

# Chapter 1

## Purpose and Need

### 1.1 Introduction

The United States Army Corps of Engineers (USACE), Tulsa District, proposes to revise the 1998 Eufaula Lake Shoreline Management Plan (SMP) and to supplement the 1977 Eufaula Lake Master Plan (MP). The current SMP has not been revised for over 10 years and the MP land utilization maps have not been revised for over 30 years. Following an extensive public scoping process associated with the proposed revisions of the SMP and MP, several zoning requests were received including one project-specific request that would require a lease of government property in addition to a change in shoreline allocation and land use classification. Several additional zoning requests were received during the public comment period on the Draft EIS. USACE is also considering these zoning requests and the request for a lease of government property.

The SMP is a comprehensive plan for managing the shoreline, including effects of human activities on the shoreline. Preparation of and periodic revisions of a SMP are mandated by federal regulations found at Title 36 of the Code of Federal Regulations (CFR), Section 327.30, which also contains requirements for a SMP. The revised SMP may modify various elements of the existing management plan for the shoreline. Key elements under consideration for revision in the SMP include the allocations of shoreline areas into Limited Development areas, Protected areas, or Public Recreation areas, and revisions to the vegetation modification policies. These SMP allocations are defined in Section 1.2.1.

USACE Engineer Pamphlet (EP) 1130-2-550 (1996) establishes guidance for developing MPs and operational management plans (OMP) for USACE civil works projects. MPs are required for fee-owned lands, in addition to civil works projects, over which USACE has administrative responsibility for management of natural and manmade resources. The primary goals of an MP are to “prescribe an overall land and water management plan, resource objectives, and associated design and management concepts” (USACE 1996). EP 1130-2-550 specifies that MPs “in need of only minor revisions and modifications will be supplemented to include corrected drawings ... Supplements should be prepared as often as necessary to ensure that the MP continues to serve its intended purpose.”

The Eufaula Lake MP was originally written in 1977 and has been supplemented several times although it has not been completely revised. The maps in the MP were last revised in 1980, and they are no longer consistent with the SMP. The MP would be supplemented at the same time as the SMP is revised at the conclusion of this NEPA review. MP land classifications are defined in Section 1.2.2.

This Environmental Impact Statement (EIS) is required to address the potential impacts of the SMP revision and MP supplement from a lake-wide perspective. This EIS has been prepared in compliance with the National Environmental Policy Act (NEPA) of 1969 (as amended), the Council on Environmental Quality (CEQ) guidelines (40 CFR Parts 1500-1508), and the Engineer Regulation (ER) 200-2-2 Procedures for Implementing NEPA. The purpose of this EIS is to address alternatives and environmental impacts associated with a revision of the SMP and a supplement to the MP for Eufaula Lake in Oklahoma. This EIS

will also provide an evaluation of alternatives and environmental impacts associated with specific proposals for the development of recreational facilities on federal lands at Eufaula Lake as identified through the SMP revision and MP supplement process.

This EIS was prepared to ensure compliance with NEPA through identification of potential impacts associated with the allocations of various shoreline classifications and specific development proposals on the physical, biological, and cultural environment. Several alternatives, including a no action alternative, were developed and analyzed.

Issues addressed in this EIS include but are not limited to potential impacts on socioeconomic conditions, cultural and ecological resources, public access and safety, impacts to lake use, public parks and recreation, aesthetics, infrastructure, lake water quality, traffic patterns, vegetation and wetlands, terrestrial and aquatic fish and wildlife habitats, federally-listed threatened and endangered species, and cumulative impacts associated with past, current, and reasonably foreseeable future actions at Eufaula Lake.

The environmental impact assessment in this EIS is focused on potential reservoir-wide impacts of the SMP revision and MP supplement, and on site-specific impacts associated directly with the one proposed development involving public lands, the Carlton Landing development proposal. The level of environmental analysis is commensurate with the defined study area and the potential effects, including cumulative effects. Resources that would not be expected to be impacted by the alternatives or which would not have significant adverse impacts are only discussed briefly and more information on these resources may be found in Appendix H.

## 1.2 Study Area

Eufaula Lake is a USACE Civil Works Project located in the upper Arkansas River basin, on several major tributaries which come together prior to entering the Arkansas River (**Figure 1-1**). These major tributaries include the North Canadian River, Canadian River, Deep Fork Creek, and Gaines Creek, all of which join together in east-central Oklahoma immediately south of the Arkansas River. Associated counties in east-central Oklahoma include Haskell, Latimer, McIntosh, Okmulgee, and Pittsburg Counties. The history of the lake project is described in Section 1.4.1.

The Carlton Landing development proposal would require both a change in zoning and a grant of a lease for use of government land. Carlton Landing is located in the central part of Eufaula Lake along the western shore of a portion of the reservoir referred to as Longtown Arm that extends west and then north of Longtown Creek (**Figure 1-2**). The Carlton Landing development proposal is located on 1,600 acres of private land south of Highway 9 and Highway 9A. The request for a lease includes approximately 301 acres of government land along 5.8 miles of shoreline that extends around Roundtree Landing.

In addition to the Carlton Landing development proposal, 13 other zoning requests were received during public scoping and the public comment period on the Draft EIS. These requests generally involve relative short sections of shoreline and are scattered throughout the central portion of the lake. These requests are described in more detail in Chapter 2 (Section 2.3.4).

For the analysis in this EIS, the Eufaula Lake study area includes the lake, the associated government lands surrounding the lakeshore, and adjacent areas that may be affected by federal management actions at the lake. The Carlton Landing study area includes the government lands, the private lands proposed for development, and any associated areas that might be affected by the development. Each of the individual

zoning requests would affect government lands along the shoreline and are included in the Eufaula Lake study area.

The lake is generally defined as the area below an elevation of 585 above mean sea level. This is the “normal” lake level and is also referred to as the “conservation pool” elevation. It is the level at which the lake is maintained most of the time to optimize the various water resource and recreation uses of the lake.

Under the SMP, all project shoreline is allocated to one of four categories that determine the type of facilities and activities that may be permitted on the lake and the adjacent shoreline – Limited Development, Public Recreation, Protected, and Prohibited Access. The SMP allocations are described in Section 1.2.1. These allocations are intended to complement the land classifications in the project MP. The MP allocates government lands (*i.e.*, government fee lands above the normal lake level) into one of several land classifications including Low Density Recreation, Multiple Resource Management, High Density Recreation, and Project Operations. The MP classifications are described in Section 1.2.2.

Under the SMP, the shoreline allocations extend from the water's edge landward to the boundary of federal ownership for purposes of vegetation modification. The shoreline allocation guides what private uses and activities such as dock construction, mowing, or other vegetation modification are allowed on the government lands. Shoreline use permits issued by the Eufaula Lake project office are required for such activities.

The government lands surrounding the lake include lands purchased in fee and lands over which the USACE real estate interest is limited to easement title only. The distance from the lakeshore upland to the edge of the fee lands is highly variable around the lake. In some places, there is only a narrow band of fee land along the lakeshore, while in other places the fee land may extend a half mile or more from the lakeshore. In a few locations at Eufaula Lake, private lands extend below the normal pool elevation.

When the dam is holding back flood waters, the lake level may rise above the “normal” level up to a “flood control pool” elevation of 597 feet above mean sea level (although under extreme conditions, the lake level can rise as high as 604.96 feet above mean sea level). As the lake level rises, it floods adjacent lands and in many places it rises above the boundary of the fee lands. In these areas, USACE has purchased “flowage easements”, which are the right to flood private property during high water events. The flowage easements extend further inland from the shoreline than the fee lands.

USACE must assure the public’s safety and navigational integrity on all waters of the reservoir, regardless of ownership of the underlying land. Therefore, easement lands inundated with water are classified into shoreline use allocations like the fee-owned lands. However, on easement lands these allocations and the associated requirement for a shoreline use permit only apply to floating facilities. Since these lands are only flooded intermittently, floating facilities are generally not considered to be feasible in these locations. Occupied structures are prohibited on flowage easement lands and activities that would result in filling, dredging, or construction require USACE review and approval.

This assessment analyzes alternatives that revise the SMP and supplement the MP and reviews specific requests for zoning and for a lease of government land (Carlton Landing). SMP alternatives include changes to the shoreline allocations and to vegetation management and access policies. The study area, therefore, includes the government lands and adjacent private lands that may be affected by changes in the designations and policies.

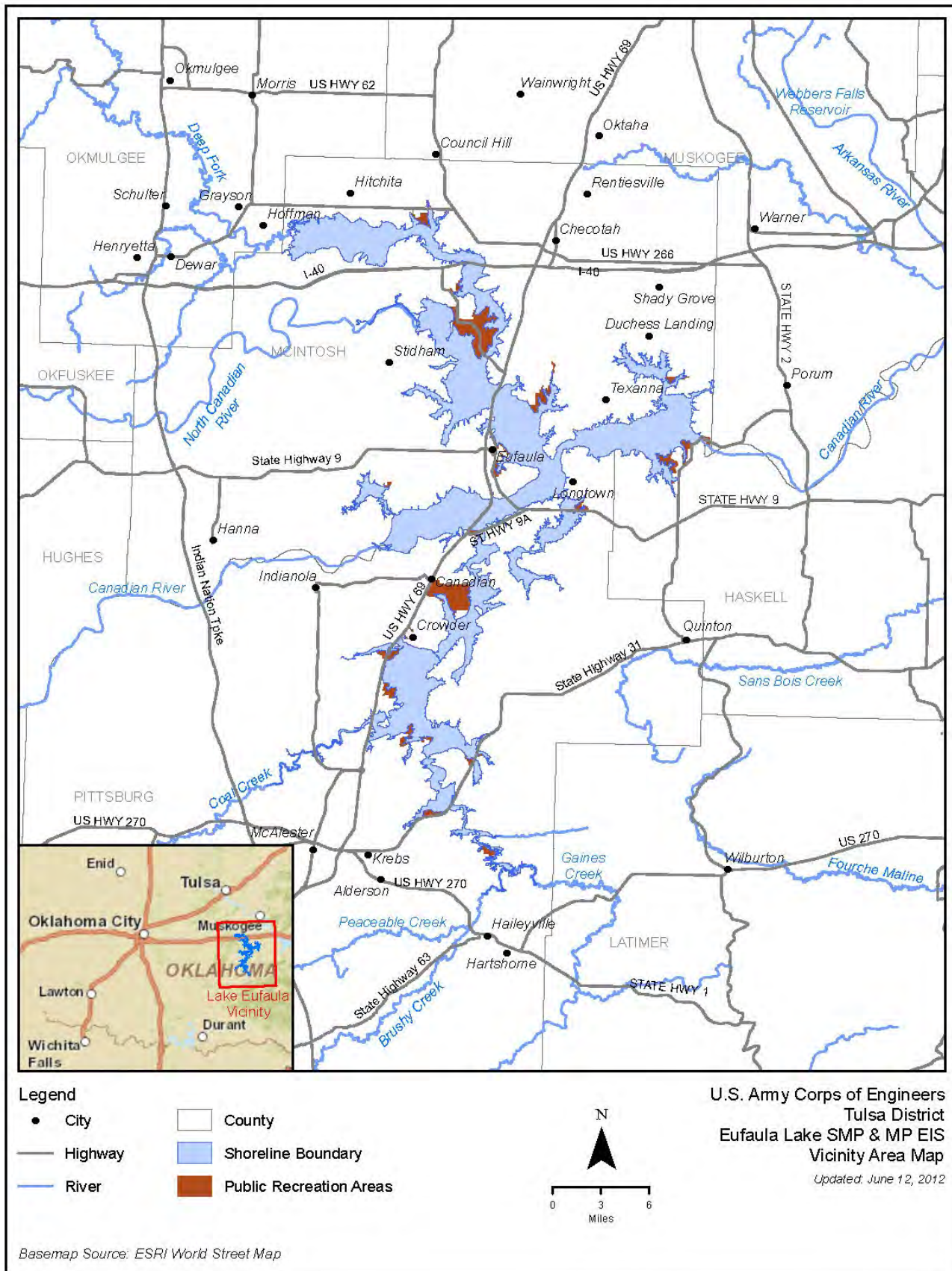


Figure 1-1. Eufaula Lake Vicinity



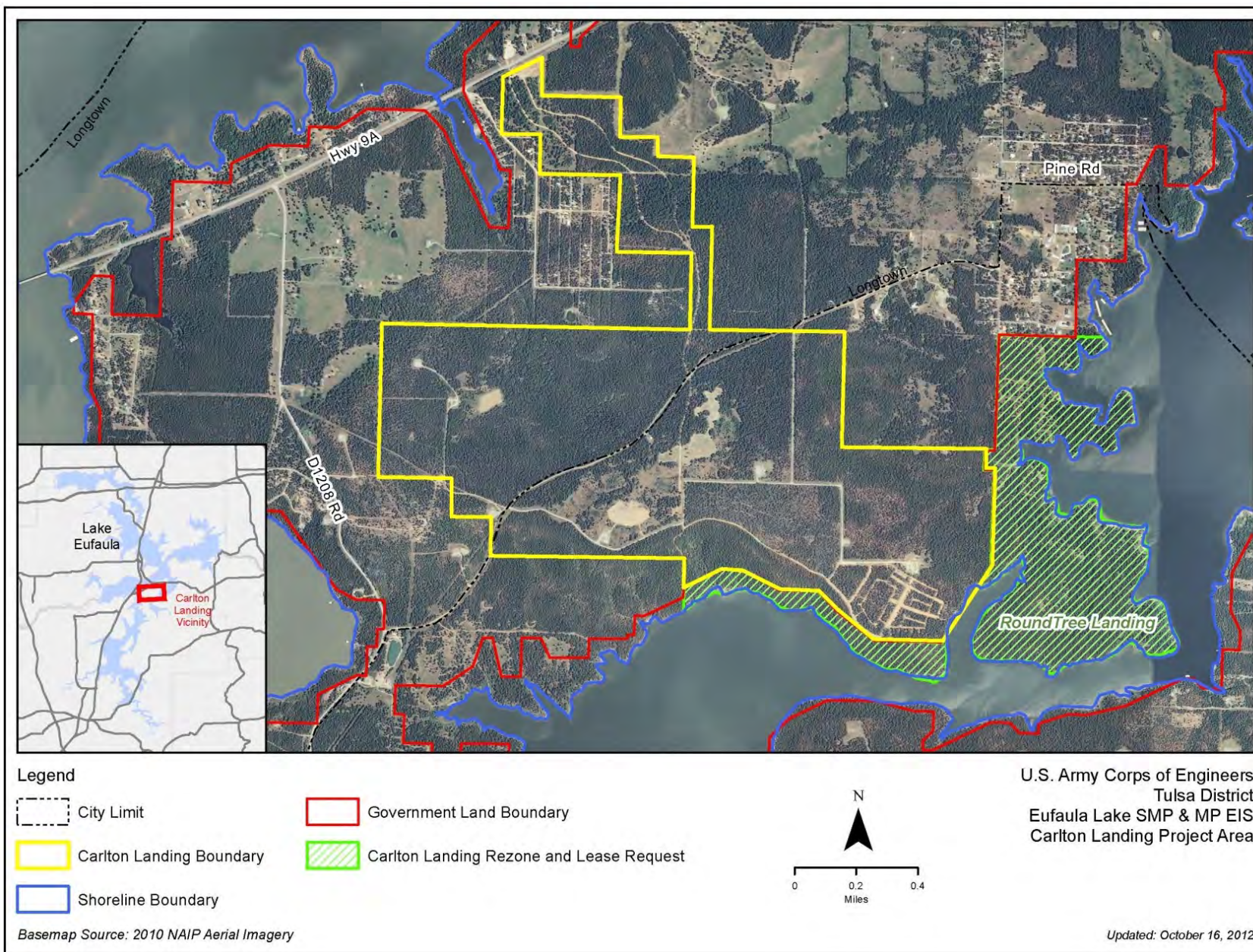


Figure 1-2. Carlton Landing Proposed Development Area

## 1.2.1 Shoreline Management Plan Allocation Categories

In compliance with USACE shoreline management regulation (Engineer Regulation (ER) 1130-2-406) and 36 CFR 327.30, Eufaula Lake’s shorelines have been classified into four allocation categories as follows. The term “zone” or “zoning” is used to refer to the resulting shoreline allocations. The current shoreline allocations are presented in Section 2.3.1 (**Table 2-1**) and on **Figures 2-1** through **2-7**.

### 1.2.1.1 Limited Development Shoreline

Limited Development shoreline allocations are areas where private activities such as vegetation modification, and/or the mooring or construction of privately owned floating facilities are permitted after due consideration of the effects of such action on the environmental and physical characteristics of the area. The density of development in these areas is not to exceed 50 percent of the shoreline zoned for Limited Development (36 CFR 327.30(j)). New or relocated docks that are to be anchored in these areas are to be located no closer than 50 feet from the nearest point of an adjacent dock or buoy (USACE 1998).

### 1.2.1.2 Public Recreation Shoreline

Public Recreation shorelines are areas where developed public recreational sites, federal, state, or similar public uses, and commercial concessionaire facilities are permitted. Non-USACE facilities may be developed if a lease is granted. No private shoreline use facilities and/or activities, such as docks are permitted within or near designated or developed public recreation areas. Public and quasi-public organization recreation areas, such as areas used by Oklahoma State Parks or the City of Eufaula, are also allowed under this allocation.

### 1.2.1.3 Protected Shoreline

Protected shoreline areas are designated primarily to protect or restore aesthetic, fish and wildlife, cultural, or other environmental values. Shorelines may also be designated in this category for physical protection reasons, such as heavy siltation, rapid dewatering, erosion or exposure to high wind, wave, or current action. Land access and boating are permitted along these shorelines, provided aesthetic, environmental, and natural resource values are not damaged or destroyed, but private floating recreation facilities may not be moored or constructed in these areas. Modification of vegetation by private individuals is permitted only after due consideration of the effects of such action on the environmental and physical characteristics of the area and issuance of a permit for such activity.

### 1.2.1.4 Prohibited Access Shoreline

Public access is prohibited in these shoreline areas for security reasons, the protection of ecosystems, or for the physical safety of the recreation visitor. For example, certain hazardous locations, areas located near dams or spillways, or work areas may be designated as Prohibited Access. Mooring of private floating facilities and the modification of land forms and vegetation are not permitted.

## 1.2.2 Master Plan Land Allocations and Classifications

Engineer Pamphlet (EP) 1130-2-550, Chapter 3, establishes the regulatory framework and general definition for land allocations and classifications described in the master plan for a USACE lake project. All lands are allocated in accordance with the congressionally authorized purposes for which they were acquired. Project lands are allocated into one of four categories when they are acquired:

- Operations: lands acquired for operation of the project (*i.e.*, flood control, hydropower, navigation, water supply, etc.).



- Recreation: separable lands acquired in accordance with authorizing documents for public recreation.
- Fish and Wildlife: separable land acquired in accordance with authorizing documents for fish and wildlife management.
- Mitigation: land acquired or designated in accordance with authorizing documents to offset losses associated with development of the project (USACE 1996).

At Eufaula Lake, all project lands are allocated to operations or recreation. The lands specifically allocated to recreation total 5,438 acres and are largely located in the two state parks above an elevation of 600 feet above mean sea level (MSL). There are no lands that were authorized or acquired with specific, separable purposes of fish and wildlife management, or mitigation. No changes to these allocations would occur as a result of the proposed MP supplement.

Allocated lands are further classified to provide for development and resource management consistent with authorized project purposes and the provisions of other federal laws. Land classification categories describe the primary purpose for which project lands are managed. The following sections describe the land classifications used in a project master plan as described in EP 1130-2-550, their occurrence at Eufaula Lake, and their general relationship to the SMP shoreline designations described in Section 1.2.1.

#### **1.2.2.1 Project Operations**

This classification includes those lands required for the dam, operations center, office, maintenance compound and other areas that are used solely for project operations. Privately-owned facilities are not permitted in these areas and recreational access is also generally prohibited. The lands at Eufaula Lake allocated for project operations are the lands containing the dam, spillway, and project buildings, excluding the overlook (USACE 1977). Project Operations lands are consistent with the Prohibited Access shoreline designation in the SMP.

#### **1.2.2.2 High Density Recreation**

High Density Recreation lands include those acquired for project operations or recreation and designated for use as developed public use areas for intensive recreational activities by the visiting public. These uses can include areas for commercial concessions (marinas, comprehensive resorts, etc.) and quasi-public development (USACE 1977). Private floating facilities are not allowed in these areas. High Density Recreation lands are consistent with the Public Recreation shoreline designation in the SMP.

#### **1.2.2.3 Mitigation**

This classification is only used for lands with an allocation of Mitigation that were acquired specifically for the purposes of offsetting losses associated with development of the project. As no such lands exist at Eufaula Lake, this lands classification category is not used in the Eufaula Lake MP.

#### **1.2.2.4 Environmentally Sensitive Areas**

This classification is used for areas where scientific, ecological, cultural, or aesthetic features have been identified. These areas are generally managed to ensure they are not adversely impacted. Typically, limited or no development of public use is allowed on land in this classification (USACE 1996) and no agricultural or grazing uses are permitted on these lands. Lands appropriate for this classification occur

sporadically around Eufaula Lake and include old growth timber, forested wetlands, and cultural resource sites. This land classification is consistent with the Protected shoreline designation in the SMP.

### **1.2.2.5 Multiple Resource Management Lands**

This classification allows for the designation of a predominant use with the understanding that other compatible uses may also occur on these lands. Land classification maps included in the Eufaula Lake MP reflect the predominant sub-classification, rather than just the Multiple Resource Management classification. The Multiple Resource Management sub-classifications are described in the following sections.

#### *Low Density Recreation*

As defined in EP 1130-2-550, the Low Density Recreation sub-classification of the Multiple Resource Management classification is appropriate for lands with minimal development or infrastructure and which support passive public recreational use such as hiking, primitive camping, wildlife observation, hunting, or similar low density recreational activities. This land classification exists extensively at Eufaula Lake. No agricultural uses are permitted on these lands except on an interim basis (USACE 1977). Depending upon site conditions, this sub-classification is consistent with either Limited Development or Protected shoreline designations in the SMP.

#### *Wildlife Management*

These lands were acquired for project operations and allocated as habitat for fish and wildlife or for propagation of such species (USACE 1977). Lands in this category should be available for low density recreational activities. These lands occur around Eufaula Lake and include ODWC-licensed lands, which are used for hunting and fishing recreational activities. This sub-classification is consistent with the Protected shoreline designation in the SMP.

#### *Vegetation Management*

These lands are defined as being used for management activities for the protection and development of forest and vegetation cover (USACE 1996). This sub-classification is only applied to a few areas in the current (1977) Eufaula Lake MP. It is likely that the proposed MP supplement will use the Environmentally Sensitive classification for these limited areas, which would not change the existing management of these lands. This sub-classification is consistent with the Protected shoreline designation in the SMP.

#### *Future/Inactive Recreation Areas*

Lands classified as Future/Inactive Recreation Areas include those planned for recreation, but never developed for such uses. This classification also includes areas with site characteristics that are compatible with potential future recreational development and recreation areas that are closed. The original 1977 MP designated four areas for Recreation – Intensive Use (now termed High Density Recreation) that have not been developed as such. At Eufaula Lake these areas include: Big Ridge (70 acres), Canadian Landing (47 acres), Duchess Creek (99 acres), and Roundtree Landing (258 acres). This sub-classification is consistent with the Protected shoreline designation in the SMP. If any of these areas are selected for active recreational development, its MP classification would need to be changed to High Density Recreation and the SMP designation would need to be changed to Public Recreation.



### 1.2.2.6 Easement lands

Easement lands are those for which USACE holds an easement real estate interest but not fee title. Use and management of easement lands is conducted in accordance with the terms and conditions of the easement estate acquired for the project (USACE 1996). While easements may be obtained for operations or conservation benefits, all of the easements at Eufaula Lake are flowage easements. These easements are found all around Eufaula Lake and are often located at higher elevations than the shoreline lands owned in fee. Flowage easements allow USACE to flood these lands during high flows for flood control purposes. Habitable structures are not allowed on flowage easement lands and private developments that would involve filling, dredging, or construction require USACE review and approval prior to such activities. As these lands are privately-owned, they are not subject to assignment of MP classifications used for federally-owned lands described above. However, where they exist, shorelines of flowage easement lands are classified into the various SMP designations for the purposes of permitting floating facilities only.

## 1.3 Purpose and Need

The Eufaula Lake SMP was last revised in 1998 and the Master Plan land utilization maps were last revised in 1980 in Supplement No. 2 to the Lake Eufaula Master Plan dated February 6, 1981. The area of shoreline designated as Limited Development has been increased under each revision of the SMP, but potential effects associated with changes to the shoreline allocations have not been thoroughly studied during the more recent revisions. Through a public scoping process and the public comment period on the Draft EIS, USACE also received several requests for changes to the current SMP allocations and one development proposal that would require both a rezone and the grant of a lease for use of federal land if approved. USACE is proposing to review and revise the SMP as necessary, supplement the MP land utilization maps to be consistent with the revised SMP, and to review and approve or reject the requests for specific shoreline zoning and the requested lease.

### 1.3.1 Study Purpose

The purpose of this federal action is to revise the Eufaula Lake SMP, supplement the MP, and to evaluate site specific proposals for leases of government property at Eufaula Lake, Oklahoma, in accordance with applicable regulations. These revisions and reviews are intended to provide for lake management that is predictable and equitable, responsive to recreational demand and the public interest, and that provides for stewardship of natural and cultural resources. The revision of the SMP will provide the mechanism to respond to individual zoning requests for specific shoreline allocations.

The overall objectives of the federal action are as follows:

- 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.

### 1.3.2 Study Need

Eufaula Lake is located in a primarily rural, but highly accessible, portion of the State of Oklahoma. Privately-owned residential properties adjacent to the lake continue to be developed. Likewise, existing residential developments are expanding, resulting in an increased demand for private use of public resources. Each year applications continue to be filed for modifications to land forms and vegetation, floating facilities and docks, utility easements/licenses, and other permitted activities. At the present time there are approximately 250 real estate subdivisions adjacent to public lands. Construction in these subdivisions ranges from simple A-frame cabins to condominiums and large homes. As the increasing numbers of permits indicate, demand for permitted use of public resources appears to be on the rise. It is anticipated that the demand for permits and licenses for use of public lands and waters will continue to increase as additional adjacent lands are developed for housing.

At Eufaula Lake, private shoreline uses including private floating facilities (*e.g.* boat docks) and vegetation modification (*i.e.* mowing permits) are managed under a permit system dependent upon the shoreline classification categories specified in the SMP in accordance with Engineer Regulation (ER) 1130-2-406 and 36 CFR 327.30. SMPs are periodically reviewed and revised and the last revision of the SMP occurred in 1998. Similarly, land resources at Eufaula Lake are managed in accordance with MP requirements as described in ER 1130-2-550. In the land classification portion of the MP, all project lands are assigned categories which are used to determine appropriate uses for these lands. The last complete revision of the Eufaula Lake MP occurred in 1977.

The objectives of the current SMP include maintenance of the aesthetic and environmental characteristics of the reservoir for the full benefit of the public. Management activities are aimed at achieving a balance between permitted private uses and protection of natural and cultural resources for use by the general public. Owing to the elapsed time since the last revisions, changed conditions, and the need to assess management policies and activities and lake-wide cumulative effects, the Tulsa District is proposing to revise the SMP and supplement the MP. The SMP revision would include a review of and potential changes to shoreline designations, vegetation management policies, and to dock access requirements.

The revision of the SMP and the supplement to the MP will address the following needs:

- The MP land classification maps were last revised in 1977 and over time inconsistencies have developed between the shoreline allocation maps in the SMP and the land classification maps in the MP.
- The SMP was last revised in 1998. A periodic review pursuant to 36 CFR 327.30(e)(7) is due.
- Recreational demand in and around the lake continues to increase and some areas of the lake are becoming congested. Therefore, a review of recreational demand and capacity of the lake is needed to identify where additional recreational opportunities might be feasible that are responsive to current patterns of recreational use.
- Shoreline management regulations limit the density of private floating and fixed recreation facilities to no more than 50 percent of the Limited Development area in which they are located (36 CFR 327.30(j)). Therefore, a review of existing development density is needed to maintain compliance with existing regulations and to identify appropriate remediation measures if needed.

- Existing shoreline designations may not be reasonable given physical constraints on dock construction and use at certain locations. Therefore, revisions that include suitability for dock construction and operation are needed to help identify realistic recreational opportunities.
- As socioeconomic profiles of lake residents and visitors have changed, recreational demands and expectations for shoreline management may have changed. A review of the shoreline management policies is needed to address current needs.
- There is a need to provide a diverse range of recreational facilities and opportunities on the lake for the benefit of all users.
- Previous SMP revisions did not specifically address potential cumulative effects of increased Limited Development shoreline designations and the cumulative effects of future shoreline management practices also need to be evaluated.
- Changes in water quality may affect water-based recreational uses. Shoreline erosion can increase turbidity and impact recreational boating uses. Stormwater runoff across maintained lawns and discharges from leaking septic systems may increase nutrient loading that leads to algal blooms which can affect water-contact users. Therefore, shoreline management policies need to be evaluated to identify potential revisions to better manage water quality impacts and shoreline erosion.
- Existing vegetation management policies may result in unacceptable environmental impacts. The effects of the current vegetation management policies need to be evaluated and potential revisions that maintain the environmental characteristics of the lake need to be identified.
- There have been improvements in available materials for dock construction that are more protective of the environment. Therefore, SMP policies regarding construction of floating facilities need to be reviewed and may need to be revised to reflect these technological improvements.
- Through a public scoping process, USACE received several requests for specific shoreline allocations and one request for a grant for use of government property (a lease for Carlton Landing). Additional requests were received during the public comment period on the Draft EIS. These requests need to be reviewed and either approved through a change in the SMP designations or rejected as may be consistent with applicable laws and policies.
- The direct, indirect, and cumulative effects of the specific shoreline allocation requests and the request for a lease of government land need to be evaluated to support informed decision making.

## 1.4 Project History

### 1.4.1 Construction and Management of Eufaula Lake

Eufaula Lake was authorized by the 1946 Rivers and Harbors Act. It is a multi-purpose reservoir impounded by Eufaula Dam on the Canadian River at river mile 27.0, about 12 miles east of Eufaula in McIntosh County, Oklahoma. Construction of the dam began in December 1956 and it was placed in operation in 1964. Eufaula Lake is a unit of the Arkansas River basin. The lake is managed for the multiple purposes of flood control, hydroelectric power, navigation, water supply, fish and wildlife management, and recreation.



Land and water resources at Eufaula Lake are managed by the Tulsa District of USACE in accordance with regulations governing Civil Works projects.

Eufaula Lake is the largest lake located entirely within the boundaries of the state of Oklahoma. The shoreline ranges from vast expanses of sandy beaches to rocky bluffs. The lake’s “normal” level is maintained at an elevation of 585 feet above mean sea level for the various water resource and recreation uses of the lake. This is referred to as the “conservation pool” elevation. The lake has a total of 105,000 surface acres and over 800 miles of shoreline at the conservation pool elevation<sup>1</sup>. During floods, water may be retained within the reservoir to control flooding downstream. The elevation of the flood control pool is 597.0 feet above mean sea level, for a total difference in the functional pool elevation of 12 feet. This would be the flood control storage area within the reservoir. However, during extreme events, the lake level can rise as high as 604.96 feet above mean sea level.

Eufaula Lake offers a wide range of recreational opportunities. Some portions of the lake still retain standing timber that was flooded when the lake was formed. These areas offer superb fishing opportunities, while other areas where the timber was cleared are used for recreational boating and water skiing. USACE maintains 9 developed campgrounds offering boat launches and overnight camping facilities. In addition, there are two large state parks on the lake with a variety of recreational facilities including marinas, golfing, swimming, and hiking trails. Eufaula Lake has long been recognized for its outstanding fishery. Crappie, sand bass, catfish, and black bass are abundant in the lake. Hunting for deer, turkey, waterfowl, small game, and upland game birds is popular on the lands surrounding the lake. Large areas of the government lands around the lake have been out-granted (*i.e.*, leased) to the Oklahoma Department of Wildlife Conservation (ODWC) for management of and access to fish and wildlife.

Over 250 housing developments with lake homes are located on private land in close proximity to the shoreline. Most of these areas are within walking distance to the lake. Many offer public boat ramp access within the development. Mowing and boat dock permits allow property owners to mow government property below their lots and to place private boat docks within walking distance of their property.

### 1.4.2 History of Shoreline Planning at Eufaula Lake

The first Lakeshore Management Plan (a shoreline management plan) was completed in 1976 (USACE 1998). To develop that plan, USACE requested public input to the Lakeshore Management Plan through a notice in published in the *Federal Register* in 1974. The Eufaula Lake, Canadian River Operations and Management Environmental Impact Statement that evaluated potential impacts of the proposed management plan was completed in 1975. The Lakeshore Management Plan included input from the Lake Eufaula Association and other interested parties. A comprehensive Lakeshore Management Plan (SMP) for Eufaula Lake was completed in 1976 and approved by the USACE Southwestern Division Commander.

The Eufaula Lake Master Plan (MP) was completed in 1977 and includes lakeshore classifications that are similar to the shoreline allocation categories established in the SMP. There have been several supplements to the MP since 1977 and some information in the MP was revised as recently as 2010 but a complete

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<sup>1</sup> Although the Eufaula lakeshore is popularly reported to be approximately 600 miles in length, this analysis includes the length of USACE waterfront which extends up into tributaries to the lake, resulting in a total length of approximately 808 miles. In addition the use of GIS and more precise data on shorelines results in a more accurate measurement of the minor undulations in the shoreline and results in a longer reported shoreline length.

revision of the MP has not been performed. The maps in the MP were last revised in 1980. There are currently 474 acres that were designated as High Density Recreation in the MP (as listed in Section 1.2.2.5) that have not been developed as public recreation areas and are managed as though they were Future/Inactive Recreation areas. The current land classifications are described in more detail in Section 2.4.1.1.

In 1976 when the comprehensive Lakeshore Management Plan (the first SMP) for Eufaula Lake was completed there were approximately 365 boat docks along 26 miles of shoreline located in selected coves next to existing developments. All of the areas designated as High Density Recreation (including those that have not been fully developed) were associated with Public Recreation shoreline designations in this first plan.

The SMP was revised in 1981 and adjustments were made to accommodate then current development patterns, with a slight increase in the amount of zoning for private shoreline uses including private floating facilities. At the time of the 1981 revision there were 452 permitted private floating facilities along 42 miles of shoreline, 36 boat ramps, and 130 real estate subdivisions around the lakeshore.

In 1983, individuals that desired docks in Protected areas petitioned to accelerate the next review of the SMP. The SMP was reviewed and revised in 1986 after intensive public debates in three public meetings at locations on Eufaula Lake and in Oklahoma City, Oklahoma. This revision of the SMP increased the total miles of shoreline designated as Limited Development to about 130 miles and vastly increased the number of allowable boat docks. It should be noted that the 130 miles of Limited Development shoreline reported in the 1986 SMP is an estimate based on limited technology of the time. The actual figure was likely higher as both the 1986 SMP and the 1998 SMP reported similar amounts of Limited Development shoreline, but the current measurements using GIS technology and more precise shoreline measurements that account for all of the undulations of the shoreline result in much larger numbers.

With the 1986 SMP revision, as the amount of Limited Development shoreline increased there would have been a corresponding decrease in the amount of Protected shoreline. There was no change to the amount of Public Recreation shoreline. At the time of the 1986 revision there were 630 permitted private facilities, 36 boat ramps, and 130 real estate subdivisions around the lakeshore.

In 1996, the SMP was again reviewed and revised with public input. The current SMP that resulted from this final process was completed in 1998. This revision increased the Limited Development allocation to 34 percent and the Public Recreation allocation to 13 percent of the shoreline. In this SMP, the Public Recreation shorelines that had not been developed were changed to Protected shorelines as would be more consistent with a Future/Inactive Recreation land classification, although the MP was not revised to reflect that change. There are currently about 273 miles of shoreline designated as Limited Development. At the time of the 1998 revision, there were over 1,100 permitted private facilities, at least 39 boat ramps, and 250 real estate subdivisions. In 2012, there are now 1,673 permitted private facilities. An evaluation of potential impacts of the changes to the SMP under NEPA was not conducted for any of the revisions since 1976.

## 1.5 Public Involvement

The Tulsa District conducted scoping for this federal action in compliance with NEPA and CEQ guidelines. The process of determining the scope, focus and content of an EIS is known as “scoping.” The scoping meeting is a useful opportunity to obtain information from the public and governmental agencies. In

particular, the scoping process asks agencies and interested parties to provide input on potential alternatives, the proposed topics of evaluation, and potential impacts and mitigation measures to be considered.

A Notice of Intent (NOI) was published in the *Federal Register* (Volume 76, No. 79; April 25, 2011), and a public scoping workshop was held in Eufaula, Oklahoma, on June 2, 2011. The workshop was advertised in local papers of general circulation and via the Tulsa District webpage and it was announced at varying public forums (*e.g.*, a local "listening session") in the project area. The purpose of this workshop was to inform the public and enlist their input about the proposed revision to the SMP, the supplement to the MP, and to solicit specific proposals for new development on federal lands at Eufaula Lake. A total of 99 people signed in at the public workshop. The workshop allowed the public to ask questions of USACE staff and to make written comments about potential alternatives to the SMP and MP. Forty comment letters or cards were received during the public comment period. These comments were considered in scoping this EIS.

In accordance with 40 CFR 1501.6, the Tulsa District sent coordination and cooperating agency request letters to appropriate agencies. "Cooperating agency" means any federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (40 CFR 1508.5). Copies of these letters are included in the Scoping Summary Report (Appendix A). Additionally, coordination letters to initiate Section 106 consultation as required by the National Historic Preservation Act of 1966 (as amended) were mailed to appropriate Native American tribes, the State Historic Preservation Officer (SHPO), and the Oklahoma Archeological Survey (OAS). Copies of these letters are also included in the Scoping Summary Report.

Only the U.S. Environmental Protection Agency (EPA) accepted the invitation to become a cooperating agency for this EIS. EPA has reviewed preliminary drafts of the document and provided special expertise on air and water quality effects and on NEPA documentation.

The Scoping Summary Report, which was prepared by the Tulsa District in August 2011 and is attached as Appendix A, includes all of the comments received during the scoping period and contains copies of the agency letters. During scoping for this EIS, the Tulsa District received one development proposal (Carlton Landing) that would require both rezoning and granting a lease to use government property and several requests for specific zoning under the SMP revision.

The following major issues were identified during scoping:

- Public Lands and Access Considerations
- Socioeconomic Impacts
- Fish and Wildlife Considerations
- Federally Listed Endangered Species
- Water Quality Concerns
- Aesthetics: Visual/Scenic Considerations
- Handicap Accessibility
- Cumulative Effect Analysis



A public comment and review period on the Draft EIS was held from December 7, 2012 to January 22, 2013. Notice of availability of the Draft EIS was published in the *Federal Register* on December 7, 2012. A cover letter and a CD of the Draft EIS were mailed to the agencies, stakeholders, and individuals on the project mailing list. In addition, a postcard notice of availability was mailed to all shoreline permit holders.

A public workshop was held on December 19, 2012 to allow the public to ask questions of USACE staff and to make written and verbal comments about potential alternatives and potential impacts. The workshop was advertised in the *Tulsa World*, the *Oklahoman*, the *Muskogee Phoenix*, *Eufaula Indian Journal*, *McAlester News Sentinel*, *Stigler News Sentinel*, and *Country Star* papers.

Two hundred and three people signed in at the public meeting. Eleven people spoke to a court reporter and 15 people submitted written comments at the meeting. Another approximately 118 written comment letter and emails were received during the public comment period. Seven letters were received from agencies, elected officials, and tribes.

Comments received on the Draft EIS were summarized and a response to each summarized comment was developed (see **Appendix I**). Every comment received is compiled in **Appendix J** and **Appendix K** of this EIS.

## 1.6 Decision Framework

The purpose of this federal action is to revise the Eufaula Lake SMP, supplement the MP, and to evaluate site specific proposals for leases of government property at Eufaula Lake in accordance with applicable regulations. The decision framework for this federal action follows several steps including preparation of the Draft EIS, public and agency review and comment on the Draft EIS, preparation and release of the Final EIS, and preparation and publication of the Record of Decision (ROD).

This EIS includes a description of several alternative configurations of shoreline designations and vegetation management policies that could be incorporated into the final SMP revision. Some of these alternatives include approval of the zoning requests and the grant of a lease for the Carlton Landing development proposal. The alternatives evaluated also include a No Action Alternative. The alternatives are described in detail in Chapter 2.

The NEPA review of the alternatives and the final decision must be conducted within the framework of numerous laws, regulations, and executive orders. Some of these authorities pertain directly to USACE management of and planning for water resource development projects such as Eufaula Lake (Section 1.6.1). Others establish regulatory compliance standards for environmental resources or provide guidance for management of environmental resources. Potential changes to shoreline designations and vegetation management policies could have effects on cultural resources, water resources, fish and wildlife and their habitats, or on the socioeconomic character of the surrounding private lands. Applicable regulations for each of these resource categories are briefly described in the sections below.

The Draft EIS was made available for review by the public, tribes, and agencies. Comments received during this public review and comment period were considered and appropriate changes have been made to the document in the preparation of the Final EIS. The Final EIS includes a Preferred Alternative that includes components from several of the alternatives presented and evaluated in the Draft EIS. The Preferred Alternative includes the preferred shoreline allocations within the SMP, land classifications in the MP, vegetation management policies, and recommended approval or rejection of the individual zoning requests and the request for a lease for the Carlton Landing shoreline development proposal.

Once the FEIS is reviewed and approved by USACE, it will be distributed to appropriate agencies, non-governmental entities, individuals, and organizations for review. A final decision on the Preferred Alternative described in the Final EIS would not be made until at least 30 days after the Final EIS is made available for review. The final decision is documented in the ROD. The ROD will be published in the *Federal Register* indicating that USACE is making a decision on the proposed action. The ROD is a written public record explaining why the lead agency, in this case USACE, is taking the proposed action. The ROD will include:

- The explanation of the decision on the proposed action
- Factors involved in making the decision
- Alternatives considered and the environmentally preferred alternative
- Adopted mitigation measures, if necessary, and monitoring and enforcement measures

### **1.6.1 Management of Water Resources Development Projects**

The environmental analyses in this EIS are conducted within the framework of a number of laws, regulations, and Executive Orders (EO). Some of these authorities pertain directly to USACE management of water resource development projects, while others establish regulatory compliance standards for environmental resources or provide guidance for planning for and management of environmental resources. Reliance on these authorities results in effective project management and sound environmental stewardship. Section 1502.25 of the NEPA regulations further requires that EISs be prepared concurrently and integrated with environmental analyses and related surveys and studies required by other federal statutes. Following completion of this EIS, USACE will issue a written ROD concerning the proposed action. The ROD will be issued within the framework of these laws, regulations, and EOs. Relevant statutory authorities are described in the following sections.

#### **1.6.1.1 Rules and Regulations Governing Public Use of Water Resources Development Projects Administered by the Chief of Engineers; 36 CFR 327**

Title 36 CFR 327 regulates activities at Civil Works projects. Part 327.30 regulates shoreline management and specifically requires preparation of an SMP for each Corps project where private shoreline use is allowed. The purpose of the plan is to protect and manage shorelines of all Civil Works water resource development projects under Corps jurisdiction in a manner which will promote the safe and healthful use of these shorelines by the public while maintaining environmental safeguards to ensure a quality resource for use by the public. The objectives of all management actions will be to achieve a balance between permitted private uses and resource protection for general public use. This plan must honor past written commitments. It must be reviewed at least once every five years and revised as necessary. Private shoreline uses are allowed through a shoreline use permit review and approval process.

#### **1.6.1.2 Rivers and Harbors Act of 1894, as amended, Title 33 of the United States Code (U.S.C.)**

The Rivers and Harbors Act applies to activities within navigable waters of the US. Actions that may affect the navigability of waters of the US such as bridge or causeway construction, aids to navigation, or dock construction are regulated under this Act. This Act also regulates the management and modification of flood control structures.

### **1.6.1.3 Flood Control Act of 1944, as amended (16 USC 460)**

Section 4 of this Act authorizes USACE, under the supervision of the Secretary of the Army, to construct, maintain and operate public park and recreational facilities at water resources development projects (16 U.S.C. 460(d)). Local interests are also permitted to construct, operate and maintain such facilities with permission from the Secretary of the Army. Water areas of all such projects shall be open to public use generally, for boating, swimming, bathing, fishing, and other recreational purposes, and ready access to and exit from such water areas along the shores of such reservoirs shall be maintained for general public use, when such use is not found to be contrary to the public interest. The lease of public lands and structures at water projects is also authorized. Recreational uses must be consistent with state laws for the protection of fish and game.

### **1.6.1.4 Federal Facility Compliance Act, 42 U.S.C. 6901**

This Act requires federal facilities to comply with state and local environmental laws, as well as federal environmental laws.

### **1.6.1.5 Federal Water Project Recreation Act of 1965, as amended; Public Law (PL) 89-72, 16 U.S.C. 4601-12 *et seq.***

This Act requires federal agencies to consider potential outdoor recreational opportunities and fish and wildlife enhancement when planning navigation, flood control, reclamation, hydroelectric, or multipurpose water resource projects.

### **1.6.1.6 Federal Land Policy and Management Act of 1976, 43 U.S.C. 1701-1784**

This Act requires federal agencies to plan for and manage public lands in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values that, where appropriate, will preserve and protect certain public lands in their natural condition.

### **1.6.1.7 Water Resources Development Act of 1986, as amended (PL 99-662); 33 U.S.C. 2201-2330**

The Water Resources Development act provides for the conservation and development of water and related resources and the improvement and rehabilitation of the Nation's water resources infrastructure.

### **1.6.1.8 USACE Policy Guidance Letter No. 32**

This policy guidance letter explains the policy for use of lands with flowage easements over them. Current flowage easement requirements provide that no structures for human habitation shall be constructed or maintained on the land, that no other structure shall be maintained on the land except as may be approved in writing by USACE, and that no excavation shall be conducted or landfill placed without USACE approval. Approval for structures other than for human habitation rests with the District Engineer.

### **1.6.1.9 ER 1130-2-540, Management of Natural Resources and Outdoor Recreation at Water Resource Projects**

This regulation establishes land management policy for USACE administered project lands and water, based on various authorizing legislation and the principles of good environmental stewardship. Environmental stewardship shall include both passive and proactive management to sustain healthy ecosystems and biodiversity, and conserve natural resources, such that USACE lands and waters are left in a condition equal to or better than their condition when acquired, and such that those natural and cultural resources are



available to serve the needs of present and future generations. Management plans will be prepared for all USACE administered lands and waters.

#### **1.6.1.10 ER 1130-2-406, Shoreline Management at Civil Works Projects**

This regulation provides guidance on the management of shorelines at Civil Works projects consistent with 36 CFR 327.30 and other applicable laws and regulations.

#### **1.6.1.11 ER 1130-2-550 Project Operations – Recreation Operations and Maintenance Policies**

This ER establishes the policy for the management of recreation programs and activities, and for the operation and maintenance of USACE recreation facilities and related structures, at civil works water resource projects. Chapter 3 establishes the policy for the preparation of MPs and OMPs for civil works projects.

#### **1.6.1.12 EP 1130-2-550 Project Operations – Recreation Operations and Maintenance Guidance and Procedures**

EP 1130-2-550 establishes guidance for developing MPs and OMPs for USACE civil works projects. MPs are required for fee-owned lands, in addition to civil works projects, for which USACE has administrative responsibility for management of natural and manmade resources. The primary goals of an MP are to prescribe an overall land and water management plan, resource objectives, and associated design and management concepts.

#### **1.6.1.13 Forest Conservation Act 16 U.S.C. 580 (P.L. 86-717)**

Section 580(m) of this Act establishes policy to provide that reservoir areas of projects for flood control, navigation, hydroelectric power development, and other related purposes owned in fee and under the jurisdiction of the Secretary of the Army and the Chief of Engineers be developed and maintained to encourage, promote, and assure adequate and dependable future resources of readily available timber, through sustainable yield programs, reforestation, and accepted conservation practices. The Act also provides for the increase in value of such areas for conservation, recreation, and other beneficial uses provided that such development and management are accomplished to the extent practicable and compatible with other uses of the project. The Chief of Engineers, under the supervision of the Secretary of the Army, is directed to provide for the protection and development of forest or other vegetation cover and the establishment and maintenance of other conservation measures on reservoirs under his jurisdiction, so as to yield the maximum benefit and otherwise improve such areas.

#### **1.6.1.14 ER 405-1-12, Real Estate Handbook, as amended**

This Engineer Regulation applies to non-recreational out-grant requests for use of USACE owned fee lands and waters by the public, tribes, private sector, quasi-public entities, or individuals at USACE Civil Works water resources projects.

## **1.6.2 Cultural and Historic Resources**

### **1.6.2.1 The National Historic Preservation Act and implementing regulations, 16 U.S.C. 470 et seq., 36 CFR 60, 63, 800**

The National Historic Preservation Act (NHPA) promotes historic preservation by ensuring that federal agencies consider historic properties when planning and making decisions on projects. Federal agencies

are directed to ensure that the preservation of properties not under their jurisdiction or control, but which may be potentially affected by agency actions, are given full consideration in planning.

The Act authorizes the Secretary of the Interior to expand and maintain a national register of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology and culture, which is referred to as the National Register. The Act also establishes the Advisory Council on Historic Preservation (ACHP) composed of 29 members, one of which is the Secretary of Defense.

The most relevant sections of the NHPA to the proposed revisions to the SMP and MP supplement, including the proposed development at Carlton Landing, are Section 106 and Section 110. Section 106 requires federal agencies to take into account the effects of their undertakings on historic properties. It also states that the ACHP must be given an opportunity to comment on the proposed action and any resulting effects. Section 106 regulations set out a four step process for federal agencies to take into account the effects of their undertakings on historic properties:

- Step 1. Initiate Project Review
- Step 2. Identify and Evaluate Historic Properties
- Step 3. Assess Adverse Effects
- Step 4. Resolve Adverse Effects

In accordance with Section 106 and 36 CFR Part 60, all resources over 50 years old must be evaluated to determine if they meet specific eligibility criteria established by the National Park Service (NPS). Historic properties are considered eligible for the National Register if they meet one or more criteria for significance and retain integrity. Section 106 applies to all resources already listed in the National Register, to resources formally determined to be eligible for listing, and to resources not formally determined eligible but that meet specified eligibility criteria. This means that resources that have not yet been listed, and even resources that have not yet been discovered, can be considered eligible for listing in the National Register.

Section 110 of the NHPA “sets out the broad historic preservation responsibilities of federal agencies and is intended to ensure that historic preservation is fully integrated into the ongoing programs of all federal agencies.” It contains several provisions that create an overall framework for federal management of historic properties.

#### **1.6.2.2 Antiquities Act of 1906, Archaeological Resources Protection Act of 1979, and Archaeological and Historic Preservation Act of 1974**

Both the Antiquities Act (AA) and Archaeological Resources Protection Act (ARPA) protect archaeological resources (as defined by ARPA) and objects of antiquity (as defined by AA) on federally-owned property. The ARPA establishes a permit system for excavation and other research at archaeological sites on these lands. An ARPA permit is issued by federal land managers to those qualified under the regulations to conduct archaeological investigations. Any recovered archaeological resources and associated records must be preserved (curated) under this law by an approved institution. Disturbing or removing archaeological resources is a felony under federal law and can result in civil or criminal prosecution.

The Archaeological and Historic Preservation Act (AHPA) requires that federal agencies provide for "...the preservation of historical and archeological data (including relics and specimens) which might otherwise be irreparably lost or destroyed as the result of...any alteration of the terrain caused as a result of any federal construction project of federally licensed activity or program."

### **1.6.2.3 Native American Graves Protection and Repatriation Act (NAGPRA) 25 USC § 3001 et seq.**

This Act establishes protective requirements to be followed when graves or Native American burial sites are encountered.

### **1.6. 2.4 Executive Order 11593: Protection and Enhancement of the Cultural Environment**

Executive Order 11593, issued on May 13, 1971, directs federal agencies to "(1) administer the cultural properties under their control in a spirit of stewardship and trusteeship for future generations, (2) initiate measures necessary to direct their policies, plans and programs in such a way that federally owned sites, structures, and objects of historical, architectural or archaeological significance are preserved, restored and maintained for the inspiration and benefit of the people, and (3), in consultation with the Advisory Council on Historic Preservation institute procedures to assure that federal plans and programs contribute to the preservation and enhancement of non-federally owned sites, structures and objects of historical, architectural or archaeological significance."

### **1.6.2.5 Indian Sacred Sites Executive Order 13007**

This Executive Order requires federal agencies to avoid physical damage to Indian sacred sites and to avoid interfering with access to such sites.

### **1.6.2.6 Executive Order 13175: Consultation and Coordination with Indian Tribal Governments**

Executive Order 13175 was issued on November 6, 2000 and it directs that federal agencies shall consult and coordinate with tribal governments when formulating or implementing policies or plans that may have tribal implications. This consultation with tribal governments shall be conducted in a manner that respects Indian tribal self-government and sovereignty, honors tribal treaty and other rights, and strives to meet the responsibilities that arise from the unique legal relationship between the Federal Government and Indian tribal governments.

### **1.6.2.7 ER 1130-2-540, Chapter 6, Historic Preservation Program**

Chapter 6 of this Engineer Regulation outlines the cultural resources management and protection policies on USACE administered lands.

## **1.6.3 Water Resources**

### **1.6.3.1 Clean Water Act (CWA), as amended, (formerly known as Water Pollution Control Act), and Implementing Regulations, 33 U.S.C. 1344 et seq., 33 CFR 320 et seq.**

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants to waters of the United States and regulating quality standards for surface waters. The CWA also regulates dredging and filling of waters of the United States, including special aquatic sites such as wetlands.

The Act authorizes EPA to implement pollution control programs such as setting wastewater standards for industries. In most states, including Oklahoma, EPA has delegated this authority to state agencies (see Oklahoma's Water Quality Standards - Oklahoma Administrative Code, Title 785, Chapter 45). The CWA



establishes requirements that limits be determined for point source discharges and stormwater that are consistent with state water quality standards, procedures for state issuance of water quality standards, guidelines to identify and evaluate the extent of nonpoint source pollution be developed, water quality inventory requirements be implemented, and toxic and pretreatment effluent standards be developed. The Act further defines liability for discharges of oil and hazardous substances and the federal role in cleanup operations. The Act establishes the requirement that EPA study and monitor water quality effects attributable to the impoundment of water by dams and requires federal agencies to consider, during the planning for any reservoir, storage to regulate stream flow for the purpose of water quality control.

**Section 404** of the CWA authorizes USACE to issue permits for the discharge of dredged or fill material into waters of the U.S. Actions that would result in the dredge or filling of a water of the U.S. including wetlands must identify alternatives that would avoid or minimize impacts. Compensatory mitigation for wetland impacts may be required to mitigate for unavoidable impacts.

**Section 401** of the CWA requires a state Water Quality Certification to show that a proposed project that would result in a discharge to a water body would also comply with state water quality standards.

**Section 402**, also known as the National Pollution Discharge Elimination System (NPDES) permit program, provides a regulatory mechanism for the control of point source discharges (*e.g.* a municipal or industrial discharge at a specific location or pipe) to waters of the U.S. Two exceptions that are regulated under the NPDES program are: 1) diffuse source discharges caused by general construction activities of more than one acre, and 2) stormwater discharges as a separate system in municipal stormwater systems in which runoff is carried through a developed conveyance system to specific discharge locations.

**Section 303(d)** of the CWA requires states, territories, and authorized tribes to develop a list of threatened and impaired waters and to submit this list to EPA every two years. States identify all waters where required pollution controls are not sufficient to attain or maintain applicable water quality standards, and establish priorities for addressing impairments based on the severity of the pollution and the sensitivity of the designated uses. Each state must develop Total Maximum Daily Loads (TMDLs) for all waters on the 303(d) list to meet water quality standards.

A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The TMDL establishes the maximum allowable loads of a pollutant that can be assimilated by a water body while still meeting applicable water quality standards. Implementation of a TMDL should provide the pollution reduction necessary for a water body to meet water quality standards.

TMDLs are intended to address all significant stressors which cause or threaten to cause impairments to beneficial uses, including point sources (*e.g.*, sewage treatment plant discharges), nonpoint sources (*e.g.*, runoff from fields, streets, range, or forest land), and naturally occurring sources (*e.g.*, runoff from undisturbed lands).

Implementing a TMDL generally involves developing a plan for applying pollution control practices necessary to reduce pollutant loads to the extent determined necessary in the TMDL. Pollution control practices usually consist of point source control permits and/or nonpoint source control Best Management Practices (BMPs). BMPs are techniques, measures, or structural controls to manage the quantity and improve the quality of stormwater runoff.

### **1.6.3.2 Executive Order 11988: Floodplain Management**

This Executive Order directs all federal agencies to avoid, if possible, development and other activities in the 100-year base floodplain. Design and siting of projects are to be based on scientific, engineering, and architectural studies, consideration of human life, natural processes, and cultural resources, and on the planned life span of the project. Federal agencies are required to reduce the risk of flood loss, minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out agency responsibilities.

### **1.6.3.3 Executive Order 11990: Protection of Wetlands**

Wetlands are very important for the maintenance of water quality in a watershed. EO 11990 directs all federal agencies are directed to avoid, if possible, adverse effects on wetlands and to preserve and enhance the natural and beneficial values of wetlands. Each agency must avoid undertaking or assisting in construction projects that would impact wetlands unless the head of the agency determines that there is no practicable alternative to such construction and that the proposed action includes measures to minimize harm.

Wetlands are lands where saturation with water is the dominant factor determining the nature of the soil, and the flora and fauna. For regulatory purposes, the CWA defines wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” Wetlands provide many important benefits such as flood control, erosion control, habitat, regulation of water quantity and quality, and recreational activities. The federal government protects wetlands in order to preserve and maintain the beneficial values wetlands contribute to U.S. water resources.

Executive Order (EO) 11990 requires that federal agencies ensure that their actions minimize the destruction, loss, or degradation of wetlands. It also assures the protection, preservation, and enhancement of the nation’s wetlands to the fullest extent practicable during the planning, construction, funding, and operation of projects.

EO 11990 further requires federal agencies to protect wetlands located on federal lands in the event that those lands are leased or disposed of to non-federal parties. When federally-owned wetlands or portions of wetlands are proposed for lease, easement, right-of-way or disposal to non-federal public or private parties, the agency shall reference, in conveyance, those uses that are restricted under identified federal, state or local wetlands regulations, and attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successor, except where prohibited by law; or withhold such properties from disposal.

### **1.6.3.4 Engineer Regulation 1110-2-1462 Water Quality and Water Control Considerations for Non- Federal Hydropower Development at Corps of Engineers Projects**

Established in 1991, provides guidance for the incorporation of USACE water quality and water control management responsibilities and considerations into the review of permit and license applications, operating agreements, and other official contracts concerning non-federal hydropower development either at or affecting USACE water resource projects. ER 1110-2-1462 establishes procedures to ensure the formulation, development, and operation of non-federal hydropower at USACE civil works projects or at other projects does not interfere with USACE water quality and water control interests and responsibilities. This ER requires consideration of upstream and downstream impacts and cumulative effects. Under ER

1110-2-1462, a developer must prove the functionality of the proposal and demonstrate that it will not adversely affect the operational or structural integrity of the project, including the ability to meet water quality management responsibilities and authorized purposes.

### **1.6.3.5 ER 1110-2-8154 Water Quality and Environmental Management for Corps Civil Works Projects**

Dated 1995, ER 1110-2-8154 establishes a policy for the water quality management program at USACE civil works projects. This ER requires USACE to take a leadership role in carrying out the goals and objectives of the national policy by managing the nation's water resources that are under control of USACE so that they are protected, maintained, and restored. This policy also requires USACE to develop and implement a holistic, environmentally sound water quality management strategy that works in concert with other project purposes.

As a steward of project resources, USACE will not allow degradation of aquatic resources unless there is compelling evidence that to do so would cause significant national economic and social harm. In situations where degradation has occurred, it is USACE's policy to restore the resource to a biologically productive, diverse, and ecologically robust condition. USACE management responsibilities include the waters directly managed by USACE and the area influenced by those waters, which necessitates a management philosophy committed to partnering with a wide range of resource organizations and interested individuals.

ER 1110-2-8154 requires division-wide water quality management programs, and states that specific water quality management objectives must be developed for each project along with procedures to meet those objectives. General water quality management objectives and water quality data collection and application procedures for all USACE water resource projects are described in ER 1110-2-8154.

### **1.6.3.6 Oklahoma Water Quality Standards - Oklahoma Administrative Code, Title 785, Chapter 45**

This legislation establishes water quality standards (WQS) promulgated by the Oklahoma Water Resources Board (OWRB) as authorized under 82 O.S. § 1085.30 (ODEQ 2010). These standards are designed to maintain and protect the quality of waters in Oklahoma and specify numerical and narrative criteria to protect designated beneficial uses for certain waters of the state. The OWRB has established five specific beneficial uses for Eufaula Lake and its major tributaries (*i.e.*, Canadian River, Gaines Creek) (OWRB 2011) as described in Section 3.3.4.4.

## **1.6.4 Fish and Wildlife**

### **1.6.4.1 Endangered Species Act (ESA), 16 U.S.C. 1531 *et seq.*, 50 CFR 17 and 402**

The Endangered Species Act (ESA), and subsequent amendments, provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Section 7 of the Endangered Species Act requires federal agencies to aid in the conservation of listed species, and to ensure that the activities of federal agencies will not jeopardize the continued existence of listed species or adversely modify designated critical habitat. At the federal level, the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) are responsible for administration of the Endangered Species Act. Section 7 of the Act requires agencies to consult with USFWS and NMFS, as appropriate, to identify the possible presence of protected species and mitigate potential impacts on such species. Within the Eufaula Lake area, only species under the jurisdiction of USFWS occur.

#### **1.6.4.2 Bald and Golden Eagle Protection Act 16 USC 5A-II § 668 *et seq.***

The Bald and Golden Eagle Protection Act of 1940 requires measures to prevent the harassment and take of bald eagles resulting from human activities (USFWS 2010a). The Act provides for the protection of the bald eagle and the golden eagle (as amended in 1962) by prohibiting the take, possession, sale, purchase, barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit. This Act requires consultation with the USFWS to ensure that proposed federal actions do not adversely affect bald or golden eagles.

#### **1.6.4.3 Fish and Wildlife Coordination Act and implementing regulations, 16 U.S.C. 661, 33 CFR 320-330**

The amendments to the Fish and Wildlife Coordination Act, enacted in 1946, require consultation with the USFWS (and NMFS when appropriate) and state fish and wildlife agencies to ensure that any modification of a water body provides for adequate protection of fish and wildlife. The FWCA applies to all fish and wildlife resources that may be present in the project area, if there are stream or wetland impacts proposed.

#### **1.6.4.4 Migratory Bird Treaty Act, 16 U.S.C. 701-719c**

The Migratory Bird Treaty Act (MBTA) decrees that all migratory birds and their parts (including eggs, nests, and feathers) are fully protected. Nearly all native North American bird species are protected by the MBTA. Under the MBTA, taking, killing, or possessing migratory birds is unlawful. Projects that are likely to result in taking of birds protected under the MBTA would require the issuance of take permits from the USFWS. Activities that would require such a permit would include destruction of migratory bird nesting habitat during the nesting season when eggs or young are likely to be present. Under the MBTA, surveys are required to determine whether nests would be disturbed and, if so, a buffer area with a specified radius around the nest would be established so that no disturbance or intrusion would be allowed until the young had fledged and left the nest. The size of the buffer area would vary depending on species and local conditions (*e.g.*, presence of busy roads), and would be based on the professional judgment of a monitoring biologist.

#### **1.6.4.5 North American Waterfowl Management Plan**

The North American Waterfowl Management Plan (NAWMP) outlines efforts to successfully protect and conserve waterfowl to ensure their continued enjoyment by hunters, birders, and the general public (NAWMP 2004). The strategy of NAWMP is to restore waterfowl populations through habitat protection, restoration, and enhancement via partners involving federal, state, provincial, tribal, and local governments, businesses, conservation organizations, and individual citizens.

#### **1.6.4.6 Executive Order 13112: Invasive Species**

This Executive Order requires federal agencies to prevent the introduction of invasive species, provide for their control, and to minimize the economic, ecological, and human health impacts from invasive species.

### **1.6.5 Other Relevant Authorities**

#### **1.6.5.1 Clean Air Act and implementing regulations, 42 U.S.C. 7401, 40 CFR 50**

The Clean Air Act requires agencies to comply with state air quality standards set in state implementation plans (SIPs) and establishes limits for air emissions and air quality levels that protect public health.

### **1.6.5.2 Farmlands Protection Policy Act, 7 U.S.C. 4201**

This Act establishes criteria for identifying and considering the effects of federal actions that may convert farmland to nonagricultural uses.

### **1.6.5.3 Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations**

This Executive Order requires each federal agency to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.

### **1.6.5.4 Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks**

This Executive Order requires each federal agency to make it a high priority to identify and assess environmental health risks and safety risks that might 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.

## **1.7 Required Permits and Licenses**

The action alternatives consider changes in shoreline allocations and vegetation management policies through revisions of the Eufaula Lake SMP. In addition, the action alternatives include supplements to the Eufaula Lake MP land use classifications, and approval of a lease of government property for a marina and other public shoreline recreational facilities at Carlton Landing.

Implementation of these actions, and corresponding changes in shoreline allocations and land use classifications would not require any federal permits, licenses, or entitlements. Implementation of the proposed vegetation management buffer policies would require individuals to obtain a shoreline use permit from USACE. Development of public recreational resources at Carlton Landing, including a marina, would require the developer to obtain a lease from USACE for use and development of government-owned shoreline areas and operation of a commercial concession. Permits from the USACE Regulatory Branch under Section 404 of the CWA and Section 10 of the Rivers and Harbors Act may also potentially be required. Dock construction and dredging to maintain navigational boating access in areas where siltation has occurred or where standing timber occurs, would require private individuals to obtain shoreline use permits and possibly also permits under Section 10 of the Rivers and Harbors Act and Section 404 of the CWA.

## **1.8 Report Organization**

This EIS is organized into twelve chapters with an Executive Summary, index and supporting appendices as follows.

### **Executive Summary**

The Executive Summary provides a brief description of the alternatives analyzed and summarizes the major conclusions and potential adverse impacts of each alternative.



## **Chapter 1 Purpose and Need**

This chapter explains the purpose and need for the proposed action and provides background information on the federal action under consideration, the history of the project, previous public involvement and the regulatory framework for the decision to be made.

## **Chapter 2 Description of Alternatives**

This chapter identifies and describes a range of reasonable project alternatives, including the No Action Alternative, addressed in the EIS. Alternatives considered but eliminated from further consideration are also described in this chapter.

## **Chapter 3 Affected Environment**

This chapter describes the existing environment, including but not limited to, land use, public lands and access, geomorphology, natural resources including terrestrial and aquatic habitats, flood storage and operation, recreation, visual resources, cultural and historic resources, water quality, air quality, noise, hazardous materials, environmental justice, social and demographic conditions, transportation, and energy.

## **Chapter 4 Environmental Consequences**

This chapter provides an assessment of the potential impacts of each alternative presented in Chapter 2. Impacts evaluated include direct and indirect impacts for each alternative for each resource category addressed in Chapter 3.

## **Chapter 5 Cumulative Impacts**

This chapter provides an assessment of the combined cumulative impact of each alternative presented in Chapter 2. Combined cumulative impacts are evaluated for each alternative for each resource category addressed in Chapter 3. Cumulative impacts include the incremental impacts that may occur when the impact of an alternative is added to other past, present, and reasonably foreseeable future actions by others. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

## **Chapter 6 Summary of Mitigation Measures and Conclusions**

This chapter includes a summary of the conclusions of the impact analyses and proposed mitigation measures for potential adverse impacts.

## **Chapter 7 Public Involvement, Consultation, and Coordination**

This chapter provides a summary of scoping outreach and any other outreach conducted prior to the release of the DEIS as well as the plan for outreach during public and agency review.

**Chapter 8 List of Preparers**

**Chapter 9 Distribution List**

**Chapter 10 Glossary**

**Chapter 11 References**

**Appendices**