to manage vegetation already occurs at Eufaula Lake, and the Proposed Action would not contribute to a regional increase in emissions that would degrade air quality. Therefore, there would be no cumulative impacts to air quality resulting from the Proposed Action when combined with past and future proposed action in the area.

#### 4.3.4 Topography, Geology, and Soils

A major impact could occur if a proposed future Action exacerbates or promotes long-term erosion, if the soils are inappropriate for the proposed construction and would create a risk to life or property, or if there would be a substantial reduction in agricultural

production or loss of Prime Farmland soils. The Proposed Action does not include any construction or ground-disturbing activities. The potential repeated removal or mowing of vegetation in LDAs as a result of the Proposed Action may contribute to negligible amounts of soil loss in the forecasted 25-year period of analysis. Cumulative impacts on topography, geology, and soils within the area surrounding Eufaula Lake, when combined with past and proposed actions in the region, are anticipated to be negligible.

#### 4.3.5 Natural Resources

The significance threshold for natural resources would include a substantial reduction in ecological processes, communities, or populations that would threaten the long-term viability of a species or result in the substantial loss of a sensitive community that could not be offset or otherwise compensated. Past, present, and future projects are not anticipated to impact the viability of any plant species or community, rare or sensitive habitats, or wildlife. The Proposed Action is expected to have minor, long-term impacts due to repeated disturbance or removal of vegetation due to mowing inside of the shoreline vegetation buffer. The Proposed Action, however, would not threaten viability of any natural resources or contribute to any substantial losses of communities. Therefore, there would be negligible cumulative impacts as a result of the Proposed Action when combined with past and future proposed actions in the area.

#### 4.3.6 Threatened and Endangered Species

The Proposed Action has the potential to create minor, long-term impacts to the American Burying Beetle as described in Section 3.8.2. The USACE completed Informal Consultation with the USFWS to establish a “may effect” determination and approved incidental take for this species. Incidental take or disturbance of the American Burying Beetle’s habitat would not jeopardize this species’ presence at Eufaula Lake or in the surrounding area. No other Threatened and Endangered species would be affected by the Proposed Action over the lifespan of the SMP.

Should Federally listed species change in the future (delisting of species or listing of new species), associated requirements will be reflected in revised land management practices in coordination with the USFWS. The USACE will continue cooperative management plans with the USFWS and ODWC to preserve, enhance, and protect critical wildlife resources. Therefore, there would be negligible cumulative impacts as a result of the Proposed Action when combined with past and future proposed actions in the area.

#### 4.3.7 Recreation

Eufaula Lake provides regionally significant outdoor recreation benefits including a variety of recreation opportunities. No changes to recreation shoreline allocations, recreation policy, or recreation areas would occur as a result of the Proposed Action.

The Proposed Action is expected to provide minor, long-term benefits to recreation due to improved recreational access to the shoreline as well as boat ramps and docks accessed by the public. Cumulative impacts to recreation are expected to be negligible as a result of the Proposed Action combined with past and future actions in the area.

#### 4.3.8 Aesthetic Resources

The Proposed Action is expected to have both positive and negative long-term impacts due to repeated vegetation modification or removal of vegetation that may either obstruct or contribute to aesthetic value. Cumulative impacts to aesthetic resources are expected to be negligible as a result of the Proposed Action combined with past and future actions in the area.

## **SECTION 5: COMPLIANCE WITH ENVIRONMENTAL LAWS**

This EA has been prepared to satisfy the requirements of all applicable environmental laws and regulations, and has been prepared in accordance with the CEQ's implementing regulations for NEPA, 40 CFR Parts 1500 – 1508, and the USACE ER 200-2-2, Environmental Quality: Procedures for Implementing NEPA. The proposed supplement to the 2013 SMP is consistent with the USACE's Environmental Operating Principles. The following is a list of applicable environmental laws and regulations that were considered in the planning of this project and the status of compliance with each:

Fish and Wildlife Coordination Act of 1958, as amended – The USACE initiated public involvement and agency scoping activities to solicit input on the 2023 supplement to the 2013 SMP EA, and to identify significant issues related to the Proposed Action. Information provided by USFWS and ODWC on fish and wildlife resources has been utilized in the development of the 2023 MP.

Endangered Species Act of 1973, as amended – Current lists of threatened or endangered species were compiled for the 2023 supplement to the 2013 SMP. USACE has determined that only the American Burying Beetle would be affected by the Proposed Action due to removal of potential habitat and incidental take as coordinated with the USFWS under Informal Consultation completed on August 18, 2023. Impacts to the American Burying Beetle would be minor and long-term in nature. No other Federally Listed Species, State Listed Species, Species of Greatest Conservation Need, or species reported by the Oklahoma National Heritage Inventory would be affected by either the No Action Alternative or The Proposed Action.

Executive Order 13186 (Migratory Bird Habitat Protection) – Sections 3a and 3e of EO 13186 direct Federal agencies to evaluate the impacts of their Actions on migratory birds, with emphasis on species of concern, and inform the USFWS of potential negative impacts on migratory birds. The 2023 supplement to the 2013 SMP would not result in adverse impacts on migratory birds or their habitat.

Migratory Bird Treaty Act, as amended – The Migratory Bird Treaty Act of 1918 extends Federal protection to migratory bird species. The nonregulated “take” of migratory birds is prohibited under this act in a manner similar to the prohibition of “take” of threatened and endangered species under the Endangered Species Act. The timing of resource management activities would be coordinated to avoid impacts on migratory and nesting birds.

CWA of 1977, as amended – The Proposed Action will comply with all state and Federal CWA regulations and requirements and is regularly monitored by the USACE and ODEQ for water quality. A state water quality certification pursuant to Section 401 of the CWA is not required for the 2023 supplement to the 2013 SMP. There will be no change in the existing management of the reservoir that will impact water quality.

National Historic Preservation Act (NHPA) of 1966, as amended – Compliance with the NHPA of 1966, as amended, requires identification of all properties in the project area listed in, or eligible for listing in, the NRHP. All previous surveys, site testing, and excavations were coordinated with the Oklahoma State Historic Preservation Officer

and Indian Tribes with interest in the project area. Known sites are mapped and avoided by maintenance activities with review and approval from District Archeologist. Areas that have not undergone cultural resources surveys or evaluations will need to do so prior to any earthmoving or other potentially impacting activities, as determined by the District Archeologist during review of the project.

Clean Air Act of 1977, as amended – The USEPA established nationwide air quality standards to protect public health and welfare. Existing operation and management of the reservoir is compliant with the Clean Air Act and will not change with the 2023 supplement to the 2013 SMP.

Farmland Protection Policy Act (FPPA) of 1980 and 1995 – The FPPA's purpose is to minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to non-agricultural uses. There are Prime Farmland and farmland of state importance on Eufaula Lake project lands, but these will not be impacted.

Executive Order 11990, Protection of Wetlands, as amended – EO 11990 requires Federal agencies to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in executing Federal projects. The Proposed Action complies with EO 11990.

Executive Order 11988, Floodplain Management, as amended – This EO directs Federal agencies to evaluate the potential impacts of proposed actions in floodplains. Both alternatives comply with EO 11988, as neither will have impacts to the existing floodplain at Eufaula Lake.

CEQ Memorandum dated August 11, 1980, Prime or Unique Farmlands – Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. The Proposed Action will not impact Prime Farmland present on Eufaula Lake project lands.

Executive Order 12898, Environmental Justice – This EO directs Federal agencies to achieve environmental justice to the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review. Agencies are required to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. The 2023 supplemental change to the 2013 SMP will not result in a disproportionate adverse impact on minority or low-income population groups.

EO 14008, Tackling the Climate Crisis at Home and Abroad – This EO directs Federal agencies to evaluate if their projects will benefit or impact disadvantaged communities as defined by the CEQ. The CEQ's CEJST tool was used for this project and it was determined that no disadvantaged communities would be impacted by the Proposed Action.

## **SECTION 6: IRRETRIEVABLE AND IRREVERSIBLE COMMITMENT OF RESOURCES**

NEPA requires that Federal agencies identify “any irreversible and irretrievable commitments of resources which will be involved in the Proposed Action should it be implemented” (42 U.S.C. § 4332). An irreversible commitment of resources occurs when the primary or secondary impacts of an Action result in the loss of future options for a resource. Usually, this is when the Action affects the use of a nonrenewable resource, or it affects a renewable resource that takes a long time to regenerate. The impacts for this project from the changes to vegetation management permits will not be considered an irreversible commitment because subsequent changes could be reversed or modified as needed. An irretrievable commitment of resources is typically associated with the loss of productivity or use of a natural resource (e.g., loss of production or harvest). No irreversible or irretrievable impacts on Federally protected species or their habitat is anticipated from implementing the 2023 proposed supplemental change to the 2013 SMP.

## **SECTION 7: PUBLIC AND AGENCY COORDINATION**

In accordance with 40 CFR §§1501.7, 1503, and 1506.6, the USACE initiated public involvement and agency scoping activities to solicit input on the proposed supplement to the 2013 SMP, as well as identifying any issues related to the Proposed Action. The USACE will provide a draft EA and official memo to the public and resource agencies on September 11, 2023.

Comments received during the draft release comment period from 11 September, 2023 to 11 October, 2023 will be appended to this EA in Attachment A.

**\*\*Please note this section and Attachment A will be updated after the public comment period.\*\***

Attachment A to this EA includes the news release, agency coordination letters, and the distribution list for the coordination letters completed at the time of this publication. The EA has been coordinated with agencies having legislative and administrative responsibilities for environmental protection.



## SECTION 8: REFERENCES

- CEJST, (2023). Climate and Economic Justice Screening Tool. CEQ Climate and Economic Justice Screening Tool. Retrieved 2023, from <https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5>
- EPA, (2015). Ecoregions of North America | US EPA. US EPA. Retrieved August 21, 2023, from <https://www.epa.gov/eco-research/ecoregions-north-america>
- EPA, (2018). Primary National Ambient Air Quality Standards (NAAQS) for Nitrogen Dioxide | US EPA. US EPA. Retrieved August 21, 2023, from <https://www.epa.gov/no2-pollution/primary-national-ambient-air-quality-standards-naaqs-nitrogen-dioxide>
- EPA, (2021). EPA Facility Level GHG Emissions Data. EPA Facility Level GHG Emissions Data FLIGHT Tool. Retrieved August 21, 2023, from <https://ghgdata.epa.gov/ghgp/main.do>
- NatureServe, (2023). NatureServe Explorer 2.0 - Gray Myotis. NatureServe Explorer 2.0. Retrieved 2023, from [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.104746/Myotis\\_grises\\_cens](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.104746/Myotis_grises_cens)
- NatureServe. (2023A). NatureServe Explorer 2.0 - Tricolored Bat. NatureServe Explorer 2.0. Retrieved 2023, from [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.102580/Perimyotis\\_s\\_ubflavus](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.102580/Perimyotis_s_ubflavus)
- NatureServe. (2023B). NatureServe Explorer 2.0 – Northern Long Eared Bat. NatureServe Explorer 2.0. Retrieved 2023, from [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.102615/Myotis\\_septentrionalis](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.102615/Myotis_septentrionalis)
- NatureServe. (2023C). NatureServe Explorer 2.0 – Red Knot. NatureServe Explorer 2.0. Retrieved 2023, from [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.100057/Calidris\\_canutus](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.100057/Calidris_canutus)
- NatureServe. (2023D). NatureServe Explorer 2.0 – Arkansas River Shiner. NatureServe Explorer 2.0. Retrieved 2023, from [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.104520/Notropis\\_girardi](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.104520/Notropis_girardi)
- NatureServe. (2023E). NatureServe Explorer 2.0 – Peppered Chub. NatureServe Explorer 2.0. Retrieved 2023, from [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.103660/Macrhybopsis\\_tetranema](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.103660/Macrhybopsis_tetranema)
- NatureServe. (2023F). NatureServe Explorer 2.0 – Peppered Chub. NatureServe Explorer 2.0. Retrieved 2023, from

[https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.108245/Danaus\\_plexippus](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.108245/Danaus_plexippus)

- NRCS, (2023). Web Soil Survey - Home. Web Soil Survey - Home. Retrieved August 21, 2023, from <https://websoilsurvey.nrcs.usda.gov/app/>
- NWS, (2023). National Weather Service - NOWData. Weather.gov. Retrieved August 21, 2023, from <https://www.weather.gov/wrh/Climate?wfo=tsa>
- ODC. (2023). Oklahoma Population Projection 2020-2070 . Oklahoma Department of Commerce. Retrieved 2023, from <https://www.okcommerce.gov/wp-content/uploads/Oklahoma-State-and-County-Population-Projections-Through-2070.pdf>
- ODEQ, (2022). Integrated Report - 303(d) & 305(b) - Oklahoma Department of Environmental Quality. (2022). Oklahoma Department of Environmental Quality. Retrieved August 21, 2023, from <https://www.deq.ok.gov/water-quality-division/watershed-planning/integrated-report/>
- ODOT, (2023). ODOT Construction Projects. Oklahoma Department of Transportation. Retrieved 2023, from <https://oklahoma.gov/odot/programs-and-projects0/8-year-construction-work-plan.html>
- ONHI, (2023). FEDERAL AND STATE ENDANGERED, THREATENED, AND CANDIDATE SPECIES IN OKLAHOMA BY COUNTY. Oklahoma Natural Heritage Inventory. Retrieved 2023, from <http://www.oknaturalheritage.ou.edu/content/biodiversity-info/endangered-species/index.php>
- ONHI, (2023A). ONHI Species Occurrence Report. Oklahoma Natural Heritage Inventory. Received August 21, 2023.
- OWRB, (2017). 2017 Oklahoma Lakes Beneficial Use Monitoring Program Report. Oklahoma Water Resources Board. Retrieved August 21, 2023, from [https://www.owrb.ok.gov/quality/monitoring/bump/pdf\\_bump/Reports/Lakes2017.pdf](https://www.owrb.ok.gov/quality/monitoring/bump/pdf_bump/Reports/Lakes2017.pdf)
- USACE-NRM, (2022). Natural Resources Management Assessment Tool. NRM Assessment Tool. Retrieved 2023, from <https://gateway.erdc.dren.mil/nrm/rec-best/nrm.cfm>
- USCB, (2010). United States Census Bureau - 2010 ACS Survey 5-Year Estimates. United States Census Bureau Data. Retrieved 2023, from <https://data.census.gov/table?t=Populations+and+People&g=040XX00US40&tid=ACSDP5Y2010.DP05>
- USCB, (2021). United States Census Bureau - 2021 ACS Survey 5-Year Estimates. United States Census Bureau Data. Retrieved 2023, from <https://data.census.gov/table?t=Populations+and+People&g=040XX00US40&tid=ACSDP5Y2021.DP05>

USFWS, (2023). National Wetlands Inventory | U.S. Fish & Wildlife Service. (2023, May 17). FWS.gov. <https://www.fws.gov/program/national-wetlands-inventory>

USFWS, (2023A). IPaC: Information for Planning and Consultation. IPaC: Home. Retrieved 2023, from <https://ipac.ecosphere.fws.gov/>

USFWS, (2023B). ECOS Environmental Conservation Online System - Gray Bat. ECOS Environmental Conservation Online System. Retrieved 2023, from <https://ecos.fws.gov/ecp/species/6329>

USFWS, (2023C). ECOS Environmental Conservation Online System - Tricolored Bat. ECOS Environmental Conservation Online System. Retrieved 2023, from <https://ecos.fws.gov/ecp/species/10515>

USFWS, (2023D). ECOS Environmental Conservation Online System – Northern Long-eared Bat. ECOS Environmental Conservation Online System. Retrieved 2023, from <https://ecos.fws.gov/ecp/species/9045>

USFWS, (2023E). ECOS Environmental Conservation Online System – Piping Plover. ECOS Environmental Conservation Online System. Retrieved 2023, from <https://ecos.fws.gov/ecp/species/6039>

USFWS, (2023F). ECOS Environmental Conservation Online System – Red Knot. ECOS Environmental Conservation Online System. Retrieved 2023, from <https://ecos.fws.gov/ecp/species/1864>

USFWS, (2023G). ECOS Environmental Conservation Online System – Alligator Snapping Turtle. ECOS Environmental Conservation Online System. Retrieved 2023, from <https://ecos.fws.gov/ecp/species/4658>

USFWS, (2023H). ECOS Environmental Conservation Online System – Arkansas River Shiner. ECOS Environmental Conservation Online System. Retrieved 2023, from <https://ecos.fws.gov/ecp/species/4364>

USFWS, (2023I). ECOS Environmental Conservation Online System – Peppered Chub. ECOS Environmental Conservation Online System. Retrieved 2023, from <https://ecos.fws.gov/ecp/species/532>

USFWS, (2023J). ECOS Environmental Conservation Online System – American Burying Beetle. ECOS Environmental Conservation Online System. Retrieved 2023, from <https://ecos.fws.gov/ecp/species/66>

USFWS, (2023K). ECOS Environmental Conservation Online System – Monarch Butterfly. ECOS Environmental Conservation Online System. Retrieved 2023, from <https://ecos.fws.gov/ecp/species/9743>

USGS, (2023). Mineral Resources Online Spatial Data: Geologic maps. Mineral Resources Online Spatial Data: Geologic Maps. Retrieved August 21, 2023, from <https://mrdata.usgs.gov/geology/state/map-us.html>

## SECTION 9: ACRONYMS AND ABBREVIATIONS

%	Percent
°	Degrees
§	Section
ACS	American Community Survey
AMSL	Above Mean Sea Level
AQCR	Air Quality Control Region
BUMP	Beneficial Use Monitoring Program
CAA	Clean Air Act
CEJST	Climate and Economic Justice Screening Tool
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
cfs	cubic feet per second
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> e	CO <sub>2</sub> -equivalent
CRMP	Cultural Resources Management Plan
CWA	Clean Water Act
DOE	Department of Energy
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EP	Engineer Pamphlet
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ER	Engineer Regulation
F	Fahrenheit
FC	Fish Consumption
Ft	Feet
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection and Policy Act
FY	Fiscal Year
GHG	Greenhouse Gas
GPM	Gallons Per Minute
HPMP	Historic Properties Management Plan
HTRW	Hazardous, Toxic, Radioactive Wastes
IPaC	Information for Planning and Consultation (USFWS)
LDA	Limited Development Area
LDR	Low Density Recreation
MBTA	Migratory Bird Treaty Act
MP	Master Plan
MW	MegaWatt
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NGVD	National Geodetic Vertical Datum

NHPA	National Historic Preservation Act
NO <sub>2</sub>	Nitrogen Dioxide
NOX	Nitrogen Oxide
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NRM	Natural Resources Management tool
NWI	National Wetlands Inventory (USFWS)
NWS	National Weather Service
ODEQ	Oklahoma Department of Environmental Quality
ODWC	Oklahoma Department of Wildlife Conservation
ONHI	Oklahoma Natural Heritage Inventory
OAQPS	Office of Air Quality Planning and Standards
ODC	Oklahoma Department of Commerce
ODEQ	Oklahoma Department Environmental Quality
ODOT	Oklahoma Department of Transportation
ODWC	Oklahoma Department of Wildlife Conservation
OWRB	Oklahoma Water Resources Board
Pb	Lead
PBO	Programmatic Biological Opinion
PL	Public Law
PM <sub>2.5</sub>	Particulate Matter Less than 2.5 Microns
PM <sub>10</sub>	Particulate Matter Less than 10 Microns
RPEC	Regional Planning and Environmental Center
SGCN	Species of Greatest Conservation Need
SHPO	Oklahoma State Historic Preservation Office
SMP	Shoreline Management Plan
SO <sub>2</sub>	Sulfur Dioxide
TCP	Traditional Cultural Properties
TDS	Total Dissolved Solids
TSI	Trophic State Index
TMDL	Total Maximum Daily Load
U.S.	United States
U.S.C.	U.S. Code
USCB	United States Census Bureau
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Service
VOC	Volatile Organic Compound
WMA	Wildlife Management Area
WSST	Web Soil Survey Tool

**SECTION 10: LIST OF PREPARERS**

Blake Westmoreland: USACE Regional Planning and Environmental Center, 5 Years of Experience

## **Attachment A: Public and Agency Coordination**



DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, TULSA DISTRICT  
2488 EAST 81<sup>ST</sup> STREET  
TULSA, OKLAHOMA 74137-4290

September 11<sup>th</sup>, 2023

## PUBLIC NOTICE

### Release Of The 2023 Draft Eufaula Lake Environmental Assessment and Finding of No Significant Impact for the 2023 Supplemental Change Memo Haskell, Latimer, McIntosh, Muskogee, Okmulgee, And Pittsburg Counties, Oklahoma

The U.S. Army Corps of Engineers (USACE), Tulsa District, hereby informs the public that the Draft 2023 Supplement to the 2013 Eufaula Lake Shoreline Management Plan (SMP) memo, Finding of No Significant Impact (FONSI), and Environmental Assessment (EA) are available for public review. This notice is for a single supplemental change and is not a complete revision of the 2013 Eufaula Lake SMP.

The current SMP for Eufaula Lake was last revised in 2013 and requires a supplemental change to address requests from the public for an update to vegetation modification permits. The proposed change would allow the public to mow 6-foot-wide paths through the 45-foot shoreline vegetation buffer in Limited Development Areas only. All 6-foot mowing pathways would need to be approved by the Lake Manager. No changes to shoreline allocations or land classifications are being proposed. **Public participation is highly encouraged.**

A public meeting will not be held for this draft document release. A 30-day public comment period will begin on September 11<sup>th</sup>, 2023, and end on October 11<sup>th</sup>, 2023. The draft supplemental change memo, EA, FONSI, and comment form with instructions will be available for download starting on September 11<sup>th</sup>, 2023, at the following Tulsa District website:

**<https://www.swt.usace.army.mil/Missions/Recreation/Shoreline-Management-Plans/>**

Comments, suggestions, and questions can be submitted in writing and can be mailed to: Corps of Engineers, Eufaula Lake Manager; 102 East BK 200 Road, Stigler, Oklahoma 74462. Comments can also be submitted via email to: [CESWT-OD-EE@usace.army.mil](mailto:CESWT-OD-EE@usace.army.mil)

Sincerely,

A handwritten signature in cursive script that reads "Angela Lane".

for Brandon Wadlington  
Acting Chief, Environmental Branch  
Regional Planning and Environmental Center





# USACE seeks public comment for Draft Eufaula Lake Shoreline Management Plan Supplement

EUFAULA, OK, UNITED STATES

08.31.2023

Story by Sara Goodeyon

U.S. Army Corps of Engineers, Tulsa

District



TULSA, Okla. – The U.S. Army Corps of Engineers (USACE) is updating the Eufaula Lake Shoreline Management Plan. The public is encouraged to review the Draft Eufaula Lake Shoreline Management Plan Supplement and submit written comments during the 30-day public comment period from Sept. 11, 2023, through Oct. 11, 2023.

Information related to the Draft Supplemental, Environmental Assessment Draft, Finding of No Significant Impacts Draft, and public comment forms are available on the Tulsa District website at:

<https://www.swt.usace.army.mil/Missions/Recreation/Shoreline-Management-Plans/>

The existing 2013 Eufaula Lake Shoreline Management Plan established the rules and guidelines that govern private shoreline uses, such as private boat docks, vegetation modification, and similar uses of USACE federally owned fee property.

The supplemental update is intended to be complimentary to the existing 2013 Eufaula Lake Shoreline Management Plan. The single change within this supplemental update to the Plan would allow the adjacent landowners to obtain a mowing permit within Limited Development Areas to mow a 6-foot-wide meandering path through the 45-foot shoreline vegetation buffer. Permits require pre-approval from the Eufaula Lake Manager. No changes to shoreline allocation are proposed.

Comments and questions pertaining to the proposed supplement can be addressed to:

Lake Manager, Eufaula Lake  
102 East BK 200 Road



## MORE LIKE THIS

## CONTROLLED VOCABULARY KEYWORDS

No keywords found.

## TAGS

- USACE
- Tulsa District
- Eufaula Lake
- Shoreline Management

## OPTIONS

- Register/Login to Download

Stigler, OK 74462  
918-484-5135  
CESWT-OD-EE@usace.army.mil

Please note that all comments regarding the Shoreline Management Plan Supplement must be in writing and can be submitted via mail or email to the above addresses.

## LEAVE A COMMENT

## NEWS INFO

Date Taken: 08.31.2023  
Date Posted: 08.31.2023 13:57  
Story ID: 452571  
Location: EUFAULA, OK, US

Web Views: 23  
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This work, *USACE seeks public comment for Draft Eufaula Lake Shoreline Management Plan Supplement*, by Sara Goodeyon, identified by DVIDS, must comply with the restrictions shown on <https://www.dvidshub.net/about/copyright>.

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**US Army Corps  
of Engineers®**

## **Comment Form Instructions**

**Eufaula Lake**

### ***Shoreline Management Plan Update Public Information***

*30-day comment period September 11, 2023 – October 11, 2023*

The U.S. Army Corps of Engineers has released the draft Eufaula Lake Shoreline Management Plan supplement and Environmental Assessment (EA). The proposed update to the 2013 Eufaula Lake Shoreline Management Plan only serves to make an administrative change regarding vegetation modification permitting:

(1) Allows the public to request vegetation modification permits from the Lake Manager to mow a 6-foot-wide meandering path through the 45-foot shoreline vegetation buffer.

The draft Shoreline Management Plan supplement and Environmental Assessment can be found on the district website below. Your input is needed regarding all aspects of the Shoreline Management Plan. The 2013 Shoreline Management Plan is also available for reference.

To add your written comments, ideas, or concerns about the draft Shoreline Management Plan update and Environmental Assessment for Eufaula Lake, comments can be submitted using any of the following methods:

- Fill out and return a comment form below or available at:  
<https://www.swt.usace.army.mil/Missions/Recreation/Shoreline-Management-Plans/>
- Provide comments in an email message or use comment form and send to:  
[CESWT-OD-EE@usace.army.mil](mailto:CESWT-OD-EE@usace.army.mil)
- Provide comments in a letter or use comment form and mail to:

Lake Manager, Eufaula Lake  
102 East BK 200 Road,  
Stigler, OK 74462  
Phone: 918-484-5135

Thank you for your participation in helping update the Shoreline Management Plan for Eufaula Lake.



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Oklahoma Ecological Services Field Office  
9014 East 21st Street  
Tulsa, OK 74129-1428  
Phone: (918) 581-7458 Fax: (918) 581-7467

In Reply Refer To:

July 17, 2023

Project Code: 2023-0105436

Project Name: Eufaula Lake mowed pathway thru 45ft buffer

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

To Whom It May Concern:

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

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

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

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

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

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

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Attachment(s):

- Official Species List
  - USFWS National Wildlife Refuges and Fish Hatcheries
  - Migratory Birds
  - Wetlands
-



## **OFFICIAL SPECIES LIST**

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

This species list is provided by:

**Oklahoma Ecological Services Field Office**

9014 East 21st Street

Tulsa, OK 74129-1428

(918) 581-7458

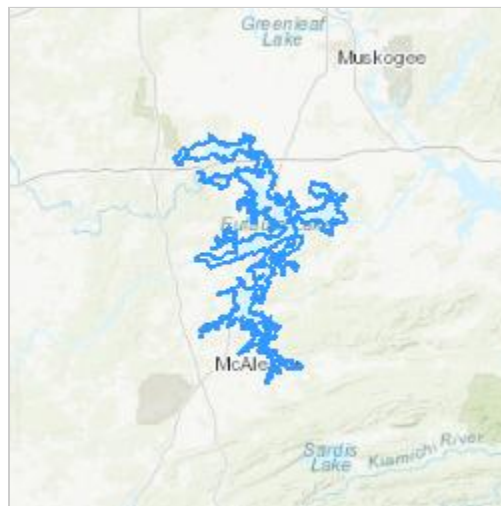
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## PROJECT SUMMARY

Project Code: 2023-0105436  
Project Name: Eufaula Lake mowed pathway thru 45ft buffer  
Project Type: Management Plans Land Management/Restoration  
Project Description: actual scope of the project is approximately 11.72 acres total, multiple locations across Lake Eufaula within limited development areas. Project is for a 6 foot wide path thru the 45 foot buffer area for each of the 1891 vegetation modification permits.

### Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@34.9224848,-95.56145107000523,14z>



Counties: Oklahoma

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## ENDANGERED SPECIES ACT SPECIES

There is a total of 10 threatened, endangered, or candidate species on this species list.

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

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

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

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

### MAMMALS

NAME	STATUS
Gray Bat <i>Myotis grisescens</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6329">https://ecos.fws.gov/ecp/species/6329</a>	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/10515">https://ecos.fws.gov/ecp/species/10515</a>	Proposed Endangered

### BIRDS

NAME	STATUS
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/6039">https://ecos.fws.gov/ecp/species/6039</a>	Threatened
Red Knot <i>Calidris canutus rufa</i> There is <b>proposed</b> critical habitat for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/1864">https://ecos.fws.gov/ecp/species/1864</a>	Threatened

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## REPTILES

NAME	STATUS
Alligator Snapping Turtle <i>Macrochelys temminckii</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4658">https://ecos.fws.gov/ecp/species/4658</a>	Proposed Threatened

## FISHES

NAME	STATUS
Arkansas River Shiner <i>Notropis girardi</i> Population: Arkansas River Basin (AR, KS, NM, OK, TX) There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/4364">https://ecos.fws.gov/ecp/species/4364</a>	Threatened
Peppered Chub <i>Macrhybopsis tetranema</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/532">https://ecos.fws.gov/ecp/species/532</a>	Endangered

## INSECTS

NAME	STATUS
American Burying Beetle <i>Nicrophorus americanus</i> Population: Wherever found, except where listed as an experimental population No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/66">https://ecos.fws.gov/ecp/species/66</a>	Threatened
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

# **USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES**

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

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

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## MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

- 
1. The [Migratory Birds Treaty Act](#) of 1918.
  2. The [Bald and Golden Eagle Protection Act](#) of 1940.
  3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

**The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\) list](#) or warrant special attention in your project location.** To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Golden-plover <i>Pluvialis dominica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
American Kestrel <i>Falco sparverius paulus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9587">https://ecos.fws.gov/ecp/species/9587</a>	Breeds Apr 1 to Aug 31

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NAME	BREEDING SEASON
<b>Bald Eagle <i>Haliaeetus leucocephalus</i></b> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Jul 31
<b>Chimney Swift <i>Chaetura pelagica</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
<b>Eastern Whip-poor-will <i>Antrostomus vociferus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
<b>Kentucky Warbler <i>Oporornis formosus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20
<b>Lesser Yellowlegs <i>Tringa flavipes</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9679">https://ecos.fws.gov/ecp/species/9679</a>	Breeds elsewhere
<b>Little Blue Heron <i>Egretta caerulea</i></b> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 10 to Oct 15
<b>Prothonotary Warbler <i>Protonotaria citrea</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
<b>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
<b>Wood Thrush <i>Hylocichla mustelina</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

## PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week





BCC Rangewide  
(CON)



Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

## MIGRATORY BIRDS FAQ

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

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[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

### **What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### **What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### **How do I know if a bird is breeding, wintering or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

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Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### **What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### **Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of

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certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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## WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED.  
PLEASE VISIT [HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML](https://www.fws.gov/wetlands/data/mapper.html) OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

---

## **IPAC USER CONTACT INFORMATION**

Agency: Army Corps of Engineers

Name: Eric Pearson

Address: 102 E BK 200 Rd

City: Stigler

State: OK

Zip: 74462

Email: eric.d.pearson@usace.army.mil

Phone: 9187995843

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## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Oklahoma Ecological Services Field Office  
9014 East 21st Street  
Tulsa, OK 74129-1428  
Phone: (918) 581-7458 Fax: (918) 581-7467

In Reply Refer To:

July 17, 2023

Project code: 2023-0105436

Project Name: Eufaula Lake mowed pathway thru 45ft buffer

Subject: Verification letter for 'Eufaula Lake mowed pathway thru 45ft buffer' project under the October 15, 2020, Programmatic Biological Opinion on Final 4(d) Rule for the American burying beetle and Activities Excepted from Take Prohibitions (50 CFR § 17.47(d), Federal Register Citation 85 FR 65241).

Dear Eric Pearson:

The U.S. Fish and Wildlife Service (Service) received on **July 17, 2023** your effect determination(s) for the 'Eufaula Lake mowed pathway thru 45ft buffer' (the Action) using the American burying beetle (*Nicrophorus americanus*) determination key within the Information for Planning and Consultation (IPaC) system.

This determination key assists users in determining whether a Federal action is consistent with the activities analyzed in the Service's October 15, 2020, Programmatic Biological Opinion (PBO). The PBO addresses activities excepted from incidental "take"<sup>[1]</sup> prohibitions applicable to the American burying beetle under the Endangered Species Act of 1973 (Act) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, the Action is consistent with activities analyzed in the PBO. The Action may affect the American burying beetle; however, any incidental take that may occur as a result of the Action is not prohibited under the Act Section 4(d) rule adopted for this species at 50 CFR §17.47(d). **Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the PBO satisfies and concludes your responsibilities for this Action under Act Section 7(a)(2) with respect to the American burying beetle.**

Please report any changes to the information about the Action that you submitted in IPaC, the results of any American burying beetle surveys conducted in the Action area, and any dead, injured, or sick American burying beetles that are found during Action implementation. If the Action is not completed within one year of the date of this letter, you must update and resubmit the information required in the IPaC key.

This IPaC-assisted determination allows you to rely on the PBO for compliance with Act Section 7(a)(2) only for the American burying beetle.

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

This letter covers only the American burying beetle. It **does not** apply to the following ESA-protected species that also may occur in the Action area:

- Alligator Snapping Turtle *Macrochelys temminckii* Proposed Threatened
- Arkansas River Shiner *Notropis girardi* Threatened
- Gray Bat *Myotis grisescens* Endangered
- Monarch Butterfly *Danaus plexippus* Candidate
- Northern Long-eared Bat *Myotis septentrionalis* Endangered
- Peppered Chub *Macrhybopsis tetranema* Endangered
- Piping Plover *Charadrius melodus* Threatened
- Red Knot *Calidris canutus rufa* Threatened
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

If your project may affect additional listed species, you must evaluate additional DKeys for other species, or submit a request for consultation for the additional species to your local Ecological Services Field Office.

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**Action Description**

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

**1. Name**

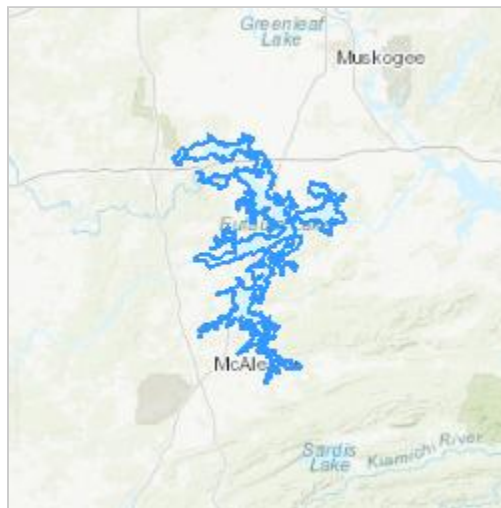
Eufaula Lake mowed pathway thru 45ft buffer

**2. Description**

The following description was provided for the project 'Eufaula Lake mowed pathway thru 45ft buffer':

actual scope of the project is approximately 11.72 acres total, multiple locations across Lake Eufaula within limited development areas. Project is for a 6 foot wide path thru the 45 foot buffer area for each of the 1891 vegetation modification permits.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@34.9224848,-95.56145107000523,14z>



## QUALIFICATION INTERVIEW

1. Is the action authorized, funded, or being carried out by a Federal agency?

*Yes*

2. Have you determined that the proposed action will have “no effect” on the American burying beetle? (If you are unsure select "No")

*No*

3. Will your activity **purposefully take** American burying beetles?

*No*

4. Is your project wholly inside the 4d rule Analysis Area? For areas of your project occurring inside the Analysis Area (New England, Northern Plains, Southern Plains), your project may qualify for exemptions. For areas of your project occurring outside the Analysis Area, all incidental take is exempted according to the ABB 4d Rule.

**Automatically answered**

*Yes*

5. Is American burying beetle [suitable habitat](#) present within the action area?

*Yes*

6. Will suitable habitat be affected by the proposed action? Suitable habitat may be impacted if the action involves soil disturbance, use of vehicles or heavy equipment, artificial lighting, vegetation removal, use of herbicides, pesticides, other hazardous chemicals.

*Yes*

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## PROJECT QUESTIONNAIRE

Please select the activity that best matches your proposed action.

*13. Other activities with soil disturbance - briefly describe below*

If you chose 13 above, please describe below. If you did not choose 13 above, please type "0".

*mowing*

Estimate the total acres of suitable American burying beetle habitat that may be affected.

*12*

Please estimate the total number of acres of **temporary impacts** to American burying beetle habitat. See definitions

*0*

Please estimate the total number of acres of **permanent impacts** to American burying beetle habitat. See definitions

*12*

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## **IPAC USER CONTACT INFORMATION**

Agency: Army Corps of Engineers

Name: Eric Pearson

Address: 102 E BK 200 Rd

City: Stigler

State: OK

Zip: 74462

Email: eric.d.pearson@usace.army.mil

Phone: 9187995843

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## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Oklahoma Ecological Services Field Office  
9014 East 21st Street  
Tulsa, OK 74129-1428  
Phone: (918) 581-7458 Fax: (918) 581-7467

In Reply Refer To:  
Project code: 2023-0105436  
Project Name: Eufaula Lake mowed pathway thru 45ft buffer

July 17, 2023

Federal Nexus: yes  
Federal Action Agency (if applicable): Army Corps of Engineers

**Subject:** Record of project representative's no effect determination for 'Eufaula Lake mowed pathway thru 45ft buffer'

Dear Eric Pearson:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on July 17, 2023, for 'Eufaula Lake mowed pathway thru 45ft buffer' (here forward, Project). This project has been assigned Project Code 2023-0105436 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

### **Ensuring Accurate Determinations When Using IPaC**

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

### **Determination for the Northern Long-Eared Bat**

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

### **Other Species and Critical Habitat that May be Present in the Action Area**

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Alligator Snapping Turtle *Macrochelys temminckii* Proposed Threatened
- American Burying Beetle *Nicrophorus americanus* Threatened
- Arkansas River Shiner *Notropis girardi* Threatened
- Gray Bat *Myotis grisescens* Endangered
- Monarch Butterfly *Danaus plexippus* Candidate
- Peppered Chub *Macrhybopsis tetranema* Endangered
- Piping Plover *Charadrius melodus* Threatened
- Red Knot *Calidris canutus rufa* Threatened
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

### **Next Steps**

Based upon your IPaC submission, your project has reached the determination of "No Effect" on the northern long-eared bat. If there are no updates on listed species, no further consultation/coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Oklahoma Ecological Services Field Office and reference Project Code 2023-0105436 associated with this Project.

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**Action Description**

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

**1. Name**

Eufaula Lake mowed pathway thru 45ft buffer

**2. Description**

The following description was provided for the project 'Eufaula Lake mowed pathway thru 45ft buffer':

actual scope of the project is approximately 11.72 acres total, multiple locations across Lake Eufaula within limited development areas. Project is for a 6 foot wide path thru the 45 foot buffer area for each of the 1891 vegetation modification permits.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@34.9224848,-95.56145107000523,14z>



## DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (*Myotis septentrionalis*). Therefore, no consultation with the U.S. Fish and Wildlife 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 for those species.

## QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

**Note:** Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. Do you have post-white nose syndrome occurrence data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed acoustic detections. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

No

3. Does any component of the action involve construction or operation of wind turbines?

**Note:** For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

5. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

No

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6. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

**Note:** This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

*Yes*

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

*No*

8. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

*No*

9. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the [effects of any activities](#) that would not occur but for the proposed action.

If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

**Note:** Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of [Effects of the Action](#) can be found here: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

*Yes*

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## **PROJECT QUESTIONNAIRE**

Will all project activities be completed by April 1, 2024?

*No*

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## **IPAC USER CONTACT INFORMATION**

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