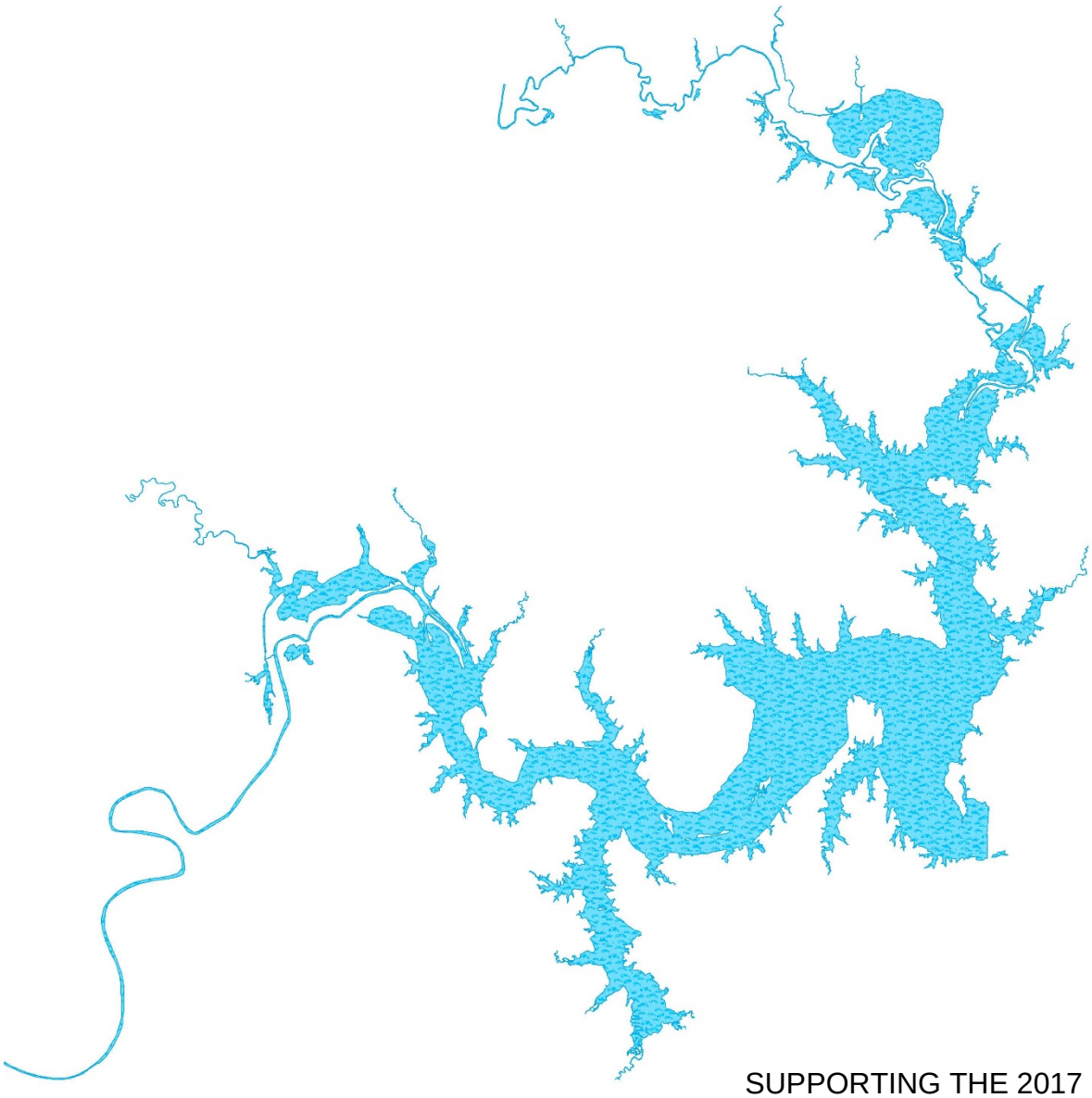
LAKE TEXOMA - DENISON DAM

SHORELINE MANAGEMENT PLAN

RED RIVER, OKLAHOMA AND TEXAS

February 2021



SUPPORTING THE 2017 MASTER PLAN FOR RESOURCE USE

US ARMY CORPS OF ENGINEERS

TULSA DISTRICT

OKLAHOMA AND TEXAS

TO BE APPROVED BY THE

DIVISION ENGINEER

EXECUTIVE SUMMARY

PURPOSE

The purpose of this Shoreline Management Plan (SMP), previously known as the Lakeshore Management Plan, is to establish policies and set guidelines by which the U.S. Army Corps of Engineers (USACE) manages certain private uses of public lands and waters along the shoreline of Lake Texoma – Denison Dam (Lake Texoma).

VISION

Lake Texoma is a multi-purpose project providing flood risk management, water supply, hydroelectric power, navigation, regulation of Red River flows, recreation, and environmental stewardship of sensitive resources.

PUBLIC INPUT

The 2021 SMP revision was developed through a process of public participation that included two initial scoping meetings, 29 and 30 January 2020 in Pottsboro, TX with 176 people in attendance and Kingston, OK, with 156 people in attendance. USACE received 56 written comments from the public.

The 2021 Lake Texoma SMP draft release was completed virtually from December 02, 2020 through January 02, 2021 due to precautions taken considering the COVID-19 pandemic. The public and agencies were notified of the process and availability of the draft through a variety of venues including e-mail, newspaper press release and purchased ads, letter, and social media. A USACE website hosted an explanatory presentation of the SMP, changes made, and the process for commenting. Comment forms, maps, the current SMP and the proposed draft SMP were included on the website for review and download by the public. Three agencies and three members of the public provided written comments resulting in 11 separate comments. A summary of the comments and USACE responses for the initial scoping meeting and final draft release can be found in Appendix F.

PRIMARY CHANGES FROM THE 1996 SHORELINE MANAGEMENT PLAN

Changes to shoreline allocations were a result of the recognition of historical uses, changes in federal regulations, public input, and alignment with the 2017 Lake Texoma Master Plan. Changes to shoreline allocations from the 1996 Shoreline Management Plan to the 2021 SMP are found in Appendix G. In accordance with the National Environmental Policy Act and Engineering Regulations (ER)1130-2-406 and ER 200-2-2, an Environmental Assessment (EA) was prepared to evaluate impacts of the proposed action on the human environment. The EA and Finding of No Significant Impact (FONSI) are included in Appendix H.

LAKE TEXOMA – DENISION DAM
SHORELINE MANAGEMENT PLAN

TABLE OF CONTENTS

SECTION I - INTRODUCTION

1.1 Purpose

The Shoreline Management Plan (SMP) for Lake Texoma establishes U.S. Army Corps of Engineers (USACE) policy and furnishes guidelines for the protection and preservation of desirable environmental characteristics of the shoreline while maintaining a balance between public and private shoreline uses. The plan considers the means of restoration of the shoreline where degradation has occurred because of private use of the shoreline. This plan presents management strategies for the review, approval, and administration of private shoreline uses on Lake Texoma. It is not intended to evaluate or develop management measures for application in the review, approval, and administration of public shoreline uses, such as commercial concession leases, limited motel/resort leases, and public utilities, except as specifically stated herein.

1.2 Objectives

The objectives of the SMP are to administer all shoreline management actions to achieve a balance between permitted private uses and protection of natural resources and environmental quality for general public use and includes the following:

a) To manage and protect shoreline under jurisdiction of the USACE Chief of Engineers.

b) To establish, conserve, and maintain sustainable natural resources, including fish and wildlife habitat, and promote environmental sustainability and aesthetic quality.

c) To promote a reasonably safe and healthful environment for project visitors.

d) To provide pedestrian access to project lands and waters while maintaining the shoreline for general public use.

e) To manage private use of public property to the degree necessary to gain maximum benefits to the public while honoring past written commitments authorizing accepted private uses.

f) To encourage boat owners to moor their boats at commercial marinas, utilize dry storage off project lands, or to trailer their boats to commercial or public launching ramps.

g) To ensure the SMP compliments and does not contradict the January 2017 Lake Texoma Master Plan.

1.3 Authority

The authority to implement the Shoreline Management Plan is detailed in Engineer Regulation (ER) 1130-2-406, Shoreline Management at Civil Works

Projects, originally dated 13 December 1974, and revised 31 October 1990. Two minor revisions were added to the regulation on 14 September 1992, and 28 May 1999. The regulation was published as a formal rule as Section 327.30 of Title 36, Chapter III of the Code of Federal Regulations.

1.4 Applicability

This plan is applicable to Lake Texoma on the Red River in Oklahoma and Texas. Within ER 1130-2-406, and this SMP, private shoreline use is described as any action that gives a special privilege to an individual or group of individuals on land or water at a USACE project that precludes use of those lands and waters by the general public. The shoreline is defined as all land along the perimeter of the lake lying between and bounded by the shoreline formed at the minimum conservation pool elevation of 617.0 feet National Geodetic Vertical Datum (NGVD29) and the boundary of the Government fee owned land. Approximately 191,459 acres are owned in fee title for the dam site and reservoir.

Flowage easements were acquired in some locations up to elevation 645.0 NGVD29. An exact acreage of flowage easement was not available at the time this plan was published but is anticipated to be in the range of 1,000 acres. The guidance in this SMP does not apply to flowage easements. This SMP establishes what private facilities and activities will be permitted on government property along the project shoreline. No other governmental entity has jurisdiction over the administration of the SMP at Lake Texoma. Rules and regulations applicable to shoreline management are addressed in Title 36, Chapter III, Part 327, Code of Federal Regulations (CFR), and are enforced by the USACE.

1.5 References

- Section 4, 1944 Flood Control Act, as amended (16 USC 460d).
- The Rivers and Harbors Act of 1894, as amended and supplemented (33 USC 1).
- Section 10, River and Harbor Act of 1899 (33 USC 403).
- National Environmental Policy Act of 1969 (42 USC 4321. et seq.).
- National Historic Preservation Act of 1966 (P.L. 89-665; 80 Stat. 915) as amended (16 USC 470 et seq.).
- The Federal Water Pollution Control Act of 1972 (FWPCA).
- The Clean Water Act (33 USC 1344, et seq.).
- Title 36, Chapter III, Part 327, Code of Federal Regulations, "Rules and Regulations Governing Public Use of Water Resources Development Projects Administered by the Chief of Engineers."
- The Water Resources Development Act of 1986 (P.L. 99-662).
- 33 CFR 320-330, "Regulatory Programs of the Corps of Engineers."
- Executive Order 12088 (13 Oct 78).
- ER and EP 1130-2-540, "Environmental Stewardship Operations and Maintenance Policies," 15 November 1996.

- ER and EP 1130-2-550, "Recreation Operations and Maintenance Policies," 15 November 1996.
- ER 1130-2-406, "Shoreline Management at Civil Works Projects", 31 October 1990.
- EM 385-1-1, "Safety and Health Requirements Manual."
- PL 86-717, Forest Cover Act (74 Stat. 817, 16 U.S.C. 580m et seq.), 6 September 1960.

1.6 Relationship to Other Plans

The overall management of project lands, water surface, and related public recreational use is guided by the 2017 Lake Texoma Master Plan, which is a strategic plan that establishes broad management goals, objectives, and land use classifications. Complementing the Master Plan is an Operational Management Plan, which is an implementation plan establishing a five-year projection of work items and initiatives, which support the Master Plan. This SMP, in accordance with Engineer Pamphlet (EP) 1130-2-550, is a part of the Operational Management Plan and must, to the extent possible within constraints imposed by public law and agency policy, support the goals and objectives of the Master Plan.

1.7 History

At Lake Texoma, and numerous USACE lakes across the nation, during the period between 1945 and 1965, there was a proliferation of private use of public land, primarily by adjacent private landowners. USACE viewed this private use as a way to encourage recreational use of the lake. General public demand for water-related outdoor recreation did not exist in that time period as it does today. Many permits were issued for the placement of private floating facilities on federal lands and waters and to perform vegetation modification activities such as landscaping and mowing. Ultimately, the relatively unregulated rapid growth of private facilities and activities at Lake Texoma and similar USACE lakes caused a loss of environmental and aesthetic qualities, as well as a loss of public outdoor recreation opportunity, as portions of the shoreline became dominated by private structures and uses.

After several years of intense public and political interest on the issue of private use of USACE-administered public lands, the USACE published a new regulation, ER 1130-2-406, on 13 December 1974, entitled Lakeshore Management at Civil Works Projects (later renamed Shoreline Management at Civil Works Projects when the regulation was re-published in October 1990). This new regulation, published as section 327.30 of Chapter III, Title 36 of the Code of Federal Regulations, established significant new restrictions on private uses at USACE lakes. These restrictions remain in place as of the date of this plan. Key among the mandates included in the new regulation is the prohibition of private facilities on new lakes and on operating lakes where no private facilities existed as of 13 December 1974. At operating lakes where permitted private facilities were

present as of 13 December 1974, the new regulation required preparation of a SMP to describe how private facilities and activities would be managed from that date forward.

1.8 Shoreline Management Plan Development and Public Input

Public and agency input toward the Shoreline Management Plan was obtained to ensure a balance between operational, environmental, and recreational outcomes. An Environmental Assessment (EA) was completed in conjunction with the SMP revision to evaluate the impacts of alternatives. The EA is included in Appendix H.

The initial SMP for Lake Texoma was prepared following numerous public meetings and input from the Lake Texoma Association. The SMP was approved for implementation by the Southwestern Division Engineer in 1976. At that time, an estimated 481 private floating facilities were permitted on Lake Texoma. In 1981, the SMP was reviewed and opened for public comment in keeping with regulatory guidance to review the plan every 5 years. This review was accomplished by holding workshops at various locations around the lake in order to obtain input from local citizens. In June 1986, the Lake Texoma SMP was again opened for review. This review resulted in an additional 3.4 miles of shoreline being designated as “Limited Development Area”.

In 1991, 1996, and 2021 the SMP was again reviewed and changes were made to reflect the trends in use, which are compatible with current policy. In 2004, USACE implemented a moratorium on new Shoreline Use Permits to address concerns of shoreline development, which was partially lifted in 2005 and fully lifted thereafter. Section 3182 of the Water Resources Development Act of 2007 (Public Law 110-114) directed the Secretary of the Army to convey approximately 635 acres of Federal land to the City of Denison at fair market value. Upon receipt of title to these lands the City retained portions of the acreage for development of public recreation facilities and transferred the remainder to a private housing developer. The public law dictated that the shoreline adjacent to the land conveyance area be reallocated, where possible, to Limited Development Area status, thus allowing private docks to be constructed along the shoreline. An EIS was prepared for the land conveyance and was funded by the City of Denison. The EIS was completed in 2012 and the lands were conveyed to the City of Denison.

In 2020, funding was appropriated by Congress to conduct a comprehensive review of the SMP. This review incorporated Geographic Information System (GIS) technology to produce more accurate shoreline allocation maps. The review included several public meetings including two initial meetings held on January 29 and 30, 2020 at Pottsboro, Texas, High School and Kingston, Oklahoma, High School respectively. All public comments were reviewed and the final recommendations were incorporated into this revised plan.

1.9 Private Shoreline Use

Private shoreline use is only authorized by written permit to individuals or groups with legal right of access to public lands and in accordance with the requirements set forth in this SMP.

SECTION II - DESCRIPTION OF SHORELINE

2.1 General

The topography surrounding Lake Texoma varies from gently sloping flats to rocky and precipitous cliffs and steep, wooded hillsides. This description of the ecological setting for the Lake Texoma region uses the EPA's ecological region (ecoregion) framework, which describes ecoregions on a hierarchical basis from Level I (coarsest level) to Level IV (finest level). At Level I, North America, is divided into 15 ecoregions, and at Level III there are 84 ecoregions in the conterminous United States. Level IV is a further refinement of Level III. The majority of Lake Texoma is located in the Cross Timbers Level III / Eastern Cross Timbers Level IV Ecoregion. A small portion of USACE land on the eastern edge of the project is located in the Cross Timbers Level III / Northern Post Oak Savannah Level IV Ecoregion. A small portion of USACE land in the south end of the Big Mineral Arm of the lake is located in the East Central Texas Plains Level III / Texas Blackland Prairie Level IV ecoregion. Refer to Figure 2.1 in the 2017 Master Plan for a map of Level III ecoregions applicable to Lake Texoma.

The unique Cross Timbers Ecoregion covers an estimated 20 million acres running from south central Kansas, through eastern Oklahoma and into north central Texas where the western prairies meet the eastern woodlands of the United States. It is a complex mosaic of upland deciduous forest, savanna, and prairie communities. The ecoregion varies geographically depending upon soil conditions, rainfall, and fire history, highlighting the broad and overlapping ecotone transition areas between the eastern forests and the grasslands of the Great Plains. The region supports an evolving plant life as it radiates outward on an upward gradient, from open lake waters, shallow wetlands, and shoreline transition toward more elevated and better drained sites. The vegetation types parallel the progression from wetland herbaceous/shrub plants and grasses to bottomland forest, oak forests, and then grasslands/prairies on the deeper soiled, well drained areas at the higher elevations. Scrub and marginal/transitional forest trees can be found where the soil is shallow or has rock outcrops. Cross Timbers type oak forests cover most of the ridges and hilly terrain between the prairies and the bottomland forests and account for the major portion of land area and vegetative cover surrounding the lake.

As noted above, the majority of USACE lands at Lake Texoma is in the Cross Timbers ecoregion of Texas, which consists of wooded and tall and mid-grasses areas. A denser woody understory forms in the absence of fire. The many forested areas along the shoreline of Lake Texoma are dominated by the following wooded and herbaceous vegetation primarily as listed in Table 1 below, as well as many annual grasses, forbs, and wild legumes.

Table 1. Primary Wooded and Herbaceous Vegetation at Lake Texoma

Common Name	Scientific Name
Post oak	*Quercus stellata*
Blackjack oak	*Quercus marilandica*
Hickories and Pecan	*Carya spp.*
Shumard Red oak	*Quercus shumardii*
American elm	*Ulmus americana*
Eastern Red Cedar	*Juniperus virginiana*
Ashe Juniper	*Juniperus ashei*
Big bluestem	*Andropogon gerardii*
Little bluestem	*Schizachyrium scoparium*
Indian grass	*Sorghastrum nutans*
Switch grass	*Panicum virgatum*
Side oats grama	*Bouteloua curtipendula*
Buffalo grass	*Bouteloua dactyloides*

2.2 Present Land Use

The total fee-owned lands above normal power pool is 114,265 acres. Table 2 consists of the current land use classifications and the associated acres. The Shoreline Management Plan allocations must be consistent with these classifications to ensure a balance between the USACE obligation to honor past written commitments authorizing private uses with the health and wellbeing of natural and cultural resources available for general public use.

Table 2. Land Use Classifications, 2017 Lake Texoma Master Plan

Land Classifications	Acres
Project Operations	1,569
High Density Recreation	12,676
Environmentally Sensitive Areas	4,404
Multiple Resource Management – Low Density Recreation	5,603
Multiple Resource Management – Wildlife Management	88,619
Multiple Resource Management – Vegetation Management	1,266
Future/Inactive Recreation Areas	128

2.3 Existing Access

Lake Texoma provides significant public access to its shores and lands. Table 3 details a list of public use areas at Lake Texoma. In addition to these and multiple areas of pedestrian access, the lake provides 23 commercial concessions (marinas and resorts), 16 quasi-public leases, and 90 boat ramps to serve the public.

Table 3. Public Use Areas at Lake Texoma

Public Use Areas (Parks)	Acres	Type of Use	Operator
Texas Recreation Areas			
Dam Site (TX and OK)	176	Mixed	USACE
Eisenhower State Park	448	Mixed	TPWD
Preston Bend Recreation Area	64	Camping	USACE
Juniper Point East and West	415	Camping	USACE
Oklahoma Recreation Areas			
Lake Texoma State Park	930	Mixed	OTRD
Pennington Creek Recreation Area	281	Mixed	City of Tishomingo
Burns Run Recreation Area, East and West	948	Mixed	USACE
Platter Flats Recreation Area	237	Camping	USACE
Lakeside Recreation Area	339	Camping	USACE
Johnson Creek Recreation Area	69	Camping	USACE
Caney Creek Recreation Area	244	Camping	USACE
Buncombe Creek Recreation Area	204	Camping	USACE

SECTION III - DESCRIPTION OF SHORELINE ALLOCATIONS

3.1 General

In compliance with the USACE Shoreline Management regulation (ER 1130-2-406), all shorelines have been classified into four allocation categories. These categories are described below and are in agreement with the January 2017 Lake Texoma Master Plan. These shoreline allocations are graphically depicted on the Shoreline Management Plan Allocations Maps presented as Appendix E, located at the end of this plan. Future changes in law, regulation, or policy may necessitate changes in shoreline allocations after the publication of this plan. To maintain a balance between permitted private uses and resource protection for public use, areas previously allocated as Public Recreation Areas and Protected Shoreline Areas in this SMP will not be converted to Limited Development Areas.

3.2 Limited Development Areas

These areas are allocated for activities, such as vegetative modification, and/or the mooring of privately owned floating facilities (PFF) following the issuance of a “Shoreline Use Permit” (see Appendix A), in accordance with this Shoreline Management Plan and current Federal regulations. A Shoreline Use Permit does not preclude use of the shoreline by the general public. Unauthorized intrusion upon private floating facilities is considered a trespass and should be reported to the appropriate law enforcement officials. The density of private floating facilities in Limited Development Areas will not exceed 50 percent of allocated shoreline. 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 its associated anchorage. Approximately 25.99 miles of shoreline is allocated as Limited Development Area.

3.3 Public Recreation Areas

The USACE primary management concerns in public recreation areas are to provide sites suitable for quality recreational experiences with facilities that can sustain intensive use, are vandal resistant, reasonably safe, and large enough to support normal weekend use during the peak recreation season. These areas are designated as public recreational sites and developed for general public use, quasi-public leases, private club sites, and commercial concessions. Quasi-public areas are designated to serve organizations such as Scouts BSA, civic organizations, and churches. New Shoreline Use Permits will not be permitted in areas allocated as Public Recreation Areas. Those Shoreline Use Permits in good standing and currently located in quasi-public and private club site recreational areas will be grandfathered, and must meet the conditions stated in Section 4.5 and Appendix B. Floating facilities belonging to the lessee within quasi-public and club site lease areas will be managed under the terms of the real estate agreement for that individual lease. Vegetation modification, including development of pedestrian paths by private individuals or groups, will not be permitted except

where authorized by a Real Estate lease or license. Approximately 147.80 miles of shoreline is allocated for public recreation.

3.4 Protected Shoreline Areas

Protected shoreline areas are designated primarily to protect or restore aesthetic, fish and wildlife, cultural, old growth forest and other ecological or environmental values in accordance with the requirements of the National Environmental Policy Act of 1969 (PL 91-190) and USACE land classification guidance set forth in Chapter 3 of ER 1130-2-550. 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, and current action. Land access and boating are permitted along these shorelines, provided the aesthetic, environmental, and natural resource values are not damaged or destroyed. Private floating facilities permits will not be issued in these areas. Some vegetation modification by private individuals, such as clearing a narrow meandering path to the water, or limited mowing, may be allowed only following the issuance of a permit if the Lake Manager determines that the activity will not adversely impact the environment or physical characteristics (including effects on water quality) for which the area was designated as protected.

Existing Shoreline Use Permits in this area, in good standing, will be renewed. During changes of private adjacent land ownership, new owners will be encouraged to help protect the lake's water quality by reducing or eliminating the vegetation modification of Federal land. Adjacent landowners will be encouraged to protect and/or restore the vegetative buffer around Lake Texoma. There are approximately 501.99 miles of shoreline classified as protected shoreline.

3.5 Prohibited Access Areas

This classification protects project operation areas, which may include certain hazardous locations, and/or areas located near dams or spillways. Mooring of private floating facilities and/or the modification of landform and vegetation are not permitted. Approximately 6.63 miles of shoreline are allocated as prohibited access areas.

SECTION IV - IMPLEMENTATION

4.1 Shoreline Use Permits

The USACE does not issue verbal approval for any private activity or facility. All approved private activities or facilities are only authorized in writing from the USACE. The type of written authorization issued by the USACE depends on the type of activity or facility.

4.1.1 Required Shoreline Use Permits

A Shoreline Use Permit is required for all-private activities and facilities on public lands and waters administered by the USACE on Lake Texoma. These activities and facilities include, but are not limited to, vegetation modification, erosion control, and the placement of private floating facilities on public lands. Shoreline Use Permits are normally issued for a period of five years and contain general terms and conditions that are uniformly applicable to all permits issued (see Appendix B). Unique circumstances may require the establishment of additional terms and/or special conditions. All applications for Shoreline Use Permits are subject to written approval by the Lake Manager or designated USACE official (hereafter Lake Manager). Requests for activities not specifically addressed in this plan should be submitted in writing to the Lake Manager for review.

Prospective adjacent property owners should not assume that activities being conducted by the present adjacent owner would be allowed to continue. Some facilities or activities are grandfathered to the present permittee as prior written commitments before the establishment of the plan. New and prospective adjacent property owners should contact the Lake Manager or a Natural Resources Specialist for information on authorized shoreline uses and permitting procedures.

4.1.2 Permit Fees

Fees will be collected for specific permitted activities and facilities prior to the issuance of a Shoreline Use Permit.

4.1.3 USACE Access

Individuals issued a Shoreline Use Permit must agree to give the Lake Manager or his representative access over their property for the purpose of inspecting the permitted facilities and/or activities.

USACE assumes no liability or responsibility for the safety of individuals engaged in any activity associated with private facilities authorized by the shoreline use permit/license on public property. The permittee assumes full liability and

responsibility for the safe conduct of the activity and must assure the safe condition of any permitted structure. Refer to condition No. 2 of the Shoreline Use Permit (see Appendix B)

4.1.4 *Shoreline Use Permit Enforcement*

All Shoreline Use Permits are issued and enforced in accordance with the provisions of Title 36, Chapter III, Part 327, Code of Federal Regulations. Failure to obtain the proper permits or noncompliance with any of the terms and conditions, general or special, may result in a termination notice or non-renewal of permit. Should a Shoreline Use Permit be terminated, the applicant cannot re-apply for another permit for a period up to 5 years. Additionally, if a violation of Title 36 resulting in the loss/damage of public property occurs, at any time, no permit may be issued for that location until the area has recovered to the satisfaction of the Lake Manager. This moratorium stays in effect for this portion of public property regardless of any change of ownership involving the adjacent private property. Additionally, restitution for damages and/or the issuance of a citation for violations of the provisions of Title 36 may be required.

4.2 Application for Private Floating Facilities Permits

Shoreline Use Permits are required for all private floating facilities, excluding registered vessels. As addressed in this plan, private floating facilities include all privately-owned boat docks, platforms, breakwaters, and buoys whether single owner or multi-owner. Shoreline Use Permits for new structures will be issued for facilities to be moored only in areas allocated as "Limited Development Areas". Permits for new structures will be issued on a first-come, first-served basis. A family household (single individual or married couple) may own a maximum of two slips in any dock and may not own an interest in more than one dock on the lake. A family household is defined as an individual/individuals living at the same address. A family household may have only one of the two following options:

(1) Ownership of a single owner dock (up to 2 slips).

(2) Ownership of 1 or 2 slips in a multi-owner dock.

An Application for Shoreline Use Permit, SWT Form 1133 (See Appendix A), for a permit must be made to the Lake Manager along with two sets of structural plans on 8.5 x 11 inch paper, proof of legal access, a detailed site map depicting the proposed location of the private floating facility and the planned construction location area. A Special Activity Permit (See Appendix C) will be required for the construction/repair of a Private Floating Facility occurring on public land. These plans shall also include alternative energy source plans, and all specifications for the proposed private floating facility in accordance with Section 4.6 (General Requirements and Minimum Design Standards). If the plans are approved, an approval letter will be issued and construction may begin. Applicants will have 180 days after the approval date to complete the facility or the approval letter will

become null and void. Extensions may be granted, if warranted. A 5-year permit will be issued after a final inspection is conducted and approved by a Natural Resources Specialist. If the Shoreline Use permit application is denied, a denial letter will be sent, detailing the reasoning for the denial by the Lake Manager.

Current vessel registrations will be required with the permit application to support boat ownership and the need for mooring space. This is necessary to preclude commercial use of the private floating facility. Condition 13 of Appendix C, ER 1130-2-406 states that “facilities authorized by a Shoreline Use Permit shall not be leased, rented or sub-let or provided to others by any means of engaging in commercial activities by the permittee or his/her agent for monetary gain.” This does not preclude the permittee from selling total ownership of the facility. This requirement applies to individual and multi-owner docks. The original vessel registration must be provided, and copies will be made for inclusion as supporting file documentation. Submittal of false or fraudulent documents is a federal crime and grounds for rejection of the Shoreline Use Permit application and may result in prosecution.

At the time of permit issuance or renewal, permittees will be furnished a copy of Best Management Practices (BMPs) known to help prevent the spread of aquatic invasive species such as zebra mussels.

Permits will be issued for 5 years. Permit numbers will be assigned by the Lake Manager and must be displayed in 2-inch letters and numbers. The permit number must be displayed on the lakeside as well as the shore side of the structure.

4.3 Existing Private Floating Facilities

Shoreline Use Permits are non-transferable. The new owner of any private floating facility must submit a Shoreline Use Permit application, notarized bill-of-sale, and current boat registration to the Lake Texoma Project Office. Permits may be issued or renewed for existing private floating facilities if maintained in a usable and safe condition, not a threat to life or property, and the permit holder is in compliance with existing permit conditions. If a permitted facility is replaced, or if during an inspection, the facility represents a safety hazard, is damaged or deteriorated beyond repair or if the substructure or superstructure are determined no longer structurally sound, the facility must be removed from the lake. The permit holder may be allowed to rebuild the structure upon the Lake Manager’s written approval and must have the structure completed and placed onsite within 180 days after the approval date. The “new private floating facility” will have to meet the following:

a) If the existing private floating facility is located where the less than 50 feet spacing has been honored, the dimensions of the private floating facility must remain the same as the original structure.

b) The “new private floating facility” must meet all current general design and minimum design standard specifications for floating facilities (Section 4.6).

c) All structural and electrical plans must be approved and certified by a currently licensed structural/electrical engineer.

d) The USACE Area Ranger must inspect the dock and grant final approval in writing that all conditions have been met.

4.4 Multi-Owner

Multi-owner (community) docks are encouraged in LDAs to prevent the proliferation of individual docks. Shoreline use permits will be issued in the name of a designated co-owner or name of association, with the remaining co-owners' or members’ names attached to the permit as an enclosure. Boat registrations (original) for each co-owner or member will be required for verification of the individual's need for boat moorage. A copy of the original registration will be made a part of the permanent file. The designated co-owner/member or association representative will be responsible to provide each member a copy of the permit, conditions, and all related correspondence. Non-compliance by any of the co-owners or members will be grounds for permit revocation in accordance with Section 4.18. Proof of ownership/registration may be required at any time.

Multi-owner private floating facilities will be subject to the same requirements and fees as stipulated for individually owned facilities. A multi-owner private floating facility may not exceed 20 slips, and all new multi-owner requests will be limited to 20 slips.

A document stating the names and permanent addresses of each legal owner of the multi-owner dock along with each person’s signatures and any other pertinent information relating to the proposed multi-owner dock list must be provided in writing to the Lake Manager. This document must designate an association member who will sign the permit. The designated co-owner/member or association representative of a Multi-owner private floating facilities must provide a list of updated slip owners upon renewal of the permit or when a change of ownership of a boat slip occurs.

4.5 Grandfathered Structures and Activities

The term “grandfathered” is used to designate a structure or activity that was authorized by a previous policy and prior permit, but which current policy no longer authorizes. *“Grandfathered” structures that are authorized to be relocated from the originally documented site lose their protected status and must meet all*

materials, flotation, dimensions, the requirement for open sided private floating facilities and all other standards now in effect. New permits for grandfathered facilities will be issued to new owners. If the holder of the permit fails to comply with the terms of the permit, it may be revoked, and the holder required to remove the structure in accordance with the conditions of the permit and Section 4.18.

Once "grandfathered" structures have been damaged to the point where the substructures are not floating or usable, where the substructures require substantial modification, or the substructure or other structural components require replacement, the private floating facility must be rebuilt in accordance with the general requirements and minimum design standards for new private floating facilities. However, if general upkeep and maintenance to the private floating facility will not affect the substructure, then it may be repaired. Any additional slips added to enclosed docks must conform to the current general requirements and minimum design standards (Section 4.6).

There are three categories of "grandfathered" structures/activities. These categories comprise the rules for grandfathered structures/activities.

4.5.1 Grandfathered by Public Law

Twice in the past, Congress enacted legislation "protecting facilities meeting certain criteria defined in these public laws." On December 29, 1981, Public Law 97-140 was adopted. Section 6 of this law applies to projects administered by the Secretary of the Army acting through the Chief of Engineers. It provided that no lawfully installed dock or appurtenant structure could be required to be removed prior to December 31, 1989, if such property was maintained in usable condition and did not occasion a threat to life or property. Therefore, "grandfathered facilities" that were to be removed upon the sale of property or death of the original owner were allowed to remain until December 31, 1989, as long as they were maintained in a safe and usable condition.

Congress amended this law by passing Public Law 99-662, prohibiting the forced removal, on or after December 31, 1989, of previously authorized docks and appurtenant structures which were in the place on November 17, 1986, providing the following conditions are met:

- The facility must be maintained in a usable and safe condition.
- The facility does not pose a threat to life or property.
- The holder of the permit is in substantial compliance with the existing conditions of the permit.
- The above law applies except where deemed necessary for public purposes, or higher public use, or for navigation or flood control project.

- These structures were originally installed in areas outside of “limited development” zoning.

4.5.2 Grandfathered by Other Than Public Law

This section pertains to structures installed in “limited development” areas that do not meet current general requirements and minimum design standards. Private floating facilities and appurtenant structures authorized by permits/licenses and installed under previous policies/plans, are “grandfathered” to honor previous written commitments. The only exceptions to this policy are that replacement flotation must meet all current requirements, handrails must be installed as required, and electrical systems must meet current National Electrical Code standards. Replacement handrails will be required at time of inspection for renewal of permit if the current handrails do not meet OSHA requirements, or if there are no handrails (see Section 4.10 of the SMP).

4.5.3 Grandfathered Vegetation Modification

Permits/licenses issued for under brushing and/or mowing activities that exceed the limits imposed by this SMP are “grandfathered” to the current permittee, or his or her spouse as long as they own the adjacent private property. Upon renewal of permits in effect as of publication of this SMP, under brushing/mowing dimensions will be limited to those maintained as previously authorized. A USACE Natural Resources Specialist will revise site sheets and the special conditions section of the permit to reflect authorized dimensions at the time of reissue/renewal. Upon change of ownership of the adjacent private property, current policy will govern what activity may be authorized according to current shoreline allocations and current mowing restrictions.

If there is any question about the “grandfathered” status of a permit, the permittee is encouraged to verify the permit status with the Lake Manager.

4.6 General Requirements and Minimum Design Standard Specifications for Private Floating Facilities

All intended private floating facility sites must allow for seven (7) feet of depth (at normal pool elevation of 617 feet NGVD29) of water under private floating facilities at the facility’s lakeside or slip end to prevent damage to boating equipment and to allow for normal water level fluctuation.

The density of facilities will not be more than 50 percent of the zoned footage available within the Limited Development Area in which they are located. Calculation of shoreline density used will be determined by the width and length on any type of floating facility. Width will always be that portion parallel to the shoreline; length will always be that portion perpendicular to the shoreline including associated anchorage. Vessels approved by the Lake Manager moored outside of

private floating facilities such as sailboats or jet ski lifts attached on the outside of the private floating facilities will be included in the calculation of shoreline density usage. When a Limited Development Area or a portion of a Limited Development Area reaches maximum density, no additional facilities will be allowed. In all cases, sufficient open area will be maintained for safe maneuvering of watercraft. Private floating facilities shall not extend out from the shore more than 100 feet, or more than one-third of the width of a cove at normal pool (617 feet NGVD29). In those cases where current density of development exceeds the density level established in the Shoreline Management Plan, the density will be reduced to the prescribed level through attrition.

A request to waive any provision of the minimum design standards for the purpose of accommodating a person with a permanent disability or limiting health condition should fully explain the disability or limiting health condition, the individual and local situation, and the specifics of the waiver, accompanied by supporting documentation (letter, copies of handicapped parking placards, doctor's letters, maps, diagrams, etc.). Exceptions to private floating facility design standards for individuals with disabilities may be approved on a case by case basis at the discretion of the Lake Manager. Exceptions may be considered for the permittee or for immediate family members. All granted exceptions must be modified back to the minimum design standards upon sale of the dock or when there is no longer a justification for the exceptions.

An Affidavit of Acceptance of these terms must be signed at time of permit application.

4.6.1 Private Floating Facility Construction and Size Requirements

No private floating facility will exceed the minimum size required to moor the owner's vessel(s) plus a minimum space for storage of items essential to watercraft operation. The maximum allowable size for a slip is 14 feet wide by 50 feet long.

The maximum allowable size of a facility without slips (platform dock) is 320 square feet (16 feet by 20 feet). The minimum size for any facility is 8 feet by 10 feet.

Private floating facilities may not have more than one slip or portion of a slip decked over within the facility. This area will include the header and fingers adjoining the decked over slip and will not exceed a maximum of 320 square feet combined.

a) *Minimum/Maximum Component Dimensions:* The following are the minimum and maximum dimensions for components on any private floating facility:

Component	Minimum Size (feet)	Maximum Size (Feet)
Walkway (width)	3	4
Header (width)	4	8
Finger (width)	3	8
Slip (width)	n/a	14
Slip (length)	n/a	50
Walkway (length)	n/a	150

b) *Metal Material*: Metal will be used and designed in accordance with American Institute of Steel Construction Specifications of the American Society of Civil Engineers Proceedings for Aluminum Structures depending on the type of metal used. Welded or bolted connections are optional. The use of new metal in the construction of a facility is mandatory.

c) *Wood Material*: The use of wood on new docks shall be limited to the decking of slip fingers, headers, and walkways. The use of wood will not be permitted below the waterline. All wood material used for decking must be “pressure treated lumber”.

4.6.2 Design Loads (Minimum)

The following design loads are minimum requirements for a private floating facility:

a) Deck Loads (substructure) 50 lbs./sq. feet
b) Approach bridges of walkways 50 lbs./sq. feet
c) Wind loads (sub & super structure) 20 lbs./sq. feet
d) Roof loads (superstructure) to provide for a 2-inch ice load or an equivalent snow load.
e) Flotation must be provided under all areas of the substructure covering 25 square feet or greater of water surface and must be sufficient to support the minimum design load of the deck, bridges, walkways, and roof, plus the weight of the structure.

4.6.3 Roofs (Superstructure)

The following roof criteria are required for a private floating facility:

a) Roof may be gabled or mono-sloped. Flat roofs are prohibited.
b) Metal roof joists or rafters must be of 1 ¼ inches or greater ID standard pipe, structural steel, or structural aluminum tubing and spaced not more than 2.0 feet center-to-center. Consideration will be given to approving 4.0 feet or greater spacing where sufficient vertical supports and bracing are provided. Purlins shall be not less than 1-inch ID pipe, structural steel or structural aluminum tubing and spaced not more than 22.0 feet center-to-center.
c) Metal roofs must be steel, minimum gauge of 28, or aluminum, minimum thickness of 0.032 inches.
d) Roofs must be securely fastened to the superstructure to resist wind uplift.

4.6.4 Decking and Framing (Substructure)

The following decking and framing criteria are required for a private floating facility:

a) Floor joists and flotation frames shall be constructed of not less than 2 inches ID standard pipe. Other standard structural steel sections may be approved as well as structural aluminum tubing.
b) Framing materials shall be not less than 1 ¼ inches ID standard pipe, structural steel, or structural aluminum tubing. Studs shall not exceed 48 inches center-to-center. Other standard steel or structural aluminum sections may be approved.
c) Flooring or decking shall be constructed of not less than 1 inch nominal rough or 2 inches by 6 inches S4S material, or ¾ inches marine plywood, and spaced in such a manner to allow for expansion. Metal, concrete, or similar types of flooring and decking may be approved. All wood material associated with the deck must be pressure treated lumber.

4.6.5 Metal Finish

The following metal finish criteria are required for a private floating facility:

a) All metal used in the construction of the docks must be galvanized or have a patented enamel and/or anodized aluminum finish.
b) If painted, all metal surfaces will be painted a color that is visually compatible with the natural background. White, yellow, orange and other highly visible colors will not be allowed.

4.6.6 Security Locker and Attachments

If installing a security locker or attachments on a private floating facility, the security locker or attachments must adhere to the following criteria:

a) An enclosed storage area may not exceed 3.0 feet x 6.0 feet floor dimension and may be constructed for the storage of safety equipment and other gear essential to recreational boating.

b) Items associated with an approved alternative energy source or licensed electrical system and centrifugal pumps associated with licensed water lines are authorized on private floating facilities.
c) Attachments to private floating facilities for the storage of small watercraft such as jet skis may be authorized. All changes to floating facilities, including the installation of these attachments must be approved in writing by the Lake Manager before installation. The attachments will be counted in the total facility size for purpose of determining spacing requirements.
d) Slides, diving boards, grills, and other items not necessary for the safe moorage of a vessel or used for recreational boating may not be attached to or stored on private floating facilities.

4.7 Structure Enclosure

Visual enclosure of the superstructure will not be allowed; however, the structure may be encompassed with galvanized or aluminum chain link fence or clear plexiglass that is non-tinted. Plexiglass that has haziness or fogging that restricts the inspector's ability to visually see inside of the structure will be required to be replaced. Glass windows are prohibited.

Corrugated metal on the sides or on the end of the structure may be approved by the Lake Manager for structural integrity of the private floating facility with the following criteria:

a) A minimum of 6 feet vertical visible opening must be maintained on all sides and ends.

b) The maximum width/height of the corrugated metal will not exceed 3 feet from the deck upwards or down from the bottom of the roof line.

   Example: If the exterior wall has a height of 12 feet, the corrugated metal may come up 3 feet from the bottom and 3 feet down from the top, leaving a 6-foot vertical opening in between.

c) This does not prohibit the use of overhead doors for boat slips or enclosure of the ends of a gable roof.

d) No more than 3 feet in width of corrugated metal extending from the deck to the vertical height of the roof line on each side of the corners or on each side of the entrance door and header for structural integrity will be allowed.

e) Exceptions may be approved by the Lake manager for the visual enclosure of the security locker area.

4.8 Flotation

All flotation for private floating facilities, shall be of materials commercially manufactured for marine use. Flotation shall be of materials which will not become waterlogged, are resistant to damage by animals, and will not sink or contaminate the water if punctured. Approved flotation materials include extruded polystyrene, polyethylene, and expanded polystyrene which has been encased with a protective covering that is warranted by the manufacturer for eight (8) years or more against cracking, peeling, sloughing, and deterioration from ultra violet rays while retaining its resiliency against ice and bumps by watercraft. All flotation must be fully encapsulated. Reuse of plastic, metal, or other previously used drums or containers for encasement or flotation purpose is prohibited.

Private floating facilities with existing un-encapsulated flotation will be allowed to remain as is until a USACE inspector deems the flotation is no longer serviceable and is failing, at which time it shall be replaced with an approved encapsulated flotation upon written notification.

A minimum 40% of each flotation section shall be above the waterline at all times (four inches for every ten inches of thickness). If less than 40% of a section is above the waterline, it is no longer considered serviceable and must be replaced with an approved type of flotation.

4.9 Anchorage and Private Floating Facilities

Design of these facilities will be included in the engineered plans for each separate structure and will be developed in accordance with the site where the facility will be moored, taking into consideration the water depth, wind loads, and exposure to fetch. New docks, or relocated docks, are to be located no closer than 50’ from the nearest point to an adjacent dock.

The preferred anchorage method will be pencil anchors. Stiff arm anchorage and other use of shoreline-obstructive cables and concrete dead man anchorage is prohibited unless allowed on a case by case basis due to conditions not suitable for pencils at the Lake Manager’s discretion.

Private floating facilities and the associated anchorage system cannot render any portion of a cove non-navigable or create any navigation hazard.

4.10 Walkways

The following walkway criteria are required for a private floating facility:

a) All walkways must be a part of the construction plan and certified by a current licensed structural engineer.
b) Walkways shall not be less than 3 feet wide and not more than 4 feet wide and must comply with standard designs.
c) Decking shall be constructed of metal, concrete, or wood, and similar types of flooring and decking may be approved. All wood material associated with

the deck must be pressure treated and/or treated with other types of preservative.

d) Flotation required will be determined on the length of the walkway in the water and/or connections on the dock and the shore.
e) The proposed method of anchoring the walkway to the floating structure and the shore must be shown on the engineered plans submitted for approval to the Project Office.
f) All walkways must have one handrail as a minimum the entire length of walkway. New private floating facility plans must include plans signed by a licensed structural engineer showing the proposed handrail construction details. Handrails will be 36-48 inches high, with an intermediate rail approximately ½ the distance below the top rail.
g) Walkways cannot be supported by fixed piers or posts located below normal pool elevation (617.0 feet NGVD29).
h) If renovation or modification occurs, the walkway must meet current standards and sizes.
i) All gates on walkways must be installed within five (5) feet of the floating facility. If a lock is used to secure the gate, it must be a combination lock, and the USACE must be provided with the combination for the purpose of inspection of the facility. Any changes in the combination must be provided to the USACE.

4.11 Spacing Requirements

The following spacing requirements criteria are required for a private floating facility:

a) New and/or relocated facilities are required to maintain a 50 foot buffer zone adjacent to all neighboring facilities. All distances will be measured at the normal pool level of 617.00 feet NGVD29 elevation. USACE GPS measurements will be decisive when conflict may occur. Vessels moored such as sailboats or jet ski lifts attached on the outside of the private floating facility will be included in the calculation of buffer zone spacing.

b) No private floating facility will extend out from the shoreline more than one third the total width of any cove at normal pool (617 feet NGVD29).

c) The density of facilities will not be more than 50 percent of the Limited Development Area in which they are located. Determination of shoreline density used by a private floating facility will be that portion of the facility that is parallel to the shoreline which may include anchorage and other attachments associated with the facility. For the purpose of determining width from length on any type of private floating facility, width will always be that portion parallel to the shoreline; length will always be that portion perpendicular to the shoreline. When a Limited Development Area or a portion of a Limited Development Area reaches maximum density, no additional facilities will be allowed.

d) In all cases, floating facilities and the associated anchorage system cannot render any portion of a cove non-navigable or create any navigation hazard and sufficient open area will be maintained for safe maneuvering of watercraft.

e) In those cases where current density of development exceeds the density level established in the Shoreline Management Plan, the density will be reduced to the prescribed level through attrition.

4.12 Stabilizer or Underwater Brace

The following stabilizer or underwater brace criteria are required for a private floating facility:

a) A stabilizer or underwater brace is recommended between the fingers on the front (lake side) of the private floating facility.
b) The size of the metal brace will be determined by the width between the dock fingers.
c) The depth of the metal brace below the waterline will be determined by the draft of the floating craft to be stored in the private floating facility.

4.13 Exterior lights

Fixtures must be shielded or otherwise constructed so that adjacent residents or boaters are not blinded by the glare from lights and should be operated by motion sensitive switches, so they remain off the majority of time. USACE will encourage all permittees to abide by the Best Management Practices for what is referred to as the Dark Skies Initiative. Essentially, all approved exterior lighting must be down-shielded to prevent what is referred to as “sky glow”.

4.14 Aids to Navigation/Buoys

Private Floating Facility owners desiring protective buoys (ex: No Wake) shall submit a letter of request to the Lake Manager that includes a detailed site map, buoy(s) GPS Latitude and Longitude coordinates, water depth (feet), buoy type and proposed number of buoys. Upon approval, a Shoreline Use Permit will be issued in the name of a responsible individual or group permitting the installation of U.S. Coast Guard (USCG) standard buoy. The purchase, installation, and maintenance will be at the expense of the permittee. Where only one Private Floating Facility is involved, the shoreline use permit may be amended in the remarks section for installation of the buoys without an additional permit charge. USACE is required to coordinate approvals/concurrence with the respective state agencies that are responsible for enforcement of the Federal Boat Safety Act of 1971.

4.15 Breakwaters

Breakwaters are used to protect a cove, area of shoreline, or private floating facilities and the associated anchorage from waves. These structures reflect or dissipate wave energy and thus prevent or reduce wave action in the specific areas. These structures must be designed to effectively serve competing requirements for wave blockage and safe vessel passage from fully exposed waters through a constricted entrance into tranquil cove waters. Application requirements for these structures include a letter of request, completed shoreline use application, detailed site map with GPS coordinates, and detailed Engineered Stamped drawings of the design of the structure will be submitted to the Lake Manager.

There are three types of breakwaters, and the approval process will be as follows:

a) “Standalone floating breakwaters” will be issued a Shoreline Use Permit and do not require Regulatory authorization. These structures must meet all General Requirements and Minimum Design Standard Specifications for Private Floating Facilities. “Floating Tire Breakwaters” are prohibited.
b) “Non-Floating breakwaters” requiring fill within the conservation pool (jetties, rip-rap/concrete structures that do not float) will be reviewed by the Lake Manager and forwarded for review/authorization by the Tulsa District Regulatory and Real Estate Offices, unless the amount of fill to be placed within the conservation pool is very minimal (less than 10 cubic yards). For minor fill placements (less than 10 cubic yards) the Lake Manager may issue a letter of authorization under the Nation-Wide Permit (NWP) 18, and a copy will be provided to the Tulsa District Regulatory and Real Estate Offices.
c) “Attached Breakwaters” that are connected to a private floating facility or that are constructed as part of the private floating facility that are not necessary for the integrity of the structure will be considered and measured as part of the private floating facility and the footage used for spacing allocations and for purposes of determining density. These structures must meet all General Requirements and Minimum Design Standard Specifications for Private Floating Facilities (Section 4.6).

4.16 Electrical Requirements for Private Floating Facilities, Government Fee, Easement Land or Waters

In accordance with the nationwide Corps of Engineers Non-Recreational Outgrant Policy dated March 30, 2009, no new utility licenses will be issued across Government Property. An “alternative energy source” such as solar power, generators, or other means are recommended. Applicants will submit a detailed plan for approval to the Lake Manager. Existing underground lines under licenses will be allowed to remain so long as they are maintained in safe working condition and meet USACE standards and all local and state codes and the requirements of National Electric Code (NEC).

All existing electric lines on government property must be buried except where the terrain will not allow as determined by the Lake Manager. No overhead lines will be allowed. Consideration will be given to the possible environmental damage that might occur as a result of burial. In these instances, the electric lines must be encased in conduit that is approved by the NEC.

All installations and materials must comply with the NEC for marinas, boatyards and wet locations. Requirements may exceed the NEC.

A weatherproof disconnect or circuit breaker box must be located on private property, as near to the USACE fee or easement line as practical. The disconnect or circuit breaker box must be weatherproof and must be mounted on a pressure treated post five (5) feet high and anchored in the ground 24 inches. The box must be properly grounded using an 8-foot ground rod driven into the ground 2 feet from the post. Wiring entering and leaving the box must be in conduit. Where circuit breakers are installed on private floating facilities, a high water disconnect must be provided.

Wiring leaving the box and installed underground may be direct burial type wire. UF and USE type wire are approved for direct burial without conduit. The bare ground wire should be covered with green tape. The distance of the run and load will determine the wire size. This wiring must be buried a minimum of 2 feet below the surface with warning tape buried 1 foot below the surface. Thermoplastic High heat-resistant and Water resistant (THW) or equal, stranded wire may be used for the entire installation provided that it is color coded black for hot, white for neutral, and green for ground and installed underground in electrical conduit.

All aboveground wiring must be in approved watertight electrical conduit with proper connections. Non-metallic rigid electrical conduit or metallic rigid threaded type conduit may be used. Conduit which leads to receptacles or switches must be supported with sufficient clamps installed to prevent movement. Flexible conduit must be used at all moveable joints. PVC water pipe is not allowed to be used in lieu of electrical conduit.

All excess openings in receptacle boxes, junction boxes, lighting fixture boxes or any other fixture must be plugged with a threaded plug and sealed with a waterproof sealant to ensure that they are watertight.

All switches exposed to the elements must be installed in waterproof boxes and mounted at least 3 feet above the land or dock surface. Switch covers must be rated for “wet locations when cover is closed.”

Receptacle covers which are treated as approved for “wet locations when cover is closed” may be used if properly installed and if used only for temporary hookups. They will not be allowed for hookups which are left unattended or that

could be rained upon. Receptacle covers which are subjected to rain or will be left unattended must be approved for “Wet locations when cover is open and outlet is in use.” All receptacles must be mounted at least 3 feet above the land or deck surface.

When the underground feeder wire reaches the walkway to the private floating facility, a junction box must be installed and THW or equal stranded wiring connected to the underground feeder conductors. The THW wire must be color coded black (hot), white (neutral), and green (ground).

The THW wire must be properly wired with polarity checked. The green (ground) wire must be connected to the ground terminal of all receptacles and to the ground LUG inside the receptacle box and/or lighting fixture box. In addition, when metal poles are used for lighting fixtures, the pole must be grounded using the same grounding circuit to ensure continuity of the ground. The ground wire must run continuous back to the on-shore ground which protects the entire system. Metal light poles should not be directly connected to the water.

All private floating facilities that have an electrical power source will be required to submit and electrical affidavit by a licensed electrical contractor or master electrician upon shoreline use permit renewals, change of ownerships, electrical modifications, and installations, facility relocation or at other times deemed necessary by the Lake Manager, regardless of power source.

ALL RECEPTACLES MUST BE PROTECTED BY A GROUND FAULT INTERRUPTER (GFI).

AFFIDAVIT OF ELECTRICAL COMPLIANCE
"OKLAHOMA"

I, _____, being a duly licensed, bonded and insured electrical contractor, operating within the state of Oklahoma, and in accordance with minimum code standards set forth by Oklahoma Statutes, Title 59, Chapter 40A, Sec. 1695B, certify that all electrical appurtenances listed below, and located at _____ _____, owned and opertated by:

_____
have been installed in accordance with the current standards contained in the National Electrical Code, National Electric Safety Code, and all applicable state, local, and Corps of Engineers electrical requirements:

(Listed facilities to be inspected here. If list is too long, continue on an attachment.)

_____

_____

_____
Signature of Electrical Contractor

_____
License Number

_____
Business Name

_____
Mailing Address

(_____)_ _____-_____
Telephone Number

Subscribed and sworn to before me on this ___ day of _____ 20_____

(Seal)

_____
Notary of Public Signature

_____
My Commission Expires

Figure 1 Affidavit of Electrical Compliance "Oklahoma"

AFFIDAVIT OF ELECTRICAL COMPLIANCE
"TEXAS"

I, _____, being a duly licensed, bonded and insured electrical contractor or certified master electrician, operating within the state of Texas, and in accordance with minimum code standards set forth, certify that all electrical appurtencances listed below, and owned or controlled by:

_____
have been installed in accordance with the current standards contained in the National Electrical Code, National Electric Safety Code, and all applicable state, local, and Corps of Engineers electrical requirements:

(Listed facilities to be inspected here. If list is too long, continue on an attachment.)

_____

_____

_____
Signature

_____
License Number

_____
Licensing Municipality

_____
Business Name

_____
Mailing Address

(_____) _____-_____
Telephone Number

Subscribed and sworn to before me on this ___ day of _____ 20_____

(Seal)

_____
Notary of Public Signature

_____
My Commission Expires

Figure 2 Affidavit of Electrical Compliance "Texas"

4.17 Prohibited Water Based Activities and Facilities

The following are prohibited water-based activities and facilities:

a) Two-story structures, flat roofs, enclosed sidewalls, and sundecks/patios
b) Mooring buoys
c) Any type of fixed pier or platform on land or extending into the water
d) Any type of piling or post driven into the lake bottom for mooring or tying boats; pencils used for anchoring private floating facilities are allowed
e) Submersible water pumps
f) Stiff-arm anchors and dead man anchors; unless prior approval given by the Lake Manager
g) Glass windows are prohibited on floating facilities
h) Non-encapsulated flotation and reuse of plastic, metal, or other previously used drums or containers for encasement or flotation purpose
i) Floating Tire Breakwaters
j) Recreational amenities including but not limited to propane grills, fuel canisters, diving boards, and slides, which are not required for basic boat storage

4.18 Permit Revocation and Removal of Unauthorized Structures

The Lake Manager may revoke a permit when it is determined that the public interest necessitates revocation or when it is determined that the permittee has failed to comply with the conditions of the permit. When a permit is revoked, the Lake Manager shall send the permittee written notice by registered or certified letter within 30 days of revocation. The revocation notice shall specify the reasons for such action. Upon permit revocation, the permittee shall remove the facility and restore the waterway and lands to their former condition within 60 days at the permittee's expense. If the permittee fails to remove and restore the area to the satisfaction of the Lake Manager, the Lake Manager may remove the facility by contract or otherwise and recover the cost thereof from the permittee. A permittee may appeal the decision to remove a private floating facility from the lake in accordance with condition 21, Appendix C, of ER 1130-2-406 – Shoreline Management Regulation.

The construction or placement of any structure under, upon, or over the project lands or water is prohibited unless a permit has been issued. This paragraph is subject to Section 327.20, Part 327, Chapter III, Title 36, Code of Federal Regulations. All structures not in accordance with this regulation will be removed.

4.19 Land-Based Activities

Applications for vegetative modification must be submitted in writing via a Shoreline Use application, and should include the extent of modification, type of vegetation to be modified, and purpose of the work, along with a detailed map of the activity in relationship to the applicant's adjacent property.

Vegetation Modification permits may be issued for the purpose of wildfire prevention and public safety in areas designated as Limited Development. During changes of ownership, minimization of permitted mowed areas will be encouraged to help protect the lake water quality. In areas where mowing has not been done in the past, a vegetative modification permit may be issued for a maximum 30-foot strip of Government property adjacent to private property. This 30-foot strip provides defensible space around structures. Mowing and/or Under-brushing will not be permitted across any natural or man-made break in vegetation, such as a road, creek, utility right-of-way, etc. Only 1 permit will be required of a single property owner and can include mowing, tree trimming and/or foot path. Permits may be issued to Homeowner Associations at the discretion of the Lake Manager in lieu of individual permits. Each activity must be requested prior to any work being done. The extent of modification permitted will be described in Appendix D, however:

- All new permits will allow mowing for a distance not to exceed a 30' width onto government property
- Where the 30-foot strip only is permitted, in the same permit a 6-foot wide path to the lake may be allowed
- The path should follow a meandering route to prevent erosion and avoid the need for removal of trees
- The permit does not convey the right to construct any structure (steps, bridges, etc.) in connection with the path unless so stated in the permit/license
- All footpaths must be approved and marked by a USACE representative

Trees may be trimmed no more than 1/3 of the total tree height not to exceed 8 feet from the base of any tree, within the permitted mow area only. No herbicides may be used for control of vegetation. No living trees, brush, or shrubs with a base diameter (measured 6 inches above the ground) of 2-inch or larger, will be cut. Trees and shrubs that are considered "flowering", such as dogwood, redbud, American beauty berry or other vegetation specifically identified by the USACE representative in the field will not be removed. Cutting or removal of trees will be allowed only after approval of the application and issuance of a permit. Trees to be cut must be marked in advance by the USACE representative responsible for this section of the lake. Dead trees considered to be a safety hazard may be cut after approval by the Lake Manager. Felled trees shall remain on project lands for wildlife habitat. The sale of any tree that is cut is prohibited. The defacing of vegetation, rocks, or other natural material by painting, whitewashing, coloring, or otherwise changing the natural appearance is prohibited.

4.20 Real Estate Instruments

USACE issues real estate instruments such as leases, licenses, easements and consents to easements structures for a wide variety of activities. Leases are

issued to concessionaires for marinas and to governmental entities for operation of park areas. Easements are typically granted to public utilities and governmental entities for water lines, sewer lines, natural gas lines, electric lines, and roads. Licenses are typically granted to individuals for electrical lines, water lines for domestic irrigation, erosion control structures, and other activities that involve a change in landform on USACE administered public lands. Consents for easement structures are issued for construction and/or improvements within the flowage easement. All commercial development activities and other activities by private or public interests on Government owned land that are not covered in this plan may be allowed only after issuance of a lease, license, or other legal grant in accordance with the requirements of ER 405-1-12, Real Estate Handbook and must comply with recreation and non-recreation outgrant policy set forth in Chapters 16 and 17 of ER 1130-2-550.

4.21 Stairways/Tramways

All stairways, including the use of natural or manmade materials, requires a Real Estate license. Licenses for existing stairways/tramways will continue to be renewed if the facility is being maintained in a safe condition. Stairways can be authorized on a limited basis where the Lake Manager has verified no safe viable alternative exists for accessing a permitted private floating facility. Unless a license is re-issued to another party, all steps will be removed from public property at the expense of the licensee upon termination of the license. Requirements for stairways are as follows:

a) All steps and stairways must be structurally sound and safe with adequate handrails. If painted, all steps and stairways will be painted a color that is visually compatible with the natural background. White, yellow, orange, and other highly visible colors will not be allowed. Lightweight steel or concrete may be used for these structures, provided the concrete structures are kept at ground level and do not project above the surface of the ground.
b) No part of the stairway may extend over the lake at conservation pool. Stairways may not extend below the conservation pool elevation and must terminate on a shoreline otherwise inaccessible except by boat.
c) Stairways must be of metal or concrete construction.
d) Stairways must meet the standards stated in EM 385-1-1, with regard to tread and riser specifications, handrails, and allowable angle of ascent.
e) Existing Stairways/Tramways may be certified by a licensed structural engineer and certification submitted to the Lake Manager prior to renewal of the license.
f) In all cases, the Government reserves the right to prohibit stairway construction on sheer rock bluffs or other sensitive landscape features.
g) Modifications of existing stairways so that they are compliant with the Americans with Disabilities Act (ADA) standards will be considered on a case-by-case basis in situations where the owner or immediate family members of a permitted private floating facility need ADA-compliant access to the facility. Need shall be based on the same criteria used for granting a

Federal Access Pass. ADA-compliant stairways may not be allowed if severe environmental or aesthetic damage would result from the construction of such access.

h) Abandoned stairways are subject to removal in accordance with Title 36 CFR, Section 327.20 Unauthorized Structures.

4.22 Moratoriums on Vegetation Modification

Wherever an unauthorized vegetation modification occurs, a moratorium on future vegetation modification in the affected area will be implemented. Moratoriums are administrative actions taken by the USACE to ensure the USACE property returns to its pre-existing condition before the unauthorized activities occurred. During moratoriums, no vegetation modification of any kind may occur. All vegetation modification permits within the area covered by the moratorium become invalid, regardless of the person responsible for the activities, any Notices of Violation issued, or adjacent land ownership. The minimum term for a moratorium is five (5) years which will generally be used for lesser impacts such as unpermitted grass cutting. This will allow the native grass community to reestablish itself and ensure non-native or invasive species will not be able to establish themselves in the disturbed area. More serious impacts such as unauthorized tree cutting will require much longer terms to allow trees to grow to replace the lost trees and return the site to the condition prior to the unauthorized tree cutting. Once habitat has been restored to its pre-existing condition and the ecological value returned, the moratorium will be removed. Any subsequent unauthorized vegetation modification in the area will restart the term of the moratorium period.

Moratoriums are implemented independently of any issuance of Notices of Violation or the recovery of damages in civil court. Owners of property adjacent to an area of USACE land with a moratorium may reapply for a vegetation modification upon expiration of the moratorium and every five years thereafter. Changes in ownership of land adjacent to the USACE will not change the term of any moratorium.

4.23 Prohibited Land Based Activities

a) Gardens and any type of lawn/landscape plantings

b) Any type of fixed pier or platform on the land or extending into the water from the shoreline

c) Any type of sewage or outfall structure

d) Any type of landform modification, construction, or other activity that changes the original or present condition of the land, including but is not limited to beach construction, channel construction, bank terracing, cuts and fills, or road and trail construction

e) Destruction, injury, defacement, removal or any alteration of public property

f) Cutting or gathering of trees or parts of trees and/or the removal of wood from project lands without prior written permission

g) The placement of sprinkler heads associated with an aerobic treatment system or lawn irrigation system

h) The construction, placement, or existence of any structure upon project lands without written permission. These items are handled as Unauthorized Structures/Encroachments/Trespasses of private property onto public lands. Unauthorized items include storage of boats, travel trailers, wood piles, or placement of other privately owned items. All items are subject to removal and impoundment by the Corps of Engineers

i) Burning of any materials by private individuals on any government owned lands managed by the Corps of Engineers

j) Accumulation of garbage, trash, refuse, litter, or other similar material

4.24 Other Permits and Licenses

USACE has broad regulatory authority pursuant to Section 404 of the Clean Water Act of 1972 and Section 10 of the Rivers and Harbors Act of 1899 to regulate the placement of dredged or fill material in certain waters and wetlands of the United States and placement of certain structures in waters that are, by definition, a navigable water of the United States. These regulatory permits generally have no relationship to Shoreline Use Permits except in rare instances where a facility that is authorized by a Shoreline Use Permit might also require a regulatory permit.

4.24.1 Shoreline Erosion Control

Lake Texoma is subject to extreme shoreline bank erosion. Although it is not economically feasible to implement an extensive shoreline erosion control program, the USACE is interested in reducing or slowing erosion whenever possible. The USACE's priority for its limited erosion control funds is the shoreline associated with developed USACE managed recreation areas.

However, if an adjacent landowner, at their own cost, desires to perform erosion control work on USACE property, a written request to do the work can be made to the Lake Manager. The Lake Manager may issue a cost-free permit for the work. No work may be undertaken without written approval from the USACE. Normally, permits for this purpose will be issued only in shoreline areas allocated as Limited Development. However, permits may be issued in other allocation areas if a need can be demonstrated. A listing of permit requirements is as follows:

- All work must meet the specifications of Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. Nationwide and regional permits may apply.

- Riprap, if used, must be natural stone and must not include unnatural materials or building rubble. Riprap material should be placed on a filter cloth material or bedding stone as approved by the Lake Manager.
- All vegetative species to be utilized for the purpose of planting and seeding must be approved by the Lake Manager. Grass planting for erosion control is not to be mowed unless located within a vegetation modification area.

All commercial development and individual activities not covered in previous sections which involve grades, cuts, fills, other changes in land form, or appropriate water or land-based support facilities required for private floating facilities, will be covered by a lease, license, or legal grant issued by Real Estate Division. Interested parties should contact the lake office for information.

4.24.2 Cultural, Historical, & Archaeological

The National Historic Preservation Act of 1966 and the Preservation of Historical and Archaeological Data Act of 1974 were provided by Congress to protect historic sites and recover historic and archeological data. If it is determined that a previously issued permit infringes upon or impacts a historic site, the permit will be rescinded.

SECTION V - CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The SMP reflects changes that have occurred since the implementation of the original plan, including public laws, new environmental considerations, recreation trends, and increased development around the lake. A detailed description of changes from the 1996 to the 2021 SMP can be found in Appendices F and G of this Plan. The Plan has taken into consideration both the present and anticipated recreational needs of the area. Written public comments received at the public meeting and during the subsequent 30-day public comment period, as well as the 30-day virtual draft release public comment period were taken into consideration in the preparation of this plan.

This revised plan provides a means of establishing and maintaining protection of desirable environmental characteristics of the lake and for the restoration of the shoreline where degradation has occurred through private and public use.

5.2 Review

The Lake Manager will continually monitor the needs of the recreational users of the lake and recommend revisions that will minimize conflicts between various interests. Minor changes that would eliminate or reduce the size of areas designated for limited development may be approved by the District Commander and be reported to the Division Engineer on an annual basis. Changes that may result in additional or expanded limited development areas will require significant public involvement and proper documentation pursuant to the National Environmental Policy Act, normally in the form of an Environmental Assessment. The Environmental Assessment and Finding of No Significant Impact (FONSI) for this Shoreline Management Plan can be found in Appendix H.

5.2 Recommendation

Approval of the Plan as submitted is recommended.

APPENDIX A: SHORELINE USE PERMIT APPLICATION

U.S. Army Corps of Engineers, Tulsa District

APPLICATION FOR SHORELINE USE PERMIT

For use of this form, see ER-1130-4-406; the proponent agency is CESWT-OD.

Name:	Date:	Lake:
Email:	Phone:	
Mailing Address:	City, State, Zip:	
Physical Address of Lake Property:		
List of Co-Owners: (For Multiple Slip Docks)		

Permit Type

☐ New Request (*See Page 2 for required supporting documents*)	☐ Renewal	☐ Change of Ownership (*Attach Bill of Sale*)
☐ Floating Facility	☐ Vegetation Modification	
Brief Description of Facility: (*Dimensions (W x L), Number of Slips, State License Numbers of Boats to be Docked, etc.*)	Brief Description of Activity: ☐ 30 ft Mowing ☐ Other (*Describe Below*)	
Location (*Cove*):		
Electricity Present *: ☐ Yes ☐ No		
License #: DACW56-3	Housing Development:	
Expires:	Block:	Lot:

Alternate Contact Information

The following alternate party will be readily available if I cannot be reached and responsible for providing any needed surveillance of the structure in my absence.

Name:	Phone (*Area Code and Number*):
Mailing Address: (*Including City, State, Zip*)	

Agreement Statement

I understand and agree to the conditions of the permit for shoreline use. Two complete sets of the plan and specifications, including site location and layout plan, for the proposed activity, structure or anchorage system are enclosed along with other listed required documentation listed in the "Permit Type" section. I understand and agree to adhere to all Local, State, and Federal Laws and conditions for shoreline use set forth in Appendix C of ER 1130-2-406 and all standards set forth in the Lake Project's Shoreline Management Plan.

Printed Name of Applicant	Date	Signature of Applicant
Printed Name of Alternate	Date	Signature of Alternate

DO NOT WRITE BELOW THIS LINE: FOR OFFICIAL USE ONLY

Shoreline Permit No.:	Date Issued:	Date Expires:

The applicant is hereby granted a permit to construct and/or maintain and use a floating recreation facility or other development as shown on the attached plans subject to the rules and regulations of the U.S. Army Corps of Engineers.

Check#: _____ Check Date: _____

Name of Resource Specialist	Date	Signature of Resource Specialist

Required Supporting Documentation

New Requests for Floating Facilities:

(Single/Multi-Slip Dock, Swim Float, Other, Describe under Permit Type)

1. Two sets of plans (8.5x11) and specifications signed and certified by a licensed engineer.
2. Proof of legal access or adjacent land ownership (recorded deed or easement).
3. Site map, noted aerial photo, or other document detailing proposed location.
4. Original boat registrations or notarized copies are required for all new boat dock applications and renewals.
5. For Multiple Slip Docks, list all co-owners on front of application. Attach additional sheets as needed.

* **Licenses for new electric service lines crossing government property are no longer being issued. Detailed requirements will be provided by the Lake Office.**

If electrical service is desired, solar or generator service may be used in accordance with current standards contained in the National Electrical Code, National Electrical Safety Code, and all applicable state, local, and federal electrical requirements. An Electrical Service Compliance Affidavit required.

New Requests for Vegetation Modification:

1. Proof of adjacent land ownership (Warranty Deed).
2. Attach survey plat depicting location of private property.

* Erosion Control Requests may require additional Department of the Army Regulatory Permitting.

Change of Ownership:

1. Notarized Bill of Sale.

Data Required by the Privacy Act of 1974

Authority: The Rivers and Harbors Act of 1894 as amended and supplemented (33 U.S.C.1).

Principal Purpose: Provide the Corps of Engineers with information for contact of the responsible person applying for and/or receiving a Shoreline Management permit. The description of the activity is needed to assure conditions of the permit requirements are met.

Routine Uses: The information on this application is used in considering the issuance of shoreline management permits on Corps of Engineers projects. This information is collected and maintained at project offices and is used as basis for issuing permits. it provides auditing information for this program which has financial involvement.

Disclosure: Disclosure of information is voluntary. However, failure to provide the requested information will preclude the issuance of a Shoreline Management Permit.

APPENDIX B: SHORELINE USE PERMIT CONDITIONS

Shoreline Use Permit Conditions

1. This permit is granted solely to the applicant for the purpose described on the attached permit.
2 .The permittee agrees to and does hereby release and agree to save and hold the Government harmless from any and all causes of action, suits at law or equity, or claims or demands or from any liability of any nature whatsoever for or on account of any damages to persons or property, including a permitted facility, growing out of the ownership, construction, operation or maintenance by the permittee of the permitted facilities and/or activities.
3. Ownership, construction, operation, use and maintenance of a permitted facility are subject to the Government's navigation servitude.
4. No attempt shall be made by the permittee to forbid the full and free use by the public of all public waters and/or lands at or adjacent to the permitted facility or to unreasonably interfere with any authorized project purposes, including navigation in connection with the ownership, construction, operation or maintenance of a permitted facility and/or activity.
5. The permittee agrees that if subsequent operations by the Government require an alteration in the location of a permitted facility and/or activity or if in the opinion of the district commander a permitted facility and/or activity shall cause unreasonable obstruction to navigation or that the public interest so requires, the permittee shall be required, upon written notice from the district commander to remove, alter, or relocate the permitted facility, without expense to the Government.
6. The Government shall in no case be liable for any damage or injury to a permitted facility which may be caused by or result from subsequent operations undertaken by the Government for the improvement of navigation or for other lawful purposes, and no claims or right to compensation shall accrue from any such damage. This includes any damage that may occur to private property if a facility is removed for noncompliance with the conditions of the permit.
7. Ownership, construction, operation, use and maintenance of a permitted facility and/or activity are subject to all applicable Federal, state and local laws and regulations. Failure to abide by these applicable laws and regulations may be cause for revocation of the permit.
8. This permit does not convey any property rights either in real estate or material; and does not authorize any injury to private property or invasion of private rights or any infringement of Federal, state or local laws or regulations, nor required by law for the construction, operation, use and maintenance of a permitted facility and/or activity.
9. The permittee agrees to construct the facility within the time limit agreed to on the permit issuance date. The permit shall become null and void if construction is not completed within that period. Further, the permittee agrees to operate and maintain any permitted facility and/or activity in a manner so as to provide safety, minimize any adverse impact on fish and wildlife habitat, natural, environmental, or cultural resources values and in a manner so as to minimize the degradation of water quality.
10. The permittee shall remove a permitted facility within 30 days, at his/her expense, and restore the waterway and lands to a condition accepted by the resource manager upon termination or revocation of this permit or if the permittee ceases to use, operate or maintain a permitted facility and/or activity. If the permittee fails to comply to the satisfaction of the resource manager, the district commander may remove the facility by contract or otherwise and the permittee agrees to pay all costs incurred thereof.
11. The use of a permitted boat dock facility shall be limited to the mooring of the permittee's vessel or watercraft and the storage, in enclosed locker facilities, of his/her gear essential to the operation of such vessel or watercraft.
12. Neither a permitted facility nor any houseboat, cabin cruiser, or other vessel moored thereto shall be used as a place of habitation or as a full or part-time residence or in any manner which gives the appearance of converting the public property, on which the facility is located, to private use.
13. Facilities granted under this permit will not be leased, rented, sublet or provided to others by any means of engaging in commercial activity(s) by the permittee or his/her agent for monetary gain. This does not preclude the permittee from selling total ownership to the facility.
14. Floats and the flotation material for all docks and boat mooring buoys shall be fabricated of materials manufactured for marine use. The float and its flotation material shall be 100% warranted for a minimum of 8 years against sinking, becoming waterlogged, cracking, peeling, fragmented, or losing beads. All floats shall resist puncture and penetration and shall not be subject to damage by animals under normal conditions for the area. All floats and the flotation material used in them shall be fire resistant. Any float which is within 40 feet of a line carrying fuel shall be 100% impervious to water and fuel. The use of new or recycled plastic or metal drums or noncompartmentalized
air containers for encasement or floats is
prohibited. Existing floats are authorized until it or its flotation material is no longer serviceable, at which time it shall be replaced with a float that meets the conditions listed above. For any floats installed after the effective date of this specification, repair or replacement shall be required when it or its flotation material no longer performs its designated function or it fails to meet the specifications for which it was originally warranted.
15. Permitted facilities and activities are subject to periodic inspection by authorized Corps representatives. The resource manager will notify the permittee of any deficiencies and together establish a schedule for their correction. No deviation or changes from approved plans will be allowed without prior written approval of the resource manager.
16. Floating facilities shall be securely attached to the shore in accordance with the approved plans by means of moorings which do not obstruct general public use of the shoreline or adversely affect the natural terrain or vegetation. Anchoring to vegetation is prohibited.
17. The permit display tag shall be posted on the permitted facility and/or on the land areas covered by the permit so that it can be visually checked with ease in accordance with instructions provided by the resource manager.
18. No vegetation other than that prescribed in the permit will be damaged, destroyed or removed. No vegetation of any kind will pe planted, other than that specifically prescribed in the permit.
19. No change in land form such as grading, excavation or filling is authorized by this permit.
20. This permit is non-transferable. Upon the sale or other transfer of the permitted facility or the death of the permittee and his/her legal spouse, this permit is null and void.
21. By 30 days written notice, mailed to the permittee by certified letter, the district commander may revoke this permit whenever the public interest necessitates such revocation or when the permittee fails to comply with any permit condition or term. The revocation notice shall specify the reasons for such actions. If the permittee requests a hearing in writing to the district commander through the resource manager within the 30 day period, the district commander shall grant such hearing at the earliest opportunity. In no event shall the hearing date be more than 60 days from the date of the hearing request. Following the hearing, a written decision wil be rendered and a copy mailed to the permittee by certified letter.
22. Notwithstanding the condition cited in condition 21 above, if in the opinion of the district commander, emergency circumstances dictate otherwise, the district commander may summarily revoke the permit.
23. When vegetation modification on these lands is accomplished by chemical means, the program will be in accordance with appropriate Federal, state and local laws, rules and regulations.
24. The resource manager or his/her authorized representative shall be allowed to cross the permittee's property, as necessary, to inspect facilities and/or activities under permit.
25. When vegetation modification is allowed, the permittee will delineate the government property line in a clear, but unobtrusive manner approved by the resource manager and in accordance with the project Shoreline Management Plan.
26. If the ownership of a permitted facility is sold or transferred, the permittee or new owner will notify the resource manager of the action prior to finalization. The new owner must apply for a Shoreline Use Permit within 14 days or remove the facility and restore the use area within 30 days from the date of ownership transfer.
27. If permitted facilities are removed for storage or extensive maintenance, the resource manager may require all portions of the facility be removed from public property.

ER 1130-2-406, 31 Oct 90

APPENDIX C: SPECIAL ACTIVITY AND CONSTRUCTION PERMIT

SPECIAL ACTIVITY PERMIT
CONSTRUCTION/REPAIR OF PRIVATE FLOATING FACILITY
(LAND BASED ACTIVITIES)

1. Name of Business: Address: City: State, Zip:	2. Contact Person: Email address:
3. Telephone: (H): (W): (C):	4. Purpose of activity and associated dock DE #:
5. Have you ever been denied or had a permit revoked? Y/N If so, where?	6. Current registration numbers and expiration of service vessel(s):
7. Staging area for floating facility construction with site map:	8. If staging area is being held at a Marina/Concession area, approval must be granted by the marina/concession manager. Manager's Signature: _____
9. PERMIT FEE: An administrative fee of $300 is required. Permit is non-transferable and non-refundable. (Checks made payable to: FAO, USAED, TULSA)	10. Is the permit application fee enclosed? __Yes __No Notice: Permit is subject to attached conditions.

11. Business must provide proof of liability insurance coverage. Minimum coverage requirements are outlined below.
Is current proof of insurance enclosed? __Yes __No

12. Signature of applicant:	Date:

DO NOT WRITE BELOW THIS LINE

Application Status: __Approved ___Incomplete Information __Denied Was Permit Fee Received? __Yes __No	Permit Number: _____ Permit term: 90 days from signature date.
Reviewing Official's Signature:	Date:

PLEASE READ APPLICABLE GUIDELINES AND CONDITIONS ON FOLLOWING PAGE

Please help prevent the transportation of Zebra Mussels to non-infested waters:

- *Drain the bilge water, live wells, and bait buckets*
- *Inspect the boat and trailer for attached Zebra Mussels*
- *Scrape off any Zebra Mussels*
- *Dry boat for 1 week before entering another waterway*

OR

- *Wash boat parts and trailer with 140° water, a 10% chlorine and water solution or hot saltwater solution. Do not wash boat at the ramp. Finish with a clean rinse.*

SPECIAL CONSTRUCTION ACTIVITY PERMIT (cont.)

PERMIT APPLICATIONS: This Special Construction Activity Permit is the mechanism by which the U.S. Army Corps of Engineers ("Corps") approves construction and repair activities of private floating facilities located on public lands by private entities (e.g. individual, dock builder, or other construction company). An authorized official, legally authorized to bind the business entity, or the individual who will be performing the construction activities if not a business entity, must obtain approval from the Corps via this Special Construction Activity Permit from the Lake Texoma Project Office prior to the commencement of any construction activities (including staging activities) on property of the United States of America. The permit application must include the following information:

- Completed Special Activity Permit for Construction/Repair of Private Floating Facility(s).
- Site map identifying all locations where work activities or impacts may occur including:
    - Materials storage and staging areas
    - Construction sites
    - Access routes for transport, placement and anchoring of dock
    - Locations where environmental features (such as vegetation, soil or shoreline features) may be modified, damaged, destroyed or removed.
- Other pertinent information requested by the Corps.

CONDITIONS OF PERMIT: In order to qualify for a Special Construction Activity Permit for a Private Floating Facility, the construction activities must comply with all applicable Federal, State, and local laws, regulations (e.g. 36 C.F.R. part 327), and applicable building codes as well as the following requirements:

- The right to charge for service is based on the business providing services for the construction and/or repair of a private floating facility. The business must meet bonding, insurance, and other local requirements.
- No costs shall accrue to the Government.
- Permittee agrees to repair any damages incurred to public property resulting from the activity, including site remediation to pre-construction conditions.
- The private use of public lands and waters will not preempt the general public's use of the recreational resource.
- This permit is non-refundable and non-transferable.
- This permit may be revoked at any time for the convenience of the Government, or if permittee or representative of the permittee is operating in a harmful or malicious nature or in a manner not consistent with this permit.
- The permittee shall ensure that a copy of the permit authorization and associated drawings are available onsite throughout the duration of the permitted activity.
- The permit approves only the activities expressly identified by the permittee. Any deviations, changes, or modifications must be re-submitted for Corps approval.
- Construction activities on the shoreline should minimize disturbance of the soil and/or restore the shoreline to its original contour and condition as it existed prior to construction.
- Discovery of cultural or historical artifacts must be immediately reported to the Corps and all construction must cease until continuation is approved by the Corps.

SPECIAL ACTIVITY PERMIT FEE: The administrative fee will be $300 for each permit.

INDEMNIFICATION AND INSURANCE: The United States shall not be responsible for, and the permittee shall hold harmless, defend, and indemnify the United States of America from any demands, claims, or lawsuits for personal injury and/or property damage which may arise from or be incident to any acts or omissions of the permittee, including its officers, employees, agents, contractors, or volunteers. The permittee shall be responsible for the health and safety of all such persons, and shall carry comprehensive general liability insurance in the following amounts, as a minimum: $100,000 per person and $500,000 per accident for bodily injury, and $50,000 per accident for property damage, or such other amounts as may be required. Evidence of insurance coverage will be furnished to the Corps Lake Office issuing this permit at least five days prior to commencement of the construction activities. The Corps Lake Manager may require cessation of the authorized activity during any period for which the permittee does not have the required insurance coverage.

ADVERTISING: This permit does not authorize the permittee to advertise or solicit business on lands owned or controlled by the United States of America except for the following: (1) one sign may be displayed during active construction as long as it is no larger than 36" x 48"; and (2) business cards may be distributed on the premises, but only upon request and only during active construction. The permittee shall not use any advertising that suggests or gives the appearance of endorsement by the United States of America, the U.S. Army, or the U.S. Army Corps of Engineers. The permittee shall not use the Corps Castle or other U.S. Government symbols or seals in their advertising.

APPLICATION PROCESSING AND COMMENCEMENT OF CONSTRUCTION: Permit applications should be submitted to the Corps of Engineers at least 30 days prior to the initiation of the construction activity. Completed applications can be delivered to the Lake Texoma Area Office or mailed to: Corps of Engineers, Lake Texoma, 351 Corps Rd., Denison, TX 75020. Telephone number 903-465-4990. Checks should be made payable to: FAO, USAED, TULSA. Construction activities may not begin until this permit application has been approved.

PRIVACY ACT STATEMENT: Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332; Archeological Resources Protection Act, 16 USC 470aa-470mm. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued.

APPENDIX D: VEGETATION MODIFICATION GUIDLINES

US Army Corps of Engineers
Tulsa District

VEGETATION MODIFICATION GUIDELINES

(Max 30 feet)

VM #: _____

THESE CONDITIONS ARE FOR _____
(Print Name)

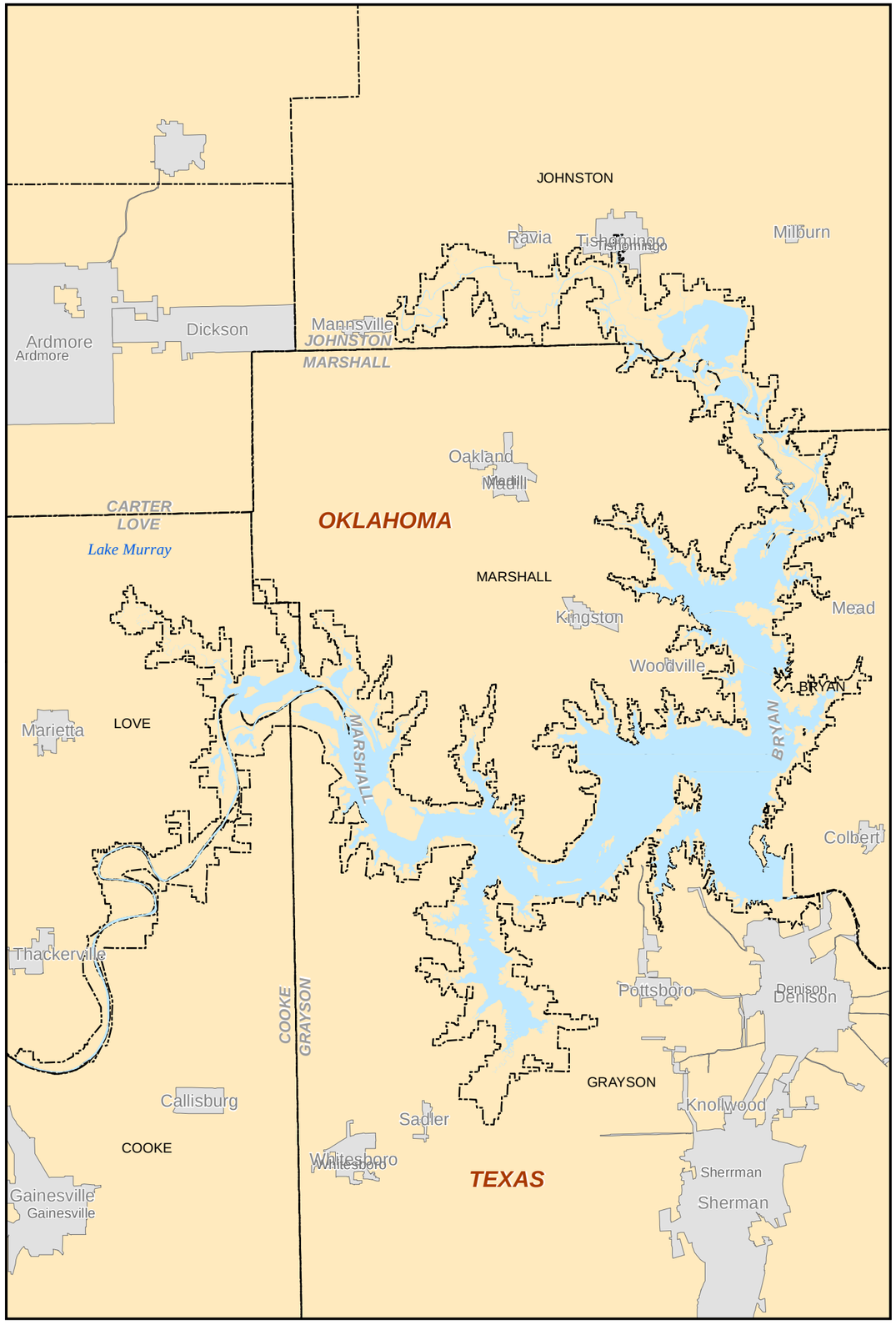
IN _____ COVE/SUBDIVISION
(Print Subdivision) (Lot Number)

1. Mowing and trimming is permitted for a distance not to exceed 30 feet (30') into government property.
2. No trees larger than 2 inch (2") in diameter at the base (measured within one inch of ground level) may be cut or removed.
3. Limbs smaller than 1" at the base may be trimmed to a height of 8ft. No limbs larger than 1" may be cut or removed.
4. No flowering trees or shrubs (e.g. Dogwoods, Redbuds) may be removed, regardless of size.
5. Lawn mowers, weed-eaters, and chain saws may be utilized to cut brush within permitted mowing areas, provided they do not damage the remaining vegetation. Use of bulldozers and other forms of dirt-moving machinery on public property is forbidden.
6. A wood cutting permit for trees that are dead and/or fallen can be obtained free of charge from the Texoma Lake Office, following inspection of the offending tree(s) by a Ranger. Approved removal is typically restricted to dead, standing trees, which are a safety hazard.
7. No herbicides will be used for controlling vegetation. Pesticides will not be applied without written approval from the Texoma Area Project Environmental Specialist.
8. The permitted area may be mowed with rubber-tired equipment as frequently as desired.
9. Approved footpaths will not exceed 6' in width and will follow a meandering route to prevent soil erosions and unnecessary removal or damage of trees and other vegetation.
10. Ranger personnel must approve any exceptions.
11. Upon expiration of the permit, it is the permittee's responsibility to contact the Lake Office to request a new permit.
12. Permits are revocable for any violation of these conditions and civil damages/criminal prosecution may be pursued for deliberate misuse of government property.

I HAVE READ AND UNDERSTOOD THE PERMIT CONDITIONS

_____ _____
(Signature) (Date)

APPENDIX E: SHORELINE ALLOCATION MAPS



INDEX TO SHORELINE MANAGEMENT PLAN MAPS

GENERAL

MAP NO.	TITLE
RT20SMP-OI-00	PROJECT LOCATION & MAP INDEX

SHORELINE CLASSIFICATION

MAP NO.	TITLE
RT20SMP-OC-00	SHORELINE CLASSIFICATIONS (00)
RT20SMP-OC-01	SHORELINE CLASSIFICATIONS (01)
RT20SMP-OC-02	SHORELINE CLASSIFICATIONS (02)
RT20SMP-OC-03	SHORELINE CLASSIFICATIONS (03)
RT20SMP-OC-04	SHORELINE CLASSIFICATIONS (04)
RT20SMP-OC-05	SHORELINE CLASSIFICATIONS (05)
RT20SMP-OC-06	SHORELINE CLASSIFICATIONS (06)
RT20SMP-OC-07	SHORELINE CLASSIFICATIONS (07)
RT20SMP-OC-08	SHORELINE CLASSIFICATIONS (08)
RT20SMP-OC-09	SHORELINE CLASSIFICATIONS (09)
RT20SMP-OC-10	SHORELINE CLASSIFICATIONS (10)
RT20SMP-OC-11	SHORELINE CLASSIFICATIONS (11)
RT20SMP-OC-12	SHORELINE CLASSIFICATIONS (12)
RT20SMP-OC-13	SHORELINE CLASSIFICATIONS (13)
RT20SMP-OC-14	SHORELINE CLASSIFICATIONS (14)
RT20SMP-OC-15	SHORELINE CLASSIFICATIONS (15)

COVES

MAP NO.	TITLE
RT20SMP-CO-00	COVE INDEX SHEET (00)
RT20SMP-CO-01	COVE INDEX SHEET (01)
RT20SMP-CO-02	COVE INDEX SHEET (02)
RT20SMP-CO-03	COVE INDEX SHEET (03)
RT20SMP-CO-04	COVE INDEX SHEET (04)
RT20SMP-CO-05	COVE INDEX SHEET (05)
RT20SMP-CO-06	COVE INDEX SHEET (06)
RT20SMP-CO-07	COVE INDEX SHEET (07)
RT20SMP-CO-08	COVE INDEX SHEET (08)
RT20SMP-CO-09	COVE INDEX SHEET (09)
RT20SMP-CO-10	COVE INDEX SHEET (10)
RT20SMP-CO-11	COVE INDEX SHEET (11)
RT20SMP-CO-12	COVE INDEX SHEET (12)
RT20SMP-CO-13	COVE INDEX SHEET (13)
RT20SMP-CO-14	COVE INDEX SHEET (14)
RT20SMP-CO-15	COVE INDEX SHEET (15)
RT20SMP-CO-16	COVE INDEX SHEET (16)

WATER SURFACE

FEE BOUNDARY

COVES (CONT'D)

MAP NO.	TITLE
RT20SMP-CO-17	COVE INDEX SHEET (17)
RT20SMP-CO-18	COVE INDEX SHEET (18)
RT20SMP-CO-19	COVE INDEX SHEET (19)
RT20SMP-CO-20	COVE INDEX SHEET (20)
RT20SMP-CO-21	COVE INDEX SHEET (21)
RT20SMP-CO-22	COVE INDEX SHEET (22)
RT20SMP-CO-23	COVE INDEX SHEET (23)
RT20SMP-CO-24	COVE INDEX SHEET (24)
RT20SMP-CO-25	COVE INDEX SHEET (25)

U.S. ARMY CORPS OF ENGINEERS TULSA DISTRICT

DENISON DAM — RED RIVER, OKLAHOMA & TEXAS

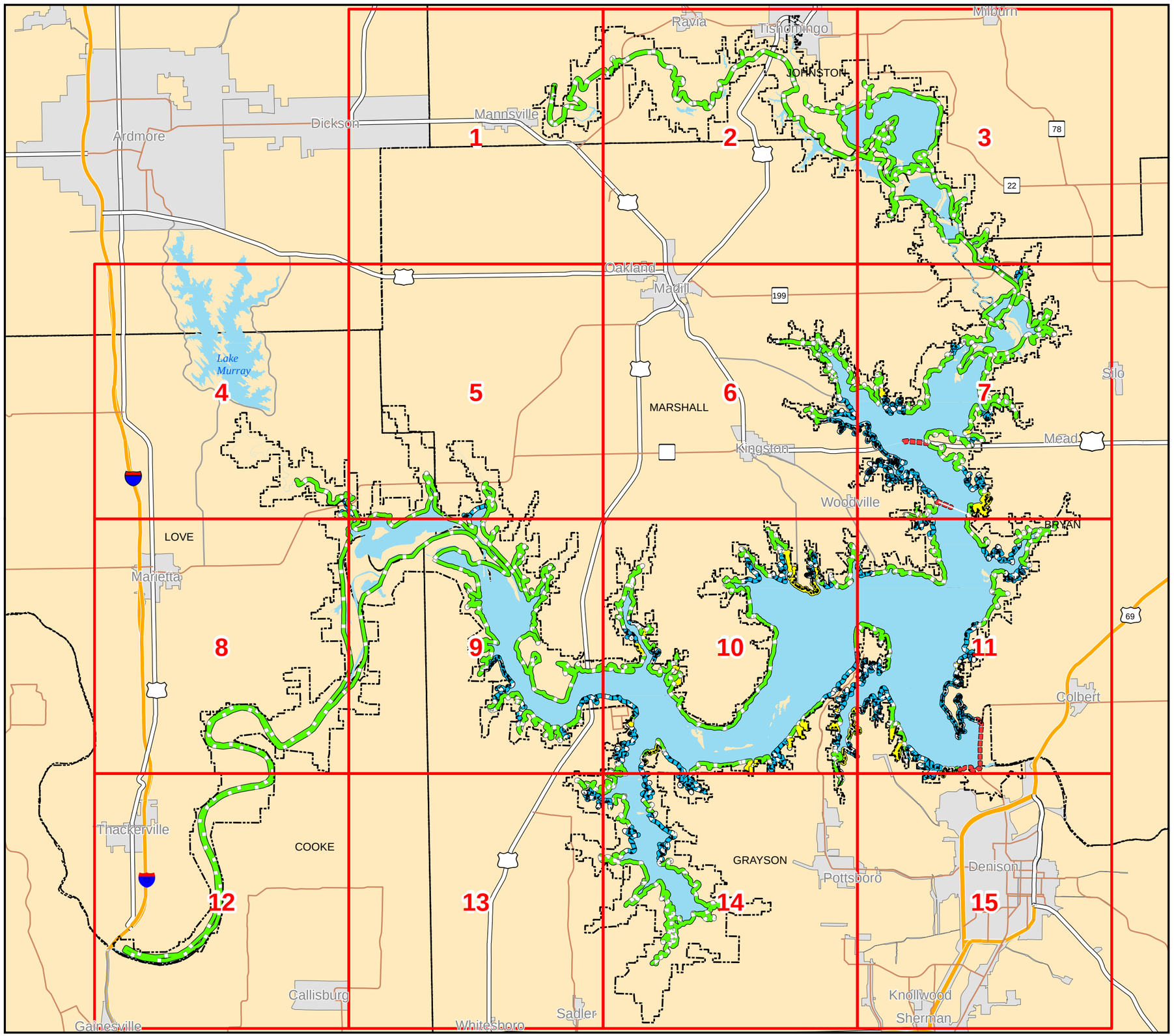
DENISON DAM - LAKE TEXOMA

LAKE TEXOMA SHORELINE MANAGEMENT PLAN

PROJECT LOCATION & MAP INDEX

N 0 3.75 7.5 15 MILES

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-OI-00



- INDEX GRID
- LIMITED DEVELOPMENT AREA
- PROHIBITED SHORELINE AREA
- PROTECTED SHORELINE AREA
- PUBLIC RECREATION AREA
- FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

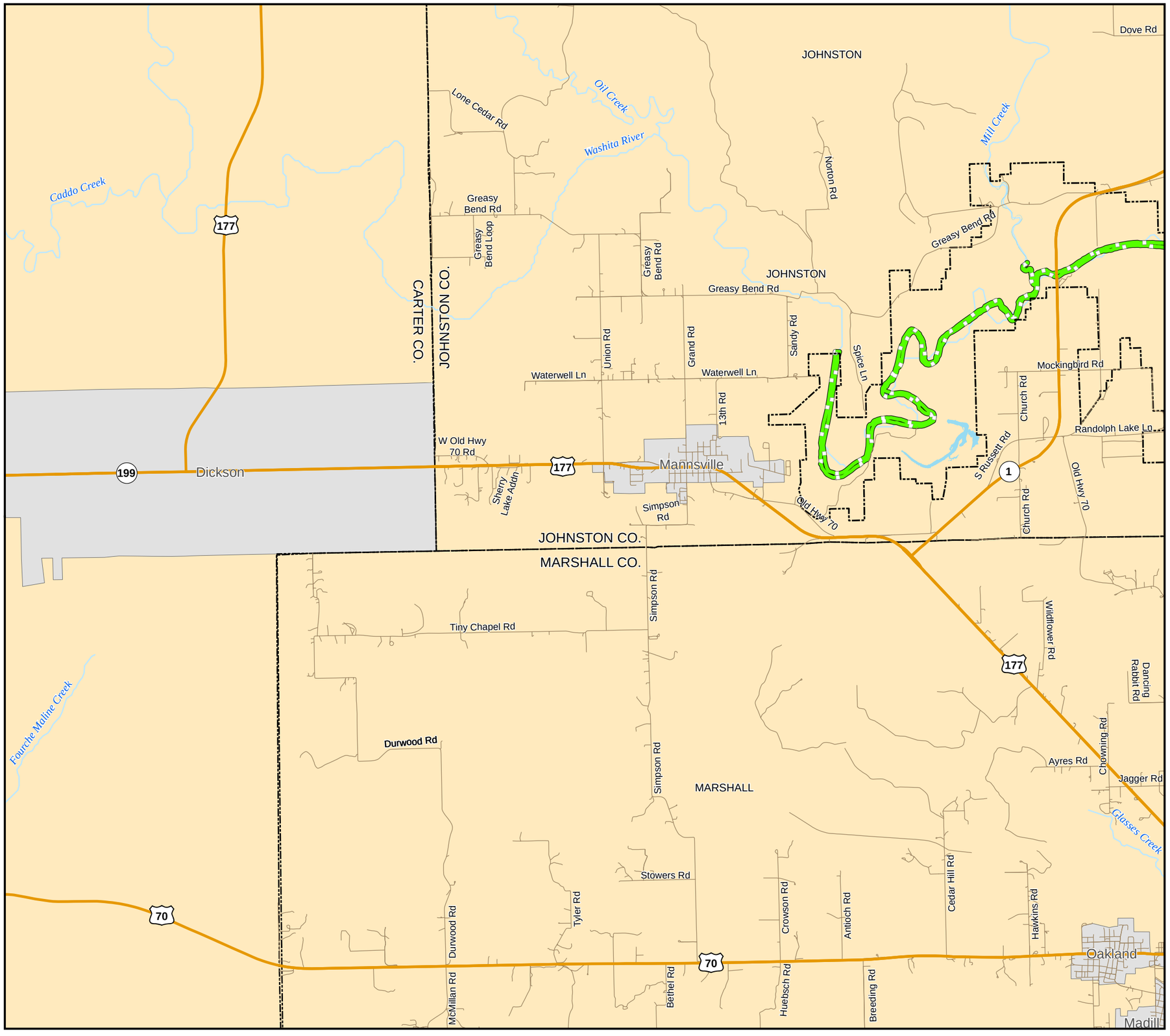
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

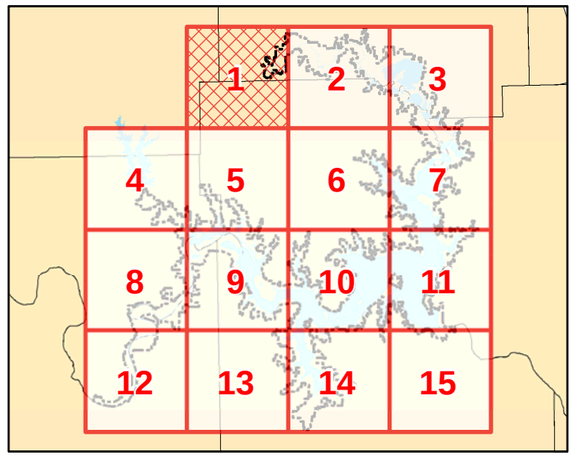
INDEX SHEET 00

N

0 2.5 5 7.5 10 Miles

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-OC-00





PROTECTED SHORELINE AREA

WATER SURFACE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

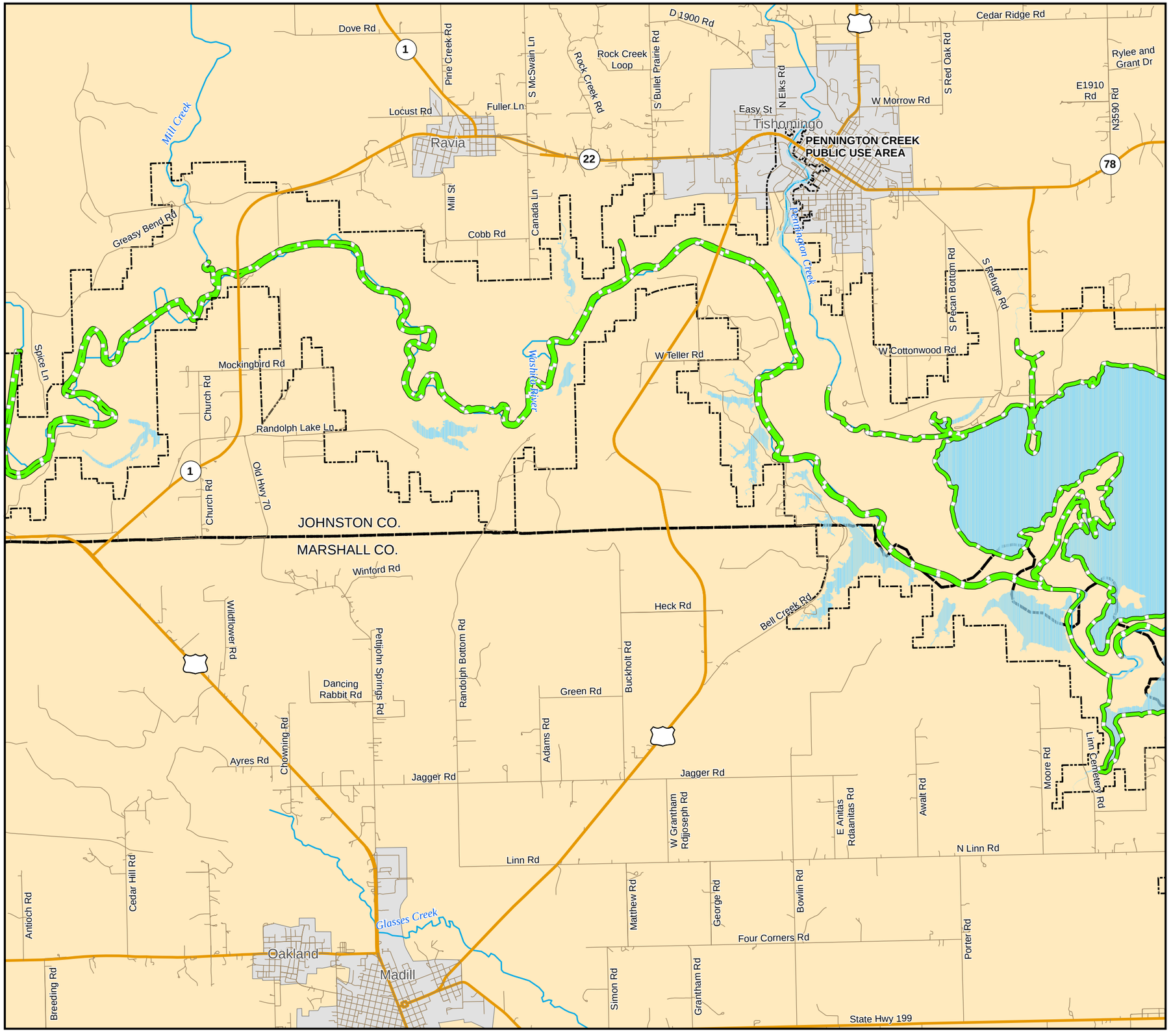
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

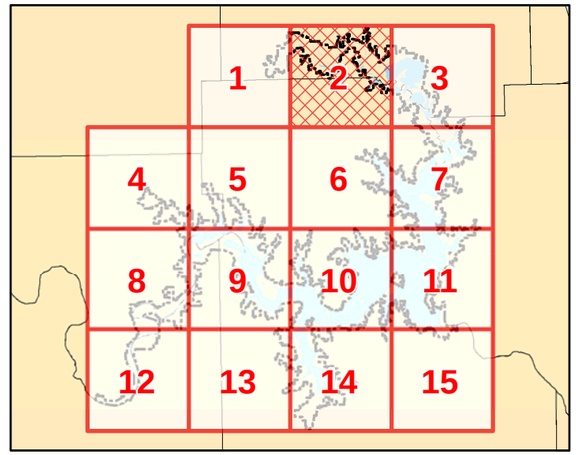
INDEX SHEET 01

N

0 0.75 1.5 2.25 3 Miles

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-OC-01





PROTECTED SHORELINE AREA

WATER SURFACE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

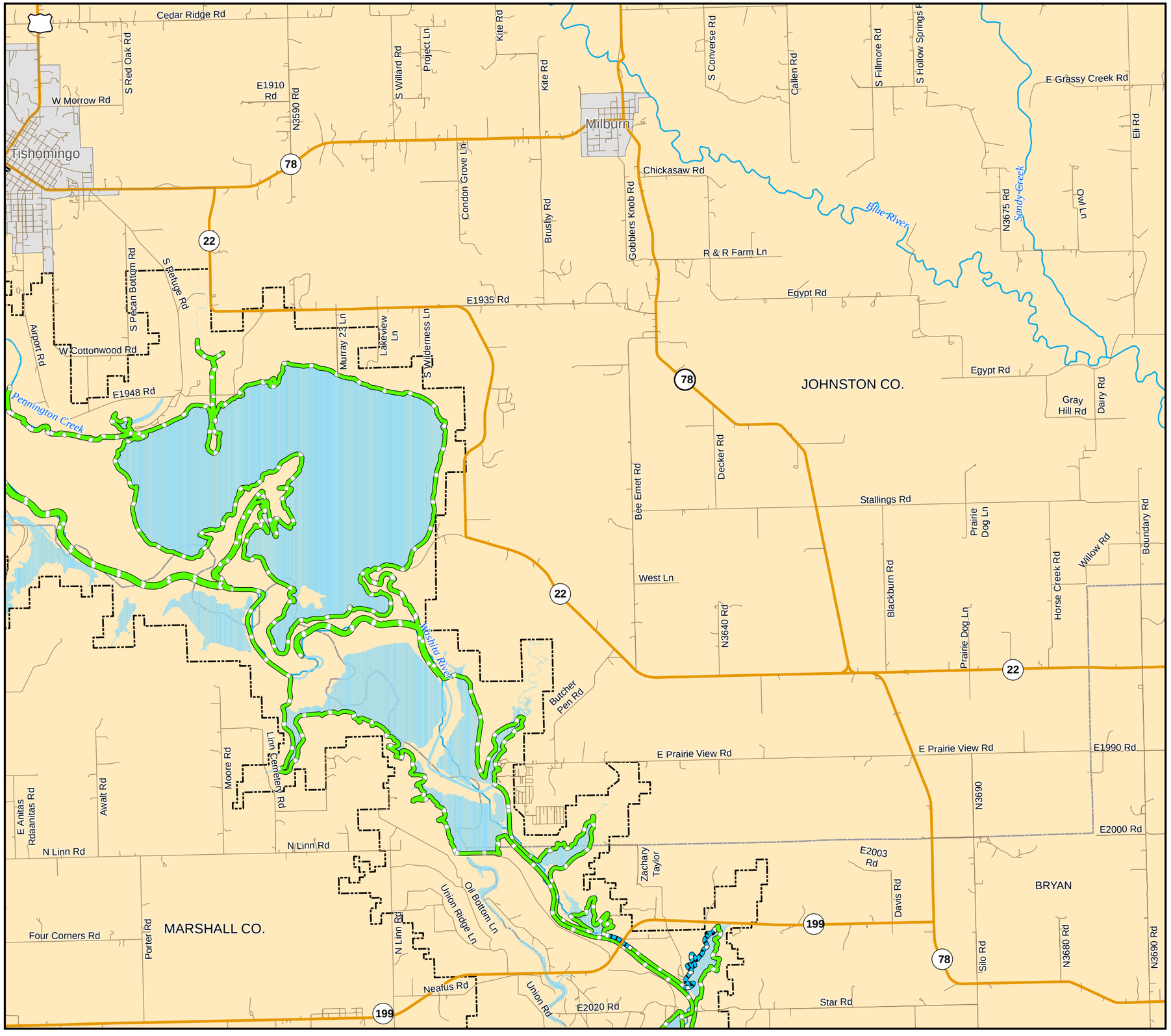
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

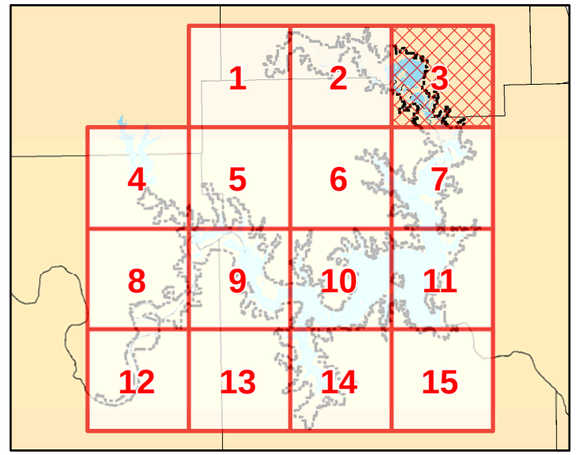
INDEX SHEET 02

N

0 0.75 1.5 2.25 3 Miles

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-OC-02





PROTECTED SHORELINE AREA

PUBLIC RECREATION AREA

WATER SURFACE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

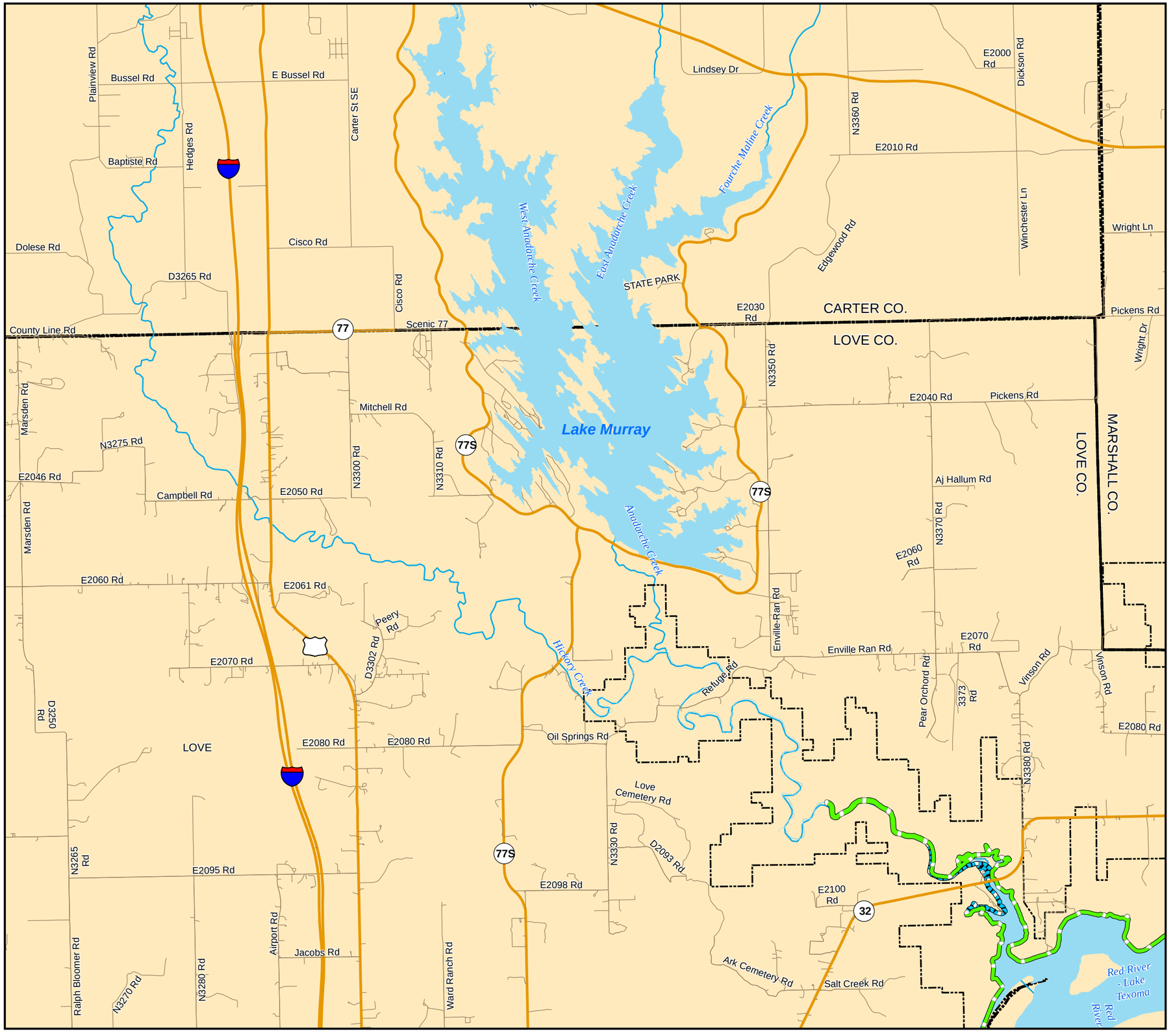
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

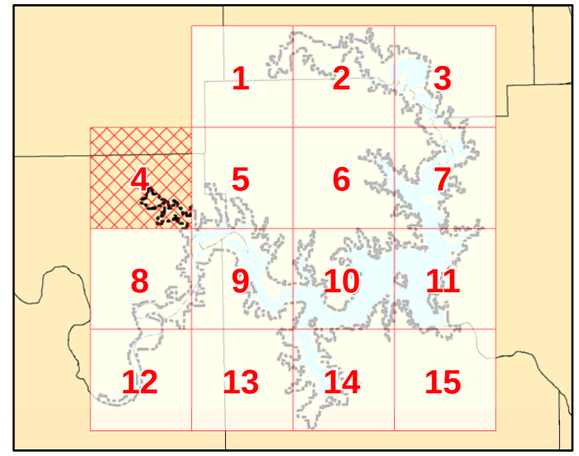
INDEX SHEET 03

N

0 0.75 1.5 2.25 3 Miles

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-OC-03





PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
WATER SURFACE
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

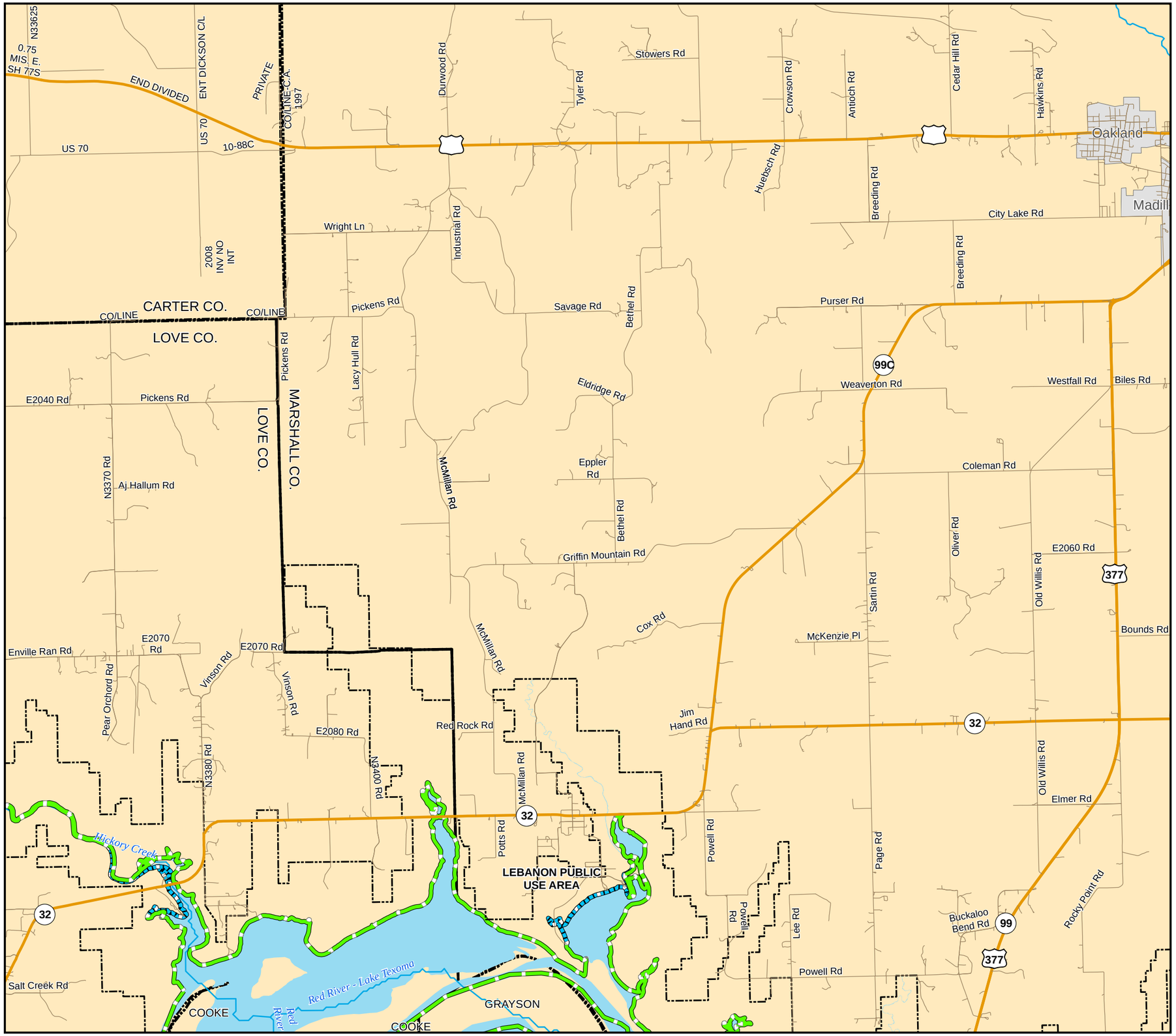
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

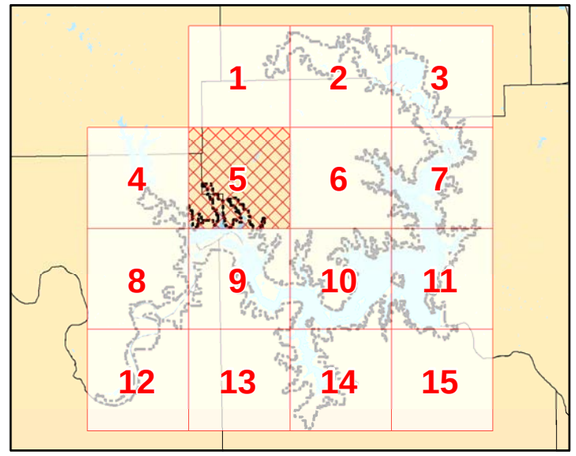
INDEX SHEET 04

N

0 0.75 1.5 2.25 3 Miles

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-OC-04





PROTECTED SHORELINE AREA

PUBLIC RECREATION AREA

WATER SURFACE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

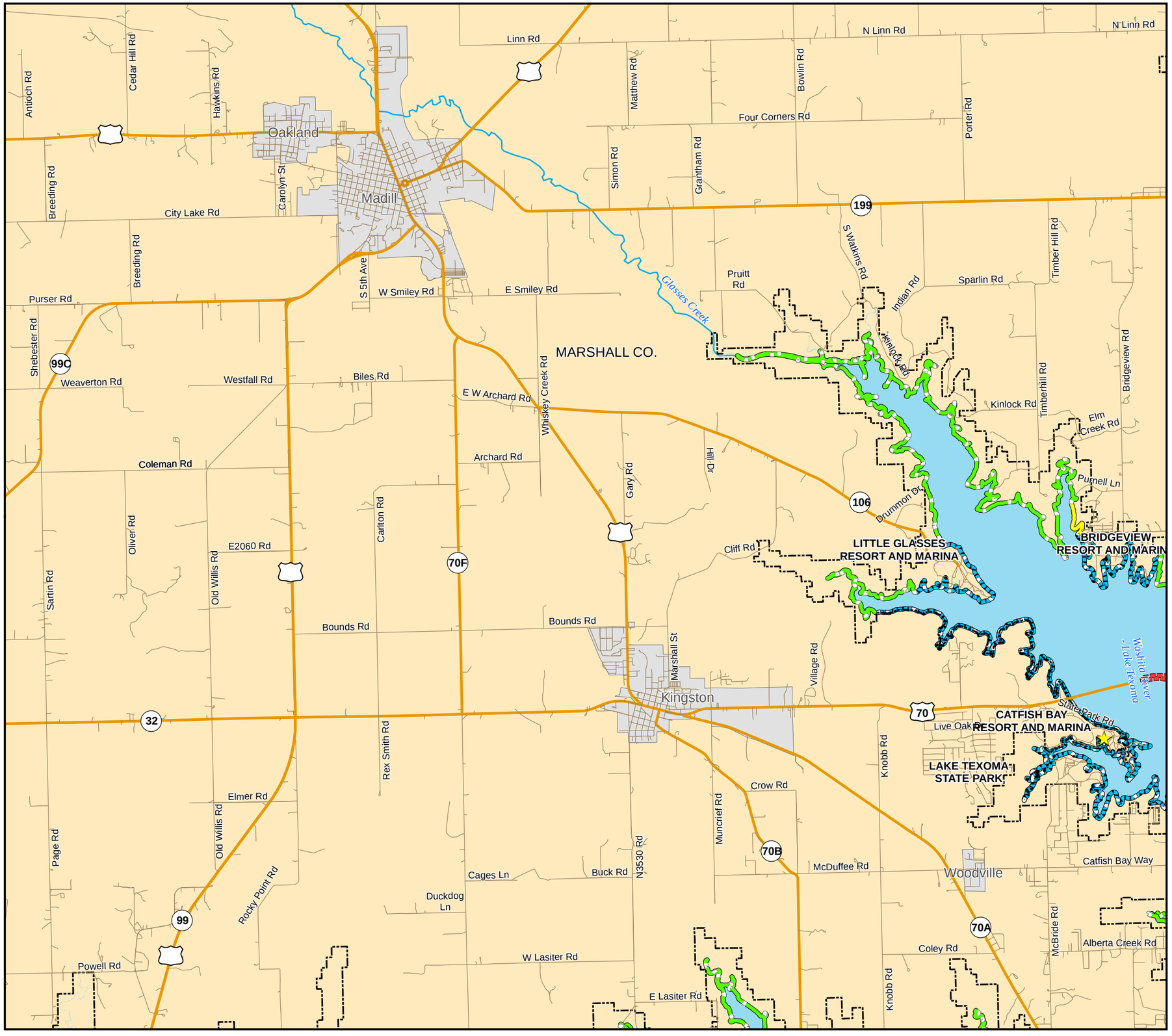
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

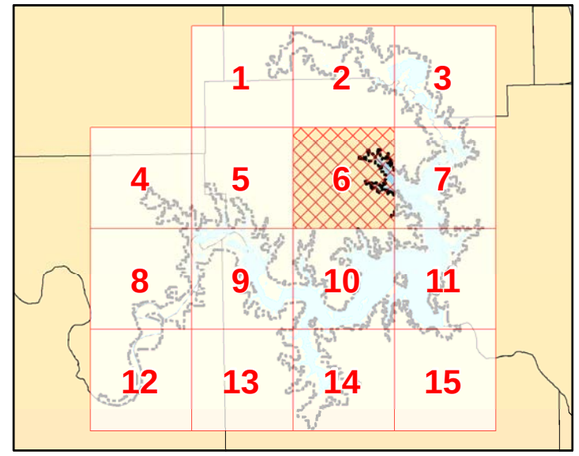
INDEX SHEET 05

N

0 0.75 1.5 2.25 3 Miles

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-OC-05





LIMITED DEVELOPMENT AREA
PROHIBITED SHORELINE AREA
PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
WATER SURFACE
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

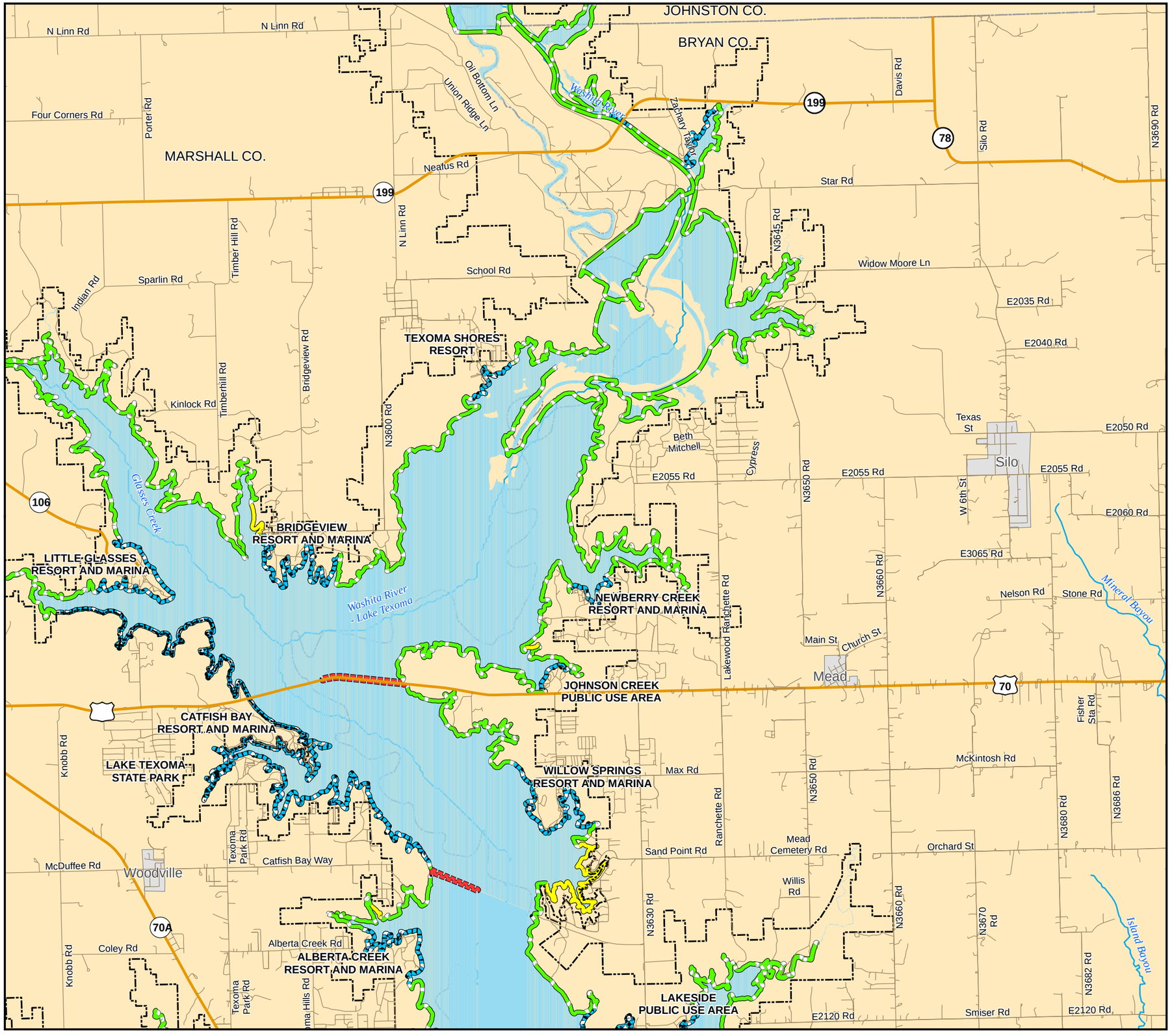
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

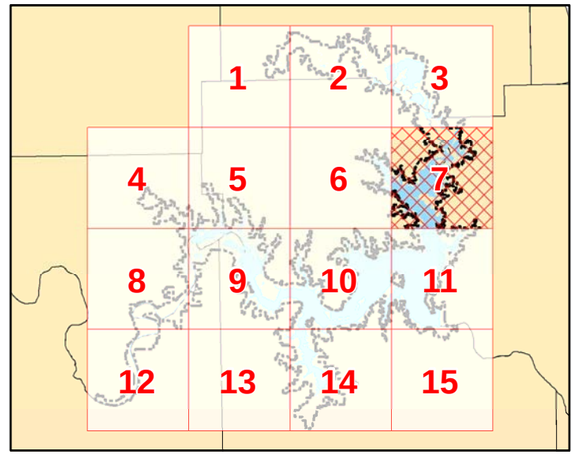
SHEET 06

N

0 0.75 1.5 2.25 3 Miles

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-OC-06





LIMITED DEVELOPMENT AREA
PROHIBITED SHORELINE AREA
PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
WATER SURFACE
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

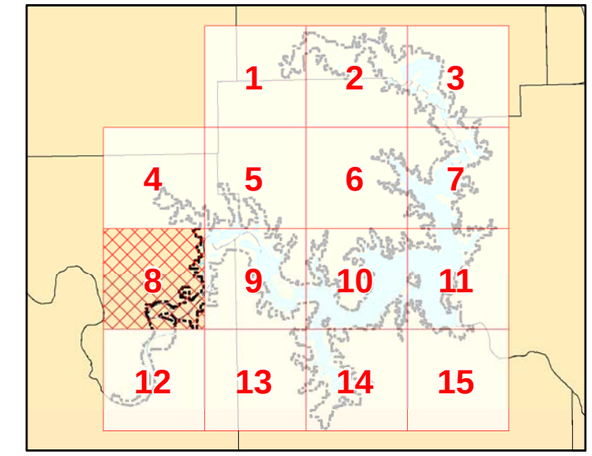
DENISON DAM - LAKE TEXOMA

LAKE TEXOMA SHORELINE MANAGEMENT PLAN

SHEET 07

N 0 0.75 1.5 2.25 3 Miles

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-OC-07



PROTECTED SHORELINE AREA

PUBLIC RECREATION AREA

WATER SURFACE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

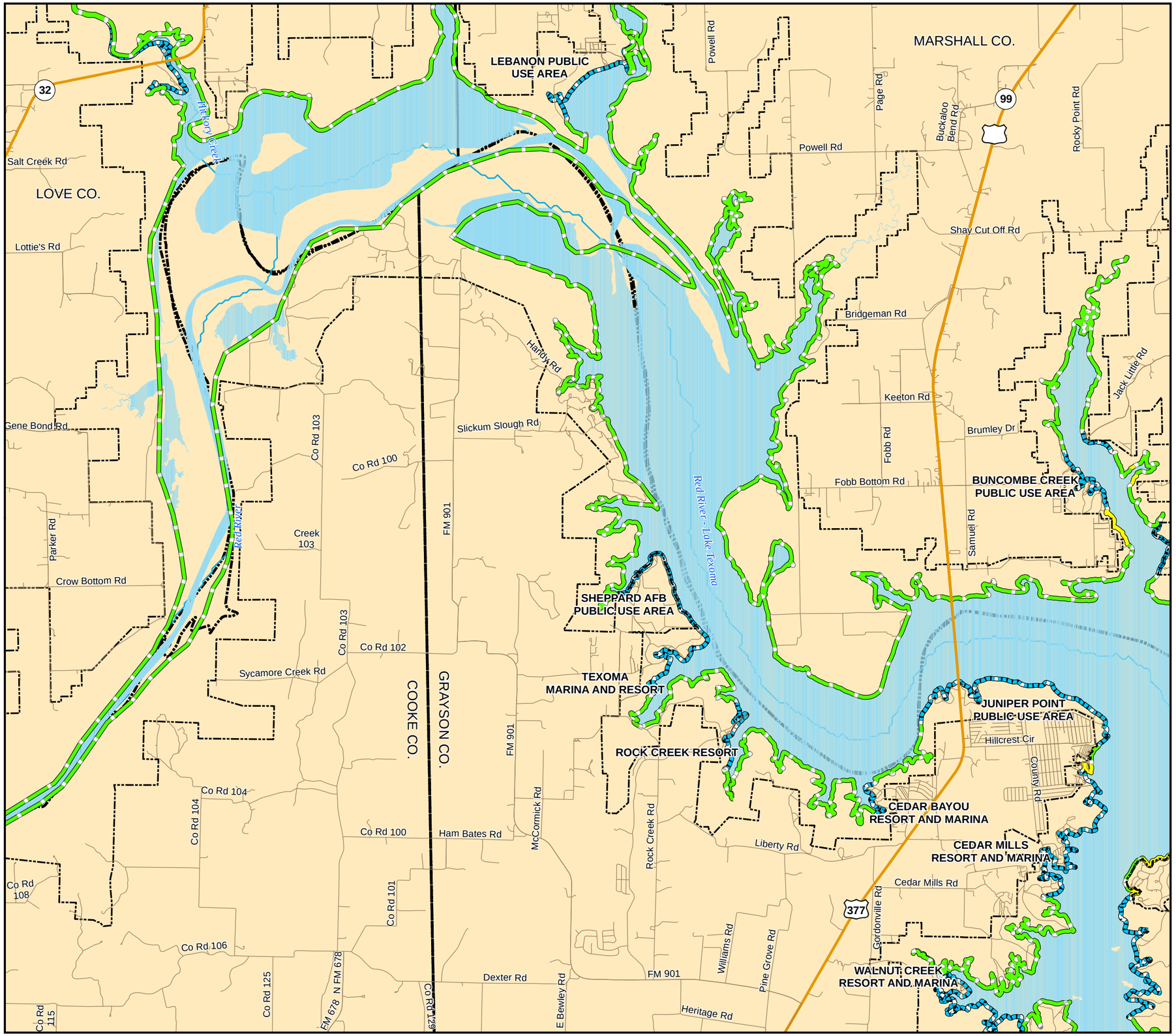
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

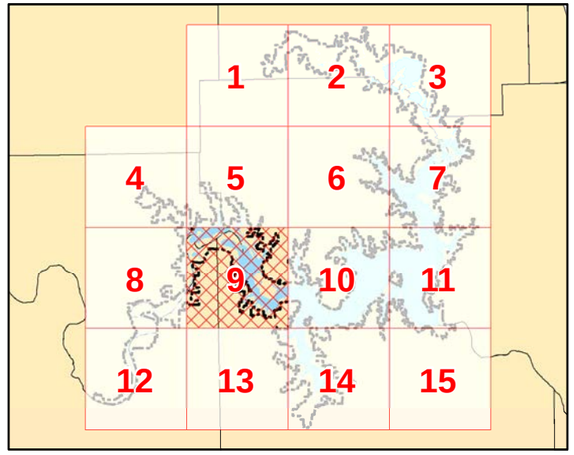
SHEET 08

N

0 0.75 1.5 2.25 3 Miles

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-OC-08





LIMITED DEVELOPMENT AREA
PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
WATER SURFACE
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

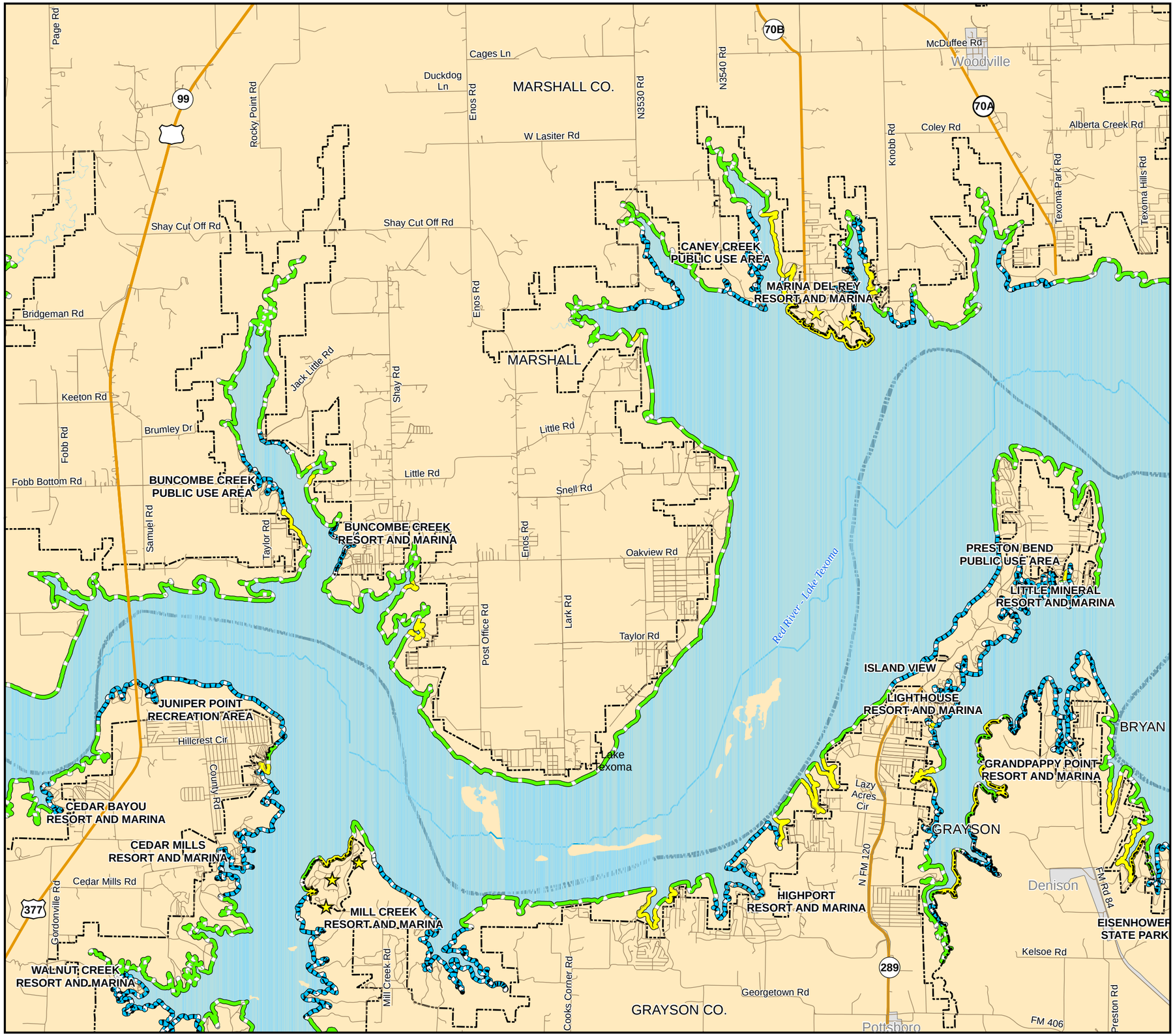
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

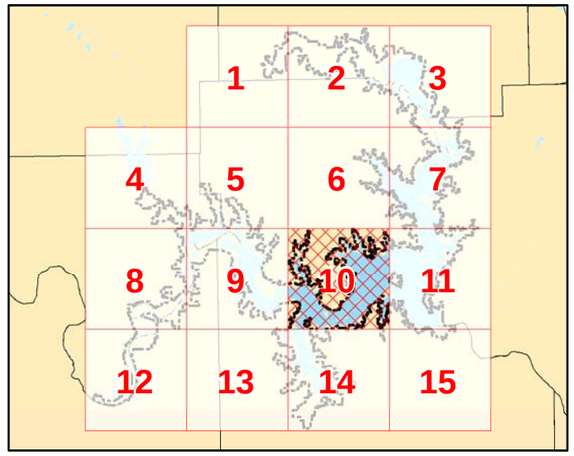
SHEET 09

N

0 0.75 1.5 2.25 3 Miles

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-OC-09





LIMITED DEVELOPMENT AREA
PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
WATER SURFACE
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

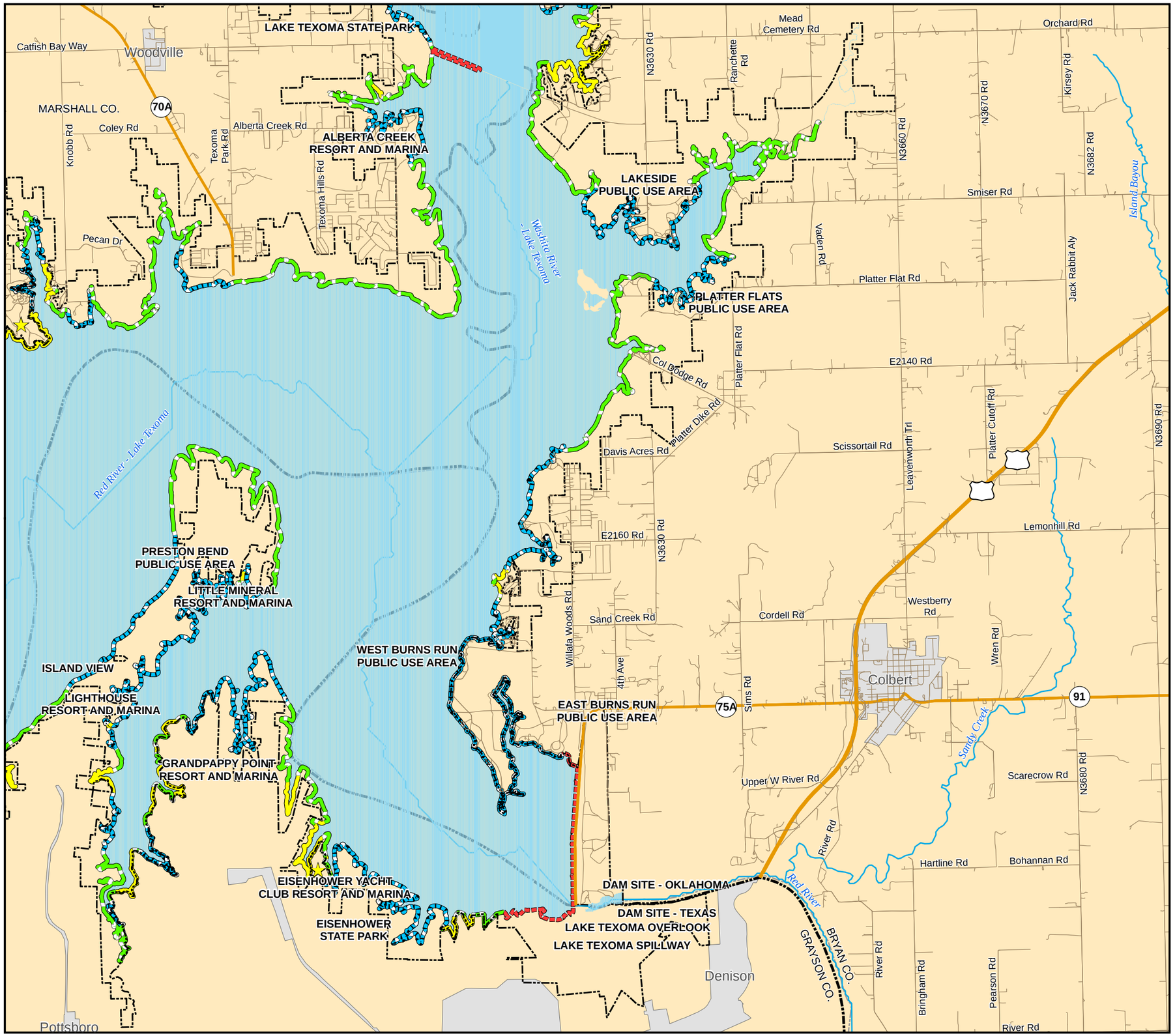
DENISON DAM - LAKE TEXOMA

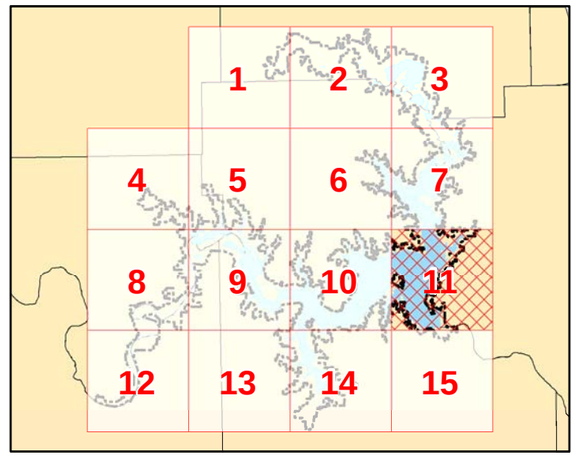
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

INDEX SHEET 10

N
0 0.75 1.5 2.25 3 Miles

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-OC-10





- LIMITED DEVELOPMENT AREA
- PROHIBITED SHORELINE AREA
- PROTECTED SHORELINE AREA
- PUBLIC RECREATION AREA
- WATER SURFACE
- FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

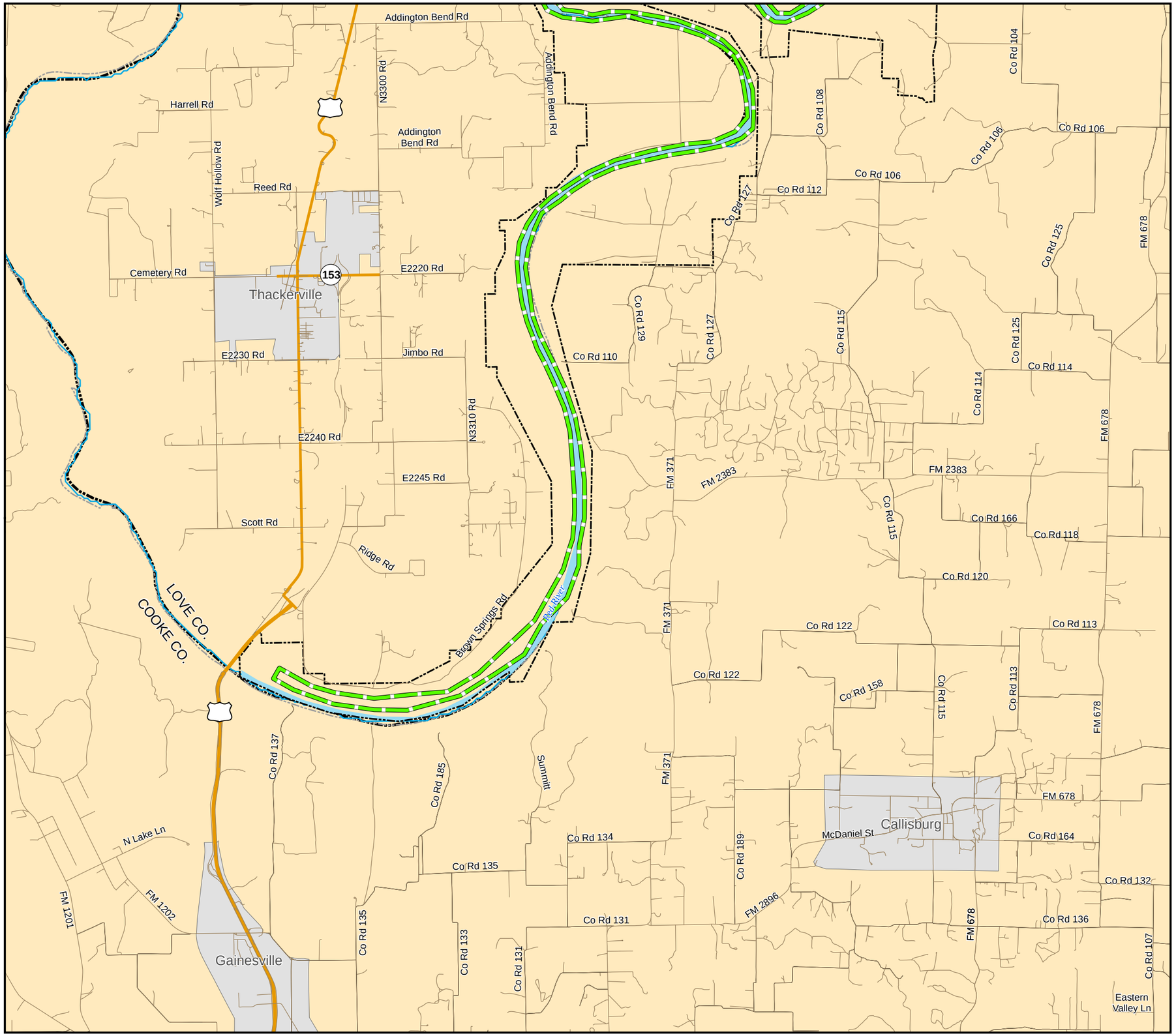
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

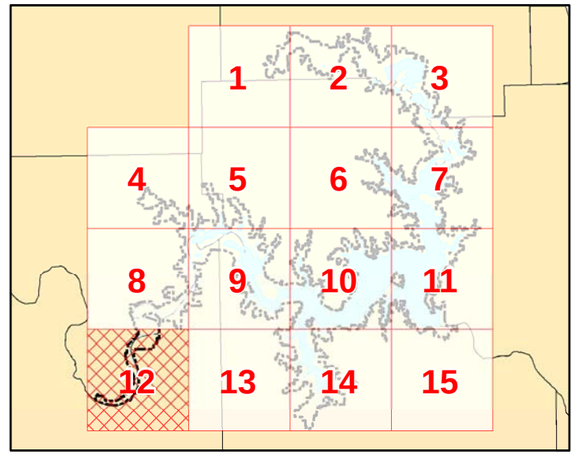
SHEET 11

N

0 0.75 1.5 2.25 3 Miles

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-OC-11





PROTECTED SHORELINE AREA

WATER SURFACE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

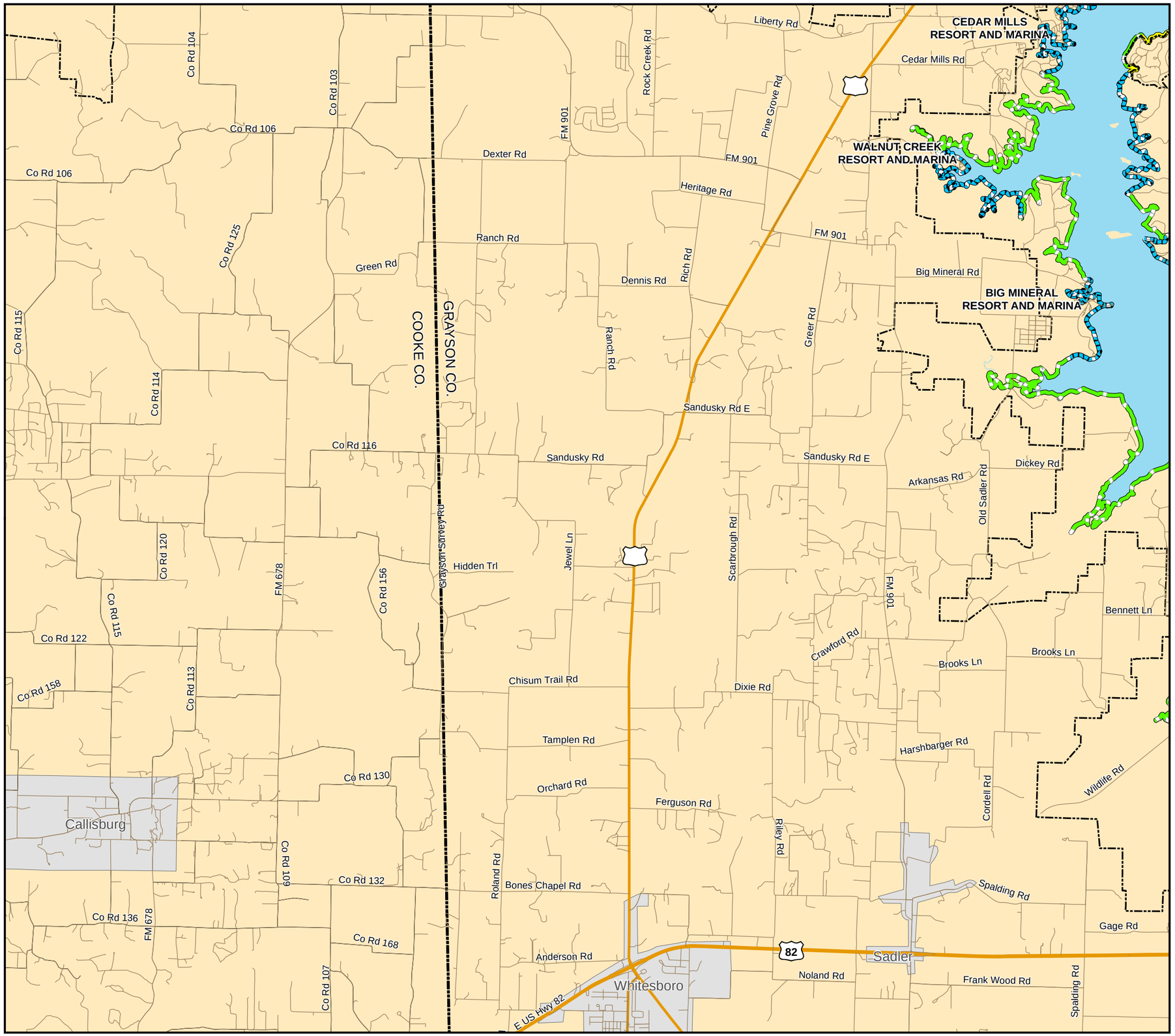
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

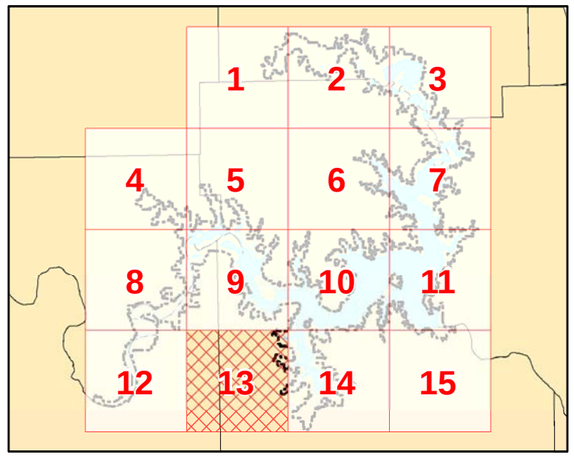
SHEET 12

N

0 0.75 1.5 2.25 3 Miles

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-OC-12





LIMITED DEVELOPMENT AREA
PROTECTED SHORELINE AREA
PUBLIC RECRECATION AREA
WATER SURFACE
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

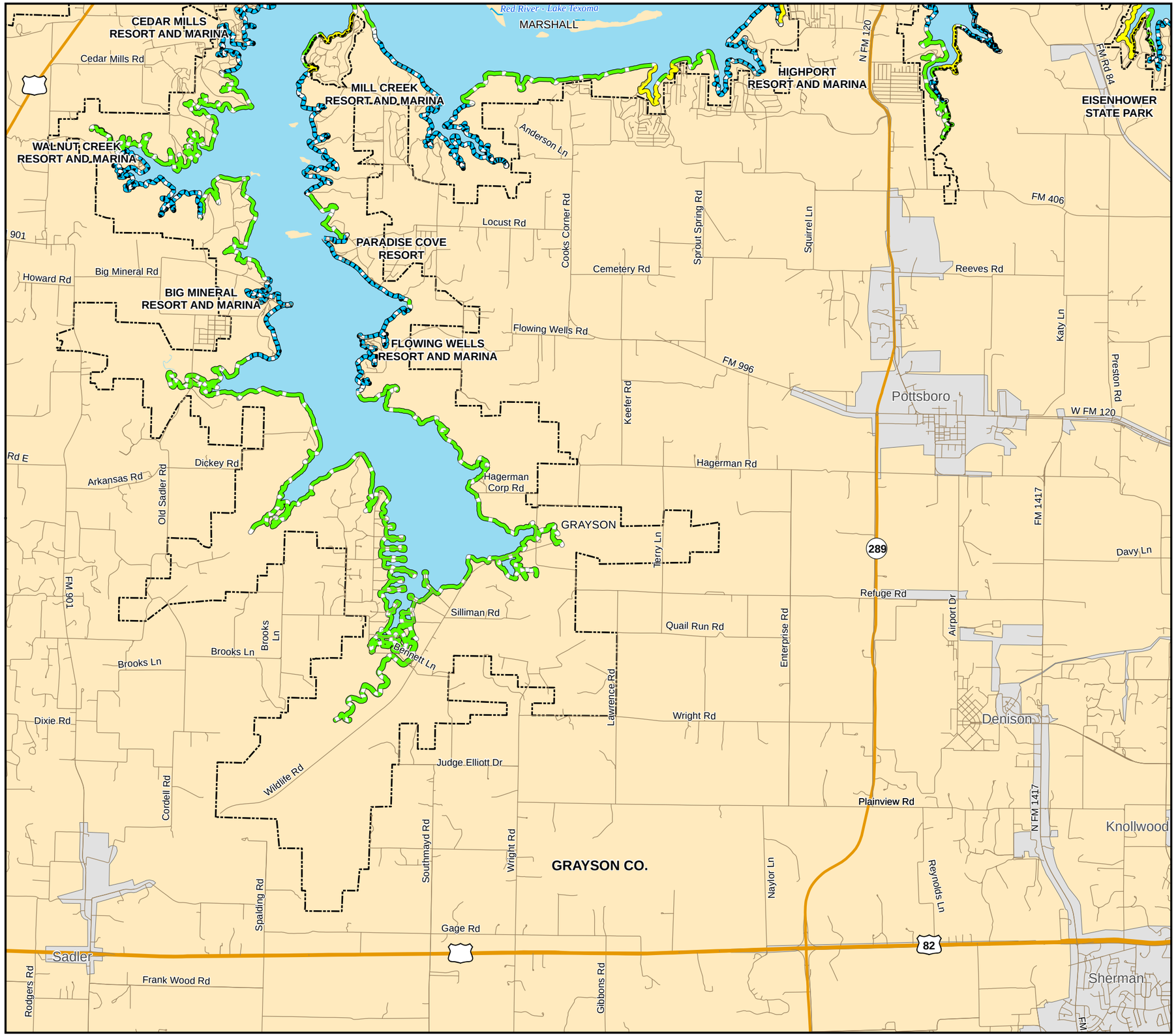
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

INDEX SHEET 13

N

0 0.75 1.5 2.25 3 Miles

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-OC-13



U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

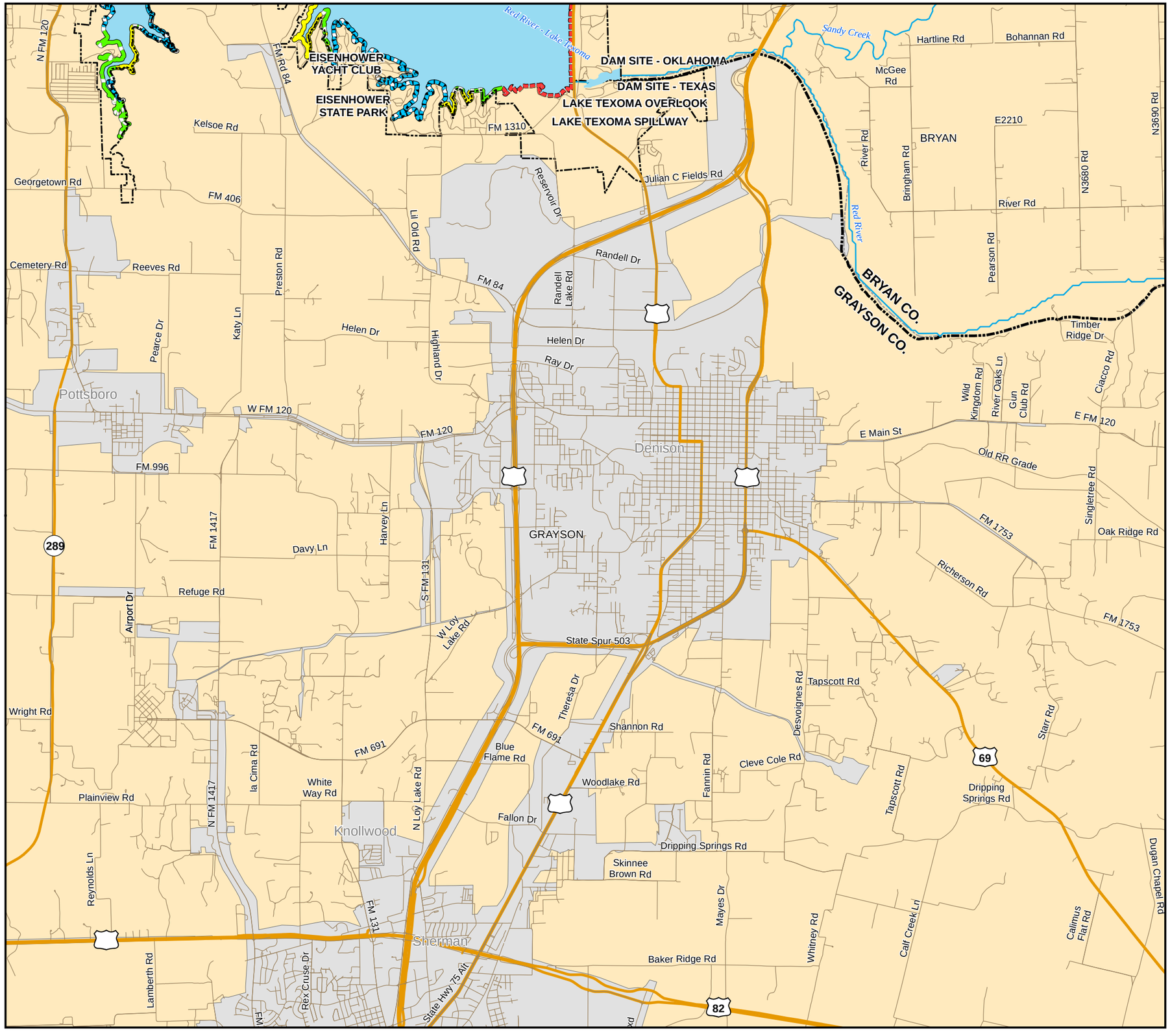
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

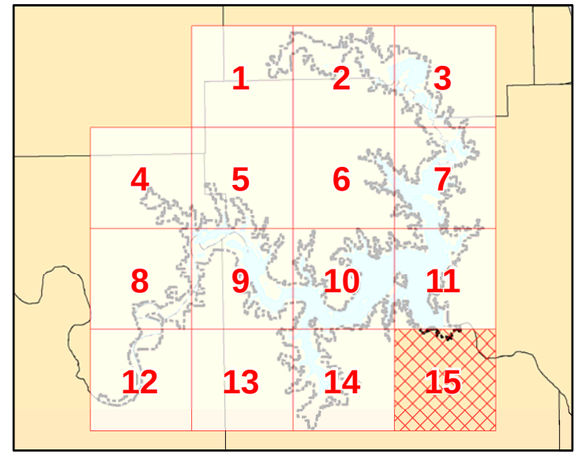
INDEX SHEET 14

N

0 0.75 1.5 2.25 3 Miles

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-OC-14





LIMITED DEVELOPMENT AREA
PROHIBITED SHORELINE AREA
PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
WATER SURFACE
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

LAKE TEXOMA SHORELINE MANAGEMENT PLAN

INDEX SHEET 15

N

0 0.75 1.5 2.25 3 Miles

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-OC-15

ID #	COVE NAME	INDEX SHEET #
1	LONG BEACH COVES	RT20SMP-CO-01
2	SAND POINT	RT20SMP-CO-02
3	CHILDER'S LAKESIDE	RT20SMP-CO-03
4	BRIDGEVIEW COVE	RT20SMP-CO-04
5	LOST ACRES COVE WEST	RT20SMP-CO-05
6	ARROWHEAD BOAT CLUB	RT20SMP-CO-06
7	SOONER BOAT CLUB	RT20SMP-CO-06
8	SOLDIER CREEK WEST	RT20SMP-CO-07
9	CANEY CREEK SOUTH	RT20SMP-CO-08
10	WILLIS COVE	RT20SMP-CO-08
11	GRAY'S COVE	RT20SMP-CO-09
12	CANEY CREEK NORTH	RT20SMP-CO-09
13	SANDY CREEK COVE	RT20SMP-CO-10
14	CARDINAL COVE	RT20SMP-CO-11
15	LIMESTONE CREEK COVE	RT20SMP-CO-11
16	BUNCOMBE CREEK COVE	RT20SMP-CO-12
17	LITTLE'S COVE	RT20SMP-CO-12
18	TEXOMA LANDING	RT20SMP-CO-12
19	GAINESVILLE BOAT CLUB	RT20SMP-CO-13
20	MILL CREEK	RT20SMP-CO-14
21	TEXOMA ESTATES	RT20SMP-CO-15
22	CAMBRIDGE SHORES	RT20SMP-CO-15
23	MA TUCKER'S COVE	RT20SMP-CO-15
24	WILSON'S LAKESIDE ACRES	RT20SMP-CO-16
25	LAZY ACRES COVE	RT20SMP-CO-16
26	CRAPPIE COVE	RT20SMP-CO-16
27	PRESTON PENINSULA COVE	RT20SMP-CO-17
28	HILAND SHORES	RT20SMP-CO-18
29	PRESTON SHORES	RT20SMP-CO-19
30	LITTLE MINERAL SOUTH	RT20SMP-CO-20
30	LITTLE MINERAL	RT20SMP-CO-21
31	WISDOM COVE	RT20SMP-CO-22
32	ELM RIDGE COVE	RT20SMP-CO-23
32	ELM RIDGE COVE EAST	RT20SMP-CO-24
33	PLEASURE BAY	RT20SMP-CO-25

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 00

N

0 1 2 3 4 Miles

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-00

- GPS POINT
- LIMITED DEVELOPMENT AREA
- PROTECTED SHORELINE AREA
- PUBLIC RECREATION AREA
- FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

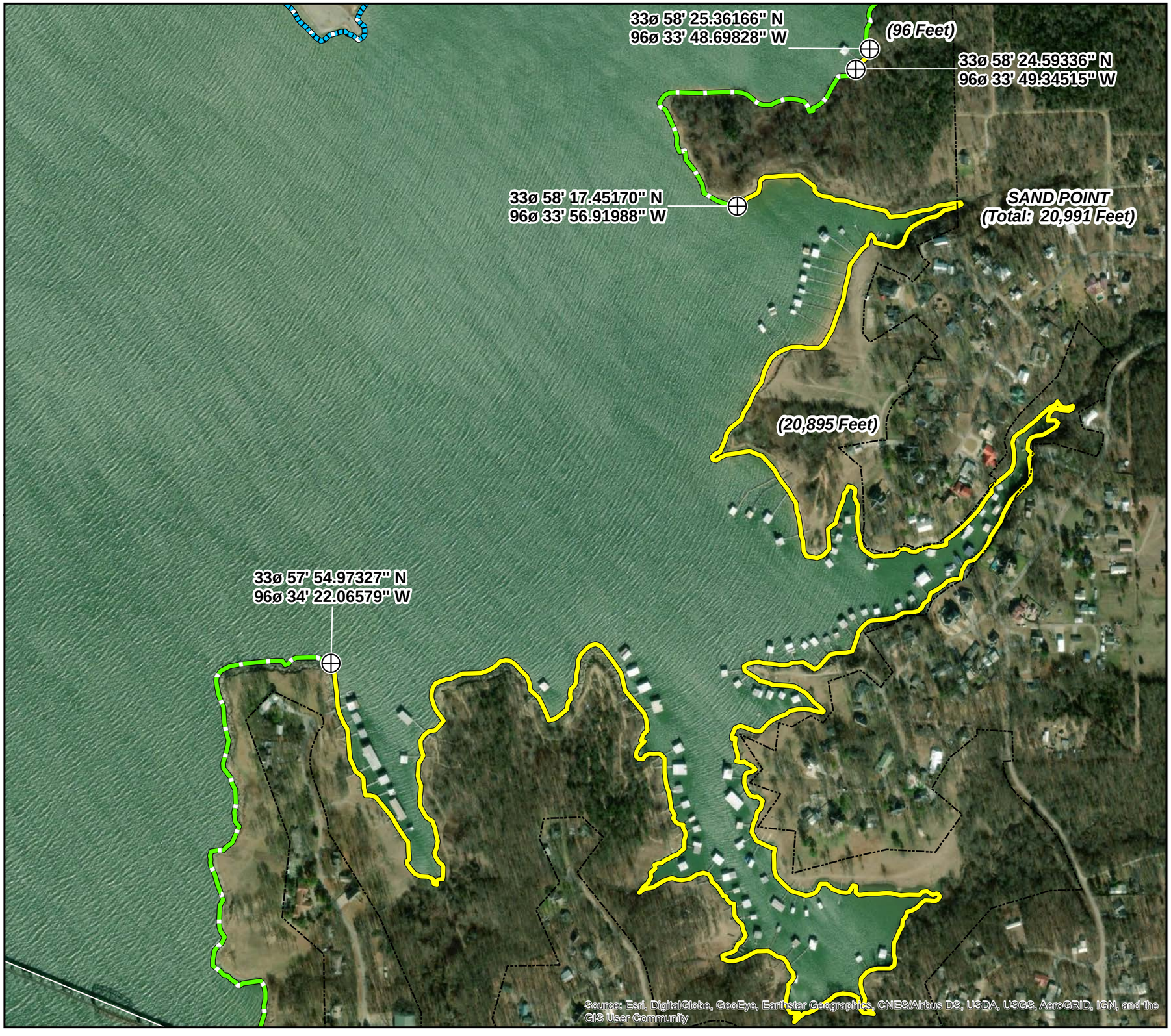
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

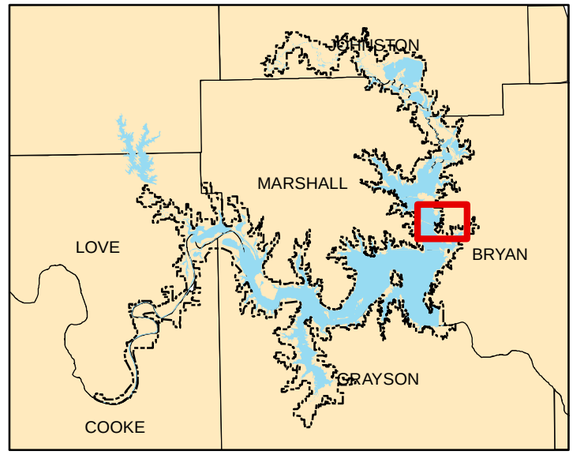
COVE INDEX SHEET 01

N

0 100 200 300 400 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-01





- GPS POINT
- LIMITED DEVELOPMENT AREA
- PROTECTED SHORELINE AREA
- PUBLIC RECREATION AREA
- FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

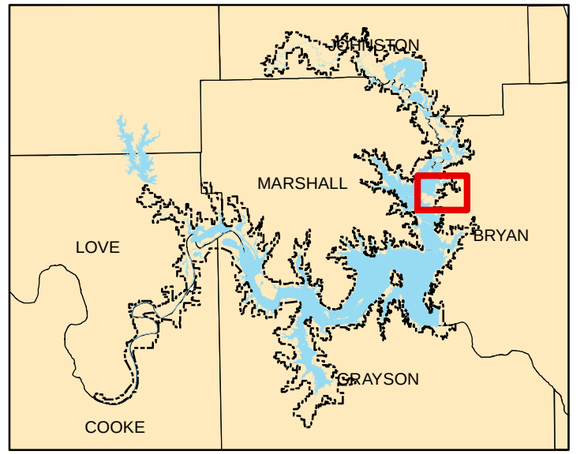
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 02

N

0 325 650 975 1,300 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-02



- GPS POINT
- LIMITED DEVELOPMENT AREA
- PROTECTED SHORELINE AREA
- PUBLIC RECREATION AREA
- FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

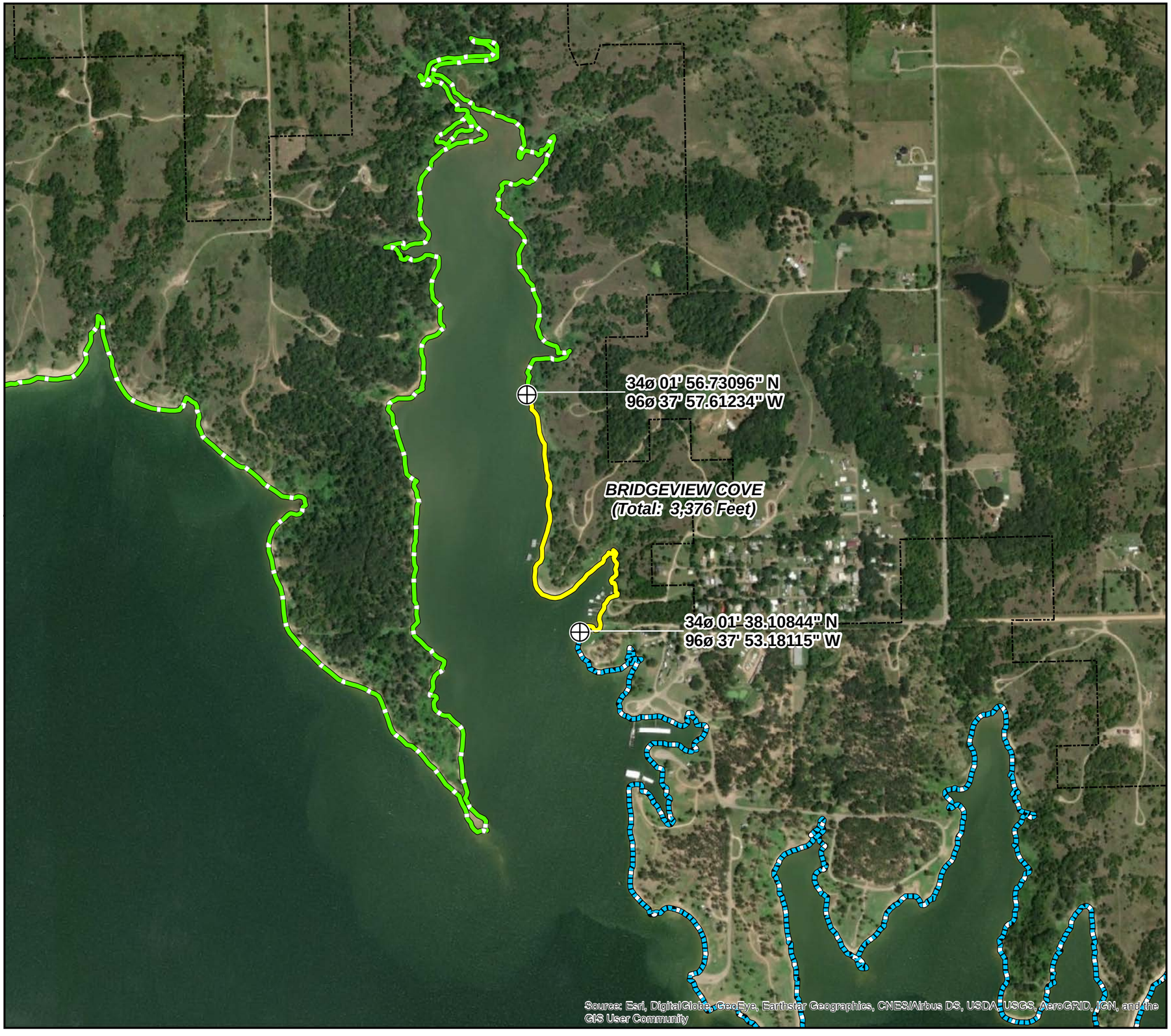
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 03

N

0 150 300 450 600 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-03



- GPS POINT
- LIMITED DEVELOPMENT AREA
- PROTECTED SHORELINE AREA
- PUBLIC RECREATION AREA
- FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

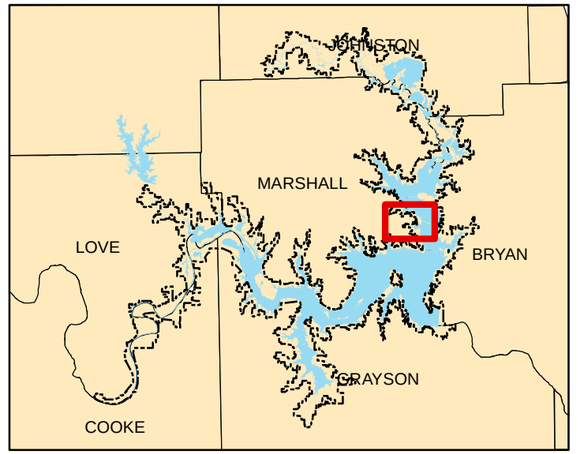
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 04

N

0 500 1,000 1,500 2,000 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-04



GPS POINT

LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 05

N

0 125 250 375 500 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-05

33ø 55' 56.59714" N
96ø 40' 44.91208" W

SOONER BOAT CLUB
(Total: 3,016 Feet)

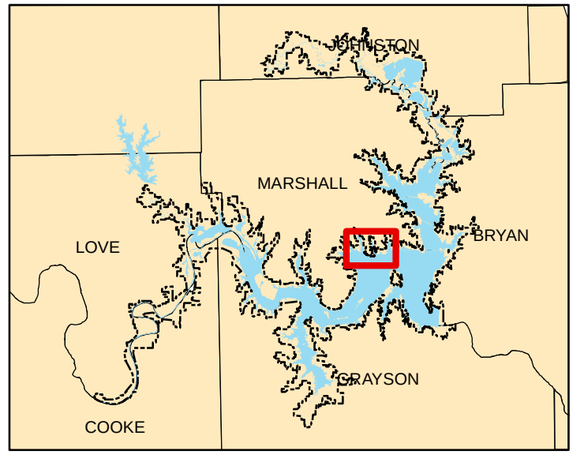
33ø 55' 40.97699" N
96ø 40' 37.74198" W

33ø 55' 39.33687" N
96ø 40' 36.75481" W

ARROWHEAD BOAT CLUB
(Total: 1,106 Feet)

33ø 55' 33.35438" N
96ø 40' 42.91273" W

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



- GPS POINT
- LIMITED DEVELOPMENT AREA
- PROTECTED SHORELINE AREA
- PUBLIC RECREATION AREA
- FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

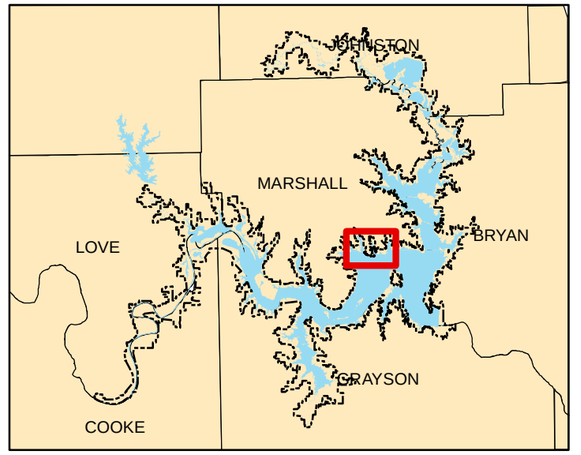
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 06

N

0 150 300 450 600 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-06



GPS POINT
LIMITED DEVELOPMENT AREA
PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

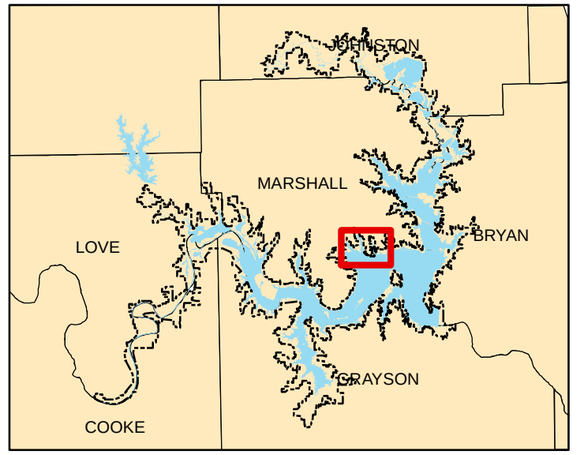
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 07

N

0 100 200 300 400 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-07



GPS POINT

LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

PUBLIC RECREATION AREA

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

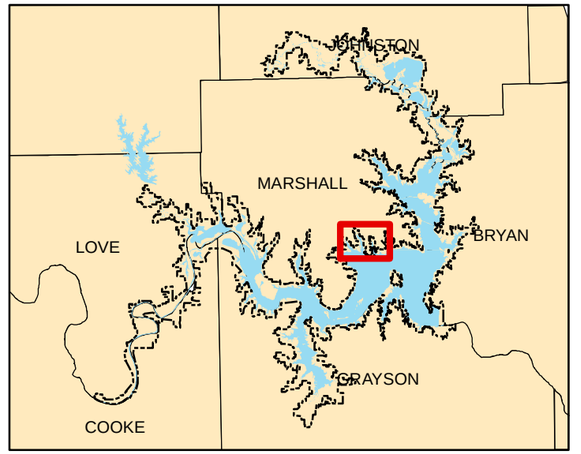
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 08

N

0 320 640 960 1,280 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-08



GPS POINT
LIMITED DEVELOPMENT AREA
PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

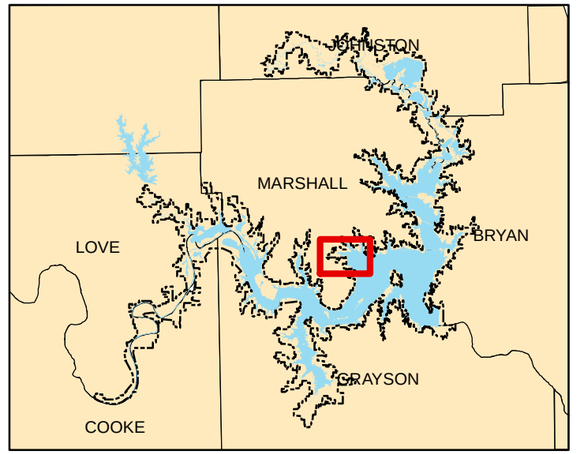
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 09

N

0 350 700 1,050 1,400 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-09



GPS POINT

LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 10

N

0 50 100 150 200 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-10

33ø 52' 44.42399" N
96ø 46' 29.68683" W

LIMESTONE CREEK COVE
(Total: 1,599 Feet)

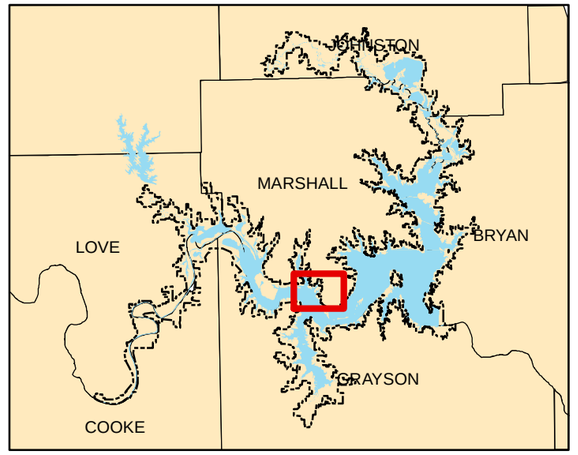
33ø 52' 40.04429" N
96ø 46' 35.54437" W

33ø 52' 21.55618" N
96ø 46' 24.90304" W

CARDINAL COVE
(Total: 4,347 Feet)

33ø 52' 11.30790" N
96ø 46' 33.54356" W

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



⊕ GPS POINT

LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

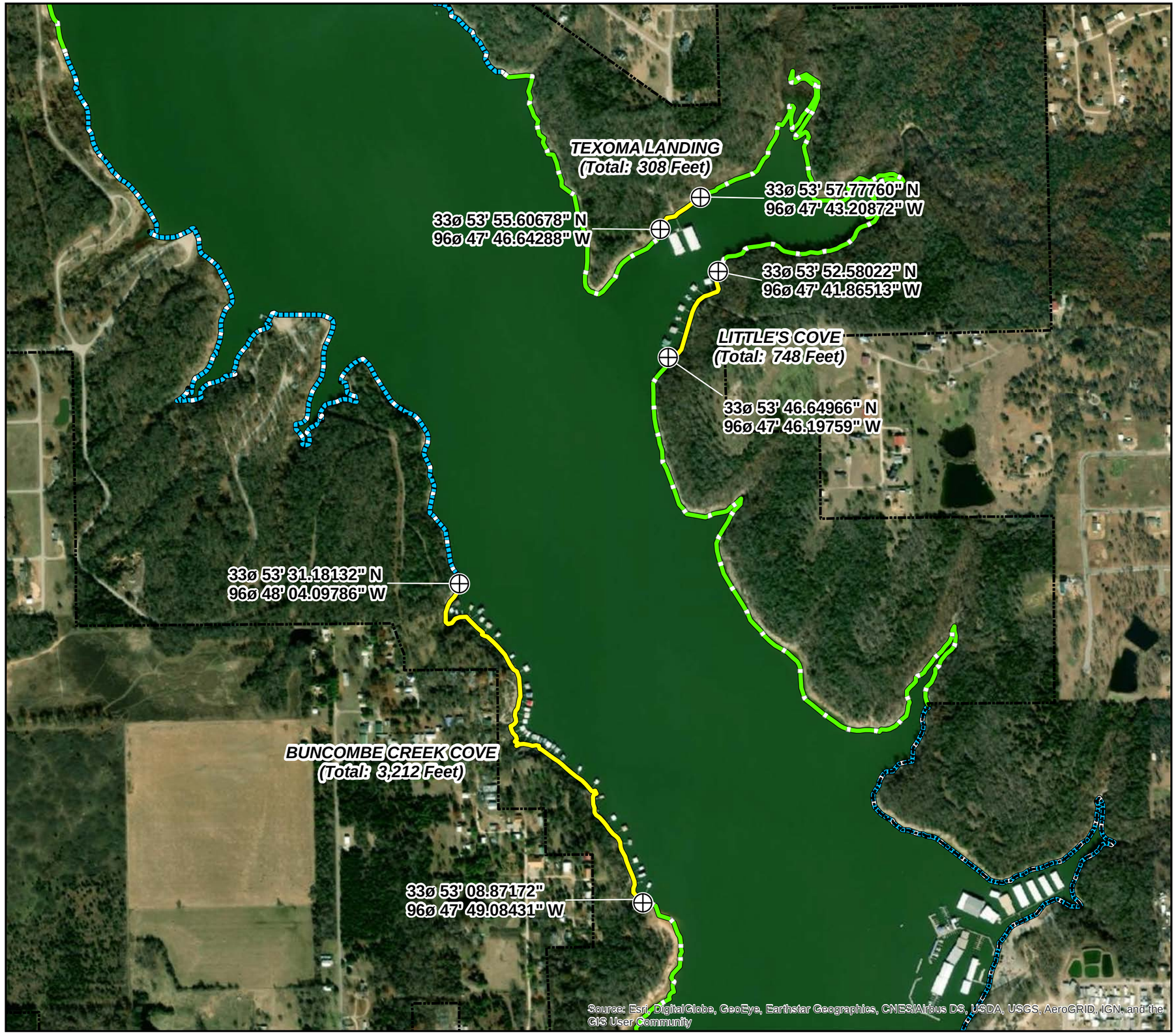
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

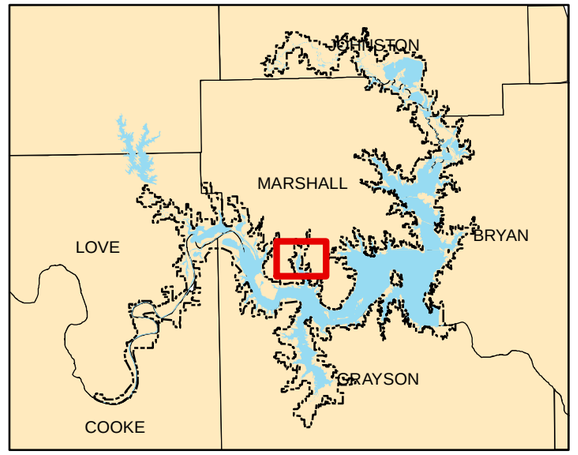
COVE INDEX SHEET 11

N

0 225 450 675 900 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-11





GPS POINT

LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

PUBLIC RECREATION AREA

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

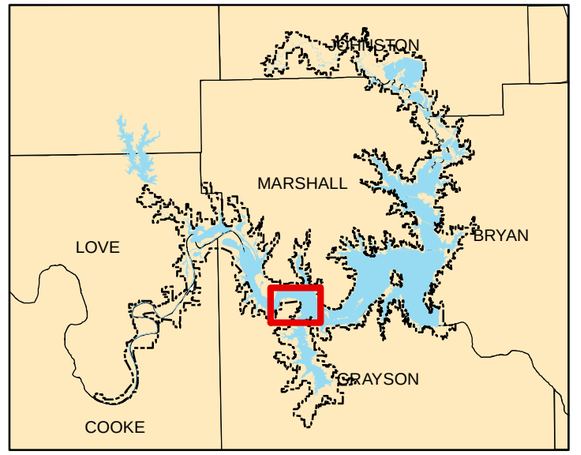
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 12

N

0 400 800 1,200 1,600 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-12



- GPS POINT
- LIMITED DEVELOPMENT AREA
- PROTECTED SHORELINE AREA
- PUBLIC RECREATION AREA
- FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

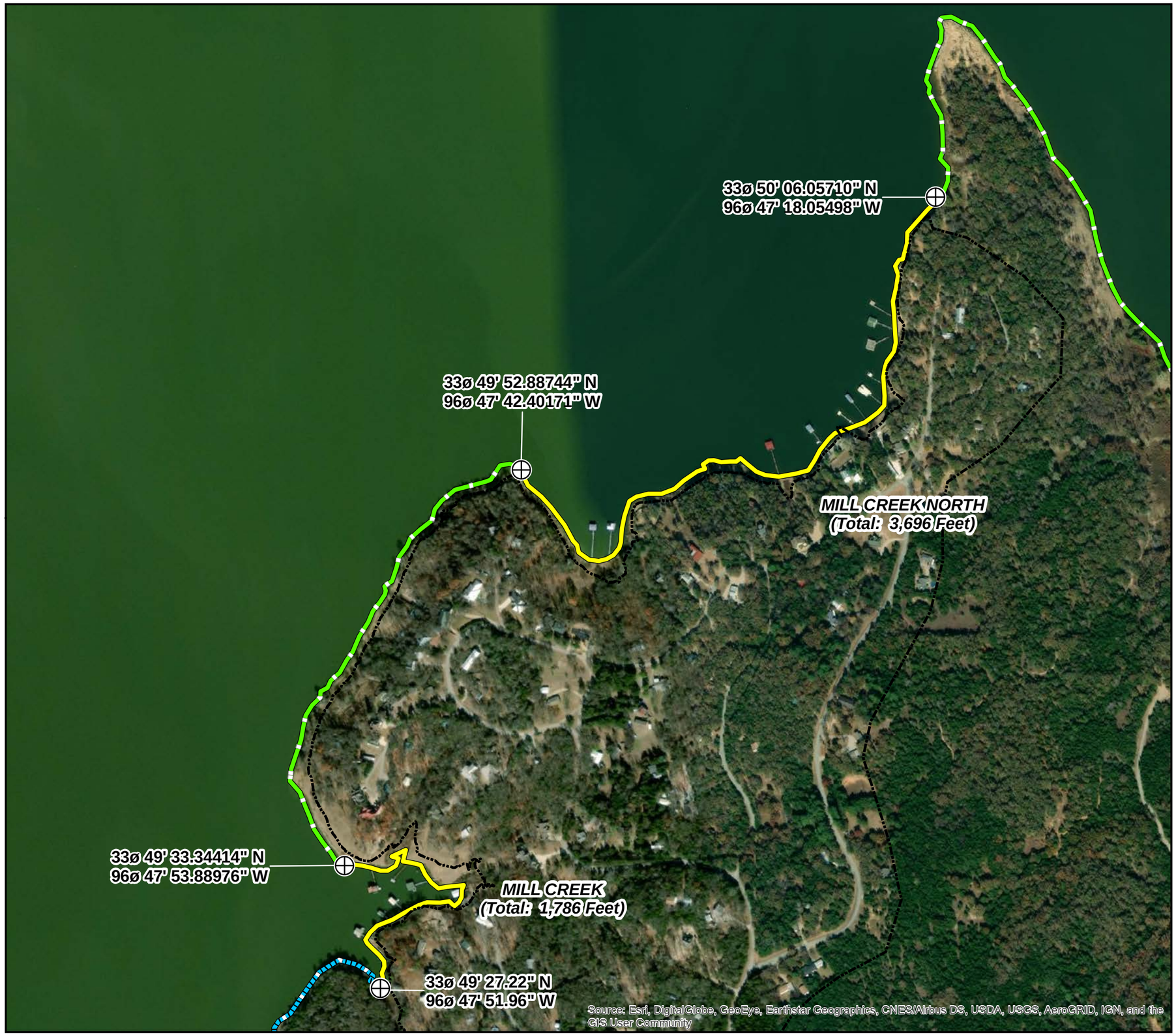
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

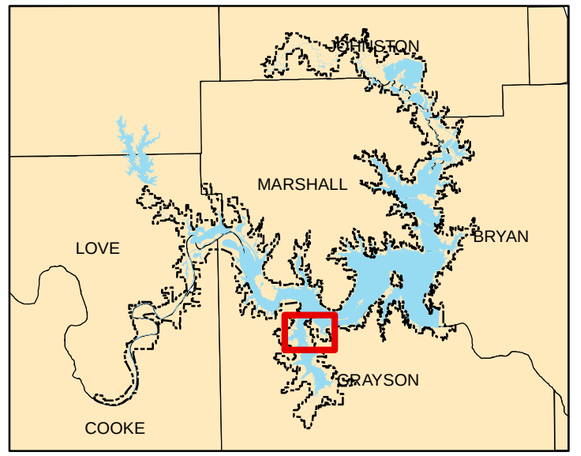
COVE INDEX SHEET 13

N

0 75 150 225 300 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-13





GPS POINT
LIMITED DEVELOPMENT AREA
PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

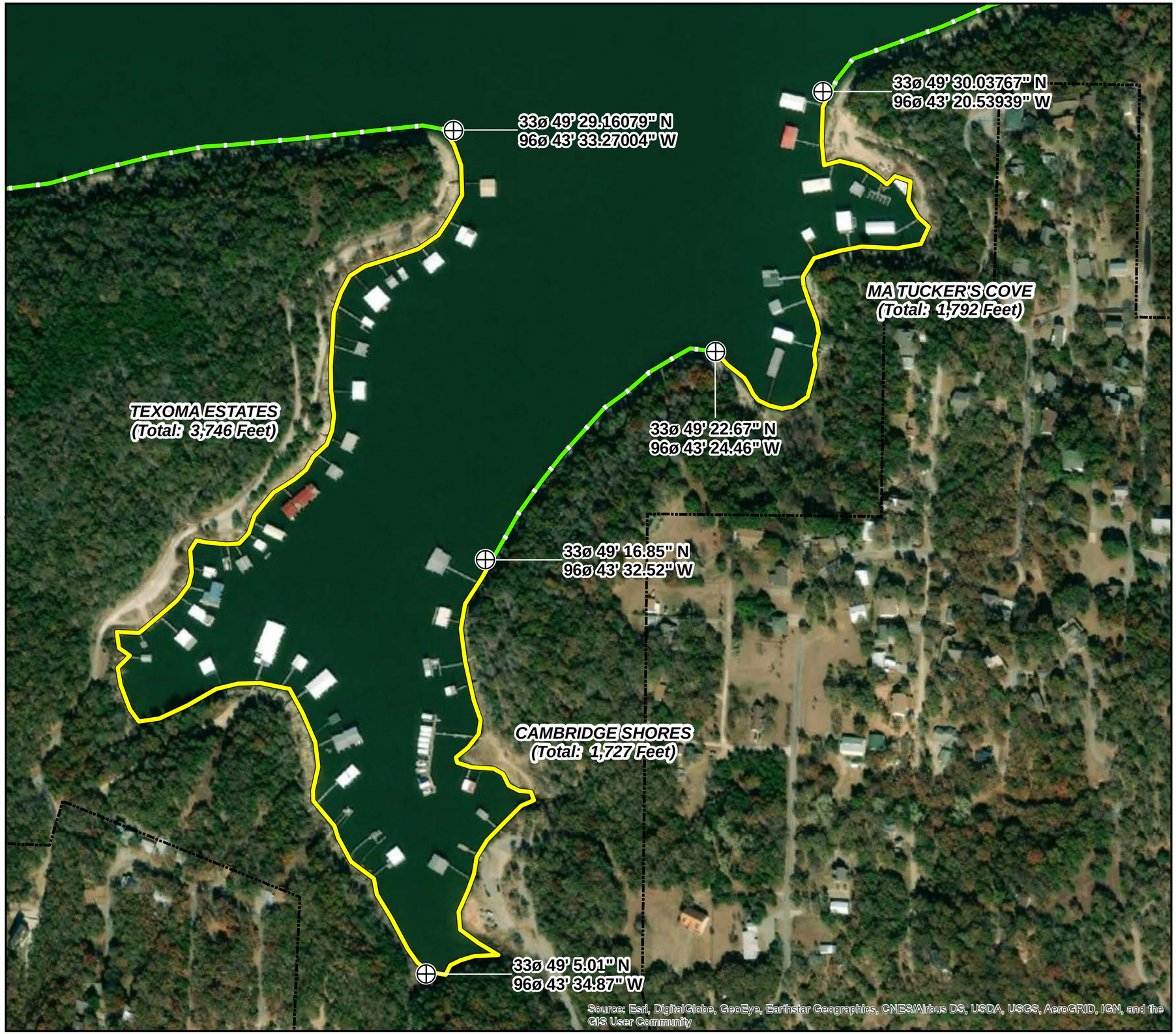
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

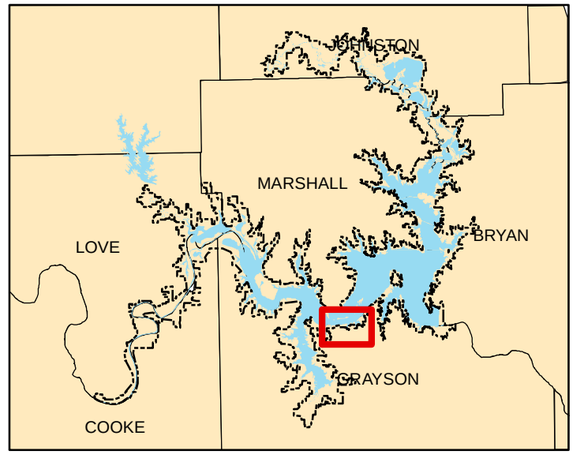
COVE INDEX SHEET 14

N

0 250 500 750 1,000 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-14





GPS POINT

LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

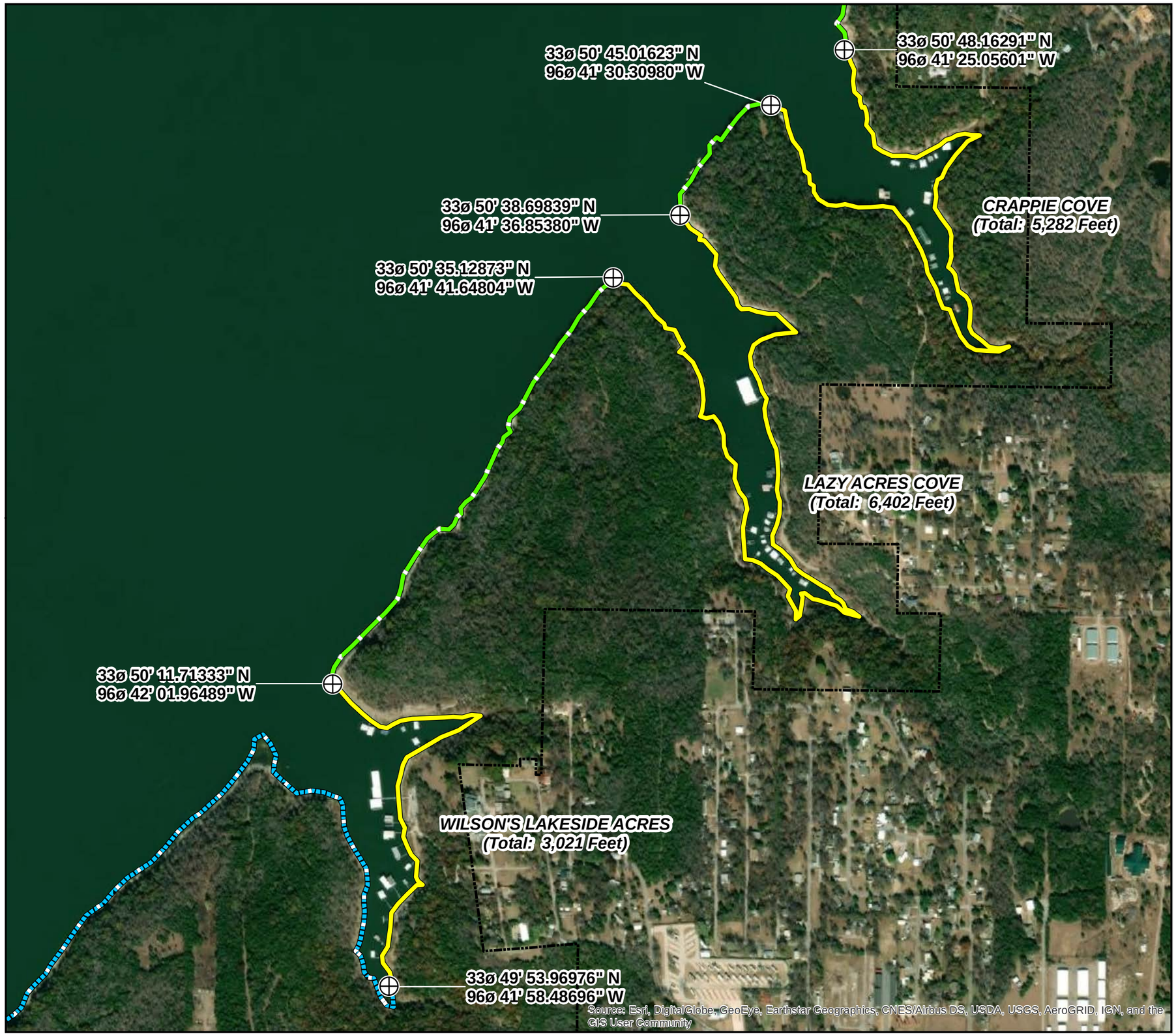
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

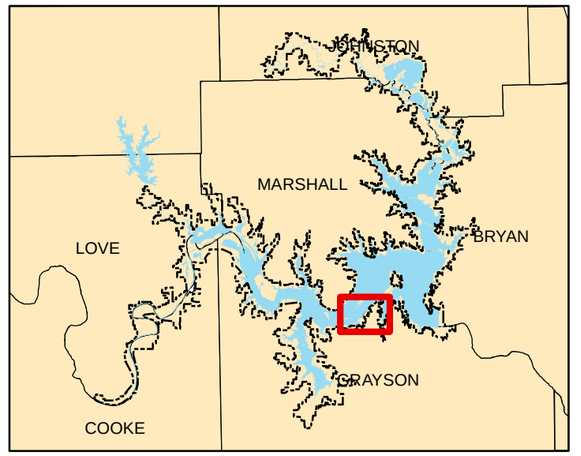
COVE INDEX SHEET 15

N

0 150 300 450 600 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-15





GPS POINT
LIMITED DEVELOPMENT AREA
PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

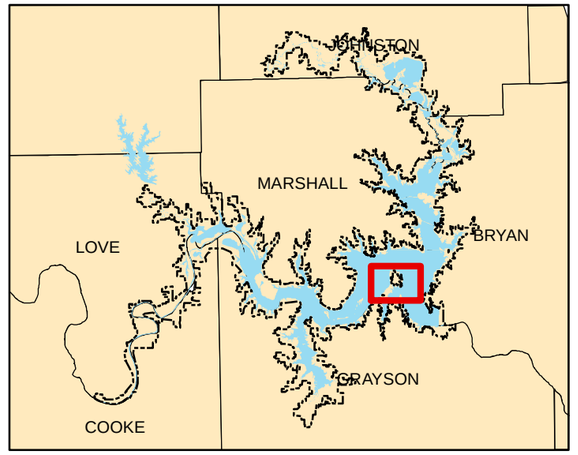
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 16

N

0 300 600 900 1,200 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-16



GPS POINT

LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

PUBLIC RECREATION AREA

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

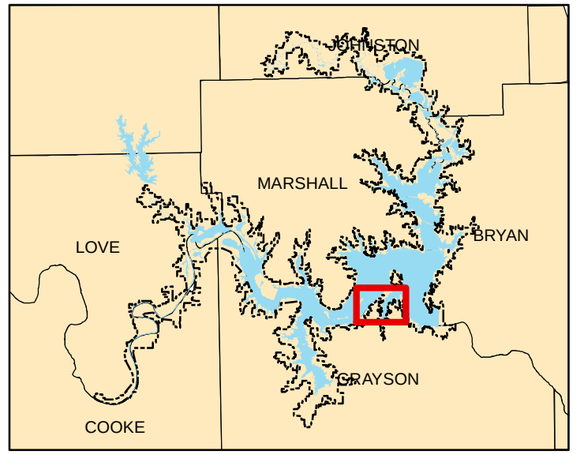
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 17

N

0 50 100 150 200 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-17



GPS POINT

LIMITED DEVELOPMENT AREA

PUBLIC RECREATION AREA

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

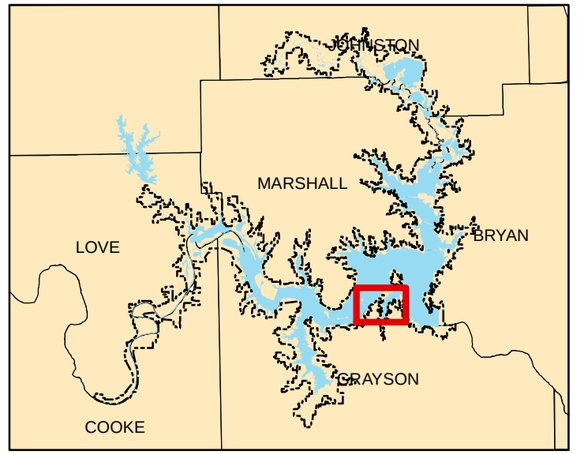
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 18

N

0 75 150 225 300 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-18



GPS POINT
LIMITED DEVELOPMENT AREA
PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 19

N
0 175 350 525 700 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-19

33ø 50' 28.25" N
96ø 39' 30.56" W

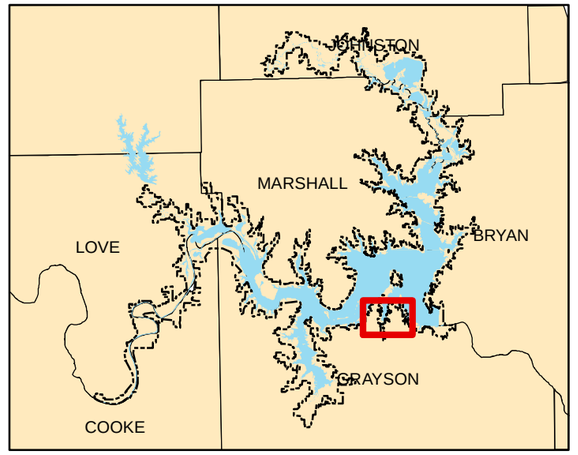
LITTLE MINERAL "D"
(Total: 1,704 Feet)

33ø 50' 12.67" N
96ø 39' 33.44" W

33ø 49' 49.14" N
96ø 39 '47.30" W

LITTLE MINERAL SOUTH
(Total: 5,217 Feet)

33ø 49' 23.56" N
96ø 40' 0.74" W



- GPS POINT
- LIMITED DEVELOPMENT AREA
- PROTECTED SHORELINE AREA
- PUBLIC RECREATION AREA
- FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 20

N

0 450 900 1,350 1,800 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-20

33ø 51' 9.96" N
96ø 39' 11.38" W

LITTLE MINERAL "A"
(Total: 1,735 Feet)

33ø 51' 0.87" N
96ø 39' 19.07" W

33ø 50' 53.40" N
96ø 39' 27.80" W

LITTLE MINERAL "B"
(Total: 356 Feet)

33ø 50' 50.08" N
96ø 39' 27.75" W

LITTLE MINERAL SOUTH

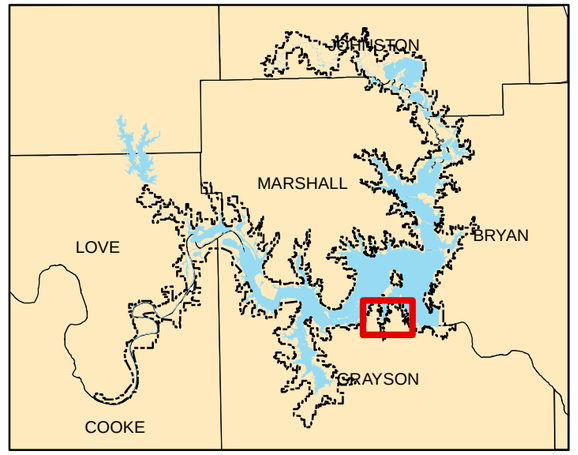
33ø 50' 43.51" N
96ø 39' 24.03" W

LITTLE MINERAL "C"
(Total: 4,743 Feet)

33ø 50' 22.54" N
96ø 39' 16.33" W

LITTLE MINERAL "D"

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



GPS POINT
LIMITED DEVELOPMENT AREA
PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 21

N

0 340 680 1,020 1,360 Feet

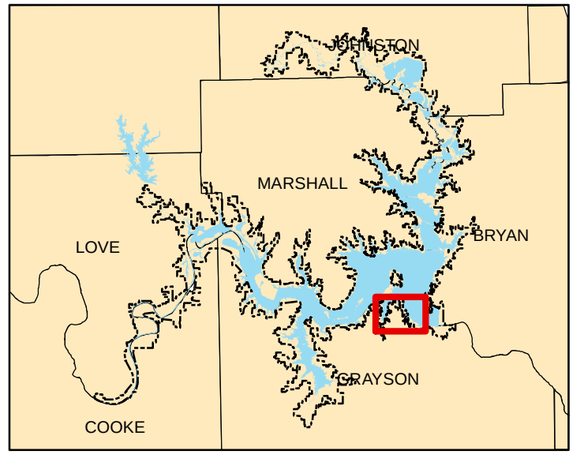
DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-21

33ø 50' 33.27568" N
96ø 37' 42.04584" W

33ø 50' 29.55192" N
96ø 37' 49.72813" W

WISDOM COVE
(Total: 4,977 Feet)

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



⊕ GPS POINT

LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 22

N

0 190 380 570 760 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-22

33ø 50' 04.05161" N
96ø 37' 27.76805" W

(446 Feet)

33ø 50' 03.81358" N
96ø 37' 22.85653" W

33ø 50' 02.86569" N
96ø 37' 30.40362" W

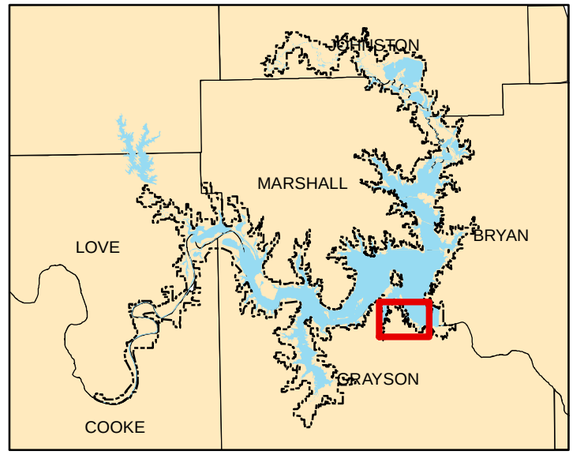
33ø 49' 54.26" N
96ø 37' 24.77" W

ELM RIDGE
COVE
(Total: 9,348 Feet)

(8,902 Feet)

ELM RIDGE
COVE EAST
CONTINUED ON
RT20SMP-CO-24

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



- GPS POINT
- LIMITED DEVELOPMENT AREA
- PROTECTED SHORELINE AREA
- PUBLIC RECREATION AREA
- FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 23

N

0 250 500 750 1,000 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-23

33ø 49' 42.07515" N
96ø 37' 22.34059" W

(142 Feet)

33ø 49' 40.79635" N
96ø 37' 22.23750" W

ELM RIDGE
COVE EAST
(Total: 375 Feet)

33ø 49' 35.04" N
96ø 37' 20.96"W

(113 Feet)

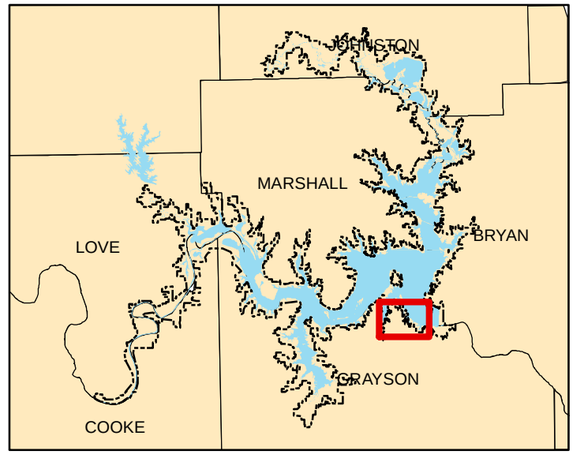
33ø 49' 33.99720" N
96ø 37' 20.41537" W

33ø 49' 33.00" N
96ø 37' 19.88" W

(120 Feet)

33ø 49' 32.03" N
96ø 37' 19.67" W

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



- GPS POINT
- LIMITED DEVELOPMENT AREA
- PROTECTED SHORELINE AREA
- PUBLIC RECREATION AREA
- FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

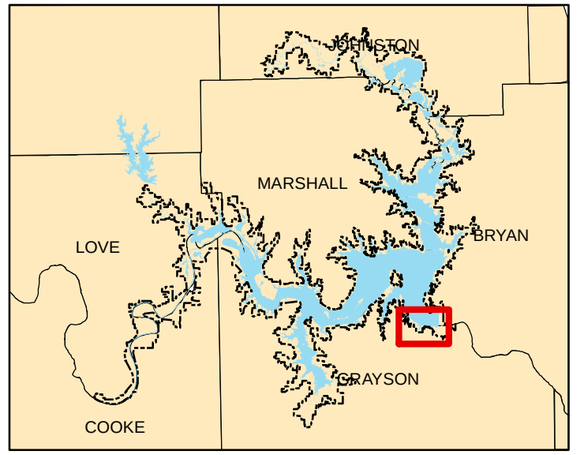
LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 24

N

0 120 240 360 480 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-24



- GPS POINT
- LIMITED DEVELOPMENT AREA
- PROTECTED SHORELINE AREA
- PUBLIC RECREATION AREA
- FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

DENSION DAM — RED RIVER, OKLAHOMA, TEXAS

DENISON DAM - LAKE TEXOMA

LAKE TEXOMA SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 25

N

0 125 250 375 500 Feet

DATE:	MAP NO.
SEPTEMBER 2020	RT20SMP-CO-25

APPENDIX F: SUMMARY OF PUBLIC COMMENTS

Initial Public Scoping Meeting, 29 January through 29 February 2020

COMMENTOR	COMMENT	RESPONSE
PUBLIC	11 comments were received concerning the west side of Caney Creek Yacht Club change it from Limited Development to an Aesthetic, Protected Area to prevent new permits for boat houses and allow Caney Creek Yacht Club to continue maintenance on the berm.	Concur: USACE will remove the area in question from LDA status and designate the area as a Protected Shoreline Area)
	Remove "No Encapsulated Foam Floats in next 5 years." For environmental reasons, give owners 3-5 years to comply before next permit.	Non-Concur: Private floating facilities with existing “un-encapsulated” flotation will be allowed to remain until an inspector’s judgment deems the flotation is no longer serviceable and is failing, at which time it shall be replaced with an approved encapsulated flotation upon notification. A minimum 40% of each flotation section shall be above the waterline at all times (four inches for every ten inches of thickness). If less than 40% of a section is above the waterline, it is no longer considered serviceable and must be replaced with an approved type of flotation. Section 4.8 Flotation
	Clean up shoreline - old and unused walkways	Concur: It is the responsibility of the permittee to remove debris and trash related to the permitted facility or activity. USACE will continue to enforce permit conditions.
	Keep lake level above 612-617	Non-Concur: As flood control lake, there is legislative requirements to maintain certain lake levels

COMMENTOR	COMMENT	RESPONSE
	West side of Elm Ridge Cove changed from Limited Development Area to Protected Shoreline Area to preserve its natural, picturesque beauty.	Non-Concur: This area has historically been maintained as a Limited Development Area. This would require the revocation of a number of permitted mooring buoys etc.
	Major concerns over loss of shoreline - any help would be appreciated.	Shoreline erosion occurs to some extent at all USACE lakes and is generally allowed to continue unless the erosion threatens developed public facilities or private property. Landowners who are concerned that shoreline erosion may threaten their private property should contact the Lake Manager. Options for managing shoreline erosion include granting a no-cost written authorization to landowners to implement erosion control measures or using Government resources to solve the problem using the most cost-efficient cure. Cost efficiency may dictate that USACE would acquire additional land to allow the erosion to continue.

COMMENTOR	COMMENT	RESPONSE
	Create a blanket permit for any boathouse owner to mow an area 50' x 50' in front of the boat dock along with a 6' wide walking trail.	Non-Concur: For many years, adjacent landowners, including boat dock permittees have been authorized (by written permit only) to mow a distance of 30 feet from the USACE boundary line and to have a path leading to their permitted boat dock. The 30-foot distance applies lake-wide except in areas where the boundary line is adjacent to a Public Recreation Area where controlled access is important for visitor security. This SMP revision does not expand the 30-foot rule. There exists a number of grandfathered mowing permits that exceed the 30-foot rule. In most cases these grandfathered permits have existed for 30+ years.
	Make it legal to drive a 4-wheeler to the boathouse to transport tools etc.	Non-Concur: This is a Title 36 violation which includes no off-road operations or unlicensed vehicles. If it becomes necessary to transport tools, equipment, and materials for repair or modification of a private floating facility, permittees should contact the Lake Manager to determine available options for transport.
	Allow placement of rocks along the shoreline at owner's expense to control or slow erosion.	Concur: USACE has a permit process to authorize these actions.
	No breakwater or barge located in soldier creek waterway as desired by Marina Del Rey.	This issue is not part of the SMP revision. Please refer to Section 4.15 of the Plan concerning breakwaters. Commercial marinas are

COMMENTOR	COMMENT	RESPONSE
		governed by lease documents and not the SMP.
	Are electrical inspections required after boathouses have broken loose in high water and brought back?	Electrical inspections can be required by the Lake Manager at any time. These could be requested depending on the event.
	Too much noise from Marina Del Ray music	Excessive noise from any source is a disturbance of the peace issue that can be managed by area law enforcement personnel. USACE may post public use restrictions applicable to excessive noise in accordance with Section 327.12 (d) of Title 36, Code of Federal Regulations. However, posting such restrictions requires signage that is expensive to install and maintain. Excessively loud music from any source is better dealt with as a disturbance of the peace violation as noted above.
	Switch from anchored stabilizing arms to vertical pencils, which have resulted in more damage to many boathouses. Would like high water levels avoided, especially during the spring when high winds occur.	Water levels are not part of the SMP and are addressed in the Texoma Water Control Manual. Section 4.9 of the SMP addresses Anchorage and private floating facilities. Vertical pencil anchors are preferred over other anchorage methods, but site conditions may dictate the use of other options.

COMMENTOR	COMMENT	RESPONSE
	No useful purpose in the policy concerning older fully enclosed boathouses limits and the replacement of galvanized siding to a certain percentage. Request the new SMP allow for full replacement where desirable of any galvanized siding on any boathouse as long as the configuration of the boathouse in not substantially altered.	Non-Concur: General upkeep and maintenance to private floating facilities is allowed. However, once the substructure is not floating or usable the facility must be rebuilt in accordance with Section 4.6 or the facility is relocated from the original approved site.
	Reclassify the area immediately around and adjacent to the boathouse from "Restricted Limited Development Area" to "Limited Development Area" for the shoreline of what was originally Club Site #2 (Tanana Rod and Gun Club)	Non-Concur: Private floating facilities located in those areas that were formerly "Restricted Limited Development" and now zoned "Public Recreation" are now considered "Grandfathered" as they are located outside of an LDA and must comply with Section 4.5
	Would like a Mooring Ball Permit located in Deer Cove to be moved to Butterfly Cove.	Existing permits for mooring balls will remain in effect if the mooring ball is maintained. Mooring balls are prohibited as new installations and relocation of an existing mooring ball is prohibited
	Would like deer hunting gun hunting further away from area around June Hill - feels hunting is too close to residential area.	While USACE is concerned with the safety and well-being of the public, hunting rules and regulations are not part of the SMP revision. Hunting rules and regulations are revised annually after hunting seasons have closed. If changes are desired, individuals should contact the Lake Manager.

COMMENTOR	COMMENT	RESPONSE
	Allow the repair, maintenance, modification, and / or substructure of existing floating and usable enclosed docks without requiring it to be rebuilt to the specifications of new docks so that it may remain enclosed.	Non-Concur: This is a public health and safety issue and is a violation of the SMP rules and guidelines. If the substructure is failing and deemed unserviceable by USACE, the entire structure must be rebuilt to current specifications which do not permit structures to be enclosed.
	For new docks, allow enclosing 3/4 of the exterior walls for storage protection.	Non-Concur: Visual enclosure is not allowed. However corrugated metal may be approved by the Lake Manger for structural integrity provided there is a minimum of 6 feet vertical visible opening maintained on all sides and ends. Section 4.7
Southcentral Region Supervisor - Fisheries Division Oklahoma Department of Wildlife Conservation	Restrict further development of shorelines that are currently designated as protected or aesthetic. Development of additional private boat houses and docks decreases angler access to wind protected shorelines in cove areas of the lake.	Concur: USACE currently has no intent to expand the number of areas were private docks are allowed. No new LDAs have been designated.

COMMENTOR	COMMENT	RESPONSE
	Govern the expansion of boat slips in coves leased to marinas and density of commercial and/or private docks in allowed areas. Conflicts are known to arise between dock owners and fisherman (boat and shore) to the point fishing activity is, at times, minimized or excluded. Ample spacing should be retained to allow desired fishing in these areas.	Noted: The number of slips in commercial marinas is governed by the lease agreement under which each marina operates. The number of slips in a commercial marina is not governed by the Shoreline Management Plan (SMP). The density, or number, of private docks is governed by the SMP within national guidelines included in Engineer Regulation (ER) 1130-2-406. National guidelines specify that private docks may not occupy more than 50% of the shoreline in shoreline areas allocated as Limited Development Areas (LDA). The number of LDAs has not increased with this revision and the 50% density rule is explained in Section 4.11 of the SMP.
	Continue to allow and encourage angler and hunter access to various shoreline areas. This may necessitate access development and/or maintenance.	Concur: The guarantee and protection of pedestrian access across public lands is a principal tenant of ER 1130-2-406 which governs the Shoreline Management Program across all USACE operational lakes. Long-term public access for recreational purposes is specifically mentioned in the USACE natural resources management mission statement published in ER 1130-2-540 - Environmental Stewardship Operations and Maintenance Policies, and ER 1130-2-550 - Recreation Operations and Maintenance Policies.

COMMENTOR	COMMENT	RESPONSE
	Continue or pursue erosion control measures (e.g. rip-rap placement) on highly erodible points and banks. Retain native vegetation to the extent feasible and minimize mowing or under-brushing, especially directly adjacent to the shoreline to improve shoreline stability and provide fish and wildlife habitat.	Concur: While the subject of shoreline erosion control is important to USACE, it is not part of the SMP. Refer to the response above for an explanation of the USACE position on shoreline erosion. Mowing and under-brushing is currently restricted to a strip of public land 30 feet wide along the USACE boundary line unless the mowing is being conducted under a grandfathered permit. With the exception of grandfathered mowing and mowing conducted by USACE and lessees in developed recreation areas, native vegetation is retained along most shoreline areas.
	Provide several boat ramps that are accessible to the public during high water when existing public ramps are often closed.	Although the subject of public boat ramps is not part of the SMP, USACE is interested in providing so called high-water ramps and is willing to discuss construction of such ramps with interested partners.
Texas Parks & Wildlife Department, Wildlife Habitat Assessment Program,	For the islands at Lake Texoma, TPWD recommends retaining the protected shoreline designation, allowing access to the public for passive recreation and hunting.	Concur: Islands are classified in the MP as Environmentally Sensitive Areas (ESA) and are protected from development. ESAs are available to the public for passive recreation to include hunting in some areas.

COMMENTOR	COMMENT	RESPONSE
Wildlife Division	TPWD recommends that the revised Shoreline Management Plan designate protected shoreline areas to correspond to the 2017 Master Plan fish and wildlife sanctuary water surface, environmentally sensitive areas, wildlife management areas and vegetation management areas.	Concur: Shoreline Allocations set forth in the SMP are complimentary to the land classifications in the 2017 Master Plan.
	TPWD recommends that any vegetation clearing and grading activities be conducted outside of the general bird nesting season, March 15 through September 15, to avoid adverse impacts to breeding birds. If clearing vegetation and grading must occur during the nesting season, TPWD recommends surveying the project area to ensure that no nests or young will be disturbed by operations. TPWD recommends retaining a 150-foot buffer around active nests that are found prior to disturbance. Vegetation or areas where occupied nests are located should not be disturbed until the eggs have hatched and the young have fledged.	Non-Concur: USACE recognizes the potential impact that shoreline activities such as vegetation clearing have on nesting birds and seeks to minimize these impacts. The SMP vegetation modification guidelines are designed to allow fire and safety mowing in most areas where the Government boundary adjoins developed private land. The allowable 30-foot mowing/underbrushing zone will incur a minor loss of wildlife habitat and these impacts have been identified. If mowing is not permitted during the spring and summer growing season, the resulting vegetation growth would, in most instances, require heavy equipment for the initial mowing in early fall. USACE requires that permittees use only small, residential mowing equipment. Mowing and underbrushing along the boundary is necessary for public health and safety.

COMMENTOR	COMMENT	RESPONSE
	To minimize potential impacts to avian species, please review the Migratory Bird Treaty Act and TPW Code, Chapter 64, for compliance. TPWD recommends the SMP identify federal and state regulations applicable to birds and to identify best management practices (BMPs) to be used for their protection.	Noted: The SMP is not intended to identify regulations or management practices related to avian species or other wildlife species. Wildlife related information is set forth in the 2017 Lake Texoma Master Plan in Chapter 5 and Chapter 6. The 2017 Master Plan notes that 88,619 acres of Federal land at Lake Texoma are classified for wildlife management purposes. This compares to the next largest land classification of 12,676 acres slated for High Density Recreation activities such as camping, picnicking, etc. The environmental assessment for the SMP identifies that a small fraction of the Federal lands at Lake Texoma may potentially be mowed for fire and safety purposes. In a comprehensive study of potential vegetation modification activities at nearby Grapevine and Lewisville Lakes it was determined that approximately 7.4% of Federal land could be impacted by fire and safety mowing activities if all allowable areas were mowed. Given the much more rural character of Lake Texoma, the percentage of area that is likely to be mowed in the foreseeable future is much less than 7.4%. A more exact percentage has not been calculated, but an educated guess would put the percentage in the range of 1 or 2 percent. Conceptual level

COMMENTOR	COMMENT	RESPONSE
		wildlife management practices are identified in the 2017 Master Plan and include statements regarding the Migratory Bird Treaty Act and the need to work with state and federal wildlife agencies to ensure that native, ecologically appropriate vegetation is protected and encouraged.

COMMENTOR	COMMENT	RESPONSE
	If construction associated with the SMP activities occurs during times when water is present and dewatering activities or other harmful construction activities are involved (such as trenching, dredging, and placement of temporary or permanent fills), then TPWD recommends relocating potentially impacted native aquatic resources in conjunction with a Permit to Introduce Fish, Shellfish or Aquatic Plants into Public Waters and an ARRP. The ARRP should be completed and approved by the department 30 days prior to activity within project waters and/or resource relocation and submitted with an application for a no-cost Permit to Introduce Fish, Shellfish, or Aquatic Plants into Public Waters. ARRPs can be submitted to Bregan Brown, TPWD Region 2 KAST at kirian.brown@tpwd.texas.gov and 512-389-4848.	This is not part of the SMP revision. USACE operates within the bounds of a nation-wide permit under the regulatory program, which address this issue.

COMMENTOR	COMMENT	RESPONSE
	For individuals or entities requesting shoreline or water construction-related permits, TPWD recommends that the USACE require the responsible party to prepare and follow an aquatic invasive species (AIS) transfer prevention plan which outlines BMPs for preventing inadvertent transfer of aquatic invasive plants and animals to and from the project site. These BMPs may include removal of mud/plant debris from all equipment and rinsing, preferably with high pressure and/or hot water and allowing equipment to dry before use in the project area. The BMPs should be repeated after use to prevent transfer to another water body. For more detailed information about how to avoid spreading harmful aquatic invasive species, please refer to the TPWD Clean/Drain/Dry Procedures and Zebra Mussel Decontamination Procedures for Contractors Working in Inland Public Waters found on the TPWD Wildlife Habitat Assessment Program webpage.	USACE will provide boat dock permittees a copy of well-publicized BMPs regarding the potential transfer of aquatic invasive species.

COMMENTOR	COMMENT	RESPONSE
	TPWD recommends the SMP include information regarding TPW Code and prohibited aquatic invasive species. TPWD recommends that applicants to the USACE for shoreline development coordinate with TPWD KAST to develop an ARRP, start the process to obtain a relocation permit, if needed, and develop an AIS transfer prevention plan. TPWD recommends the SMP indicate that coordination with TPWD KAST would be necessary for activities that involve dewatering, trenching, dredging, or filling to ensure protection of aquatic life and to ensure that disturbance activities do not result in a resource damage or restitution concern.	Invasive species and related management practices are not included in the SMP but are fully addressed in the 2017 Lake Texoma Master Plan as a special topic in Chapter 6. In the unlikely event that dewatering, trenching, dredging or filling would be associated with a Shoreline Use Permit, these activities would be coordinated with USACE regulatory personnel pursuant to Section 404 of the Clean Water Act. This coordination may call for coordination with the TPWD KAST and development of an ARRP.
	TPWD recommends the SMP indicate that those engaged in treatment or removal of shoreline or aquatic vegetation must receive the appropriate permits from TPWD to comply with TAC Title 31, Part 2, Ch 57, Subchapter L.	Removal or treatment of shoreline vegetation or aquatic vegetation via a Shoreline Use Permit is prohibited. If treatment of removal of aquatic vegetation is determined by USACE to be necessary, such as control of hydrilla near boat ramps, USACE will coordinate with TPWD including application for appropriate permits.

COMMENTOR	COMMENT	RESPONSE
	For actions covered by the SMP that involve disturbance to inundated stream channels, TPWD recommends the applicant contact Tom Heger, TPWD - Inland Fisheries at Tom.Heger@tpwd.texas.gov to determine if a permit is needed and for permit application forms and additional information.	As with the issue of trenching, dewatering, filling, etc., any action involving disturbance to inundated stream channels would involve coordination with USACE regulatory staff which may lead to contact with TPWD fisheries personnel.
	TPWD recommends that applicants to USACE for shoreline development permits, assess their project area for habitat suitable for species on the TPWD RTEST county list and to design the project to avoid impacts to state listed species and their habitats. For projects being conducted in native habitats or ecologically sensitive areas in Texas, TPWD recommends the USACE seek coordination with the TPWD Wildlife Habitat Assessment (WHAB) program for input regarding potential impacts to state-listed species.	USACE will continue to work closely with the wildlife departments in both Oklahoma and Texas. The 2017 Lake Texoma Master Plan designates land classifications that identify environmentally sensitive areas (ESA) and includes listings of state and federal listed species. ESAs are protected for cultural, environmental, and aesthetic resources. The SMP shoreline allocations are in-line with the Master Plan land classifications to address these issues.
	TPWD recommends referring to the TPWD WHAB website for pre-project planning resources, laws and regulations, project review request forms, and information on other planning tools and best management practices. Please note that applicants can either use the WHAB Review Request Form or submit their project information in a generic report format with appropriate details and maps of the project.	Actions that could potentially be authorized via a Shoreline Use Permit are relatively minor, such as placement of a private boat dock. USACE will ensure that any action authorized by a Shoreline Use Permit is in compliance with state and Federal rules and guidelines related to wildlife and wildlife habitat.

COMMENTOR	COMMENT	RESPONSE
	Because Harris mud crabs (Rhithropanopeus harrisii) burrow into Styrofoam supports and degrade the material, TPWD recommends that future construction and renovations of boat docks and floats prohibit the use of Styrofoam and require encasement in molded plastic or other suitable durable materials.	Concur
	Terrestrial state-listed species may only be handled by persons authorized through the TPWD Wildlife Permits Office for relocation, surveys, and monitoring. For encounters with rare species that will not readily leave the premises, TPWD recommends obtaining authorization and translocating the animal. Translocations of reptiles should be the minimum distance possible no greater than one mile, preferably within 100-200 yards from the initial encounter location. Handling of state-listed aquatic species is done under the authority granted through KAST coordination.	As previously noted, any action authorized via a Shoreline Use permit will be evaluated by USACE for the need to coordinate with state and Federal wildlife officials.

COMMENTOR	COMMENT	RESPONSE
	Recommendation: For soil stabilization and/or revegetation of disturbed areas within the project area, TPWD recommends erosion and seed/mulch stabilization materials that avoid entanglement hazards to snakes and other wildlife species. Because the mesh found in many erosion control blankets or mats pose an entanglement hazard to wildlife TPWD recommends the use of no-till drilling, hydromulching and/or hydroseeding rather than erosion control blankets or mats due to a reduced risk to wildlife. If erosion control blankets or mats will be used, the product should contain no netting or contain loosely woven, natural fiber netting in which the mesh design allows the threads to move, therefore allowing expansion of the mesh openings. Plastic mesh matting should be avoided.	The need to use soil stabilization materials that prevent entrapment of wildlife species is addressed in the 2017 Lake Texoma Master Plan in Chapter 5 where wildlife management practices are described. Administration of the SMP must not contradict the management direction specified in the Master Plan.

COMMENTOR	COMMENT	RESPONSE
	TPWD recommends taking precautions to avoid impact to SGCN flora and fauna, natural plant communities, and priority habitat types of the ecoregion (limestone cliffs, native mixed grass and tallgrass prairies, oak woodlands and savanna, riparian and floodplain forest, springs, and wetlands) when working in Grayson and Cooke counties, Texas, or if encountered during project activities. Individual rare plants or habitats found to contain rare plants should be clearly marked as avoidance areas prior to construction. Where priority habitats or rare plants cannot be avoided, please make a detailed record of the occurrence and contact TPWD to determine if additional conservation practices are available.	The importance of SGCN flora and fauna, natural plant communities, and priority habitats by ecoregion in Texas and Oklahoma is noted in the 2017 Lake Texoma Master Plan. These important species and habitats are taken into account in all management actions.
	To aid in the scientific knowledge of a species' status and current range, TPWD encourages reporting encounters of state-listed species and SGCN to the Texas Natural Diversity Database (TXNDD) according to the data submittal instructions found at the TXNDD webpage.	Noted
	TPWD recommends retaining native vegetation to the extent feasible and minimizing mowing or under-brushing, especially directly adjacent to the shoreline to improve shoreline stability and provide fish and wildlife habitat.	Noted: Shoreline Use Permits take into consideration environmental, health and safety issues before they are issued.

COMMENTOR	COMMENT	RESPONSE
	Because light pollution affects wildlife and ecosystems, TPWD recommends the SMP address lighting of shoreline and water facilities. TPWD recommends new lighting or retrofitting existing lighting to contain the minimum amount of night-time lighting needed for safety and security. TPWD recommends utilizing dark-sky friendly lighting that triggers on only when needed, is down-shielded, is as bright as needed, and minimizes blue light emissions. TPWD recommends minimizing the cumulative adverse effects of sky glow by focusing light downward, with full cutoff luminaries to avoid light emitting above the horizontal. Appropriate lighting technologies and BMPs may be found at the International Dark-Sky Association website.	The importance of the dark skies initiatives and best management practices will be added to the SMP in Section 4.13 - Exterior Lighting.

COMMENTOR	COMMENT	RESPONSE
	WHAB may identify the following additional TPWD coordination that is needed as applicable to the type of activities being conducted, or applicants may contact these programs directly for more information:• TPWD Kills and Spills Team (KAST) (regarding an aquatic resourcerelocation plan and an aquatic invasive species transfer prevention plan or to obtain a permit when activities involve dewatering, trenching, dredging, or filling that may impact native aquatic life)• TPWD Marl, Sand, Gravel, Shell or Mudshell Permits (to obtain a permit for streambed disturbance to navigable tributaries on the south side of the Red River channel in Lake Texoma that were present prior to inundation)• Aquatic Vegetation Removal Permit for Exotic Species (to obtain review and authorization for aquatic vegetation treatment in public waters)• TPWD Wildlife Permitting (to obtain a permit for handling terrestrial state-listed threatened and endangered species)"	Noted
	TPWD encourages the USACE to consider priority habitats of the ecoregion and habitats for state-listed threatened and endangered species and SGCN from RTEST when inventorying habitats, updating the shoreline use classifications, and reviewing requests for shoreline use authorization.	Noted

Draft Release Public Comment – 02 December 2020 through 02 January 2021

COMMENTER	COMMENT	USACE RESPONSE
Oklahoma Dept of Wildlife Conservation	We are in general support of the current draft and continue to encourage the Corps to maintain or even further protect public fishing access and opportunities. The governance of dock expansions, capacity, spacing, and consideration of anchorage impacts should help protect the shoreline fishing qualities that exist on the lake. Additionally, the protection of shoreline vegetation will help provide shoreline stabilization while also providing wildlife and fisheries (while inundated) habitat. We appreciate your endeavors to wisely manage this tremendous recreational resource.	Noted. The US Army Corps of Engineers is committed to protecting public access for fishing and other public recreation-related activities. Balancing private uses with protection of natural resources and public uses is a principal tenant of the Shoreline Management Plan.
Southwestern Power Administration, Department of Energy, Oklahoma	1. Updates made in the SMP should not negatively impact hydroelectric power operations at Lake Texoma	Concur.
	2. Southwestern suggests explicitly stating within the SMP that the SMP does not address water level management, and lake levels will fluctuate depending on a variety of factors, including rainfall, flood control operations, water supply withdrawals, and power demand. Southwestern requests that such a disclaimer be included with the minimum design standard for docks. On Page 16, Section 4.6, the SMP states that: "All intended private floating facility sites must allow for seven (7) feet of depth (at normal pool elevation of 617 feet NGVD29) of water under private floating facilities at the facility's lakeside or slip end to prevent damage to boating equipment and to allow for normal water level fluctuation." The water supply users and Southwestern have full Congressional authority to draw the lake	Non-concur. Hydropower storage allocation and seasonal pool management are discussed in the 2017 Lake Texoma Masterplan that informs the public of these primary project missions. The Shoreline Management Plan must be compatible with the Master Plan and, as such, is not the appropriate document to include a disclaimer as noted in your comment. Lake Texoma has historically maintained an elevation of 612 or

	down to 590 ft during drought periods per their Congressionally authorized storage allocations that are to be utilized solely for water supply and hydropower production. Dock owners should be aware that, if their dock cannot reach a minimum depth for operation at lake elevation 590 ft, the dock may be unusable during periods of drought.	above, approximately 85 percent of the time, which adequately serves recreational stakeholders most of the time. It is well known and understood that the primary ongoing water usage from Lake Texoma is for municipal/industrial water supply and hydropower, which are given top priority in the overall management of Lake Texoma. The general public understands that periodic impacts from droughts and floods can greatly impact stakeholders' personal interests and the overall use of the project. Shoreline Use Permit applicants are informed during the application process of pool fluctuation and the effects it could have on their individual facility

	3. It should be noted that Lake Texoma has operated under a seasonal pool since the late 1990's, and the top of conservation pool ranges annually from elevation 615 to 619 ft. Prior to the permitting and construction of additional facilities in or around Lake Texoma, developers should continue to be informed that the seasonal pool fluctuates from 615 to 619 ft every year and the actual pool elevation can and will experience routine and significant fluctuations both in the flood pool and conservation pool at Lake Texoma. Developers should also be informed that per Section 7-06 of the Lake Texoma Water Control Manual: "Although recreation is an authorized project purpose, no storage is provided specifically for that purpose and no special regulations are made for recreational activities."	See above response.
	4. Southwestern supports efforts to improve the water quality at Lake Texoma. In addition to being beneficial for water supply, aquatic habitat, and recreation, increased water quality has a positive impact on the severity of seasonal depleted dissolved oxygen (DO) conditions in the lake and tailwater during releases.	Noted. USACE strives to balance the many diverse project purposes and appreciates the support Department of Energy offers.
Oklahoma Department of Environmental Quality	No adverse environmental impacts under DEQ jurisdiction are anticipated.	Noted. Thank you for the Comment.

Public	The overall SMP revision is a major improvement in information and planning. Several improvements in the Draft 2021 Lake Texoma Shoreline Management Plan Revision are noted particularly electrical requirements. The maps and images of the lake and coves with geo pins for end points are great improvements. However, we continue to be concerned that USACE policies, standards and procedures including Shoreline Management Plans are consistent with the National Fire Protection Association (NFPA) 303 and 70 Standards and provide adequate fire and electrical protection for Multi-owner or Community Boat Houses and electric shock drowning. Section 4.16, In accordance with the nationwide Corps of Engineers Non-Recreational Outgrant Policy dated March 30, 2009, no new utility licenses will be issued across Government Property. An “alternative energy source” such as solar power, generators, or other means are recommended. In certain land and water areas the statement appears to prohibit new power lines to private floating facilities used for required battery charging and importantly higher current electric heaters for engine compartments, cabin utilities and backup power for boat bilge pumps. Many vessels require 30 or even 50-amp shore power electric service for routine use as well as preventative and corrective maintenance. Supplemental boat generators are not designed for continuous use and can cause hazardous carbon monoxide in closed docking spaces. Completely winterizing boats and their power and support systems causes many boats to be virtually unusable for several winter months and less financially feasible for public recreation. If this statement is	USACE recognizes the difficulties that may be encountered with regard to providing code compliant utility service to private floating docks or other structures based on the requirements of the USACE Non-Recreation Outgrant Policy (Chapter 17 of ER 1130-2-550). However, compliance with the terms of Chapter 17 of ER 1130-2-55 are not discretionary at the project or District level. Accordingly, the terms of Section 4.16 in the SMP revision are necessary for the SMP to be in compliance with USACE regulations.” The intent of the Non-Recreation Outgrant Policy is to meet legitimate needs for the use of project lands and waters and to allow utility placement only where no viable alternatives exist. Experience in administering the Shoreline Management Plan at Lake Texoma and other USACE lakes has demonstrated that viable alternatives in the form of solar-electric installations, or

	interpreted correctly, it is an example of federal government overreach placing unreasonable burdens on the public.	temporary use of portable generators are generally sufficient to meet the electrical needs associated with private boat docks while significantly reducing the negative visual and public safety aspects of conventional overhead or buried electrical service lines.
Public	Congratulations on the much-needed proposed plan revisions. This reflects a lot of thought and hard work by those involved. Has any provision been made to assist in the reconstruction of critical shoreline erosion and degradation with shoreline communities with leased shoreline property such as the case with us at the Gainesville boat club? This would be of great benefit to its preservation and conservation goals of the USACE and lake management would it not?	Noted. Lake Texoma is subject to extreme bank erosion. Although it is not economically feasible to implement an extensive shoreline erosion control program, USACE is interested in reducing or slowing erosion whenever possible. The USACE's first priority for its limited erosion control funds is the shoreline associated with its Flood Risk Management operations and protection of developed USACE managed recreation areas. However, the USACE has permitted numerous shoreline erosion control structures to adjacent property owners, lessees, and other interested parties, via the SMP and the

		USACE Regulatory authority pursuant to the Clean Water Act, and we are committed to continuing to do so.
Public	Requests that the private floating facility construction and size requirements and the structure enclosures be reevaluated: Section 4.6.1 - Need a min of 16' width to accommodate boats with lifts, i.e. many boats are 11' in with then you need the space for a boat lift. Also, many cruiser (Sea Rays, etc.) boats have a 14' beam width and does not allow you enough room to pull/back in with fenders out. Make slip width to 55' to help with extensions on boats. Additionally, slip decking should be a percentage of the dock size, so if you have one slip or 5 should be proportionate i.e. percentage of dock size could be used.	Non-concur. USACE has reviewed Sec. 4.6.1, and we believe that the proposed increases in size requirements have allowed for much more than minimal requirements to berth a private vessel. Furthermore, the many commercial marinas on Lake Texoma provide excellent docking facilities for the larger vessels and it is the intent of the SMP to encourage individuals to use commercial marinas in lieu of constructing more and larger private docks. The private floating facility size requirements listed in the SMP are generous and were increased a reasonable amount over past requirements.
	Section 4.6.1 (a) - Slip width should be 16', slip length should be 55', and walkway length should be 150' because the lake level determines the length of the walkway with water depth. To use 100’ is not usable. We have built many	Concur. We have reviewed the SMP and agree with your comment to increase the allowable length of walkways from the

	docks because of elevation most docks have 125’ of walkway some have more, only one dock we have built in the last 5 years has 100’ or less.	current 100 feet to 150 feet.
	For Section 4.7 - Structure Enclosure, the use of Polygal wall panels 11mm is a great product has a 10 warranty and does not damage the dock or the boats inside. Thee use of only visible clear panel causes a problem to the dock/boats. Please consider a tinted panel with a “Legal” tent.	Non-concur. In order for visual inspections to be efficient and effective, clear plexiglass is required.

Total Commenters: 6 Total Comments: 11

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APPENDIX G: SUMMARY OF SHORELINE MANAGEMENT CHANGES

1996 Shoreline Management Plan (SMP)	Proposed 2020 Shoreline Management Plan (SMP)	Justification of the Proposed Action
Public Law National USACE Policy and Engineer Regulation 1130-2-406 The 1996 plan contains numerous outdated requirements related to changes in national USACE policy and to ER 1130-2-406 that affect permit administration, transfer of permits, permit termination, dock removal/replacement, prohibited facilities such as submersible pumps, flotation requirements and required response times. Changes to shoreline allocation resulting from implementation of Section 3182 (j) and (k) of the Water Resources Development Act of 2007 (WRDA 2007) are not fully addressed in the 1996 SMP. This law resulted in disposal of approximately 635 acres of public land to the City of Denison and changes to Shoreline Allocations.	Public Law National USACE Policy and Engineer Regulation Numerous changes are proposed to bring the revised plan into compliance with national USACE policy and the current version of ER 1130-2-406. Changes resulting from implementation of WRDA 2007 are also incorporated.	Public Law National USACE Policy and Engineer Regulation Most of the changes related to national policy and changes in ER 1130-2-406 were minor and were implemented administratively as they became effective. Per ER 1130-2-406, the District Commander can make minor administrative changes without implementing a public involvement process. Changes resulting from implementation of WRDA 2007 were implemented through publication of an Environmental Impact Statement (EIS) and full public involvement.

1996 Shoreline Management Plan (SMP)	Proposed 2020 Shoreline Management Plan (SMP)	Justification of the Proposed Action
Shoreline Allocations Shoreline Allocations (in miles) in the 1996 SMP consisted of the following: • Prohibited Access Areas: 7.5 • Protected Shoreline Areas: 382.0 • Limited Development Areas: 21.0 • Public Recreation Areas: 174.5 • Aesthetic Areas: 76.34 • Restricted Areas: 1.81 In the 1996 plan, numerous public recreation areas existed with a larger footprint than they do today. The 1996 plan aligned shoreline allocation with the land classifications included in the 1978 version of the Lake Texoma Master Plan. The 1978 Master Plan and related supplements were revised in 2017.	Shoreline Allocations Shoreline Allocations in the 2020 SMP revision consist of the following: • Prohibited Access Areas: 6.63 • Protected Shoreline Areas: 501.99 • Limited Development Areas: 25.99 • Public Recreation Areas: 147.80 Completion of the 2017 revision of the Lake Texoma Master Plan resulted in numerous changes to land classification. For example, several large recreation areas were reclassified to Multiple Resource Use Lands with emphasis on Wildlife Management. Several areas were also reclassified as Environmentally Sensitive Areas or Multiple Resource Use Lands emphasizing Vegetation Management. Many of the 2017 changes in land classification resulted in shoreline allocation changes from Public Recreation Area to Protected Shoreline Areas in the 2020 SMP. Limited Development Areas were increased by 4.99 miles.	Shoreline Allocations Many of these changes reduced the relic public recreation areas and aligned allocations with Master Plan updates. The majority of other shoreline allocation changes were to align with updated Master Plan land use classification, which were based on historic land uses, much of which was moved to Multiple Resource Management – Wildlife Management. Shoreline miles for each of the four shoreline allocations were measured using Geographic Information System (GIS) technology at approximately elevation 617.0 NGVD29. These measurements do not include shoreline areas that are not bordered by private land and therefore do not equal the shoreline miles stated in the 2017 Master Plan. Examples of shorelines not measured are

1996 Shoreline Management Plan (SMP)	Proposed 2020 Shoreline Management Plan (SMP)	Justification of the Proposed Action
	The 2017 Lake Texoma Master Plan revision aligned land use classification with current conditions and management goals, and the proposed Shoreline Management Plan aligns shoreline allocation with those land use classifications.	shorelines that surround islands and deltas formed by sediment deposition. Shoreline allocation changes were needed to reflect the land classification changes in the Master Plan. The increase in Limited Development Areas was not the outcome of adding new LDAs but was simply the result of improved technology in measuring devices and software that allow the precise measurement of the zoned footage within individual shoreline allocations versus the technology used in 1996. In certain Coves the LDAs zoned footage was reduced due to the following reasons: Insufficient water depth; protection from excessive wind fetch, and extreme/unsafe topography/terrain of the adjacent shoreline.

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Public Recreation Areas: The 1996 SMP states “Facilities (in quasi-public and private club sites) will be designated for restricted limited development in the Shoreline Management Plan”.	Public Recreation Areas: Those shoreline use permits in good standing and currently located in quasi-public and private club site recreational areas will be grandfathered and must meet the conditions stated in Section 4.5 “Grandfathered Structures and Activities.”	The term “restricted limited development” in the 1996 SMP was done away with to align with the 2017 Master Plan. The 2020 SMP clarifies how PFF’s will be managed in lessee-operated areas. Although lessee-operated areas are classified in the 2017 MP as High Density Recreation Areas, changes were needed in the 2020 SMP to more precisely explain how the PFF’s located in these leased areas will be managed. This change is needed to better define the requirement stated in ER 1130-2-406 mandating that those who are granted a Shoreline Use Permit must have “legal access” to fee-owned government land. This requirement will help ensure that permittees will not trespass across private property to access fee-owned government land.
Shoreline Use Permits An Application for Shoreline Use Permit, SWT Form 1133(See Appendix A), for a permit must be made to the Lake Manager along with two sets of structural plans on 8.5 x 11 inch paper, proof of legal access, a detailed site map depicting the proposed location of the private floating facility and the planned construction location area.	Shoreline Use Permits Shoreline use applicants must show proof of legal access to fee-owned government land.	

1996 Shoreline Management Plan (SMP)	Proposed 2020 Shoreline Management Plan (SMP)	Justification of the Proposed Action
Private Floating Facilities Shoreline Use Permits are required for all private floating facilities, excluding registered vessels. Minimum Design standards specifications outlines requirements for the private floating facility. No restriction of number of PFF's a household or individual may own.	Private Floating Facilities PFF's include privately-owned boat docks, platforms, breakwaters, and buoys whether single owner or multi-owner. New mooring Buoys are prohibited. Existing mooring buoys in good standing will be renewed. Minimum design standards set minimum and maximum size requirements on slip length and width, as well as square footage on platform docks. Header size increased to eight (8) feet Max. A family household (single individual or married couple) may own a maximum of two slips in any dock and may not own an interest in more than one dock on the lake. A family household is defined as an individual/individuals living at the same address. A family household may have only one of the two following options: (1) Ownership of a single owner dock (up to two (2) slips).	This combining of all PFF's, simplifies the application and requirements process for the applicant. No way of identification and tracking of mooring buoys makes it difficult to track responsibility and ownership when displaced by high waters. This change clarifies min. and max design standards and sizes for allowable PFF's. This increase in header size, aids the PFF owner by giving additional space for storage of vessel equipment and aids in safe maneuvering around the facility. The change related to ownership minimizes PFF's being used as a commercial business. It is a violation of Title 36 when a PFF is leased, rented, sub-let or provided to others by any means of engaging in commercial activity(s)

1996 Shoreline Management Plan (SMP)	Proposed 2020 Shoreline Management Plan (SMP)	Justification of the Proposed Action
	(2) Ownership of 1 or 2 slips in a multi-owner dock. A Special Activity Permit for the construction/repair of a PFF will be required when the construction/repair occurs on public land.	by the permittee or his/her agent for monetary gain. This requirement is added for all construction of PFF's that would occur on fee-owned government land, to ensure accountability and restoration of the area by the PFF owner (s). This will reduce environmental impacts to the shoreline and protect the public interest.
Anchorage of Private Floating Facilities Design of these facilities will be included in the engineered plans for each separate structure and will be developed in accordance with the site where the facility will be moored, taking into consideration the water depth, wind loads, and exposure to fetch. New docks, or relocated docks, are to be located no closer than 50' from the nearest point of an adjacent dock.	Anchorage of Private Floating Facilities The preferred anchorage method will be pencil anchors (steel pipes driven into the lake bottom and attached to a PFF by a collar assembly). Stiff arm anchorage and other use of shoreline-obstructive cables and "concrete dead man" anchorage are prohibited unless allowed on a case-by-case basis due to "conditions not suitable for pencils" at the Lake Manager's discretion. Private floating facilities and the associated anchorage system cannot render any portion of a cove non-	This ensures the safety and navigability in and around PFF's within a cove for both vessels on the water and pedestrian foot traffic along the shoreline. This preferred anchorage method is less intrusive to the shoreline and minimizes ground disturbance.

1996 Shoreline Management Plan (SMP)	Proposed 2020 Shoreline Management Plan (SMP)	Justification of the Proposed Action
	navigable or create any navigation hazard regardless of lake elevation	
<u>Walkways and Stairs</u> Walkways shall not be less than 3 feet and no more than 4 feet wide. All walkways must have one handrail as a minimum the entire length of walkway. Licenses for existing stairways/tramways will continue to be renewed if the facility is being maintained in a safe condition. All steps and stairways must be structurally sound and safe with adequate handrails. If painted, all steps and stairways will be painted a color that is visually compatible with the natural background. White, yellow, orange, and other highly visible colors will not be allowed. Lightweight steel or concrete may be used for these structures, provided the concrete structures are kept at ground level and do not project above the surface of the ground.	<u>Walkways and Stairs</u> New private floating facility plans must include plans signed/stamped by a licensed structural engineer showing the proposed handrail construction details. Handrails will be 36-48 inches high, with an intermediate rail approximately ½ the distance below the top rail. Stairways can be authorized on a limited basis where the Lake Manager has verified no safe viable alternative exists for accessing the permitted dock. All stairways, including the use of natural or manmade materials, requires a Real Estate instrument which can be renewed if the facility is maintained and in safe condition. Unless a license is re-issued to another party, all steps will be removed from public property at the expense of the licensee upon termination of the license. No part of the stairway may extend over the lake at conservation pool (elevation	These requirements adhere to EM 385-1-1 Requirements for existing and new stairways ensure public safety, and ensures compliance with EM 385-1-1, and Real Estate requirements for issuance of the license.

1996 Shoreline Management Plan (SMP)	Proposed 2020 Shoreline Management Plan (SMP)	Justification of the Proposed Action
	617.0 NGVD29). Stairways may not extend below the conservation pool elevation, and must terminate on a shoreline otherwise inaccessible except by boat. Stairways must be of metal or concrete construction. Stairways must meet the standards stated in EM 385-1-1, with regard to tread and riser specifications, handrails, and allowable angle of ascent. Existing Stairways/Tramways must be certified by a licensed structural engineer and certification submitted to the Lake Manager prior to renewal of the license. In all cases the Government reserves the right to prohibit stairway construction on sheer rock bluffs or other sensitive landscape features. Modifications of existing stairways so that they are compliant with the Americans with Disabilities Act (ADA) standards will be considered on a case-by-case basis in situations where the owner or immediate family members of a	

1996 Shoreline Management Plan (SMP)	Proposed 2020 Shoreline Management Plan (SMP)	Justification of the Proposed Action
	permitted private floating facility need ADA-compliant access to the facility. Need shall be based on the same criteria used for granting a Federal Access Pass. ADA-compliant stairways may not be allowed if severe environmental or aesthetic damage would result from the construction of such access. Abandoned stairways are subject to removal in accordance with Title 36 CFR, Section 327.20 Unauthorized Structures.	
<u>Vegetation Alteration</u> Tree trimming was limited to living vegetation 1 inch or less in diameter measured 6 inches up from the ground.	<u>Vegetation Alteration</u> Tree trimming is limited to living vegetation 2 inch or less in diameter measured 6 inches up from the ground.	This purpose serves for wildfire prevention and public safety in areas designated as Limited Development.
<u>Grandfathered</u> The 1996 Plan did not address definition of grandfathered clauses.	<u>Grandfathered</u> This plan addresses the three scenarios that could deem a PFF grandfathered under the new plan.	These definitions were established to clarify the “Grandfathered” term to the public and to maintain consistency going forward.
<u>Buoys and Breakwaters</u>	<u>Buoys and Breakwaters</u>	

1996 Shoreline Management Plan (SMP)	Proposed 2020 Shoreline Management Plan (SMP)	Justification of the Proposed Action
The 1996 SMP did not address the application or permitting process for a private entity requesting a Buoy or Breakwater. The new plan addresses these and outlines requirements.	Private boat dock owners desiring protective buoys (ex: No Wake) shall submit a letter of request to the Lake Manager that includes a detailed site map, buoy(s) GPS Latitude and Longitude coordinates, water depth (feet), buoy type and proposed number of buoys. Upon approval, a Shoreline Use Permit will be issued in the name of a responsible individual or group permitting the installation of U.S. Coast Guard (USCG) standard buoy. The purchase, installation, and maintenance will be at the expense of the permittee. Where only one boat dock is involved, the permit for the boat dock may be amended in the remarks section and buoys installed without additional permit charge. USACE is required to coordinate approvals/concurrence with the respective state agencies that are responsible for enforcement of the Federal Boating Safety Act of 1971. Breakwaters are used to protect a cove, area of shoreline, or private floating facilities and the associated anchorage from waves. These structures deflect or	This section gives clear and concise guidance to members of the public on the requirements for installation of aid to navigation type buoy or breakwater structure.

1996 Shoreline Management Plan (SMP)	Proposed 2020 Shoreline Management Plan (SMP)	Justification of the Proposed Action
	dissipate wave energy and thus prevent or reduce wave action in specific areas. These structures must be designed to effectively serve competing requirements for wave blockage and safe vessel passage from fully exposed waters through a constricted entrance into tranquil cove waters. Application requirements for these structures include a letter of request, completed shoreline use application, detailed site map with GPS coordinates, and detailed Engineered Stamped drawings of the design of the structure will be submitted to the Lake Manager.	
<u>Electrical Power and Lights</u> Existing underground lines under licenses will be allowed to remain so long as they are maintained in safe working condition and meet USACE standards and all local and state codes and the requirements of National Electric Code.	<u>Electrical Power and Lights</u> In accordance with the nationwide Corps of Engineers Non-Recreational Outgrant Policy dated March 30, 2009, no new utility licenses will be issued across Government Property. An “alternative energy source” such as solar power, generators, or other means are recommended. Applicants will submit a detailed plan for approval to the Lake Manager. Any overhead line proposed	This requirement brings the SMP within compliance of the nationwide Corps of Engineers Non-Recreational Outgrant Policy dated March 30, 2009

1996 Shoreline Management Plan (SMP)	Proposed 2020 Shoreline Management Plan (SMP)	Justification of the Proposed Action
All existing electric lines on government property must be buried except where the terrain will not allow as determined by the Lake Manager. No overhead lines will be allowed. Consideration will be given to the possible environmental damage that might occur as a result of burial. In these instances, the electric lines must be encased in conduit that is approved by the NEC	for placement on Government flowage easements will be required to meet special vertical clearance requirements. See Lake Manager for details.	

APPENDIX H: ENVIRONMENTAL ASSESSMENT

Environmental Assessment for the 2021 Lake Texoma Shoreline Management Plan Revision

Red River Basin

Bryan, Marshall, Johnston, and Love Counties, Oklahoma
Grayson and Cooke Counties, Texas

US Army Corps
of Engineers ®
Tulsa District

ENVIRONMENTAL ASSESSMENT ORGANIZATION

This Environmental Assessment (EA) evaluates the potential environmental and socioeconomic impacts of the proposed 2021 Shoreline Management Plan of Lake Texoma. This EA will 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 should it be implemented.

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*

TABLE OF CONTENTS

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Tables & Figures

LIST OF FIGURES

LIST OF TABLES

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ENVIRONMENTAL ASSESSMENT
Lake Texoma Shoreline Management Plan Revision
BRYAN, MARSHALL, JOHNSTON, AND LOVE COUNTIES, OKLAHOMA
GRAYSON AND COOKE COUNTIES, TEXAS

SECTION 1: INTRODUCTION

The United States Army Corps of Engineers (USACE) is proposing to adopt and implement the 2021 Lake Texoma Shoreline Management Plan (SMP). The 2021 SMP is a revision of the 1996 SMP. The 2021 SMP is the 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 Lake Texoma 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 Lake Texoma for the benefit of present and future generations. The 2017 Master Plan (MP) is incorporated in this document by reference; the proposed SMP is intended to be subservient and complimentary to the 2017 MP.

Adoption and implementation of the 2021 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).

1.1 PROJECT LOCATION AND SETTING

The Red River Valley Denison Dam and Lake Texoma Reservoir project (referred to as Lake Texoma) is located in Bryan, Marshall, Johnston, and Love Counties in Oklahoma and Grayson and Cooke Counties in Texas at River Mile 725.9 on the Red River, approximately 5 miles northwest of Denison, Texas. The Lake Texoma dam extends in a north-south direction for a distance of approximately 2.8 miles and is situated in Grayson County, Texas, and Bryan County, Oklahoma. The dam and associated infrastructure, as well as all lands acquired for the Lake Texoma project, are Federally-owned and are administered by the USACE.

Lake Texoma was authorized and funded by the Federal Government for construction by the USACE to provide flood control and hydropower generation through the Flood Control Act approved 28 June 1938 (Public Law No. 761, 75th Congress, 3rd Session). USACE authority for administration of project land and water areas is contained in Section 4 of the Flood Control Act approved 22 December 1944 (58 Stat. 889), and in Section 4 of the Flood Control Act of 1946 (60 Stat. 642), as further amended by Section 209 of the 1954 Flood Control Act approved 3 September 1954 (68 Stat. 1266).

The USACE began construction of the dam, spillway, and outlet works in August 1939. The project was first available to operate for full flood control without restrictions in January 1944. Upon completion, Denison Dam was America's largest rolled earth-filled dam. The first hydroelectric turbine was placed in operation in March 1945, followed by a second turbine unit in September 1949. The dam infrastructure is designed to accept three additional hydropower units.

The main dam structure is a 15,200-foot-long rolled earth-filled embankment with a rock-protected upstream slope. The maximum height of the embankment structure is 165 feet above the Red River streambed. Highway 91 (75A) crosses the top of Denison Dam. The spillway is a concrete, gravity, chute-type structure, 2,000 feet long, located in a saddle embankment on the right bank. Spillway capacity at maximum surcharge pool elevation 666.4 National Geodetic Vertical Datum (NGVD) is 1,050,000 cubic feet per second (cfs). The outlet works consists of three 20-foot-diameter, concrete conduits through the main dam embankment equipped with six 9-by 19-foot vertical-lift gates and one emergency gate. Capacity of the outlet works is 67,500 cfs at the top of the flood control pool and 60,120 cfs at the top of the hydropower pool.

Power pool storage ranges from 590.0 NVGD (the top of the inactive pool during droughts, approximately 1,049,000.0 acre-feet of storage) to 617.0 NGVD (the top of the power pool). Water intake inverts for hydropower are set at 523.0 NGVD invert elevation. The hydropower plant at the dam currently has two 35,000-kilowatt (kW) generators that have been operational since 1949, with authority and capability for three additional 43,000 kW generator units. One 20-foot-diameter steel-lined conduit provides water to each power unit penstock. Each of the five conduits is equipped with two 9-foot by 9-foot vertical lift gates located in the intake structure that are set at 523.0 NGVD. Maximum turbine discharge with the two operational units on overload at 88 megawatts (mW) at pool elevation 617.0 NGVD is 13,600 cfs. The powerhouse and power conduits are located adjacent to the outlet works near the right abutment of the spillway. Conservation pool storage is 1,467,283 acre-feet.

Platter Dike

A rolled earth-filled dike that is 5,870 feet long and 15 feet high is located in the vicinity of Platter, Oklahoma, to protect the town of Platter during major flood events.

Cumberland Levees

The Cumberland levee system is composed of two structures totaling 23,480 linear feet, with the north levee having a crest elevation of 646.0 NGVD and the south levee cresting at 647.0 NGVD. The two levees contain approximately 8,000,000 cubic yards of fill, which is almost half the amount of fill required for Denison Dam. These two levees were constructed to protect the Cumberland Oil Field from being inundated during major flood events. The north levee was overtopped during the extended flood events in the spring and summer of 2015. USACE repaired the breech in 2015-2016.

1.2 PURPOSE OF AND NEED FOR THE ACTION

The purpose of the Proposed Action is to ensure that the revision of the 2021 Lake Texoma SMP (SMP) is in compliance with applicable environmental laws and regulations and to maintain quality lands for future public use. The 2021 SMP is intended to balance certain private shoreline uses with resource protection for general public use. The 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 bring the 1996 SMP up to date and to reflect changes in public law, USACE policy and expressed public interest.

1.3 SCOPE OF THE ACTION

This EA was prepared to evaluate existing conditions and potential impacts of proposed alternatives associated with the implementation of the 2021 SMP. The alternative considerations were formulated with special attention given to revised shoreline allocations, revised permit administrative processes, revised construction and maintenance standards, new shoreline allocation maps, and to ensure the SMP compliments the 2017 Lake Texoma Master Plan. 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).

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SECTION 2: PROPOSED ACTION AND ALTERNATIVES

The project need is to revise the 1996 SMP. As part of this process, which includes public outreach and comment, two alternatives were developed for evaluation including a No Action Alternative.

The analysis of public comment, the review of USACE regulations at ER 1130-2-406, and the review of the 2017 Lake Texoma Master Plan resulted in adoption of the following goals for the revision of the SMP:

a) To manage and protect shoreline under jurisdiction of the USACE Chief of Engineers.

b) To establish, conserve, and maintain sustainable natural resources, including fish and wildlife habitat, and promote environmental sustainability and aesthetic quality.

c) To promote a reasonably safe and healthful environment for project visitors.

d) To provide pedestrian access to project lands and waters while maintaining the shoreline for general public use.

e) To manage private use of public property to the degree necessary to gain maximum benefits to the public while honoring past written commitments authorizing certain private uses.

f) To encourage boat owners to moor their boats at commercial marinas, utilize dry storage off project lands, or to trailer their boats to commercial or public launching ramps.

g) To ensure the SMP compliments and does not contradict the January 2017 Lake Texoma MP.

A summary of the changes in the proposed action are compared to the 1996 SMP in Table 1. A summary of the changes in shoreline management designation miles compared to the 1996 SMP are presented in Table 2.

Table 1 - Summary of Shoreline Management Changes

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action
Public Law National USACE Policy and Engineer Regulation 1130-2-406 The 1996 plan contains numerous outdated requirements related to changes in national	Public Law National USACE Policy and Engineer Regulation Numerous changes are proposed to bring the revised plan into compliance with national USACE policy and the current version of	Most of the changes relate to national policy and changes in ER 1130-2-406 were minor and were implemented administratively as they

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USACE policy and to ER 1130-2-406 that affect permit administration, transfer of permits, permit termination, dock removal/replacement, prohibited facilities such as submersible pumps, flotation requirements and required response times. Changes to shoreline allocation resulting from implementation of Section 3182 (j) and (k) of the Water Resources Development Act of 2007 (WRDA 2007) are not fully addressed in the 1996 SMP. This law resulted in disposal of approximately 635 acres of public land to the City of Denison and changes to Shoreline Allocations.	ER 1130-2-406. Changes resulting from implementation of WRDA 2007 are also incorporated.	became effective. Per ER 1130-2-406, the District Commander can make minor administrative changes without implementing a public involvement process. Changes resulting from implementation of WRDA 2007 were implemented through publication of an Environmental Impact Statement (EIS) and full public involvement.
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with a larger footprint than they do today. The 1996 plan aligned shoreline allocation with the land classifications included in the 1978 version of the Lake Texoma Master Plan. The 1978 Master Plan and related supplements were revised in 2017.	emphasis on Wildlife Management. Several areas were also reclassified as Environmentally Sensitive Areas or Multiple Resource Use Lands emphasizing Vegetation Management. Many of the 2017 changes in land classification resulted in shoreline allocation changes from Public Recreation Area to Protected Shoreline Areas in the 2021 SMP. Limited Development Areas were increased by 4.99 miles. The 2017 Lake Texoma Master Plan revision aligned land use classification with current conditions and management goals, and the proposed SMP aligns shoreline allocation with those land use classifications.	System (GIS) technology at approximately elevation 617.0 NGVD. These measurements do not include shoreline areas that are not bordered by private land and therefore do not equal the shoreline miles stated in the 2017 Lake Texoma Master Plan and EA Examples of shorelines not measured are shorelines that surround islands and deltas formed by sediment deposition. Shoreline allocation changes are needed to reflect the land classification changes in the Master Plan. The increase in Limited Development Areas (LDAs) is not the outcome of adding new LDAs but simply the result of improved technology in measuring devices and software that allow the precise measurement of the zoned footage within individual shoreline allocations versus the technology used in 1996. In certain Coves the LDAs zoned footage is reduced due to the following reasons: Insufficient water depth; protection from excessive wind fetch, and extreme/unsafe topography/terrain of the adjacent shoreline.
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<u>Private Flotation Facilities</u> Shoreline Use Permits are required for all private flotation facilities, excluding registered vessels. Minimum Design standards specifications outlines requirements for the private flotation facility. No restriction of number of PFFs a household or individual may own.	<u>Private Flotation Facilities</u> PFFs include privately-owned boat docks, platforms, breakwaters, and buoys whether single owner or multi-owner. New mooring buoys are prohibited. Existing mooring buoys in good standing will be renewed. Minimum design standards set minimum and maximum size requirements on slip length and	This combining of all PFFs, simplifies the application and requirements process for the applicant. No way of identification and tracking of mooring buoys makes it difficult to track responsibility and ownership when displaced by high waters. This change clarifies min. and max. design standards and sizes for allowable PFFs. This increase in header size aids the PFF owner by giving

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action
	width, as well as square footage on platform docks. Header size increased to eight (8) ft. Max. A family household (single individual or married couple) may own a maximum of two slips in any dock and may not own an interest in more than one dock on the lake. A family household is defined as an individual/individuals living at the same address. A family household may have only one of the two following options: (1) Ownership of a single owner dock (up to two (2) slips). (2) Ownership of 1 or 2 slips in a multi-owner dock. A Special Activity Permit for the construction/repair of a PFF will be required when the construction/repair occurs on public land.	additional space for storage of vessel equipment and aids in safe maneuvering around the facility. The change related to ownership minimizes PFFs being used as a commercial business. It is a violation of Title 36 when a PFF is leased, rented, sub-let or provided to others by any means of engaging in commercial activity(s) by the permittee or his/her agent for monetary gain. This requirement is added for all construction of PFFs that would occur on fee-owned government land, to ensure accountability and restoration of the area by the PFF owner (s). This will reduce environmental impacts to the shoreline and protect the public interest.
<u>Anchorage of Private Flotation Facilities</u> Design of these facilities will be included in the engineered plans for each separate structure and will be developed in accordance with the site where the facility will be moored, taking into consideration the water depth, wind loads, and exposure to fetch. New docks, or relocated docks, are to be located no	<u>Anchorage of Private Flotation Facilities</u> The preferred anchorage method will be pencil anchors (steel pipes driven into the lake bottom and attached to a PFF by a collar assembly). Stiff arm anchorage and other use of shoreline-obstructive cables and “concrete dead man” anchorage are prohibited unless allowed on a case-by-case basis due to “conditions not suitable for	This ensures the safety and navigability in and around PFFs within a cove for both vessels on the water and pedestrian foot traffic along the shoreline. This preferred anchorage method is less intrusive to the shoreline and minimizes ground disturbance.

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action
closer than 50' from the nearest point of an adjacent dock.	pencils" at the lake manager's discretion. Private flotation facilities and the associated anchorage system cannot render any portion of a cove non-navigable or create any navigation hazard regardless of lake elevation	
<u>Walkways and Stairs</u> Walkways shall not be less than 3 ft. and no more than 4 ft. wide. All walkways must have one handrail as a minimum the entire length of walkway. Licenses for existing stairways/tramways will continue to be renewed if the facility is being maintained in a safe condition. All steps and stairways must be structurally sound and safe with adequate handrails. If painted, all steps and stairways will be painted a color that is visually compatible with the natural background. White, yellow, orange, and other highly visible colors will not be allowed. Lightweight steel or concrete may be used for these structures, provided the concrete structures are kept at ground level and do not project above the surface of the ground.	<u>Walkways and Stairs</u> New private flotation facility plans must include plans signed/stamped by a licensed structural engineer showing the proposed handrail construction details. Handrails will be 36-48" high, with an intermediate rail approximately ½ the distance below the top rail. Stairways can be authorized on a limited basis where the Lake Manager has verified no safe viable alternative exists for accessing the permitted dock. All stairways, including the use of natural or manmade materials, requires a Real Estate instrument which can be renewed if the facility is maintained and in safe condition. Unless a license is re-issued to another party, all steps will be removed from public property at the expense of the licensee upon termination of the license. No part of the stairway may extend over the lake at conservation pool (elevation 617.0 NGVD). Stairways may not extend below the conservation pool elevation, and must terminate on	This requirements adheres to EM 385-1-1. Requirements for existing and new stairways ensure public safety, ensure compliance with EM 385-1-1, and Real Estate requirements for issuance of the license.

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action
	a shoreline otherwise inaccessible except by boat. Stairways must be of metal or concrete construction. Stairways must meet the standards stated in EM 385-1-1, with regard to tread and riser specifications, handrails, and allowable angle of ascent. Existing Stairways/Tramways must be certified by a licensed structural engineer and certification submitted to the Lake Manager prior to renewal of the license. In all cases the Government reserves the right to prohibit stairway construction on sheer rock bluffs or other sensitive landscape features. Modifications of existing stairways so that they are compliant with the Americans with Disabilities Act (ADA) standards will be considered on a case-by-case basis in situations where the owner or immediate family members of a permitted private flotation facility need ADA-compliant access to the facility. Need shall be based on the same criteria used for granting a Federal Access Pass. ADA-compliant stairways may not be allowed if severe environmental or aesthetic damage would result from the construction of such access.	

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action
	Abandoned stairways are subject to removal in accordance with Title 36 CFR, Section 327.20 Unauthorized Structures.	
Vegetation Alteration Tree trimming was limited to living vegetation 1 inch or less in diameter measured 6 inches up from the ground.	Vegetation Alteration Tree trimming is limited to living vegetation 2 inch or less in diameter measured 6 inches up from the ground.	This change serves to aid wildfire prevention and public safety in areas designated as Limited Development.
Grandfathered The 1996 Plan did not address definition of grandfathered clauses.	Grandfathered This plan addresses the three scenarios that could deem a PFF grandfathered under the new plan.	These definitions are established to clarify the "Grandfathered" term to the public and to maintain consistency going forward.
Buoys and Breakwaters The 1996 SMP did not address the application or permitting process for a private entity requesting a Buoy or Breakwater. The new plan addresses these and outlines requirements.	Buoys and Breakwaters Private boat dock owners desiring protective buoys (ex: No Wake) shall submit a letter of request to the Lake Manager that includes a detailed site map, buoy(s) GPS Latitude and Longitude coordinates, water depth (ft.), buoy type and proposed number of buoys. Upon approval, a Shoreline Use Permit will be issued in the name of a responsible individual or group permitting the installation of U.S. Coast Guard (USCG) standard buoy. The purchase, installation, and maintenance will be at the expense of the permittee. Where only one boat dock is involved, the permit for the boat dock may be amended in the remarks section	Gives clear and concise guidance to members of the public on the requirements for installation of aid to navigation type buoy or breakwater structure.

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action
	and buoys installed without additional permit charge. USACE is required to coordinate approvals/concurrence with the respective state agencies that are responsible for enforcement of the Federal Boating Safety Act of 1971. Breakwaters are used to protect a cove, area of shoreline, or private flotation facilities and the associated anchorage from waves. These structures deflect or dissipate wave energy and thus prevent or reduce wave action in specific areas. These structures must be designed to effectively serve competing requirements for wave blockage and safe vessel passage from fully exposed waters through a constricted entrance into tranquil cove waters. Application requirements for these structures include a letter of request, completed shoreline use application, detailed site map with GPS coordinates, and detailed Engineered Stamped drawings of the design of the structure will be submitted to the Lake Manager.	
<u>Electrical Power and Lights</u> Existing underground lines under licenses will be allowed to remain so long as they are maintained in safe working condition and meet USACE standards and all local and state codes and the requirements of National Electric Code.	<u>Electrical Power and Lights</u> In accordance with the nationwide Corps of Engineers Non-Recreational Outgrant Policy dated March 30, 2009, no new utility licenses will be issued across Government Property. An “alternative energy source” such as solar power, generators, or other means are recommended. Applicants will submit a detailed	This requirement brings the SMP within compliance of the nationwide Corps of Engineers Non-Recreational Outgrant Policy dated March 30, 2009.

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action
All existing electric lines on government property must be buried except where the terrain will not allow as determined by the Lake Manager. No overhead lines will be allowed. Consideration will be given to the possible environmental damage that might occur as a result of burial. In these instances, the electric lines must be encased in conduit that is approved by the NEC.	plan for approval to the Lake Manager. Any overhead line proposed for placement on Government flowage easements will be required to meet special vertical clearance requirements. See Lake Manager for details.	

Table 2 - Summary of Shoreline Mileage Designation Changes

SHORELINE DESIGNATION	1996 DESIGNATED MILES	2021 DESIGNATED MILES	DIFFERENCE
Prohibited Access Area	7.5	6.63	-0.87
Protected Shoreline Area	382.0	501.99	+119.99
Limited Development Area	21.0	25.99	+4.99
Public Recreation Area	174.5	147.80	-26.7
Restricted Areas	1.81	0	-1.81

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(d)). Under the No Action Alternative, the USACE would not approve the adoption or implementation of the 2021 SMP. Instead the USACE would continue to manage Lake Texoma's natural resources as set forth in the 1996 SMP. The 1996 SMP would continue to provide the only source of comprehensive management guidelines and philosophy. However, the 1996 SMP is out of date and does not reflect the current ecological, socio-political, or socio-

demographic conditions of Lake Texoma, or the policies and management guidelines set in place by the 2017 Master Plan. The No Action Alternative, while it does not meet the purpose of or need for the Proposed Action, serves as a benchmark of existing conditions against which federal actions can be evaluated, and as such, the No Action Alternative is included in this EA, as prescribed by CEQ regulations.

2.2 ALTERNATIVE 2: PROPOSED ACTION

Under the Proposed Action, the 1996 SMP would be reviewed, coordinated with the public, revised to comply with USACE regulations and guidance, and revised to reflect changes in the land management and land uses that have occurred over time or are desired in the near future. The keys to this alternative would be the revision of shoreline designations and associated area to USACE standards and the preparation of the resource objectives that would reflect current and projected needs and would be compatible with regional goals while sustaining Lake Texoma natural resources and providing recreational experiences for the next 25 years.

The proposed shoreline allocation categories are defined as follows:

2.2.1 LIMITED DEVELOPMENT AREAS: These areas are allocated for activities, such as vegetative modification, and/or the mooring of privately owned flotation facilities following the issuance of a “Shoreline Use Permit” (see Appendix A of the SMP), in accordance with this SMP and current Federal regulations. A Shoreline Use Permit does not preclude use of the shoreline by the general public. Unauthorized intrusion upon private flotation facilities is considered a trespass and should be reported to the appropriate law enforcement officials. The density of private flotation facilities in these areas will not exceed 50 percent of allocated shoreline. 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 its associated anchorage. Approximately 26 miles of shoreline will be allocated as “Limited Development Area” (LDA).

2.2.2 PUBLIC RECREATION AREAS: The USACE primary management concerns in public recreation areas are to provide sites suitable for quality recreational experiences with facilities that can sustain intensive use, are vandal resistant, reasonably safe, and large enough to support normal weekend use during the peak recreation season. These areas are designated as public recreation areas and developed for general public use, quasi-public leases, private club sites, and for commercial concessions. Quasi-public areas are designated to serve organizations such as Scouts BSA, civic organizations and churches. New Shoreline Use Permits will not be permitted in areas allocated as Public Recreation Areas. Those Shoreline Use Permits in good standing and currently located in quasi-public and private club site recreational areas will be grandfathered and must meet the conditions stated in Appendix B of the SMP. Floating facilities belonging to the lessee within quasi-public and club site lease areas will be managed under the terms of the real estate agreement for that individual lease. Vegetation Modification, including development of pedestrian paths, by private individuals or groups will not be permitted, except where authorized by a Real Estate lease or license. Approximately 148 miles of shoreline will be allocated for public recreation.

2.2.3 PROTECTED SHORELINE AREAS: Protected shoreline areas (PSA) are designated primarily to protect or restore aesthetic, fish and wildlife, cultural, old growth forest and other ecological or environmental values in accordance with the requirements of the National Environmental Policy Act of 1969 (PL 91-190) and USACE shoreline allocation guidance set forth in Chapter 3 of ER 1130-2-550. 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, and current action. Land access and boating are permitted along these shorelines, provided the aesthetic, environmental, and natural resource values are not damaged or destroyed. Private flotation facilities permits will not be issued in these areas. Some vegetation modification by private individuals, such as clearing a narrow meandering path to the water, or limited mowing, may be allowed only following the issuance of a permit if the Lake Manager determines that the activity will not adversely impact the environment or physical characteristics for which the area was designated as protected. In making this determination the effect on water quality will also be considered.

Existing Shoreline Use Permits in this area, in good standing, will be renewed. During changes of private adjacent land ownership, new owners will be encouraged to help protect the lake's water quality by reducing or eliminating the vegetation modification of Federal land. Adjacent landowners will be encouraged to protect and/or restore the vegetative buffer around Lake Texoma. Approximately 502 miles of shoreline will be classified as protected shoreline.

2.2.4 PROHIBITED ACCESS AREAS: This shoreline allocation protects certain project operation areas, which may include certain hazardous locations, and/or areas located near dams or spillways. Mooring of private flotation facilities and/or the modification of landform and vegetation are not permitted. Approximately 6.6 miles of shoreline will be allocated as prohibited access areas.

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 § 1501.7(a)(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 Lake Texoma 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 § 1508.8(a)). Indirect effects are caused by the action and are later in time or further removed in distance but are still reasonably foreseeable (40 CFR § 1508.8(b)). 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 (40 CFR § 1508.27). 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

Lake Texoma is located in the Red River Watershed. The dam, named after the town of Denison, is located in Bryan County, Oklahoma, and Grayson County, Texas, at the confluence of the Red River and the Washita River. The impounded reservoir of Lake Texoma extends through Grayson and Cooke Counties in Texas, and Bryan, Marshall, Johnston, and Love Counties in Oklahoma. It is an integral part of a multi-purpose plan for flood control, hydroelectric power generation, navigation, and other beneficial water uses on the Red River and its tributaries. Lake Texoma is one of numerous reservoirs that provide flood protection to the Red and Atchafalaya River Valleys. Other reservoirs include McGee Creek, Pat Mayse, Sardis (formerly Clayton), Hugo, Pine Creek, Broken Bow, DeQueen, Gillham, Dierks, Millwood, Cooper, Wright Patman, Lake 'O Pines, Caddo, Bodcau, and Wallace Lakes.

The original acquisition of lands for the project included an area of 193,719 acres of land acquired in fee and 537 acres of flowage easement rights acquired in both Texas and Oklahoma along the Red River, as required for the construction and operational needs of the authorized dam and reservoir project. Various Federal land disposals through the years, as dictated primarily by legislation, have reduced the acreage of Federally-owned lands to approximately 191,459 acres, with a corresponding increase in the number of acres of flowage easement. The original impounded reservoir inundated approximately 89,000 acres at Conservation/Power Pool elevation 617.0 NGVD. Within the 89,000-acre pool are numerous islands and areas where sediment accumulation has caused the formation of land lying above 617.0 NGVD. Thus, the actual acreage of water surface at 617.0 NGVD has been reduced over the years. As measured by the Texas Water Development Board, the surface acreage at 617.0 NGVD is 74,686 acres. The figure of 74,686 acres is used throughout this document to represent the “normal” or conservation pool acreage. Lake Texoma is the largest lake in the Tulsa District in terms of capacity and the 12th largest lake in the nation.

At Lake Texoma there are 12,676 acres classified as High Density Recreation land. At present, there are 12 public use areas, 23 commercial marinas/resorts, 28 quasi-public use areas, and 20 private club sites. Improvements at these areas generally include access and circulation roads, restroom facilities, bathhouses or washhouses, potable water supplies, sanitary dump stations, swimming beaches, picnic sites with tables, fire rings, trash dumpsters, shelters, parking areas, and campsites.

3.1.1 Alternative 1: No Action Alternative

The No Action Alternative for Lake Texoma is defined as the USACE taking no action, which means the 1996 SMP would not be revised. No new resource analysis, resources management objectives, or shoreline allocations would occur. The operation and maintenance of USACE lands at Lake Texoma would continue as outlined in the existing 1996 SMP. Although this alternative does not result in a SMP that meets current regulations and guidance, there would be no significant negative long-term impacts on land uses on Lake Texoma lands.

3.1.2 Alternative 2: Proposed Action

The objectives for revising the Lake Texoma 1996 SMP are to administer all shoreline management actions to achieve a balance between permitted private uses and protection of natural resources and environmental quality for general public use. The USACE intends to support the current level of land and shoreline use by the surrounding and visiting community. The changes to shoreline use are as described in Tables 1 and 2 and are effectively zoning changes. The proposed changes in mileage of shoreline designations are not expected to have long-term adverse effects; there will be a benefit to sensitive environmental areas considering the increase in PSAs and LDAs, as well as updated shoreline management practices that will further conserve the environment.

3.2 WATER RESOURCES

Surface Water

Lake Texoma is located within the Red River watershed, with a 39,719 square mile drainage area flowing upstream into the dam. At the top of the flood control pool, the capacity is 4.9 million acre-feet of water. At the top of the conservation pool, the capacity is approximately 2.6 million acre-feet of water.

Hydrology and Groundwater

An additional benefit from Lake Texoma is the utilization of water impounded to provide municipal and industrial water supplies to the cities of Pottsboro, Sherman, Pointe Vista, Buncombe Creek, Denison, and multiple other municipal water districts. The total amount of water supply storage is approximately 300,000 acre-feet. The amount of water available is sometimes dependent on water requirements for electrical power production as determined by the SWPA, as hydropower production is an authorized purposed for the Lake.

The dam has an uncontrolled spillway that is a concrete-gravity, chute-type structure, 2,000 feet long, located in a saddle on the right bank. Spillway capacity at maximum pool (elevation 666.4) is 1,050,000 cfs. The outlet works consist of three 20-foot-diameter, concrete conduits through the embankment equipped with six 9-by19-foot vertical lift gates and one emergency gate. Capacity of the outlet works is 67,500 cfs at the top of the flood control pool and 60,120 cfs at the top of the power pool. Limiting channel capacity below Denison Dam is about 45,000 cfs.

The main sources of water in the lake area are the Red River from the west and the Washita River from the north. Other water sources include Big Mineral Creek, Little Mineral Creek, Buncombe Creek, Rock Creek, and Glasses Creek. The Antlers Aquifer supplies groundwater for the area.

The nearest source of groundwater is the Antlers Aquifer found on the south central portion of Oklahoma, with a capacity of approximately 53.5 million acre-feet. A 2015 ground water monitoring report produced from 30 sampling sites conducted by

Oklahoma Water Resources Board (OWRB) details the groundwater quality. The United States Environmental Protection Agency (USEPA) sets two water quality standards for public water systems, the Maximum Contaminant Levels (MCL) and the Secondary Contaminant Levels (SMCL). The MCLs are based on values that are toxic or would otherwise cause adverse health effects, and the SMCL's are based on aesthetics such as color and odor that do not pose a risk to health at the SMCL. The MCLs are enforceable limits, whereas the SMCLs are guidelines. The following parameters had at least one sample site that violated an SMCL: pH, Total Dissolved Solids, Aluminum, Iron, and Manganese. None of the sample sites had any parameters above the MCLs.

Water Quality

Water quality at Lake Texoma is dependent upon many factors, including the location of Denison Dam downstream of the confluence of the Washita River with the Red River and the unique chemical characteristics exhibited by the reservoir. The chemical composition of Lake Texoma can vary considerably from that of the two main tributaries. The majority of the ionic composition of the reservoir is attributable to Permian salt deposits present in the upper Red River Basin, resulting in a strong salinity gradient within the reservoir, with the highest ionic concentrations occurring within the Red River arm and the lowest ionic concentrations occurring in the Washita River arm, resulting in well-defined riverine, riverine transitional, and lacustrine zones present in Lake Texoma.

The Oklahoma Water Resources Board (OWRB) conducts annual water quality monitoring of Lake Texoma through its Beneficial Use Monitoring Program (BUMP) at 13 fixed sampling sites located throughout the riverine, riverine transitional, and lacustrine zones of the reservoir. Based upon the most recent 2015 BUMP report, Lake Texoma is classified as a eutrophic reservoir within the riverine transition and lacustrine zones of the lake, with riverine portions of the reservoir classified as hypereutrophic (OWRB 2015). Chlorophyll *a* values range from 10 to 13 milligram per cubic meter (mg/m^3) in the lacustrine and Washita River riverine transition zones and 21 to 49 mg/m^3 in the Red River riverine transition and riverine zones. Surface total nitrogen values range from 0.66 to 1.50 milligrams per liter (mg/l) within the Red River arm and from 0.79 to 0.96 mg/l within the lacustrine and Washita River riverine transition zone of the reservoir. Surface total phosphorus ranges from 0.005 to 0.091 mg/l within the Red River arm and from 0.005 to 0.026 mg/l within the lacustrine and Washita River riverine transition zone of the reservoir. Nitrogen to phosphorus ratios throughout the reservoir range from 18:1 to 80:1 and indicate that the reservoir is phosphorus-limited, meaning that phosphorus is the nutrient considered to limit phytoplankton growth within the reservoir. Turbidity values range from 8 to 27 Nephelometric Turbidity Units (NTUs) within the Red River arm and 3 to 5 NTUs within the lacustrine and Washita River riverine transition zones of the reservoir. Secchi depth measurements of light penetration into the water range from 25 to 142 centimeters (cm) throughout the reservoir.

The OWRB has reported that Lake Texoma does not meet all designated beneficial uses under the State of Oklahoma Water Quality Standards, Oklahoma

Administrative Code Title 785, Chapter 45. Dissolved oxygen concentrations within the Washita River riverine transition zones do not support designated beneficial uses for fish and wildlife propagation, with up to 50 percent of the water column exhibiting dissolved oxygen concentrations less than 2.0 mg/l. This same reach of the reservoir does not meet designated beneficial uses for agriculture due to sulfate concentrations exceeding water quality standards for agricultural use. Turbidity limits the designated beneficial use in the Red River riverine zone due to turbidity values exceeding water quality standards for fish and wildlife propagation.

The frequency and duration of harmful algae blooms and nuisance algae blooms have increased in Lake Texoma since 2004. The majority of nuisance and harmful algae blooms have been due to golden algae and cyanobacteria blooms. Golden algae blooms have resulted in sporadic minor to moderate fish kills within the Red River arm of Lake Texoma since 2004. Cyanobacteria bloom cell densities frequently exceed established World Health Organization (WHO) public health guidelines for primary body contact for low (> 20,000 cells/ml cyanobacteria) and moderate (> 100,000 cells/ml cyanobacteria) risk of adverse health effects. Additionally, the hepatotoxin (liver toxin) microcystin and neurotoxin (nerve toxin) cylindrospermopsin have been continually detected at concentrations below action levels established by the USEPA for drinking water and action levels established by the WHO for recreational waters.

Comparisons of the 2010-2011, 2012, and 2015 OWRB Oklahoma Lakes Report, BUMP indicate the trophic status of Lake Texoma has changed very little between 2010 and 2015; however, the N:P ratio within the reservoir increased over the same period, suggesting that nitrogen loading to the reservoir may be increasing. As a reservoir ages, water quality declines can be attributed to many factors, individually and collectively. Factors which generally contribute to declining water quality in aging reservoirs includes sedimentation, increased human habitation within the vicinity of the lake, changing land management practices within the watershed, increased urbanization and associated urban runoff, and increased reliance on an allocated water supply. Recreation is one use that has already been adversely impacted by cyanobacteria blooms, low dissolved oxygen in the water, and increasing reliance on water supply by stakeholders with water supply contracts. Adverse impacts on the local economy due to water quality issues have been an increasing matter of local, state, and regional concern throughout the contiguous United States in recent years.

Water quality and quantity concerns and future anticipated total maximum daily load (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 Lake Texoma to meet all authorized purposes into the future.

Wetlands

Waters of the United States are defined within the Clean Water Act (CWA), and jurisdiction is addressed by the USACE and USEPA. Wetlands are a subset of the waters of the United States that may be subject to regulation under Section 404 of the

CWA (40 CFR § 230.3). Wetlands are those areas 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.

In accordance with standard USACE natural resources inventory requirements, wetlands are inventoried using the USFWS *Classification of Wetlands and Deepwater Habitats of the United States.* The majority of wetlands in the vicinity of Lake Texoma are in the palustrine system; however, wetlands classified in the lacustrine and riverine systems are also present (USFWS 2016). Wetlands classified as palustrine are nontidal and are dominated by trees, shrubs, emergents, mosses, or lichens. Within these three systems (palustrine, lacustrine, and riverine), wetlands have been further classified as limnetic and littoral (lacustrine); emergent, forested, scrub-shrub, unconsolidated bottom, and unconsolidated shore (palustrine); and lower perennial (riverine). Many of the wetland types have been further classified as diked/impounded or excavated, indicating that they formed under conditions created by humans. The wetlands in the vicinity of Lake Texoma are also subject to different hydrologic regimes, including seasonally flooded, semi-permanently flooded, and permanently flooded.

Dominant vegetation found in wetlands of the Tishomingo and Hagerman National Wildlife Refuges, which are located on USACE lands at Lake Texoma, include boxelder (*Acer negundo*), black willow (*Salix nigra*), cottonwood (*Populous deltoides*), sedges, saltgrass (*Distichlis* spp.), native millet (*Panicum miliaceum*), pondweed (*Potamogeton nodosus*), smartweed, arrowleaf (*Sagitaria* spp.), cattail (*Typha* spp.), rushes (*Juncus spp*.), and bulrush (*Scirpus pendulus*). Wetlands provide essential habitat for waterfowl, as well as shore birds, wading birds, and several mammal and reptile species (USACE 2016). Table 3 lists the acreages of various types of wetlands present at Lake Texoma. Data were retrieved from the fiscal year (FY) 2015 Project Wetland Classes reported in the Operations and Maintenance Business Information Link (OMBIL).

Table 3 - Lake Texoma Wetland Acreage

System	Sub-System	Class	Class Acres
Lacustrine	Limnetic	Open water/unknown bottom	60,459
Lacustrine	Littoral	Unconsolidated Shore	210
Palustrine	No Sub-System	Scrub-shrub Wetland	1,309
Palustrine	No Sub-System	Forested Wetland	13,549
Palustrine	No Sub-System	Emergent Wetland	896
Palustrine	No Sub-System	Unconsolidated Shore	80
Palustrine	No Sub-System	Unconsolidated Bottom	1,216
Riverine	Lower Perennial	Unconsolidated Bottom	1,373

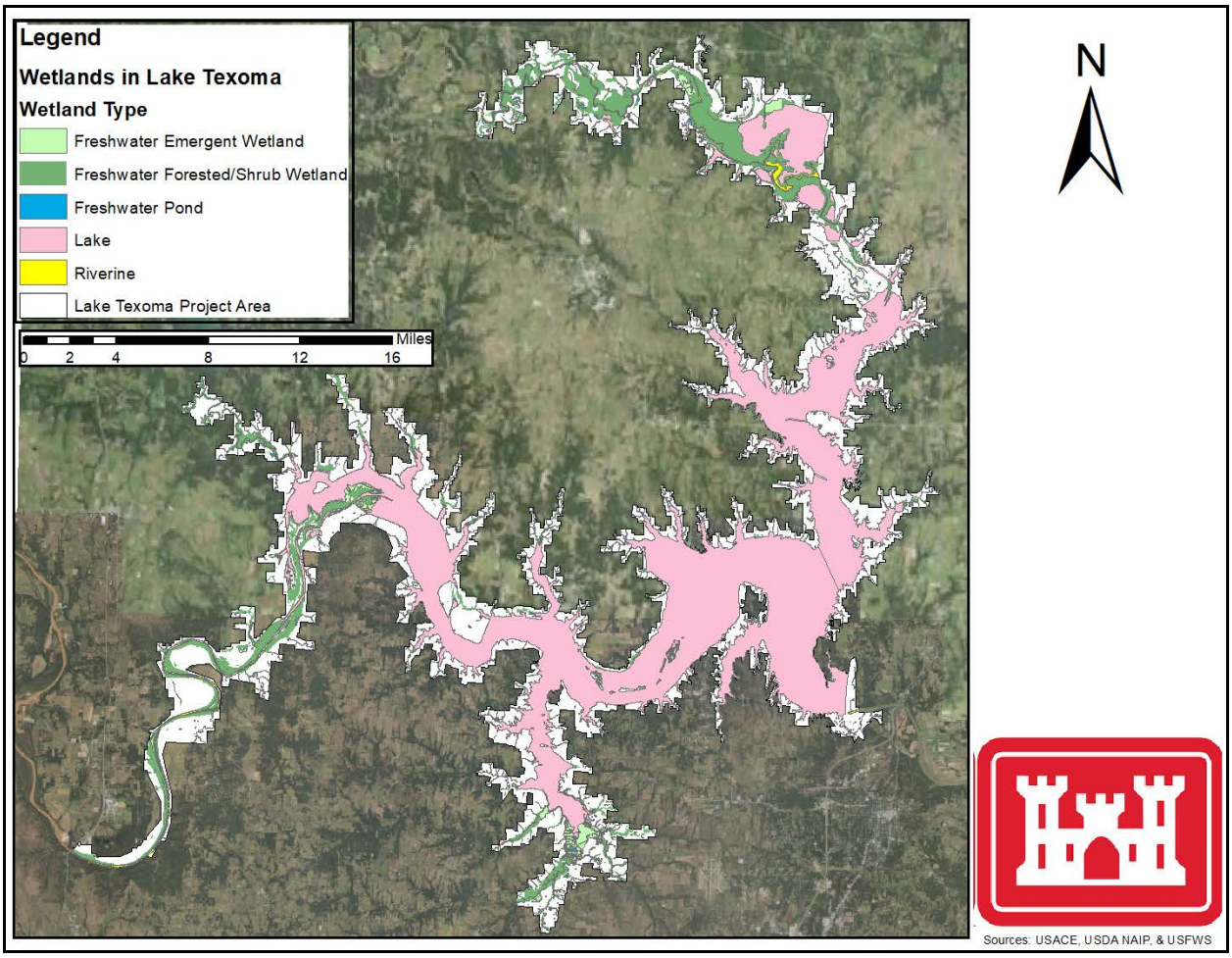

Figure 1 - Map of Wetlands in Lake Texoma

3.2.1 Alternative 1: No Action Alternative

There would be no negative significant permanent impacts on water resources as a result of implementing the No Action Alternative, since there would be no change to the existing SMP.

3.2.2 Alternative 2: Proposed Action

The changes proposed to shoreline designations will have both adverse and beneficial, minor, long-term effects to water quality. Beneficial effects will result from decreased public use and recreation areas that should result in a reduction in possible sources of pollution and erosion which can effect water resources. The 119.99 mile increase in protected shoreline areas will also provide beneficial effects by increasing water quality by protecting and supporting vegetation communities. Better management of vegetation communities will allow for more stable soils, reducing turbidity and potential runoff issues. Adverse effects may stem from temporary, localized, impacts during construction of docks whereas recreational boat use may result in more long

term impacts. Any adverse impacts to water resources would be minor and not dissimilar to the impacts already experienced from the No Action Alternative.

3.3 CLIMATE

Lake Texoma lies in a region characterized by long summers with high temperatures and short, moderate winters, except in the western portion of the basin where winters are more severe. Normal annual precipitation over the watershed is 26.76 inches. May is normally the wettest month and January is the driest; however, major storms may occur at any time during the year. Nearly two-thirds of the precipitation occurs during the growing season, which occurs April through October. Annual snowfall ranges between 3 and 13 inches per year.

The mean temperature is approximately 62 degrees (°) Fahrenheit (F), with record extremes ranging from -23° F to 120° F. Prevailing winds within the Lake Texoma watershed are from the south and southeast during the summer and from the northwest in the winter. The western third of the project watershed is located in a semiarid region with generally excessive wind and high evaporation. In the central and eastern areas, precipitation is typically adequate for agricultural purposes, and wind and evaporation are moderate. A study of available wind velocity data indicates that 42 miles per hour is the highest wind velocity that can be reasonably expected for the duration of 1 hour or more.

3.3.1 Alternative 1: No Action Alternative

The No Action Alternative does not involve any activities that would contribute to changes in existing conditions. There would be no long-term major adverse impacts on climate as a result of implementing the No Action Alternative.

3.3.2 Alternative 2: Proposed Action

Revision of the Lake Texoma SMP would have no impact on the climate of the study area. There would be no short or long-term, minor, moderate or major, beneficial, or adverse impacts on climate as a result of implementing the Proposed Action Alternative.

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 Greenhouse Gas (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_2)-equivalent (CO_2e) 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 is a single Greenhouse Gas contributor within the project vicinity; the Panda Temple Power Station located in Grayson County, TX. The power plant's Greenhouse Gas emissions are described in Table 4.

Table 4 - 2018-2019 Greenhous Gas Emissions from the Panda Temple Power Station

Greenhouse Gas Parameter:	2018	2019	Percent Change
Heat Input (mmBtu)	43,226,063	36,564,491	-15%
Sulfur Dioxide (SO_2) (tons)	13	11	-16%
Nitric Oxides (NO_x) (tons)	155.4	137.5	-11%
Carbon Dioxide (CO_2) (tons)	2,568,861	2,172,970	-15%

The general operations and recreation facilities associated with Lake Texoma do not approach the proposed reportable limits. Lake Texoma Project Office does have management plans in place such as routine equipment maintenance, vegetation management plans, natural resources management plans, and public education and outreach programs to protect regional natural resources. In addition, the Lake Texoma the Texoma Project Office will continue monitoring programs as required to meet applicable laws and policies.

Two Executive Orders (EOs), EO 13693 and EO 13783, set forth requirements to be met by federal agencies. These requirements range from preparing general preparedness plans to meeting specific goals to conserve energy and reduce GHG emissions. The USACE has prepared an Adaptation Plan in response to the EOs. The Adaptation Plan includes the following USACE policy statement:

It is the policy of USACE to integrate climate change preparedness and resilience planning and actions in all activities for the purpose of enhancing the resilience of our built and natural water-resource infrastructure and the effectiveness of our military support mission, and to reduce the potential vulnerabilities of that infrastructure and those missions to the effects of climate change and variability.

The USACE manages project lands and recreational programs to advance broad national climate change mitigation goals including, but not limited to, climate change resilience and carbon sequestration, as set forth in EO 13653, EO 13693, and related USACE policy.

3.4.1 Alternative 1: No Action Alternative

The No Action Alternative does not involve any activities that would contribute to changes in existing conditions. There would be no long-term major adverse impacts on climate change or contributions to GHG emissions and climate change as a result of implementing the No Action Alternative.

3.4.2 Alternative 2: Proposed Action

Under the Proposed Action, current Lake Texoma climate monitoring programs would not be changed. There would be no short- or long-term, minor, moderate or major, beneficial, or adverse impacts on climate change or contributions to GHG emissions as a result of implementing the 2021 SMP. In the event that GHG emission issues become significant enough to impact the current operations at Lake Texoma, the 2021 SMP and all associated documents would be reviewed and revised as necessary.

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_2); 4) ozone (O_3); 5) particulate matter <10 microns (PM_{10}) and <2.5 microns ($PM_{2.5}$); and 6) sulfur dioxide (SO_2). Ground level or "bad" O_3 is not emitted directly into the air, but is created by chemical reactions between oxides of nitrogen (NO_x) 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_x and VOC (USEPA 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. The geographical region surrounding the Lake Texoma project, including all USACE-administered lands is located in USEPA Air Quality Control Regions 188 (Oklahoma) and 215 (Texas). Both AQCRs are classified as in attainment by the USEPA (USEPA 2016). The region meets the NAAQS for the criteria pollutants designated in the CAA. Consequently, a conformity determination is not required.

3.5.1 Alternative 1: No Action Alternative

There would be no major adverse long-term impacts on air quality as a result of implementing the No Action Alternative, since there would be no change to the existing 1996 SMP.

3.5.2 Alternative 2: Proposed Action

Existing operation and management of Lake Texoma is compliant with the Clean Air Act and would not change with implementation of the 2021 SMP. Under the proposed action, there will be no impacts to air quality.

Due to the increase in protected shorelines by 119.99 miles, there will be less area available for development or construction actions that can further contribute negatively to air quality. Negligible air emissions could occur near these protected shoreline areas as new structures and recreational features are built in the area.

3.6 TOPOGRAPHY, GEOLOGY, AND SOILS

Topography

Land forms surrounding Lake Texoma are low rolling hills and plains with occasional escarpments and terraces, varying in elevation from 500.0 NGVD to 850.0 NGVD. There are broad valleys (such as the Washita and Red), which can drop to 200 feet below the surrounding terrain. In many places the valley slopes are steep, creating rugged cliffs, hills, and promontories along the man-made reservoir shoreline of Lake Texoma. River gradient for the length of the lake averages about 1.6 feet per river mile. The 873-mile shoreline of the lake ranges from gently sloping flats and sandy beaches to rocky precipitous cliffs and steep, wooded hillsides.

Geology

The geology of the area is dominated by materials of the Osage Plains section of the Central Lowland physiographic province of the interior plains. The Osage Plains are underlain by soft shales with interbedded sandstones and limestones of late Mississippian to Pennsylvanian age. The principal geologic formations found in the project area are Mississippian limestone, limestone shale, Ordovician dolomite, and coal. Clay and shale are also present within the Pennsylvanian bedrock.

Soils

The soil taxonomy developed by the US Department of Agriculture (USDA) and the National Cooperative Soil Survey organizes soils in a hierarchical system including the following categories: Order, Suborder, Great Group, Subgroup, Family and Series. The soil series provides the finest level of detail and is often aggregated into soils associations which combine one or more series. Approximately 25 soil associations have been identified in the six counties surrounding Lake Texoma. The six most prevalent soils associations, by state, that occur on or near USACE lands at Lake Texoma are described in Table 5.

Table 5 - Common Soils Associations and Series Found on USACE Lands at Lake Texoma

Soils Association/Series	Location	Description
Konsil	OK	Fine sandy loam, well drained. Ecologically site is described as sandy loam. All areas of Konsil soil are prime farmland.
Heiden-Ferris	OK	Clay and stony clay soils on hillslopes. Well drained. Ecological site is clay prairie. Not prime farmland.
Yahola-Reinach-McLain-Dale	OK	Fine sandy loam and silty clay loams. Ecological site is loamy bottomland. Some areas are prime farmland.
Muskogee-Durant-Boxville	OK	Fine sandy loam and silty loams. Moderately well drained and slowly permeable. Ecological site is loamy prairie or savannah. All areas are prime farmland.
Gasil-Callisburg-Birome-Aubrey	TX	Stony fine sandy loam. Well drained and moderately to slowly permeable. Ecological site is described as sandstone hill. Not prime farmland
Windthorst-Weatherford	TX	Loamy clay and fine sandy loam. Moderately well drained and moderately slowly permeable. Ecological site is described as shallow savannah and sandy loam. Not prime farmland.

In general much of the Cross Timbers forests, savannahs and prairies that dominate USACE lands at Lake Texoma are growing on soils in the Alfisol Order. These important soils form in semiarid to humid locations typically under a hardwood forest cover. They have a clay enriched subsoil with relatively high natural fertility. Some of the more common soil series present on USACE lands include Aubrey, Birome, Gasil and Callisburg series in Texas and Konsil, Konowa, Durant, Tarrant, Karma and Bernow series in Oklahoma. Several areas, primarily in Oklahoma, have soil series that are listed as prime farmland by the Natural Resource Conservation Service (NRCS). These series include, but are not limited to Teller, Konawa, Konsil, Bastrop, Minco, Slaughterville, Yahola, Ashport, and Oklared. The majority of soils listed as prime farmland are included in areas leased to the ODWC for wildlife management purposes. Some of these areas are subleased for farming operations that include requirements that benefit wildlife.

Further detailed information on all soil types surrounding Lake Texoma is available on websites maintained by the NRCS.

3.6.1 Alternative 1: No Action Alternative

The No Action Alternative does not involve any activities that would contribute to changes in existing conditions, so there would be no long-term major adverse impacts on topography, geology, soils, sedimentation, or shoreline erosion as a result of implementing the No Action Alternative.

3.6.2 Alternative 2: Proposed Action

The proposed action will not decrease public recreation areas, as the 2017 Master Plan already re-classified approximately 26.7 miles; this reduces erosion and the loss of soil stability. There is also an increase in protected shoreline areas that will also limit public use and the degradation of existing topography, geology, soils, sedimentation, or shoreline erosion. Continued restrictions on development will also help to reduce these types of impacts. The proposed alternative will have moderate beneficial impacts to topography, geology, soils, sedimentation, shoreline erosion, or prime farmlands. The 119.99 mile increase in PSAs will also provide beneficial effects by reducing erosion and helping to reduce soil disturbance for vegetation. Overall, there are long-term beneficial impacts to topography, geology, and soils due to the 2021 shoreline allocations.

3.7 NATURAL RESOURCES

Natural resources include the fisheries and aquatic resources, wetlands, vegetation, and wildlife present in the vicinity of Lake Texoma. Approximately 88,000 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 as listed by Oklahoma and Texas, and sustainability of habitat for game species such as turkey and whitetail deer. USACE directly manages habitat, access, and public use on approximately 10,000 acres that are available for public hunting. The ODWC manages approximately 29,112 acres of USACE public lands under long-term license for fish and wildlife and public hunting at the Washita Arm, Fobb Bottom, Hickory Creek, and Love Valley Wildlife Management Areas. The USFWS manages the Hagerman and Tishomingo National Wildlife Refuges on USACE public lands totaling 24,879 acres, under a long-term Cooperative Agreement. These two refuges provide important stopover and wintering grounds for thousands of ducks and geese as they migrate through the Central Flyway. USFWS also manages upland habitat to benefit many neotropical migrating birds, as well as many other game and non-game species. Restoration and protection of the upland forests representative of the Eastern Cross Timbers Ecoregion is also an important management objective. The Texas Parks and Wildlife Department (TPWD) does not manage any wildlife areas on Lake Texoma, but does actively manage the lakes fishery in cooperation with ODWC.

Vegetation

Two basic vegetation zones can be found in the project area, the Eastern Cross Timbers and Northern Post Oak Savannah Ecoregions. A comparatively small portion of project lands in the Big Mineral arm of the lake falls within the Texas Blackland Prairie Ecoregion. The upland forests and woodlands and bottomland forests characteristic of the Eastern Cross Timbers and Northern Post Oak Savannah Level IV Ecoregions cover approximately 76,000 acres of USACE lands. The USACE has not conducted an intense ecological inventory of these forested lands, although mapping efforts by the Ancient Cross Timbers Consortium, based at the University of Arkansas at Fayetteville, indicates that remnants of ancient Cross Timbers forests exist on USACE lands. Mature post oaks (*Quercus stellata*) and eastern redcedars (*Juniperus virginiana*) in these remnants may approach 500 years in age.

The upland forest covers the major portion of public lands. Common dominant species include post oak, Texas oak (*Quercus texana*), blackjack oak (*Quercus marilandica*), chinquapin oak (*Quercus muehlenbergi*), Shumard oak (*Quercus shumardii*), black hickory (*Carya texana*), redbud (*Cercis canadensis*), red mulberry (*Morus rubra*), and eastern redcedar. Understory species include poison ivy (*Toxicodendron radicans*), coral berry (*Symphoricarpos orbiculatus*), rusty blackhaw (*Viburnum rufidulum*), cat briar (*Smilax*), and skunkbush (*Rhus trilobata*).

Marginal forest exists within the fringe or edge transitional scrubby/shrubby woodlands between oak forest and grassland. Common species include smooth and winged sumac (*Rhus glabra* and *Rhus copallinum*), deciduous holly (*Ilex decidua*), hawthorn (*Crataegus texana*), Mexican and Chickasaw plum (*Prunus mexicana* and *Prunus angustifolia*), eastern redcedar, and blackjack oak.

The common species for the shorelines and open wetlands include black and sandbar willow (*Salix nigra* and *Salix exigua*), cottonwood (*Populus deltoids*), sycamore (*Platanus occidentalis*), buttonbush (*Cephalanthus occidentalis*), wetland- and disturbance-loving herbaceous plants, and grasses. Lake level fluctuations greatly influence vegetation establishment and growth in this zone.

The bottomland forest is characterized by a very diverse overstory composition and large wetland-adapted climax tree species. Common species include pecan (*Carya illinoensis*), black walnut (*Juglans nigra*), southern hackberry (*Celtis laevigata*), green ash (*Fraxinus pennsylvanica*), American elm (*Ulmus americana*), Shumard oak, black oak (*Quercus velutina*), and bur oak (*Quercus macrocarpa*). Understory species include Canada wild rye (*Elymus canadensis*), inland sea oats (*Chasmanthium latifolium*), and poison ivy.

The diversity of grasses and flowering perennial forbs is vast and exhibits notable changes during the growing season. Common dominant native grass species include big bluestem (*Andropogon gerardii*), little bluestem (*Schizachyrium scoparium*), Indiangrass (*Sorghastrum nutans*), and switchgrass (*Panicum virgatum*). Many exotic and invasive grasses are abundant, including Johnsongrass (*Sorghum halepense*) and Bermudagrass (*Cynodon dactylon*).

The vegetative data for Lake Texoma was obtained using information derived from Fiscal Year 2015 (FY2015) Project Site Vegetation Classification Records reported in OMBIL. These data and the results are displayed in Table 2.7 of the 2017 Master Plan.

Fisheries and Wildlife Resources

The waters of Lake Texoma provide abundant and diverse habitats for at least 70 species of warm-water fish, several of which were introduced or stocked in the lake. Recreational fishing is and will continue to be an important aspect of the overall recreational program enjoyed by visitors to the lake. Native species commonly sought by fisherman are channel catfish (*Ictalurus punctatus*), flathead catfish (*Pylodictis olivaris*), blue catfish (*Ictalurus furcatus*), white crappie (*Pomoxis annularis*), black crappie (*Pomoxis nigromaculatus*), white bass (*Morone chrysops*), largemouth bass (*Micropterus salmoides*), striped bass (*Morone saxatilis*), spotted bass (*Micropterus punctulatus*), and various sunfish species (*Lepomis spp*.).

Fish habitat consists of large expanses of water, offshore humps, and limited amounts of standing timber, rock, coarse gravel, and mud or sand flats. Buttonbush is a common native shrub along the shorelines in many areas, growing at or above the conservation pool level, and provides good spawning and nursery habitat when seasonally inundated. Aquatic vegetation needed by herbivorous fish is very sparse due to fluctuating water levels. Additional habitat includes man-made structures such as riprap, natural and artificial brush piles, and boat docks. Each year (water levels allowing), local anglers in cooperation with the USACE and the ODWC create new brush piles in different areas of the lake and recharge previous piles.

Smallmouth bass (*Micropterus dolomieu*) stocking in the lake has been successful and produced several Oklahoma state records. Forage food for sport fish is provided by threadfin (*Dorosoma petenense*), gizzard shad (*Dorosoma cepedianum*), Mississippi silverside (*Menidia beryllina*), and various minnow and shiner species. Freshwater drum (*Aplodinotus grunniens*), carp (*Cyprinus carpio*), alligator gar (*Atractosteus spatula*), buffalo (*Ictiobus cyprinellus*), and river carp sucker (*Carpiodes carpio*) are the primary non-game fish species in the lake. Downstream of the dam is a tailwater fishery that supports striped bass, as well as channel, blue, and flathead catfish. The ODWC and TPWD cooperatively manage the fishery habitat, fish stocking, species monitoring and development, and enforce joint regulations on Lake Texoma.

Lake Texoma is one of the few lakes in the United States that support a naturally reproducing striped bass fishery. The extremely popular fishery was introduced in the mid-1960s. Through stocking, management action, research, monitoring, and harvest regulations, Lake Texoma became nationally recognized for its sustainable, healthy, and reproducing population of striped bass by the 1980s. Today, Lake Texoma is marketed as the “Striper Capital of the World” and draws close to 1 million visitors annually. The spawning of striped bass in the Red and Washita Rivers is the key to the continued success of this sport fishery.

Terrestrial Wildlife Resources

The major wildlife habitats are upland forests, bottomland forests, shorelines and wetlands, prairies and grasslands, and agricultural areas. Each of these vegetative types provides habitat for a variety of organisms. The transition zones between these areas are especially productive. Due to the quantity and diversity of terrestrial habitats on public lands around Lake Texoma, there are many opportunities for consumptive recreation (hunting and fishing) and non-consumptive recreation (hiking, nature study/wildlife viewing, birdwatching, photography, outdoor education). Lake Texoma public lands are managed by natural resource professionals from the USACE, USFWS, ODWC, and TPWD cooperatively to preserve and enhance the natural beauty of the landscapes, manage habitats, promote vegetation succession for diversity and desirable species, control erosion, control invasive species, protect Federally listed and state-listed rare and endangered species, ensure natural wildlife food sources, and, in general, improve and sustain the carrying capacity of lands and waters for diverse, healthy populations of native terrestrial and aquatic animal species.

Principal wildlife species include mourning dove (*Zenaida macroura*), grey and fox squirrel (*Sciurus carolinensis* and *Sciurus niger*), cottontail rabbit (*Sylvilagus floridanus*), swamp rabbit (*Sylvilagus aquaticus*), white-tailed deer (*Odocoileus virginianus*), waterfowl, wild turkeys (*Meleagris gallopavo*), coyotes (*Canis latrans*), red and gray fox (*Vulpes vulpes* and *Urocyon cinereoargenteus*), skunk (*Mephitidae*), opossum (*Didelphimorphia*), raccoon (*Procyon lotor*), bobcat (*Lynx rufus*), beaver (*Castor canadensis*), muskrat (*Ondatra zibethicus*), and mink (*Neovison vison*). The variety of habitats at Lake Texoma also support numerous species of migratory waterfowl and wading birds, migratory neotropical and nearctic birds, upland game birds, raptors, and songbirds.

Hunting and fishing at Lake Texoma is managed in accordance with Federal and state fish and game regulations, as well as special restrictions imposed by the USACE. An example of special USACE restrictions is an “archery only” requirement on numerous tracts. Hunting is generally permitted on most large tracts of project lands and waters except in developed public use areas and other areas posted as no hunting. Public safety is a top priority on all Project lands and waters.

These lands are part of the 29,112 acres operated by ODWC in the Love Valley, Hickory Creek, Fobb Bottom, and Washita Arm Wildlife Management Areas. USACE has licensed 24,879 acres of land to USFWS at Hagerman and Tishomingo National Wildlife Refuges (NWRs). The remaining wildlife management lands not managed by ODWC and USFWS are managed by the USACE. Management efforts focus on producing native wildlife foods, as well as nesting and foraging habitat. Prescribed burns are conducted when conditions permit. Supplemental forage is provided through management of farming leases where needed to support the needs of species of greatest conservation need. Wetland development units are managed to provide additional waterfowl habitat and hunting opportunity. Hunting and fishing activities are regulated by Federal and state laws.

3.7.1 Alternative 1: No Action Alternative

The No Action Alternative does not involve any activities that would contribute to changes in existing conditions; therefore, no major long-term adverse impacts on natural resources would be anticipated as a result of implementing the No Action Alternative.

3.7.2 Alternative 2: Proposed Action

The proposed SMP would provide moderate, beneficial, long-term effects to natural resources due to better management of environmentally sensitive areas and vegetation management. The 119.99 mile increase in PSAs will provide more protected habitat as well as less disturbance to surrounding wildlife. Increases in protected shoreline areas along with decreases in public recreation areas, as well as the restrictions placed on vegetation management, will result in less short and long-term adverse impacts over time.

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.

Federally listed threatened and endangered species described in Table 6 may occur on the Lake Texoma project property.

Table 6 - Federally Listed Threatened and Endangered Species

Common Name	Scientific Name	Conservation Status	Likelihood of Occurrence
Least Tern	*Sterna antillarum*	Endangered	Rare
Piping Plover	*Charadrius melodus*	Threatened	Unlikely
Red Knot	*Calidris canutus rufa*	Threatened	Unlikely
Whooping Crane	*Grus Americana*	Endangered	Rare
American Burying Beetle	*Nicrophorus americanus*	Endangered	Moderate

Table 7 - Migratory Birds Listed by the USFWS

Common Name:	Scientific Name:	Breeding Season:
American Golden-Plover	*Pluvialis dominica*	Breeds Elsewhere
Bald Eagle	*Haliaeetus leucocephalus*	Breeds 1-SEP to 31-JUL
Buff Breasted Sandpiper	*Calidris subruficollis*	Breeds Elsewhere
Harris' Sparrow	*Zonotrichia querula*	Breeds Elsewhere
King Rail	*Rallus elegans*	Breeds 1-MAY to 5-SEP

Common Name:	Scientific Name:	Breeding Season:
Lesser Yellowlegs	*Tringa flavipes*	Breeds Elsewhere
Marbled Godwit	*Limosa fedoa*	Breeds Elsewhere
Red-Headed Woodpecker	*Melanerpes erythrocephalus*	Breeds 10-MAY to 10-SEP
Semipalmated Sandpiper	*Calidris pusilla*	Breeds Elsewhere
Smith's Longspur	*Calcarius pictus*	Breeds Elsewhere
Sprague's Pipit	*Anthus spragueii*	Breeds Elsewhere
Swallow Tailed Kite	*Elanoides forficatus*	Breeds 10-MAR to 30-JUN
Willet	*Tringa semipalmata*	Breeds Elsewhere

Information regarding endangered and threatened species from the Oklahoma Natural Heritage Inventory (ONHI) was used to determine the likelihood of occurrence of the species in Table 6. The USFWS was also consulted by using their official Information for Planning and Consultation (IPaC) tool; the threatened and endangered species in their reports are also listed in Table 6. The USFWS also provided a list of migratory bird species of conservation concern that may seasonally utilize Lake Texoma; these species are listed in Table 7.

The American Burying Beetle is the most likely species to occur on or in the near vicinity of Lake Texoma and will be heavily considered when determining effects to threatened and endangered species. The ONHI report indicates findings of the American Burying Beetle in Johnston and Marshall counties, OK. The American Burying Beetle is a habitat generalist, so it is not possible to determine their presence with greater precision.

The ONHI report also noted that an Oklahoma State Threatened species, the Arkansas River Shiner (*Notropis girardi*) has occurred on or in the near vicinity of Lake Texoma.

Texas Listed Rare, Threatened, and Endangered Species

Chapters 67 and 68 of the TPWD Code and Sections 65.171-65.176 of Title 31 of the Texas Administrative Code gives TPWD the authority to develop a list of state-listed threatened and endangered species, and to manage, regulate, and protect listed species in Texas. The state-listed species and species of greatest conservation need (SGCN) for Grayson and Cooke counties are provided in Appendix A. SGCN are species that are declining or rare and in need of attention to recover or to prevent the need to list under state or federal regulation. TPWD has identified 105 SGCN in Grayson and Cooke county while 14 SGCN occur on USACE property at Lake Texoma.

Along with the state lists, TPWD also operates the Texas Natural Diversity Database (TXNDD). TXNDD is a GIS-based inventory of known locations of state-listed threatened, endangered, and SGCN species. The TXNDD is limited to elements of occurrence that are located on public lands and private lands where the landowner has given written consent to include in the database. Therefore, TXNDD data are not a comprehensive representation of the range of the species, but a tool to identify potential listed species in a specific area. A search of the TXNDD resulted in the identification of 14 SGCN known to occur within the USACE boundary of Lake Texoma; these species are listed in Table 8.

Table 8 - Species of Greatest Conservation Need Occurring on Lake Texoma

Species Common Name:	Species Scientific Name:	State Rank:	Rank Meaning:	State Protection:
American Eel	*Anguilla rostrata*	S4	AS	
American Elm-hackberry Forest	*Ulmus americana-celtis spp. forest*	S4	AS	
Blue Sucker	*Cycleptus elongatus*	S3	V	T
Chub Shiner	*Notropis potteri*	S2	I	T
Eastern Box Turtle	*Terrapene carolina*	S3	V	
Goldeye	*Hiodon alosoides*	S3	V	
Interior Least Tern	*Sternula antillarum athalassos*	S1B	CI	E
Little Bluestem-Indiangrass-Needlegrass Herbaceous Vegetation	*Andropogon gerardii-schizachyrium scoparium-stipa leucotricha herbaceous vegetation*	S2	I	
Orangebelly Darter	*Etheostoma radiosum*	S3	V	
Red River Shiner	*Notropis bairdi*	S3	V	
Silver Chub	*Macrhybopsis storeriana*	S3	V	
Southern Crawfish Frog	*Lithobates areolatus areolatus*	S3	V	
Texas Oak-Ashe Juniper-Texas Ash Woodland	*Quercus buckleyi-juniperus ashei-fraxinus texensis woodland*	S3	V	
Timber (canebrake) Rattlesnake	*Crotalus horridus*	S4	AS	

AS = Apparently Secure: Uncommon but not rare; some cause for long-term concern due to declines or other factors.
V = Vulnerable: Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
I = Imperiled: Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.
CI = Critically imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep

declines making it especially vulnerable to extirpation from the state/province.
T = Threatened
E = Endangered

The USFWS and TPWD reports are listed in Appendix A. Please note that the ONHI and TXNDD reports that were also used to make effects determinations are not listed in Appendix A, in order to protect any rare or threatened and endangered species.

3.8.1 Alternative 1: No Action Alternative:

The No Action Alternative does not involve any activities that would contribute to changes in existing conditions; therefore, no major long-term adverse impacts on Threatened and Endangered Species would be anticipated as a result of implementing the No Action Alternative. No new adverse or beneficial impacts that are not presently occurring under the 1996 SMP would occur.

3.8.2 Alternative 2: Proposed Action:

The proposed alternative would cause an increase in Protected Shoreline Areas by approximately 120 miles, which would in turn, decrease the likelihood of impact to any threatened and endangered species that utilize the shoreline. Threatened and Endangered birds that utilize the shoreline, such as the Red Knot, Interior Least Tern, Piping Plover, and Whooping Crane, would have more protected shoreline to utilize. These bird species would experience no new adverse impacts, and would receive minor long-term beneficial impacts over the life of the SMP.

Migratory birds listed in Table 7 will not experience new adverse impacts, as any vegetation modification/management or other ground disturbing activities will still have to be permitted by the Lake Manager. Any activities that may disturb migratory birds during the time period they are most likely to be present will be evaluated by the Lake Manager and the USFWS. These species may also experience minor long-term beneficial impacts as a result of an increase in Protected Shoreline Areas.

The American Burying Beetle will experience no new adverse impacts considering any land modification, management, or otherwise disturbance will follow the same, if not, more rigorous permitting process. The SMP does change the diameter of trees able to be removed by one inch to two inches in diameter from 6 inches off the ground, but this is unlikely to disturb any American Burying Beetle habitat since they do not inhabit frequently flooded areas such as shorelines. Any projects or construction that could impact the American Burying Beetle may require surveying to the standards of the Lake Manager and the USFWS. The American Burying Beetle may also experience minor long-term beneficial impacts as a result of an increase in Protected Shoreline Areas.

Any species listed as SGCN by TPWD will experience no new adverse impacts similar to the federally listed species described above. These species may also experience minor long-term beneficial impacts.

3.9 INVASIVE SPECIES

Lake Texoma project lands and waters within the Red River and Washita River basins are considered to be a major pathway for the introduction of terrestrial and aquatic nuisance species. Table 9 lists invasive species presently documented to be present on Lake Texoma fee lands and waters. Vegetative species considered to be of special concern by the Oklahoma Invasive Plant Council in south central Oklahoma include: tree-of-heaven (*Ailanthus altissima*), mimosa (*Albizia julibrissin*) camelthorn (*Vachellia erioloba*), alligator weed (*Alternanthera philoxeroides*), Caucasian bluestem (*Bothriochloa bladhii*), paper mulberry (*Broussonetia papyrifera*), purple nutsedge (*Cyperus rotundus*), bush honeysuckle (*Lonicera maackii*), chinaberry tree (*Melia azedarach*), sulfur cinquefoil (*Potentilla recta*), kudzu (*Pueraria lobata*), callery pear (*Pyrus calleryana*), ravenna grass (*Saccharum ravennae*), and water hyacinth (*Eichhornia crassipes*).

Aquatic nuisance species considered special concerns by ODWC and TPWD include Asian carp (*Cyprinus carpio*), didymo (rock snot) (*Didymosphenia geminata*), golden algae (*Chrysophyceae*), Harris mud crab (*Rhithropanopeus harrisii*), white perch (*Morone americana*), zebra mussel (*Dreissena polymorpha*), and giant salvinia (*Salvinia molesta*).

Golden algae was first documented in Lake Texoma between January and March in 2004 during a substantial bloom, which resulted in fish kills in small coves from Lebanon Pool to Big Mineral Creek. Additional minor and nuisance blooms occurred in 2006 and 2007. The 2006 bloom and associated fish kill was isolated primarily to Lebanon Pool; however, the 2007 bloom and associated fish kill extended from Lebanon Pool to Buncombe Creek on the Oklahoma side of the reservoir and from Slickum Slough to Cedar Bayou on the Texas side of the reservoir. While the only major golden algae bloom occurred in 2004, the population of golden algae present in Lake Texoma is documented to be capable of producing the prymnesium toxin, and future blooms could result in a significant fish kill within the Red River arm of the reservoir.

The zebra mussel is an invasive, freshwater invertebrate that has a high filtration rate, high reproductive rate, strong byssal threads for substrate attachment, and a limited number of natural predators. Due to these characteristics, zebra mussels are able to populate an aquatic ecosystem relatively quickly and out-compete native mussel populations. Economic impacts caused by the invasive species include fouling water intake pipes, cooling systems, filtration systems, and fouling boat engine cooling systems. Zebra mussels fouling filtration systems associated with fire suppression at facilities using raw water can impede the effectiveness of the system, increasing the potential of damage to the facility and danger to human welfare. When a zebra mussel "die-off" occurs, thousands of shells can wash up on the shoreline or beach area; the sharp edges of the mussels' shells could potentially cause harm to humans and may result in public beach closures for safety reasons.

Zebra mussels were introduced to North America via trans-Atlantic barges to the commercial waterways of the U.S. from Europe in the 1980s. Once established, the spread of zebra mussels to inland waters occurred via navigation system traffic,

overland transportation of private boats from an infested water body to an uninfested water body, and natural downstream flows that carried the free-floating larval form of the species. Within the Tulsa District, zebra mussels were first confirmed in Oklahoma in the McClellan-Kerr Arkansas River Navigation System (MKARNS) in January 1993 inside Locks 14 (W.D. Mayo), 15 (Robert S. Kerr), and 16 (Webbers Falls). The invasive species were subsequently found in the Verdigris River of the MKARNS at Lock 17 (Chouteau) in June 1993 and at Lock 18 (Newt Graham) in January 1994. In conjunction with zebra mussel infestation at the locks along the MKARNS, the species was also observed to be in the powerhouses associated with Keystone Lake. Zebra mussel biological material was first documented in Lake Texoma in 2008. The first adult zebra mussels were found in Lake Texoma in 2009. Signs are posted to educate the public concerning the presence of invasive species and assist in the prevention of spreading the species to other water bodies.

The Harris mud crab was first observed by anglers during the summer of 2009 on the Oklahoma side of Lake Texoma (ODWC 2016). It is unknown whether the crabs were introduced by way of boats or released bait, or whether they naturally traveled their way to Oklahoma from Texas through rivers. Surveys and angler reports have resulted in this species being found in Fobb Bottom, Buncombe Creek, Cardinal Cove, Sandy Beach, Cross Point Camp, Caney Creek, McLaughlin Creek, Willow Springs, Platter Flats, and Willafa Woods. The population is thought to be limited but, where found, has negatively affected the native habitat and competes with native species for food. The crabs also cause damage by clogging intake valves and other water delivery systems.

Table 9 lists the invasive species that occur on Lake Texoma fee lands and waters. Data were retrieved from the FY2015 Project Site Invasive Species Records reported in OMBIL (USACE 2015).

Table 9 - Invasive Species Occurring on Lake Texoma Fee Lands & Waters

Species Group	Species Common Name	Type of Occurrence	Acreage Impacted	% Acreage Impacted	Acreage Treated
Aquatic and Wetland Animals	Asian clam	Moderate	74,686	39.01	0
Aquatic and Wetland Animals	Grass carp	Moderate	74,686	39.01	0
Aquatic and Wetland Animals	Rudd	Minor	74,686	39.01	0
Aquatic and Wetland Animals	Spiny water flea	Minor	74,686	39.01	0
Aquatic and Wetland Animals	Zebra mussel	Significant/Major	74,686	39.01	1
Aquatic and Wetland Animals	Harris mud crab				
Aquatic and Wetland Plants	Golden algae	Significant/Major	74,686	39.01	0

Species Group	Species Common Name	Type of Occurrence	Acreage Impacted	% Acreage Impacted	Acreage Treated
Terrestrial Animals	Red imported fire ant	Moderate	104,256	54.45	4
Terrestrial Animals	Feral hog	Significant/Major	104,256	54.45	75
Terrestrial Plants	Japanese honeysuckle	Minor	55,044	28.75	934
Terrestrial Plants	Johnsongrass	Moderate	104,256	54.45	216
Terrestrial Plants	Kudzu	Minor	200	0.10	934
Terrestrial Plants	Mimosa	Minor	200	0.10	11
Terrestrial Plants	Multiflora rose	Minor	104,256	54.45	934
Terrestrial Plants	Redcedar	Significant/Major	104,256	54.45	1834
Terrestrial Plants	Russian olive	Minor	104,256	54.45	934
Terrestrial Plants	Saltcedar	Minor	83,400	43.56	0
Terrestrial Plants	Sericea lespedeza	Minor	104,256	54.45	8
Terrestrial Plants	Tall fescue	Minor	88,156	46.04	8

3.9.1 Alternative 1: No Action Alternative

The No Action Alternative does not involve any activities that would contribute to changes in existing conditions, so Lake Texoma would continue to be managed according to the existing invasive species management practices. There would be no long-term major adverse impacts from invasive species as a result of implementing the No Action Alternative.

3.9.2 Alternative 2: Proposed Action

The shoreline reallocations, resource objectives, and resource plan required to revise the Lake Texoma SMP are compatible with the lake's invasive species management practices. The addition of 1,129 acres classified as Environmentally Sensitive Areas (ESA) in the 2017 Lake Texoma MP may provide long-term benefits as these areas may receive additional invasive species management. The 119.99 mile increase in protected shoreline areas in the 2021 SMP will further add to these protections already provided by the 2017 MP. Any land management activities such as vegetation management will be evaluated and approved by the Lake Manager, with best management practices applied.

The proposed shoreline allocation changes and associated policy changes proposed by the 2021 SMP will result in minor, long-term beneficial impacts in reducing and preventing the spread of invasive species. In summary these objectives are: monitoring for invasive species presence; addressing unauthorized uses of public lands which may spread invasive species; and evaluating erosion control as eroding lands provide colonization opportunities for invasive plant species. All of these would include a public outreach and education emphasis.

3.10 CULTURAL, HISTORICAL, AND ARCHAEOLOGICAL RESOURCES

Cultural resources preservation and management is an equal and integral part of all resource management at Civil Works operating projects. The term “cultural resources” is a broad term meant to include anything that is of cultural significance to humans and that has some historical value, and generally includes, but is not limited to, the following categories of resources: archaeological sites (historic and prehistoric), historic standing structures, traditional cultural properties, and sacred sites. There are approximately 464 known archaeological sites (339 sites in Oklahoma and 125 sites in Texas) located on project lands associated with Lake Texoma. Of these, two sites are listed in the National Register of Historic Places (NRHP), five sites have been determined eligible for listing in NRHP, 70 are ineligible, and 387 are of unknown NRHP eligibility. All of the listed or eligible sites are in Oklahoma, while the majority of the sites determined ineligible for listing are in Texas. The cultural, historical, and archaeological resources are described in detail in Section 2.3 of the Lake Texoma MP and are incorporated herein by reference (USACE 2017).

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 approved in 2014, and referenced in the 2017 MP, still applies.

3.10.1 Alternative 1: No Action Alternative

There would be no major adverse impacts on cultural resources as a result of implementing the No Action Alternative, as there would be no changes to the existing 1996 SMP. However, maintaining existing shoreline allocations would not recognize the presence or importance of cultural resources, which could lead to long-term negative moderate or major impacts as a result of implementing the No Action Alternative.

3.10.2 Alternative 2: Proposed Action

The proposed 2021 Shoreline Management Plan would not contradict or violate any of the protections for cultural resources set forth by the 2017 MP. The proposed action serves to further protect cultural resources and their associated areas by increasing the area of protected shoreline areas. The proposed action would have minor to moderate beneficial impacts to cultural resources over the planning horizon of the project.

Any future ground-disturbing activities would take into account Section 106 of the NHPA and other applicable cultural resource statutes to insure that cultural resources are protected. Also, several cultural resources management objectives were developed to promote the protection of Lake Texoma cultural resources and are described in Chapter 3.1 of the revised 2017 MP.

3.11 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

The zone of influence for the socio-economic analysis of Lake Texoma consists of 6 counties in both Texas and Oklahoma in the immediate vicinity of the reservoir. The counties which have the greatest socio-economic effects, or zone of influence, are Bryan, Johnston, Love, and Marshall Counties in the state of Oklahoma, and Cooke and Grayson Counties in the state of Texas. Available information indicates that an overwhelming majority of visitors to Lake Texoma come from within the zone of interest which takes in all or portions of counties lying within a 100-mile radius of the lake. The population, education level, employment rates, income, and household characteristics of the area are discussed in detail in Section 2.3 of the 2017 MP and are incorporated herein by reference (USACE, 2017).

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.

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.

3.11.1 Alternative 1: No Action Alternative

Under the No Action Alternative, there would be no changes to the existing SMP, with the USACE continuing to manage Lake Texoma natural resources as set forth in the 1996 SMP. There would be no major adverse long-term impacts on socioeconomic resources. Beneficial socioeconomic impacts existing as a result of the implementation of the 1996 SMP would continue, as visitors would continue to come to the lake from surrounding areas. In addition to camping in USACE-operated campgrounds, many visitors purchase goods such as groceries, fuel, and camping supplies locally, eat in local restaurants, stay in local hotels and resorts, play golf at local golf courses, and shop in local retail establishments. These activities would continue to bring revenues to local companies, provide jobs for local residents, and generate local and state tax revenues. There would be no disproportionately high or adverse impacts on minority or low-income populations or children with the implementation of the No Action Alternative.

3.11.2 Alternative 2: Proposed Action

Lake Texoma is beneficial to the local economy through indirect job creation and local spending by visitors, and also offers a variety of recreation opportunities and uses innovative maintenance and planning programs to minimize usage fees.

Since recreational opportunities remain abundant, and the revised SMP recognizes and reinforces projected recreational trends there would be negligible, long-term beneficial impacts on area economic stability and environmental justice populations resulting from the revision of the 1996 SMP.

Section 2.4 of the 2017 MP provides analysis of recreation needs for Lake Texoma; Section 3 of the revised 2017 MP details the recreational objectives support improving and modernizing recreation opportunities at Lake Texoma that promote continued visitation and related spending.

Similar to alternative 1, there would be no disproportionately high or adverse impacts on minority or low-income populations or children with the implementation of the No Action Alternative.

3.12 RECREATION

The majority of visitors to Lake Texoma come from a 100-mile radius of the reservoir. 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. Recreational facilities, activities, and needs are discussed in detail in Section 2.4 of the 2017 MP.

3.12.1 Alternative 1: No Action Alternative

Under the No Action Alternative, there would be no major adverse long-term impacts on recreational resources, as there would be no changes to the existing SMP.

3.12.2 Alternative 2: Proposed Action

The primary objective for revising the Lake Texoma 1996 SMP is to capture changes in current land use, management, sociopolitical factors, environmental factors, socioeconomic factors, and sociodemographic factors and modify the 1996 SMP to account for these changes.

Under the Proposed Action, the required revisions to the Lake Texoma SMP would be compatible with current recreation management plans and recognizes regional and national outdoor recreation trends, as well as the changes made in the 2017 MP. The reallocation changes required for the Proposed Action were developed to enhance regional goals associated with good stewardship of land and water resources that would allow for continued recreational use and development of project lands. The proposed action technically does reduce the area of public recreation areas, but this change is mostly a result of reducing relic public recreation areas that are not currently used by the public, as well as the incorporation of changes in land classification set forth by the 2017 MP. The proposed action would have minor beneficial impacts to recreation considering the change in public recreation areas better reflects the areas actually being used by the public, allowing for better management of these recreational areas.

3.13 AESTHETIC RESOURCES

Lake Texoma is in the unique Cross Timbers ecoregion, which is a complex mosaic of upland deciduous forest, savanna, and prairie communities. Geographically this region varies depending upon soil conditions, rainfall, and fire history highlighting the broad and overlapping ecotone transition areas between the eastern forests and the grasslands of the Great Plains. The region supports an evolving plant life as it radiates outward on an upward gradient, from open lake waters, shallow wetlands, and shoreline transition toward more elevated and better drained sites. Lake Texoma offers public, open space value and scenic vistas that are unique in the region.

3.13.1 Alternative 1: No Action Alternative

There would be no major adverse impacts on visual resources as a result of implementing the No Action Alternative, as there would be no changes to the existing 1996 SMP.

3.13.2 Alternative 2: Proposed Action

The proposed action includes an increase in protected shoreline areas as well as restrictions on vegetation management. These changes will serve to better preserve the aesthetic value of the environment of Lake Texoma. An increase in protected shoreline areas will continue to protect and preserve valuable cultural and environmental resources that contribute to the aesthetic properties of Lake Texoma. The vegetation management restrictions will better protect the growth and maturation of young, high quality, trees from damage or removal. The continued management of limited development areas will also preserve the natural aesthetics of the Lake by preventing planting of non-native flora and the removal or disturbance of native flora.The 119.99 mile increase in PSAs will provide beneficial effects to aesthetics by decreasing soil, vegetation, and wildlife disturbance that may be deemed aesthetically pleasing.

Therefore, the Proposed Action would result in minor, long-term beneficial impacts to the aesthetic resources of Lake Texoma.

3.14 HAZARDOUS MATERIALS AND SOLID WASTE

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.

3.14.1 Alternative 1: No Action Alternative

There would be no major adverse long-term impacts on hazardous, toxic, radioactive, or solid wastes as a result of implementing the No Action Alternative, as there would be no changes to the existing SMP.

3.14.2 Alternative 2: Proposed Action

The shoreline allocations required to revise the SMP would be compatible with Lake Texoma hazardous and toxic waste and solid waste management practices. Therefore, no major, adverse, or long-term impacts due to hazardous, toxic, radioactive, or solid wastes would occur as a result of implementing the 2021 SMP.

3.15 HEALTH AND SAFETY

As mentioned earlier in this document, Lake Texoma authorized purposes include flood risk management, water conservation, 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 Lake Texoma are in place to enforce these policies, rules, and regulations during normal park hours.

3.15.1 Alternative 1: No Action Alternative

Under the No Action Alternative, the 1996 SMP would not be revised. No major, adverse, long-term impacts on human health or safety would be anticipated.

3.15.2 Alternative 2: Proposed Action

Under the Proposed Action, the required revisions to the Lake Texoma 1996 SMP would be compatible with project safety management plans. The project would continue to have reporting guidelines in place should water quality become a threat to public health. No wake areas were designated in front of every boat ramp and marina. Restricted areas were established upstream and downstream of Lake Texoma Dam, around all designated swim beaches, and around municipal water intake structures. Overall there are no shoreline allocations that would have any impact on human health or safety. Several new recreational, education, and outreach objectives were developed to support ongoing efforts that provide for public health and safety and can be found in Chapter 3 of the revised MP. Existing regulations and safety programs throughout the Lake Texoma area would continue to be enforced to ensure public safety.

Therefore, there would be no major, adverse, long-term impacts on public health and safety as a result of implementing the Proposed Action.

SECTION 4: CUMULATIVE IMPACTS

The most severe environmental degradation may not result from the direct effects of any particular action, but from the combination of effects of multiple, independent actions over time. As defined in 40 CFR § 1508.7, a cumulative effect is 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.

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.” This cumulative impacts analysis summarizes expected environmental impacts from the combined impacts of past, current, and reasonably foreseeable future activities affecting any part of the human or natural environments impacted by the Proposed Action.

4.1 Current And Reasonably Foreseeable Projects Within And Near The Zone Of Interest

The majority of the Texas side of Lake Texoma is approximately 40 miles from the northern counties of the Dallas-Fort Worth-Arlington Metropolitan Statistical Area (MSA), the largest MSA in Texas and fourth largest in the United States. Roadway

extensions and expansions are being constructed and planned in anticipation that population growth of the MSA will extend further north toward Lake Texoma. Population projections from the Census Bureau show Grayson County growing by approximately 50,000 additional people by 2050. Perhaps of greater importance is the projected population growth of adjoining Denton and Collin Counties of more than 1 million additional people by 2040.

The websites of several organizations were reviewed to determine significant planned or projected road projects within the six-county zone of influence. The agency websites reviewed included Texas Department of Transportation (TXDOT), Oklahoma Department of Transportation (ODOT), North Texas Tollway Authority (NTTA) and Grayson County Regional Mobility Authority (GCRMA). The review of available information revealed two major road projects of regional significance as follows:

- Replacement of the U.S. Highway 99/377 Bridge that spans Lake Texoma from Grayson County, Texas, to Marshall County, Oklahoma. This is a joint project of ODOT and TXDOT. Construction is scheduled to complete in 2022.

- Extension of the Dallas North Tollway (DNT) into Grayson County. This is a long-term planning project under development by the NTTA, with a feasibility study scheduled to start in 2019. Phase 4 of the project would extend the DNT to the Grayson County line. Phase 5 would extend the DNT north to approximately FM 121 in southern Grayson County. Of note is that the GCRMA has signed a resolution supporting extension of the DNT north to U.S. Highway 75 in the northern part of Denison, Texas, only a few miles from Denison Dam.

Other minor roadway projects managed by ODOT and TXDOT are described below:

<u>TXDOT:</u>

- Project ID: 008110046
  - Highway 377
  - Work Description: Seal Coat; 5.2 miles

- Project ID: 137901027
  - FM 901
  - Work Description: Texturize Shoulders, Profile Pavement Markers; 17.9 miles

- Project ID: 264002009
  - FM 406
  - Work Description: Preventative Maintenance; NA

- Project ID: 004701069
    - US 75
    - Work Description: Full Depth Repair Reinforce Concrete Pavement, Slab Jacking Concrete Pavement; 0.8 miles

- Project ID: 004718079
    - US 75
    - Work Description: Seal Coat; 10.6 miles

- Project ID: 004718084
    - US 75
    - Work Description: Full Depth Repair Reinforce Concrete Pavement, Slab Jacking Concrete Pavement; 12.9 miles

- Project ID: 072802033
    - FM 120
    - Work Description: Hazard Elimination & Safety

ODOT:

- Description: Bridge & approaches over Lake Texoma on the Willis Bridge. Spring ’22. Jensen Const. $43 million.
    - Affected Roads: SH-99/US-377

- Description: Grade, drain and surface on a new alignment 3 miles east of SH-32 extending east near Kingston. Summer ’20. Overland Corp. $2.6 million.
    - Affected Roads: US-70

In addition to the roadway projects described above, the GCRMA has a thoroughfare plan showing a variety of existing and planned roadway projects. Included in the proposed roadways are two minor arterials of significance to USACE lands at Lake Texoma. One appears to be an east-west extension of FM120 from just west of Pottsboro, traversing across the Big Mineral Arm of Lake Texoma before intersecting with US Highway 377. A second minor arterial appears to be a northwestern extension of SH 289 from Pottsboro out onto the Preston Bend peninsula.

- Repair of the Cumberland Levee is nearing completion, but work will continue until the damage resulting from the 2015 flood event is completely repaired.

Reasonably foreseeable future development is difficult to predict with certainty in the Lake Texoma region. Given the proximity of the lake to the Dallas-Fort Worth metroplex, future development is anticipated due to increased recreational needs. Currently, three developments are proposed for Lake Texoma and include the Preston Harbor Development, the Rock Creek Resort, and the Pointe Vista Development

(USACE 2012). The Preston Harbor Development is located on the northeastern side of Little Mineral Arm on the Texas side of Lake Texoma. Development is anticipated to occur over a 20 to 25 year period and would include the construction of the wastewater pump station, boat ramp, boat club, boat slips, a dry dock storage facility, and shoreline protection for the boat club and the housing development. After the first 5 years, the development would include the southern golf club, golf course, community center, single-family and townhome residential development, commercial and medical services, and an inland lake. The next 10 to 20 years would include the development of a northern golf course, golf club, single-family and townhome residential development, commercial services center, boat slips, boat docks, and possible expansion of the wastewater pump station, and another inland lake. The last five years of development would include the completion of a hotel and conference center, including the proposed day-use boat slips and recreational beaches.

Rock Creek Resort consists of approximately 1,300 acres of private lands and an adjacent137-acre commercial concession lease on USACE land on the Texas side of the lake in the vicinity of the former Paw Paw Creek marina and resort. Rock Creek Resort is owned by Double Diamond Companies. Future development includes residential properties and amenities on the private lands and a proposed marina and related amenities on the lands leased from USACE. Public road access will be provided to the marina location (Rock Creek Resort 2016).

The Pointe Vista Development (Pointe Vista Development, LLC), located in Marshall County, Oklahoma on the Washita Arm of Lake Texoma, is proposed to develop 1,850 acres into a resort setting. Including the development in the surrounding areas, the total project includes the development of approximately 2,815 acres. The development includes 750 acres acquired from the Oklahoma Commissioners of the Land Office (CLO) and 558 acres previously conveyed in 2005 by USACE to the CLO in accordance with the Water Resources Development Act of 1999. Future development could involve an additional 950 acres of USACE property and 100 acres of land from the Oklahoma Tourism and Recreation Department (OTRD). The development around Catfish Bay Marina would include residential lots, marina expansion, and public boat slips. The Pointe Vista Development is proposed to include a golf course, hotel, club house, practice facility, marina, aquatic center, outdoor recreation center, nature parks, campgrounds, retail shops, and an amphitheater.

4.2 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 are defined in Section 3.0. Moderate growth and development are expected to continue in the vicinity of Lake Texoma and cumulative adverse impacts on resources would 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 is presented below. A resource is only discussed in the following section if it is being impacted by the proposed action.

4.2.1 Land Use

A major impact would occur if any action is inconsistent with adopted land use plans or if an action would substantially alter those resources required for, supporting, or benefiting the current use. Under the No Action Alternative, land use would not change. Although the Proposed Action would result in the mileage changes of shoreline allocations, the changes in area were developed to enhance regional goals associated with good stewardship of shoreline resources that would allow for continued use and development of project lands. Therefore, cumulative impacts on shoreline use within the area surrounding Lake Texoma, when combined with past and proposed actions in the region, are anticipated to be minimal.

4.2.2 Water Resources

Lake Texoma was developed for flood control, water supply, fish and wildlife management, and recreation purposes. A major impact would occur if any action is inconsistent with adopted surface water allocations or water use plans, or if an action would substantially alter those resources required for, supporting, or benefiting the current use. The reallocations required for the Proposed Action would allow land management and land uses to be compatible with the goals of good stewardship of water resources.

Other activities surrounding Lake Texoma, such as the addition of future utility lines in corridors, which would require boring beneath streams in most cases to avoid impacts, have been identified as having the potential to contribute directly to the cumulative impacts on water quality; however, water quality monitoring will continue to be used to assess any changes in these conditions. However, the cumulative impacts on water quality from the Proposed Action at Lake Texoma are anticipated to be negligible when combined with past and proposed actions in the area.

4.2.3 Air Quality

For the area surrounding Lake Texoma, activities that could add to air emissions in the area are likely few and minor in nature. Vehicle traffic along park and area roadways and routine daily activities in nearby communities contribute to current and future emission sources. Seasonal prescribed burning on Lake Texoma lands would have minor, negative impacts on air quality through elevated ground-level ozone and particulate matter concentrations; however, these seasonal burns are generally scheduled so that impacts are minimized. Minor improvements to the communities in the Lake Texoma area, such as construction of new business buildings and highway improvement projects could also contribute to minor future emissions. Implementation of the 2021 SMP will not contribute to major cumulative impacts in the region.

4.2.4 Topography, Geology, and Soils

A major impact would occur if the 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 ground-disturbing activities, other than permitted construction of docks, and is unlikely to disturb any Prime Farmland soils present on Lake Texoma grounds. Cumulative adverse impacts on topography, geology, and soils within the area surrounding Lake Texoma, when combined with past and proposed actions in the region, are anticipated to be negligible on the long-term basis.

Land use around Lake Texoma has changed in the past several years. Given the projected population growth and vast acreage of Prime Farmland in the area, there could be cumulative impacts on Prime Farmland in the Project area. However, the cumulative impacts on Prime Farmland from the Proposed Action at Lake Texoma are anticipated to be negligible when combined with past and proposed actions in the area.

4.2.5 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 establishment of Protected Shoreline Areas, as well as resource objectives that favor protection and restoration of valuable natural resources will have beneficial cumulative impacts. No identified projects would threaten the viability of natural resources. Therefore, there would be long-term beneficial impacts to natural resources resulting from the revision of the 1996 Lake Texoma SMP, including the establishment of utility corridors, when combined with past and proposed actions in the area.

4.2.6 Threatened and Endangered Species

The Proposed Action and No Action Alternative would not adversely impact threatened, endangered and special status species within the area. Should federally listed species change in the future (e.g., delisting of the Least Tern or other species or listing of new species), associated requirements will be reflected in revised land management practices in coordination with the USFWS. The USACE would continue cooperative management plans with the USFWS and TPWD to preserve, enhance, and protect critical wildlife habitat resources.

Projects proposed within the Lake Texoma project area, as well as past and present projects, are not anticipated to impact threatened and endangered species as they will be coordinated with the appropriate resource agencies. The shoreline reallocations as explained in detail in Table 1 will allow for further protection of threatened, endangered and other unique/rare communities found within the project area. The reallocations will also allow future land management practices that would

maintain and enhance habitats for these species. The proposed utility corridors would limit further fragmentation of habitat and confine ongoing maintenance disturbances. Therefore, there would be major long-term beneficial impacts on threatened and endangered species resulting from the revision of the Lake Texoma 1996 SMP when combined with past and proposed actions in the area.

4.2.7 Invasive Species

To the extent that funding will allow, USACE will continue its proactive, cooperative herbicide treatments with TPWD and ODWC to control these species that affect not only the natural biological resources, but also recreational opportunities. Pesticide treatment for invasive ants will also continue. The USACE will also continue to monitor for zebra mussels and take all practicable measures to manage them in Lake Texoma.

Invasive species control has and will continue to be conducted on various areas across the project lands. Implementing Best Management Practices (BMP) will help reduce the introduction and distribution of invasive species, ensuring that proposed actions in the region will not contribute to the overall cumulative impacts related to invasive species. The shoreline allocation changes proposed to revise the 1996 SMP are compatible with Texoma invasive species management practices as described in the 2017 MP. Therefore, there would be minor, long-term, beneficial impacts on reducing and preventing invasive species within the area surrounding Lake Texoma.

4.2.8 Cultural, Historical, and Archaeological Resources

The Proposed Action would not affect cultural resources or historic properties. Therefore, this action, when combined with other existing and proposed projects in the region, would not result in major cumulative impacts on cultural resources or historic properties. The SMP would follow the same assessments made in the 2017 MP that uses the 2014 Cultural Resources/Historic Properties Management Plan.

4.2.9 Socioeconomics and Environmental Justice

The Proposed Action would not result in the displacement of persons (minority, low-income, children, or otherwise) or a decrease in people recreating at Lake Texoma as a result of implementing the revised shoreline allocations. The creation of jobs, increase of visitor spending and relative decrease of usage fees results in a positive impact to the local economy. Therefore, the effects of the Proposed Action on environmental justice and the protection of children, when combined with other ongoing and proposed projects in the Lake Texoma area, are anticipated to have negligible long-term beneficial impacts.

4.2.10 Recreation

Lake Texoma is beneficial to the local visitors and also offers a variety of free recreation opportunities. Some of the popular recreation activities at Lake Texoma are, on a national basis, either static or declining in participation. For example, developed

camping activity, power boating, hunting, and fishing have experienced small to moderate declines in recent years. In contrast to these declines, significant increases in hiking, walking, sightseeing, wildlife viewing and canoeing/kayaking have occurred in recent years. The 2021 SMP does not reduce the amount of lands available for recreation, but is an accompanying document to the 2017 MP, which did reduce recreation lands. The conversion of these lands would have no effect on current or projected public use. Therefore, the effects of the Proposed Action, when combined with other existing and proposed projects in the region, would result in negligible, long-term, beneficial impacts on the area recreation.

4.2.11 Aesthetic Resources

Lake Texoma proper and surrounding federal lands offer public, open space values and scenic vistas that are unique in the region. Natural Resources Management Objectives for the lake will continue to minimize activities which disturb the scenic beauty and aesthetics of the lake. Therefore, the Proposed Action would result in minor long-term beneficial impacts to the aesthetic resources of Lake Texoma.

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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 revision of the 1996 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 2021 SMP revision process, as well as identify reallocation proposals, and identify significant issues related to the Proposed Action. Information provided by USFWS, TPWD, and ODWC/ONHI on fish and wildlife resources has been utilized in the development of the 2021 SMP.

Endangered Species Act of 1973, as amended – Current lists of threatened or endangered species were compiled for the revision of the 1996 SMP. There would be no adverse long-term impacts on threatened or endangered species resulting from the revision of the 1996 SMP. However, continued long-term beneficial impacts, such as habitat protection, could occur as a result of the revision of the 1996 SMP.

Executive Order 13186 (Migratory Bird Habitat Protection) – Sections 3a and 3e of EO 13186 directs 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 2021 SMP revision will not result in adverse impacts on migratory birds or their habitat. Beneficial impacts could occur through protection of habitat as a result of the 2021 SMP revision.

Migratory Bird Treaty Act – 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.

Clean Water Act (CWA) of 1977 – The Proposed Action is in compliance with all state and federal CWA regulations and requirements and is regularly monitored by the USACE, OWRB, and TCEQ for water quality. A state water quality certification pursuant to Section 401 of the CWA is not required for the 2021 SMP revision. However, any future utilities occupying the proposed utility corridors would be required to comply with all Clean Water Act requirements. There will be no change in the existing management of the reservoir that would 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 and site salvages were coordinated with the Texas and Oklahoma State Historic Preservation Officers. Known sites are mapped and avoided by maintenance activities. Areas that have not undergone cultural resources surveys or evaluations will need to do so prior to any earthmoving or other potentially impacting activities.

Clean Air Act of 1977 – 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 2021 SMP revision.

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. Prime Farmland is present within and adjacent to Lake Texoma. The 2021 SMP would not impact Prime Farmland present on Lake Texoma.

Executive Order 11990, Protection of Wetlands – 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 2021 SMP complies with EO 11990.

Executive Order 11988, Floodplain Management – This EO directs federal agencies to evaluate the potential impacts of proposed actions in floodplains. The operation and management of the existing project complies with EO 11988.

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 2021 SMP would not impact Prime Farmland present on Lake Texoma 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 revision of the 1996 SMP will not result in a disproportionate adverse impact on minority or low-income population groups.

SECTION 6: IRRETRIEVABLE AND IRREVERSIBLE COMMITMENT OF RESOURCES

NEPA requires that federal agencies identify “any irreversible and irretrievable commitments of resources which would be involved in the Proposed Action should it be implemented” (42 U.S.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 renew. The impacts for this project from the reallocation of shorelines would not be considered an irreversible commitment because subsequent SMP revisions could result in some shorelines being reclassified to a prior, similar shoreline allocation. 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 revisions to the Lake Texoma 1996 SMP.

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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 2021 SMP revision process, as well as identify reallocation proposals, and identify significant issues related to the Proposed Action. The USACE began its public involvement process with a public scoping meeting to provide an avenue for public and agency stakeholders to ask questions and provide comments. There were 2 public scoping meetings, the first one was held on 29 January 2020 in Pottsboro, Texas, and the second one was held on 30 January 2020 in Kingston, OK. The Tulsa District placed advertisements on the USACE webpage and provided news releases to media prior to the public scoping meetings.

The 2021 Lake Texoma SMP draft release was completed virtually from December 02, 2020 through January 02, 2021 due to precautions taken considering the COVID-19 pandemic. The public and agencies were notified of the process and availability of the draft through a variety of venues including e-mail, newspaper press release and purchased ads, letter, and social media. A USACE website hosted an explanatory presentation of the SMP, changes made, and the process for commenting. Comment forms, maps, the current SMP and the proposed draft SMP and EA were included on the website for review and download by the public. Three agencies and three members of the public provided written comments resulting in 11 separate comments. A summary of the comments and USACE responses for the initial scoping meeting and final draft release can be found in Appendix F of the 2021 SMP.

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SECTION 9: ACRONYMS/ABBREVIATIONS

%	Percent
°	Degrees
ADA	Americans with Disabilities Act
AQCR	Air Quality Control Regions
AS	Apparently Secure
BMP	Best Management Practices
BSA	Boy Scouts of America
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
cfs	cubic-feet per second
CI	Critically Imperiled
CLO	Oklahoma Commissioners of the Land Office
Cm	Centimeter
CO	Carbon Monoxide
CO2	Carbon Dioxide
CO2e	Carbon Dioxide Equivalent
cy	cubic yards
E	Endangered
EA	Environmental Assessment
EIS	Environmentl Impact Statement
ER	Environmental Regulation
ESA	Environmentally Sensitive Area
FPPA	Farmland Protection Policy Act
GCRMA	Grayson County Regional Mobility Authority
GHG	Greenhouse Gas
GIS	Geographic Information System
GPS	Global Positioning System
I	Imperiled
IPaC	Information for Planning and Consultation
kW	Kilowatts
LDA	Limited Development Area
LLC	Limited Liability Company
M	Meter
MCL	Maximum Containment Level
mg/L	Milligrams per Liter
mg/m3	Milligrams per cubic meter
MKARNS	McClellan–Kerr Arkansas River Navigation System
mmBtu	Million British Thermal Units
MP	Master Plan
mW	Megawatts
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NEC	National Electric Code
NEPA	National Environmental Policy Act
NGVD	National Geodetic Vertical Datum

NOx	Nitric Oxide
NRCS	National Resources Conservation Service
NRHP	National Register of Historic Places
NTTA	North Texas Tollway
NTU	Nephelometric Turbidity Units
O3	Ozone
OAQPS	Office of Air Quality and Planning Standards
ODOT	Oklahoma Department of Transportation
ODWC	Oklahoma Department of Wildlife Conservation
OK	Oklahoma
OMBIL	Operations and Maintenance Business Information Link
ONHI	Oklahoma National Heritage Inventory
OTRD	Oklahoma Tourism and Recreation Department
OWRB	Oklahoma Water Development Board
PAA	Prohibited Access Area
Pb	Lead
PFF	Private Flotation Facility
PM10	Particulate Matter – 10 micrometers or less in diameter
PRA	Public Recreation Area
PSA	Protected Shoreline Area
RA	Restricted Area
RTEST	Rare, Threatened, and Endangered Species of Texas
SGCN	Species of Greatest Conservation Need
SMCL	Secondary Maximum Containment Level
SMP	Shoreline Management Plan
SO2	Sulfur Dioxide
SWT	Southwestern District - Tulsa
T	Threatened
TCAP	Texas Conservation Action Plan
TORP	Texas Outdoor Recreation Plan
TPWD	Texas Parks and Wildlife Department
TX	Texas
TXDOT	Texas Department of Transportation
TXNDD	Texas National Diversity Database
US	United States
USACE	United States Army Corps of Engineers
USC	United States Code
USCG	United States Coast Guard
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
V	Vulnerable
VOC	Volatile Organic Compounds
WHO	World Health Organization
WRDA	Water Resources Development Act

APPENDIX A: RESOURCE AGENCY REPORTS

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
http://www.fws.gov/southwest/es/Oklahoma/

In Reply Refer To: November 05, 2020
Consultation Code: 02EKOK00-2020-SLI-2178 Event Code: 02EKOK00-2021-E-00519
Project Name: Lake Texoma Shoreline Management Plan Revision

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/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

Non-federal entities conducting activities that may result in take of listed species should consider seeking coverage under section 10 of the ESA, either through development of a Habitat Conservation Plan (HCP) or, by becoming a signatory to the General Conservation Plan (GCP) currently under development for the American burying beetle. Each of these mechanisms provides the means for obtaining a permit and coverage for incidental take of listed species during otherwise lawful activities.

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

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http:// www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http:// www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/ comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit through our Project Review step-wise process http://www.fws.gov/southwest/es/ oklahoma/OKESFO%20Permit%20Home.htm.

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

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

Arlington Ecological Services Field Office

2005 Ne Green Oaks Blvd Suite
140
Arlington, TX 76006-6247
(817) 277-1100

Project Summary

Consultation Code: 02EKOK00-2020-SLI-2178

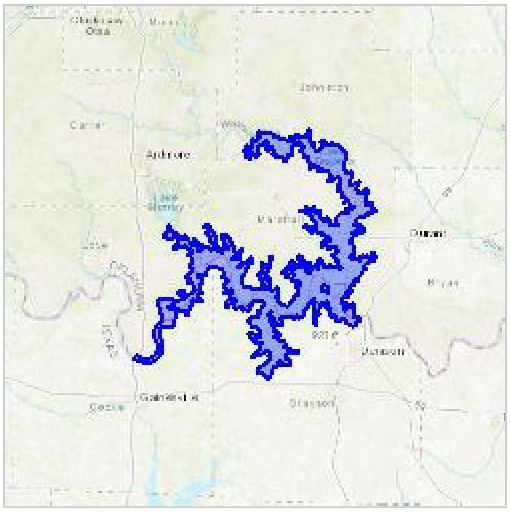
Event Code: 02EKOK00-2021-E-00519

Project Name: Lake Texoma Shoreline Management Plan Revision

Project Type: LAND - MANAGEMENT PLANS

Project Description: Revising the shoreline management plan for Lake Texoma. This is effectively just a zoning project, with no construction involved.

Project Location:
Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/33.96048054303769N96.94756019340674W



Counties: Bryan, OK | Johnston, OK | Love, OK | Marshall, OK | Cooke, TX | Grayson, TX

Endangered Species Act Species

There is a total of 5 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[1], 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.

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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.

Birds

NAME	STATUS
Least Tern *Sterna antillarum* Population: interior pop. No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8505	Endangered
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **fi** **nal** critical habitat for this species. Your location is outside the critical habitat. Species pr ofile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot *C alidris canutus rufa* No critical habitat has been designated for this species. Species pr ofile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping C rane *Grus americana* Population: Wherever found, except where listed as an experimental population There is **fi** **nal** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/758	Endangered

Insects

NAME	STATUS
American Burying Beetle *Nicrophorus americanus* Population: Wherever found, except where listed as an experimental population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/66	Threatened

Critical habitats

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

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.

The following FWS National Wildlife Refuge Lands and Fish Hatcheries lie fully or partially within your project area:

FACILITY NAME	ACRES
Tishomingo National Wildlife Refuge	16,500

Tishomingo National Wildlife Refuge 11766 South Refuge Road
Tishomingo, OK 73460-3507
(580) 371-2402

https://www.fws.gov/refuges/profiles/index.cfm?id=21650

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

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.

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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 *Pluvialis dominica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Bald Eagle *Haliaeetus leucocephalus* 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. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

NAME	BREEDING SEASON
Buff-breasted Sandpiper *Calidris subruficollis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9488	Breeds elsewhere
Harris's Sparrow *Zonotrichia querula* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
King Rail *Rallus elegans* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8936	Breeds May 1 to Sep 5
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Semipalmated Sandpiper *Calidris pusilla* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Smith's Longspur *Calcarius pictus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Sprague's Pipit *Anthus spragueii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8964	Breeds elsewhere
Swallow-tailed Kite *Elanoides forficatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938	Breeds Mar 10 to Jun 30

NAME	BREEDING SEASON
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere

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 months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season **( )**

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

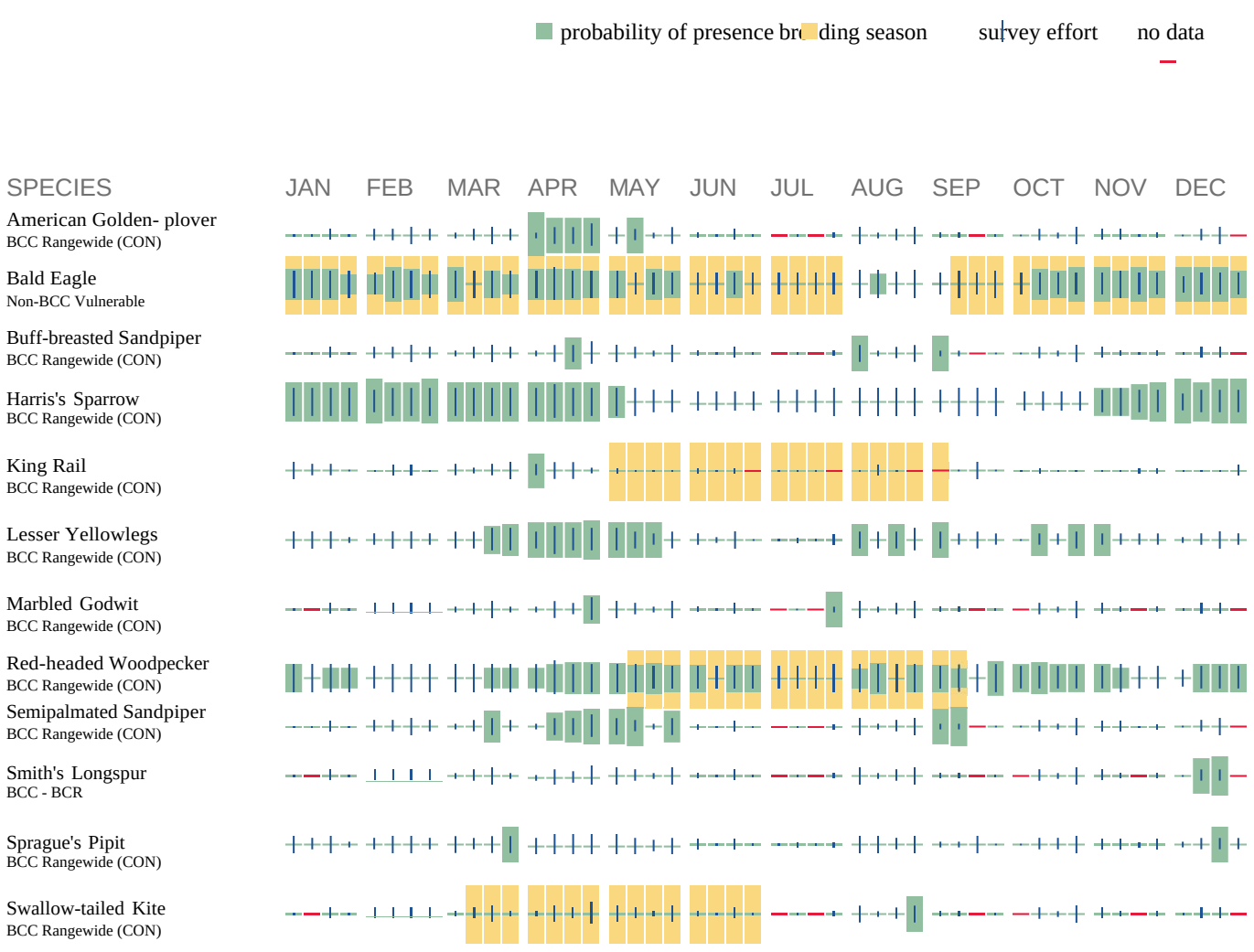
Survey Effort ( )

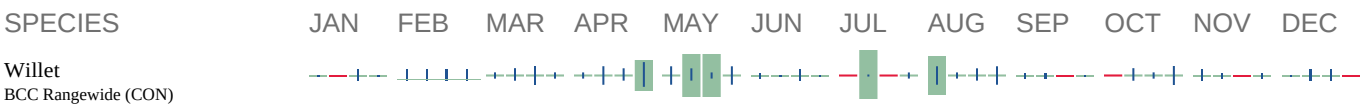
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data ( )
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

Migratory Birds FAQ

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

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 and/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 migratory birds potentially occurring 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 AKN Phenology 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, migrating or present year-round in my project 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 refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. 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?

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 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.

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.

Due to your project's size, the list below may be incomplete, or the acreages reported may be inaccurate. For a full list, please contact the local U.S. Fish and Wildlife office or visit https://www.fws.gov/wetlands/data/mapper.HTML

FRESHWATER EMERGENT WETLAND

- PEM1/FO1Fh
- PEM1/SS1A
- PEM1/SS1C
- PEM1A
- PEM1Ah
- PEM1Ax
- PEM1C
- PEM1Ch
- PEM1Cx
- PEM1F
- PEM1Fh

FRESHWATER FORESTED/SHRUB WETLAND

- PFO/EM1A
- PFO/EM1Ch
- PFO/EM1Fh
- PFO/SS1Ah
- PFO1/SS1A
- PFO1/SS1Ah
- PFO1/SS1C
- PFO1/SS1Ch
- PFO1/SS1F
- PFO1/UBF

- PFO1A
- PFO1Ah
- PFO1C
- PFO1Ch
- PFO1F
- PFO1Fh
- PSS/EM1Ah
- PSS/EM1C
- PSS/EM1Ch
- PSS/EM1F
- PSS/EM1Fh
- PSS/FO1Ch
- PSS1/EM1Ah
- PSS1/FO1C
- PSS1A
- PSS1Ah
- PSS1C
- PSS1Ch
- PSS1F
- PSS1Fh
- PSS2A
- PSS2C
- PSS2Ch

FRESHWATER POND

- PUB/FO1Fh
- PUBF
- PUBFh
- PUBH
- PUBHh
- PUBHx
- PUSA
- PUSAh
- PUSC
- PUSCh

LAKE

- L1UBH

- L1UBHh
- L2UBFh
- L2USCh

RIVERINE

- R2UBH
- R2USA
- R2USC
- R4SBA
- R4SBC

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arlington Ecological Services Field Office 2005 Ne Green Oaks Blvd
Suite 140
Arlington, TX 76006-6247
Phone: (817) 277-1100 Fax: (817) 277-1129
http://www.fws.gov/southwest/es/arlingtontexas/
http://www.fws.gov/southwest/es/EndangeredSpecies/lists/

In Reply Refer To: November 05, 2020
Consultation Code: 02ETAR00-2020-SLI-2307 Event Code: 02ETAR00-2021-E-00672
Project Name: Lake Texoma Shoreline Management Plan Revision

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/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, which may occur within the boundary of 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.).

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 section 7(a)(1) of the Act, Federal agencies are directed to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Under and 7(a)(2) and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether their actions may affect threatened and endangered species and/or designated critical habitat. A Federal action is an activity or program authorized, funded, or carried out, in whole or in part, by a Federal agency (50 CFR 402.02).

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 Federal actions 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.

After evaluating the potential effects of a proposed action on federally listed species, one of the following determinations should be made by the Federal agency:

1. *No effect* - the appropriate determination when a project, as proposed, is anticipated to have no effects to listed species or critical habitat. A "no effect" determination does not require section 7 consultation and no coordination or contact with the Service is necessary. However, the action agency should maintain a complete record of their evaluation, including the steps leading to the determination of affect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related information.
2. *May affect, but is not likely to adversely affect* - the appropriate determination when a proposed action's anticipated effects are insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and should never reach the scale where "take" of a listed species occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects, or expect discountable effects to occur. This determination requires written concurrence from the Service. A biological evaluation or other supporting information justifying this determination should be submitted with a request for written concurrence.
3. *May affect, is likely to adversely affect* - the appropriate determination if any adverse effect to listed species or critical habitat may occur as a direct or indirect result of the proposed action, and the effect is not discountable or insignificant. This determination requires formal section 7 consultation.

The Service recommends that candidate species, proposed species, and proposed critical habitat be addressed should consultation be necessary. 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

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.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/ eagle_guidance.html). Additionally, wind energy projects should follow the wind energy

guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http:// www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http:// www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/ comtow.html.

For additional information concerning migratory birds and eagle conservation plans, please contact the Service's Migratory Bird Office at 505-248-7882.

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

Attachment(s):

- Official Species List

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:

Arlington Ecological Services Field Office
2005 Ne Green Oaks Blvd Suite
140
Arlington, TX 76006-6247
(817) 277-1100

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

Oklahoma Ecological Services Field Office

9014 East 21st Street Tulsa, OK
74129-1428
(918) 581-7458

Project Summary

Consultation Code: 02ETAR00-2020-SLI-2307

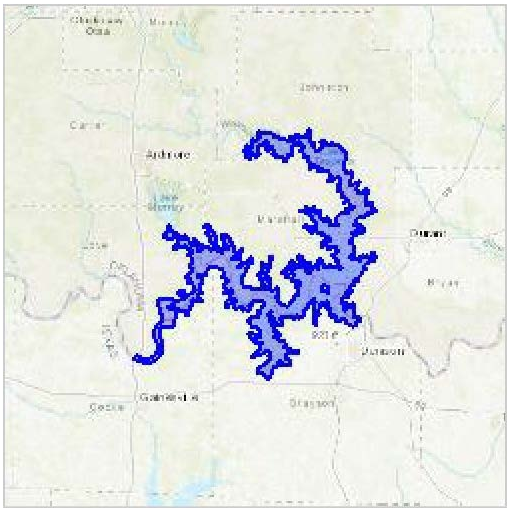
Event Code: 02ETAR00-2021-E-00672

Project Name: Lake Texoma Shoreline Management Plan Revision

Project Type: LAND - MANAGEMENT PLANS

Project Description: Revising the shoreline management plan for Lake Texoma. This is effectively just a zoning project, with no construction involved.

Project Location:
Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/33.96048054303769N96.94756019340674W



Counties: Bryan, OK | Johnston, OK | Love, OK | Marshall, OK | Cooke, TX | Grayson, TX

Endangered Species Act Species

There is a total of 4 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. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], 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.

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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.

Birds

NAME STATUS

Least Tern *Sterna antillarum* Endangered
Population: interior pop.
No critical habitat has been designated for this species. Species profile:
https://ecos.fws.gov/ecp/species/8505

Piping Plover *Charadrius melodus* Threatened
Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.
There is **fi** **nal** critical habitat for this species. Your location is outside the critical habitat.
This speci es only needs to be considered under the following conditions:
Energy Projects
- Wind ofile: https://ecos.fws.gov/ecp/species/6039

Species pr

alidris canutus rufa
Red Knot *C* habitat has been designated for this species. Threatened
No critical This speci es only needs to be considered under the following conditions:
Energy Projects
- Wind ofile: https://ecos.fws.gov/ecp/species/1864

Species pr

rane *Grus americana*
Whooping C Wherever found, except where listed as an experimental population Endangered
Population: **nal** critical habitat for this species. Your location is outside the critical habitat.
There is **fi**
Species profile: https://ecos.fws.gov/ecp/species/758

Critical habitats

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

Last Update: 6/26/2020

COOKE COUNTY

AMPHIBIANS

Strecker's chorus frog *Pseudacris streckeri*

Terrestrial and aquatic: Wooded floodplains and flats, prairies, cultivated fields and marshes. Likes sandy substrates.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Woodhouse's toad *Anaxyrus woodhousii*

Terrestrial and aquatic: A wide variety of terrestrial habitats are used by this species, including forests, grasslands, and barrier island sand dunes. Aquatic habitats are equally varied.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: SU

BIRDS

bald eagle *Haliaeetus leucocephalus*

Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3B,S3N

Black Rail *Laterallus jamaicensis*

Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia

Federal Status: PT	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S2

Eskimo curlew *Numenius borealis*

Historically, shortgrass plains and prairies, but more recently (1960s) in old fields, closely grazed pastures, burned prairies, and marshes; beaches and sand flats. Nonbreeding: grasslands, pastures, plowed fields, and less frequently, marshes and mudflats

Federal Status: LE	State Status: E	SGCN: N
Endemic: N	Global Rank: GH	State Rank: SHN

Franklin's gull *Leucophaeus pipixcan*

This species is only a spring and fall migrant throughout Texas. It does not breed in or near Texas. Winter records are unusual consisting of one or a few individuals at a given site (especially along the Gulf coastline). During migration, these gulls fly during daylight hours but often come down to wetlands, lake shore, or islands to roost for the night.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2N

COOKE COUNTY

BIRDS

interior least tern *Sternula antillarum athalassos*

Sand beaches, flats, bays, inlets, lagoons, islands. Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony

Federal Status: LE	State Status: E	SGCN: Y
Endemic: N	Global Rank: G4T3Q	State Rank: S1B

mountain plover *Charadrius montanus*

Breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

piping plover *Charadrius melodus*

Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low-very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast. However, beaches are probably a vital habitat along the central and northern coast (i.e. north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance.

Federal Status: LT	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2N

Rufa Red Knot *Calidris canutus rufa*

Red knots migrate long distances in flocks northward through the contiguous United States mainly April-June, southward July-October. A small plump-bodied, short-necked shorebird that in breeding plumage, typically held from May through August, is a distinctive and unique pottery orange color. Its bill is dark, straight and, relative to other shorebirds, short-to-medium in length. After molting in late summer, this species is in a drab gray-and-white non-breeding plumage, typically held from September through April. In the non-breeding plumage, the knot might be confused with the omnipresent Sanderling. During this plumage, look for the knot's prominent pale eyebrow and whitish flanks with dark barring. The Red Knot prefers the shoreline of coast and bays and also uses mudflats during rare inland encounters. Primary prey items include coquina clam (Donax spp.) on beaches and dwarf surf clam (Mulinia lateralis) in bays, at least in the Laguna Madre. Wintering Range includes- Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Jefferson, Kennedy, Kleberg, Matagorda, Nueces, San Patricio, and Willacy.
Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore.

Federal Status: LT	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4T2	State Rank: SNRN

COOKE COUNTY

BIRDS

western burrowing owl *Athene cunicularia hypugaea*

Open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4T4	State Rank: S2

white-faced ibis *Plegadis chihi*

Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

whooping crane *Grus americana*

Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.

Federal Status: LE	State Status: E	SGCN: Y
Endemic: N	Global Rank: G1	State Rank: S1N

FISH

chub shiner *Notropis potteri*

Brazos, Colorado, San Jacinto, and Trinity river basins. Flowing water with silt or sand substrate

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S2

goldeye *Hiodon alosoides*

Restricted to the Red River basin; adults in quiet turbid water of medium to large lowland rivers, small lakes, marshes and muddy shallows connected to them.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

paddlefish *Polyodon spathula*

Species occurred in every major river drainage from the Trinity Basin eastward, but its numbers and range had been substantially reduced by the 1950's; recently reintroduced into Big Cypress drainage upstream of Caddo Lake. Prefers large, free-flowing rivers but will frequent impoundments with access to spawning sites.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3

COOKE COUNTY

FISH

Red River pupfish *Cyprinodon rubrofluviatilis*

Native to the upper Red River and Brazos River basins where it is typically found in saline waters of main channels and in saline springs. Introduced populations also exist in the Canadian River and Colorado River basins. River edges, channels, backwaters, over sand bottoms. Males establish spawning territories typically in shallowest waters up to 50 cm over sandy shoals and in small coves with little or no current.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2

Red River shiner *Notropis bairdi*

Red River basin; typically found in turbid waters of broad, shallow channels of main stream, over bottom mostly of silt and shifting sand.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3

shovelnose sturgeon *Scaphirhynchus platorynchus*

Found only in the Red River below Denison Dam (Lake Texoma). Evidence of the presence of this species in the lower Pecos River, during prehistoric times, strongly suggests that it likely occurred in many Texas rivers. Inhabits flowing water over sandy bottoms or near rocky points or bars.

Federal Status: SAT	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S2

silver chub *Macrhybopsis storeriana*

Red River and Brazos River basins. Mainly restricted to large, often silty rivers. Ranges over gravel to silt substrates but found more commonly over silt or mud bottom.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

INSECTS

American bumblebee *Bombus pensylvanicus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G3G4	State Rank: SNR

MAMMALS

American badger *Taxidea taxus*

Generalist. Prefers areas with soft soils that sustain ground squirrels for food. When inactive, occupies underground burrow. Young are born in underground burrows.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

COOKE COUNTY

MAMMALS

big brown bat *Eptesicus fuscus*

Any wooded areas or woodlands except south Texas. Riparian areas in west Texas.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

black-tailed prairie dog *Cynomys ludovicianus*

Dry, flat, short grasslands with low, relatively sparse vegetation, including areas overgrazed by cattle; live in large family groups

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3

eastern red bat *Lasiurus borealis*

Found in a variety of habitats in Texas. Usually associated with wooded areas. Found in towns especially during migration.

Federal Status:	State Status:	SGCN: N
Endemic: N	Global Rank: G3G4	State Rank: S4

eastern spotted skunk *Spilogale putorius*

Generalist; open fields prairies, croplands, fence rows, farmyards, forest edges & woodlands. Prefer wooded, brushy areas & tallgrass prairies. S.p. ssp. interrupta found in wooded areas and tallgrass prairies, preferring rocky canyons and outcrops when such sites are available.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S1S3

hoary bat *Lasiurus cinereus*

Known from montane and riparian woodland in Trans-Pecos, forests and woods in east and central Texas.

Federal Status:	State Status:	SGCN: N
Endemic: N	Global Rank: G3G4	State Rank: S4

long-tailed weasel *Mustela frenata*

Includes brushlands, fence rows, upland woods and bottomland hardwoods, forest edges & rocky desert scrub. Usually live close to water.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

Mexican free-tailed bat *Tadarida brasiliensis*

Roosts in buildings in east Texas. Largest maternity roosts are in limestone caves on the Edwards Plateau. Found in all habitats, forest to desert.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

mink *Neovison vison*

Intimately associated with water; coastal swamps & marshes, wooded riparian zones, edges of lakes. Prefer floodplains.

Federal Status:	State Status:	SGCN: Y

COOKE COUNTY

MAMMALS

Endemic: N | Global Rank: G5 | State Rank: S4

mountain lion *Puma concolor*

Generalist; found in a wide range of habitats statewide. Found most frequently in rugged mountains & riparian z nes.

Federal Status: | State Status: | SGCN: Y

Endemic: N | Global Rank: G5 | State Rank: S2S3

plains spotted skunk *Spilogale putorius interrupta*

Generalist; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie

Federal Status: | State Status: | SGCN: N

Endemic: N | Global Rank: G4T4 | State Rank: S1S3

short-tailed shrew *Blarina hylophaga*

Mottes of live oak trees on deep, fine sandy soils; Bastrop - grassy vegetation with an overstory of loblolly pine; Montague - grassy vegetation near post oak trees

Federal Status: | State Status: | SGCN: Y

Endemic: N | Global Rank: G5 | State Rank: S1

southern short-tailed shrew *Blarina carolinensis*

Found in East Texas pine forests and agricultural land. May favor areas with abundant leaf litter and fallen logs (Baumgardner et al. 1992). Nest sites are probably under logs, stumps and other debris.

Federal Status: | State Status: | SGCN: Y

Endemic: N | Global Rank: G5 | State Rank: S4

swamp rabbit *Sylvilagus aquaticus*

Primarily found in lowland areas near water including: cypress bogs and marshes, floodplains, creeks and rivers.

Federal Status: | State Status: | SGCN: Y

Endemic: N | Global Rank: G5 | State Rank: S5

thirteen-lined ground squirrel *Ictidomys tridecemlineatus*

Prefers short grass prairies with deep soils for burrowing. Frequently found in grazed ranchland, mowed pastures, and golf courses.

Federal Status: | State Status: | SGCN: Y

Endemic: N | Global Rank: G5 | State Rank: S5

tricolored bat *Perimyotis subflavus*

Forest, woodland and riparian areas are important. Caves are very important to this species.

Federal Status: | State Status: | SGCN: Y

Endemic: N | Global Rank: G2G3 | State Rank: S3S4

COOKE COUNTY

MAMMALS

woodland vole *Microtus pinetorum*

Include grassy marshes, swamp edges, old-field/pine woodland ecotones, tallgrass fields; generally sandy soils.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

MOLLUSKS

Texas Heelsplitter *Potamilus amphichaenus*

Occurs in small streams to large rivers in standing to slow-flowing water; most common in banks, backwaters and quiet pools; adapts to some reservoirs. Often found in soft substrates such as mud, silt or sand (Howells et al. 1996; Randklev et al. 2017a). [Mussels of Texas 2019]

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G1G3	State Rank: S1

REPTILES

common garter snake *Thamnophis sirtalis*

Terrestrial and aquatic: Habitats used include the grasslands and modified open areas in the vicinity of aquatic features, such as ponds, streams o marshes. Damp soils and debris for cover are thought to be critical.

Federal Status:	State Status:	SGCN: N
Endemic:	Global Rank: G5	State Rank: S2

eastern box turtle *Terrapene carolina*

Terrestrial: Eastern box turtles inhabit forests, fields, forest-brush, and forest-field ecotones. In some areas they move seasonally from fields in spring to forest in summer. They commonly enters pools of shallow water in summer. For shelter, they burrow into loose soil, debris, mud, old stump holes, or under leaf litter. They can successfully hibernate in sites that may experience subfreezing temperatures.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

massasauga *Sistrurus tergeminus*

Terrestrial: Shortgrass or mixed grass prairie, with gravel or sandy soils. Often found associated with draws, floodplains, and more mesic habitats within the arid landscape. Frequently occurs in shrub encroached grasslands.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3S4

slender glass lizard *Ophisaurus attenuatus*

Terrestrial: Habitats include open grassland, prairie, woodland edge, open woodland, oak savannas, longleaf pine flatwoods, scrubby areas, fallow fields, and areas near streams and ponds, often in habitats with sandy soil.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

COOKE COUNTY

REPTILES

smooth softshell *Apalone mutica*

Aquatic: Large rivers and streams; in some areas also found in lakes and impoundments (Ernst and Barbour 1972). Usually in water with sandy or mud bottom and few aquatic plants. Often basks on sand bars and mudflats at edge of water. Eggs are laid in nests dug in high open sandbars and banks close to water, usually within 90 m of water (Fitch and Plummer 1975).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Texas horned lizard *Phrynosoma cornutum*

Terrestrial: Open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive. Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3

timber (canebrake) rattlesnake *Crotalus horridus*

Terrestrial: Swamps, floodplains, upland pine and deciduous woodland, riparian zones, abandoned farmland. Limestone bluffs, sandy soil or black clay. Prefers dense ground cover, i.e. grapevines, palmetto.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4

western box turtle *Terrapene ornata*

Terrestrial: Ornate or western box trutles inhabit prairie grassland, pasture, fields, sandhills, and open woodland. They are essentially terrestrial but sometimes enter slow, shallow streams and creek pools. For shelter, they burrow into soil (e.g., under plants such as yucca) (Converse et al. 2002) or enter burrows made by other species.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

western rattlesnake *Crotalus viridis*

Terrestrial: Dry desert and prairie grasslands, shrub desert rocky hillsides; edges of arid and semi-arid river breaks.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

PLANTS

Engelmann's bladderpod *Physaria engelmannii*

Grasslands and calcareous rock outcrops in a band along the eastern edge of the Edwards Plateau, ranging as far north as the Red River (Carr 2015).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3

COOKE COUNTY

PLANTS

Hall's prairie clover *Dalea hallii*

In grasslands on eroded limestone or chalk and in oak scrub on rocky hillsides; Perennial; Flowering May-Sept; Fruiting June-Sept

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S2

Osage Plains false foxglove *Agalinis densiflora*

Most records are from grasslands on shallow, gravelly, well drained, calcareous soils; Prairies, dry limestone soils; Annual; Flowering Aug-Oct

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

Reverchon's scurfpea *Pediomelum reverchonii*

Mostly in prairies on shallow rocky calcareous substrates and limestone outcrops; Perennial; Flowering Jun-Sept; Fruiting June-July

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

Shinner's sedge *Carex shinnersii*

Occurs in ditches and swales in prairie landscapes (Carr 2015).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

Shumard's morning glory *Ipomoea shumardiana*

Known only from two specimens, both collected in 1941 from one site along the Red River, gravelly roadside prairie; Perennial; Flowering June Aug; Fruiting July

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G2G3	State Rank: S1

Topeka purple-coneflower *Echinacea atrorubens*

Occurring mostly in tallgrass prairie of the southern Great Plains, in blackland prairies but also in a variety of other sites like limestone hillsides; Perennial; Flowering Jan-June; Fruiting Jan-May

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

Last Update: 6/26/2020

GRAYSON COUNTY

AMPHIBIANS

cajun chorus frog *Pseudacris fouquettei*

Aquatic and terrestrial: Habitats of this ground-dwelling frog are diverse and include forests, fields, swamps, marshes, irrigation ditches, and temporarily flooded areas (Bartlett and Bartlett 1999, Lemmon et al. 2008). Eggs are laid in small clusters that adhere to submerged vegetationin shallow temporary pools, ditches, and flooded areas where emergent vegetation or a grassy margin is present (Dundee and Rossman 1989).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: SU

southern crawfish frog *Lithobates areolatus areolatus*

Terrestrial and aquatic: The terrestial habitat is primarily grassland and can vary from pasture to intact prairie; it can also include small prairies in the middle of large forested areas. Aquatic habitat is any body of water but preferred habitat is ephemeral wetlands.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4T4	State Rank: S3

Strecker's chorus frog *Pseudacris streckeri*

Terrestrial and aquatic: Wooded floodplains and flats, prairies, cultivated fields and marshes. Likes sandy substrates.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Woodhouse's toad *Anaxyrus woodhousii*

Terrestrial and aquatic: A wide variety of terrestrial habitats are used by this species, including forests, grasslands, and barrier island sand dunes. Aquatic habitats are equally varied.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: SU

BIRDS

bald eagle *Haliaeetus leucocephalus*

Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3B,S3N

Black Rail *Laterallus jamaicensis*

Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia

Federal Status: PT	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S2

GRAYSON COUNTY

BIRDS

Franklin's gull *Leucophaeus pipixcan*

This species is only a spring and fall migrant throughout Texas. It does not breed in or near Texas. Winter records are unusual consisting of one or a few individuals at a given site (especially along the Gulf coastline). During migration, these gulls fly during daylight hours but often come down to wetlands, lake shore, or islands to roost for the night.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2N

interior least tern *Sternula antillarum athalassos*

Sand beaches, flats, bays, inlets, lagoons, islands. Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony

Federal Status: LE	State Status: E	SGCN: Y
Endemic: N	Global Rank: G4T3Q	State Rank: S1B

piping plover *Charadrius melodus*

Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low-very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast. However, beaches are probably a vital habitat along the central and northern coast (i.e. north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance.

Federal Status: LT	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2N

Rufa Red Knot *Calidris canutus rufa*

Red knots migrate long distances in flocks northward through the contiguous United States mainly April-June, southward July-October. A small plump-bodied, short-necked shorebird that in breeding plumage, typically held from May through August, is a distinctive and unique pottery orange color. Its bill is dark, straight and, relative to other shorebirds, short-to-medium in length. After molting in late summer, this species is in a drab gray-and-white non-breeding plumage, typically held from September through April. In the non-breeding plumage, the knot might be confused with the omnipresent Sanderling. During this plumage, look for the knot’s prominent pale eyebrow and whitish flanks with dark barring. The Red Knot prefers the shoreline of coast and bays and also uses mudflats during rare inland encounters. Primary prey items include coquina clam (Donax spp.) on beaches and dwarf surf clam (Mulinia lateralis) in bays, at least in the Laguna Madre. Wintering Range includes- Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Jefferson, Kennedy, Kleberg, Matagorda, Nueces, San Patricio, and Willacy.
Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore.

Federal Status: LT	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4T2	State Rank: SNRN

GRAYSON COUNTY

BIRDS

western burrowing owl *Athene cunicularia hypugaea*

Open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4T4	State Rank: S2

white-faced ibis *Plegadis chihi*

Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

whooping crane *Grus americana*

Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.

Federal Status: LE	State Status: E	SGCN: Y
Endemic: N	Global Rank: G1	State Rank: S1N

wood stork *Mycteria americana*

Prefers to nest in large tracts of baldcypress (Taxodium distichum) or red mangrove (Rhizophora mangle); forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: SHB,S2N

FISH

american eel *Anguilla rostrata*

Originally found in all river systems from the Red River to the Rio Grande. Aquatic habtiats include large rivers, streams, tributaries, coastal watersheds, estuaries, bays, and oceans. Spawns in Sargasso Sea, larva move to coastal waters, metamorphose, and begin upstream movements. Females tend to move further upstream than males (who are often found in brackish estuaries). American Eel are habitat generalists and may be found in a broad range of habitat conditions including slow- and fast-flowing waters over many substrate types. Extirpation in upstream drainages attributed to reservoirs that impede upstream migration.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4

GRAYSON COUNTY

FISH

blue sucker *Cycleptus elongatus*

Blue Sucker usually inhabit rapids, riffles, runs and pools with moderate to fast current, with bottoms of exposed bedrock sometimes in combination with hard clay, sand, gravel, and boulders; generally intolerant of highly turbid conditions. Adults winter in deep pools and move upstream in spring to spawn on riffles. Current distribution in Texas includes the Red River downstream of Lake Texoma, Sabine and Neches rivers, and Colorado River downstream of Austin, Texas. May occur in other river systems (Warren et al. 2000).

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3

chub shiner *Notropis potteri*

Brazos, Colorado, San Jacinto, and Trinity river basins. Flowing water with silt or sand substrate

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S2

goldeye *Hiodon alosoides*

Restricted to the Red River basin; adults in quiet turbid water of medium to large lowland rivers, small lakes, marshes and muddy shallows connected to them.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

orangebelly darter *Etheostoma radiosum*

Streams, creeks, and small to moderate-sized rivers in the Red River basin. Riffle areas of gravel-bottoms streams with moderate to high currents.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

paddlefish *Polyodon spathula*

Species occurred in every major river drainage from the Trinity Basin eastward, but its numbers and range had been substantially reduced by the 1950's; recently reintroduced into Big Cypress drainage upstream of Caddo Lake. Prefers large, free-flowing rivers but will frequent impoundments with access to spawning sites.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3

Red River shiner *Notropis bairdi*

Red River basin; typically found in turbid waters of broad, shallow channels of main stream, over bottom mostly of silt and shifting sand.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3

shovelnose sturgeon *Scaphirhynchus platorynchus*

Found only in the Red River below Denison Dam (Lake Texoma). Evidence of the presence of this species in the lower Pecos River, during prehistoric times, strongly suggests that it likely occurred in many Texas rivers. Inhabits flowing water over sandy bottoms or near rocky points or bars.

GRAYSON COUNTY

FISH

Federal Status: SAT | State Status: T | SGCN: Y
Endemic: N | Global Rank: G4 | State Rank: S2

silver chub *Macrhybopsis storeriana*

Red River and Brazos River basins. Mainly restricted to large, often silty rivers. Ranges over gravel to silt substrates but found more commonly over silt or mud bottom.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S3

INSECTS

American bumblebee *Bombus pensylvanicus*

Habitat description is not available at this time.

Federal Status: | State Status: | SGCN: Y
Endemic: | Global Rank: G3G4 | State Rank: SNR

No accepted common name *Bombus variabilis*

Habitat description is not available at this time.

Federal Status: | State Status: | SGCN: Y
Endemic: | Global Rank: G1G2 | State Rank: SNR

MAMMALS

American badger *Taxidea taxus*

Generalist. Prefers areas with soft soils that sustain ground squirrels for food. When inactive, occupies underground burrow. Young are born in underground burrows.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S5

big brown bat *Eptesicus fuscus*

Any wooded areas or woodlands except south Texas. Riparian areas in west Texas.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S5

black bear *Ursus americanus*

Generalist. Historically found throughout Texas. In Chisos, prefers higher elevations where pinyon-oaks predominate; also occasionally sighted in desert scrub of Trans-Pecos (Black Gap Wildlife Management Area) and Edwards Plateau in juniper-oak habitat. For ssp. luteolus, bottomland hardwoods, floodplain forests, upland hardwoods with mixed pine; marsh. Bottomland hardwoods and large tracts of inaccessible forested areas.

Federal Status: | State Status: T | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S3

GRAYSON COUNTY

MAMMALS

eastern red bat *Lasiurus borealis*

Found in a variety of habitats in Texas. Usually associated with wooded areas. Found in towns especially during migration.

Federal Status:	State Status:	SGCN: N
Endemic: N	Global Rank: G3G4	State Rank: S4

eastern spotted skunk *Spilogale putorius*

Generalist; open fields prairies, croplands, fence rows, farmyards, forest edges & woodlands. Prefer wooded, brushy areas & tallgrass prairies. S.p. ssp. interrupta found in wooded areas and tallgrass prairies, preferring rocky canyons and outcrops when such sites are available.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S1S3

hoary bat *Lasiurus cinereus*

Known from montane and riparian woodland in Trans-Pecos, forests and woods in east and central Texas.

Federal Status:	State Status:	SGCN: N
Endemic: N	Global Rank: G3G4	State Rank: S4

long-tailed weasel *Mustela frenata*

Includes brushlands, fence rows, upland woods and bottomland hardwoods, forest edges & rocky desert scrub. Usually live close to water.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

Mexican free-tailed bat *Tadarida brasiliensis*

Roosts in buildings in east Texas. Largest maternity roosts are in limestone caves on the Edwards Plateau. Found in all habitats, forest to desert.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

mink *Neovison vison*

s. Intimately associated with water; coastal swamps & marshes, wooded riparian zones, edges of lakes. Prefer floodplai

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4

mountain lion *Puma concolor*

ne Generalist; found in a wide range of habitats statewide. Found most frequently in rugged mountains & riparian z

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2S3

GRAYSON COUNTY

MAMMALS

plains spotted skunk *Spilogale putorius interrupta*

Generalist; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie

Federal Status:	State Status:	SGCN: N
Endemic: N	Global Rank: G4T4	State Rank: S1S3

southern short-tailed shrew *Blarina carolinensis*

Found in East Texas pine forests and agricultural land. May favor areas with abundant leaf litter and fallen logs (Baumgardner et al. 1992). Nest sites are probably under logs, stumps and other debris.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4

swamp rabbit *Sylvilagus aquaticus*

Primarily found in lowland areas near water including: cypress bogs and marshes, floodplains, creeks and rivers.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

thirteen-lined ground squirrel *Ictidomys tridecemlineatus*

Prefers short grass prairies with deep soils for burrowing. Frequently found in grazed ranchland, mowed pastures, and golf courses.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

tricolored bat *Perimyotis subflavus*

Forest, woodland and riparian areas are important. Caves are very important to this species.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G2G3	State Rank: S3S4

woodland vole *Microtus pinetorum*

Include grassy marshes, swamp edges, old-field/pine woodland ecotones, tallgrass fields; generally sandy soils.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

MOLLUSKS

Texas Heelsplitter *Potamilus amphichaenus*

Occurs in small streams to large rivers in standing to slow-flowing water; most common in banks, backwaters and quiet pools; adapts to some reservoirs. Often found in soft substrates such as mud, silt or sand (Howells et al. 1996; Randklev et al. 2017a). [Mussels of Texas 2019]

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G1G3	State Rank: S1

GRAYSON COUNTY

REPTILES

common garter snake *Thamnophis sirtalis*

Terrestrial and aquatic: Habitats used include the grasslands and modified open areas in the vicinity of aquatic features, such as ponds, streams o marshes. Damp soils and debris for cover are thought to be critical.

Federal Status:	State Status:	SGCN: N
Endemic:	Global Rank: G5	State Rank: S2

eastern box turtle *Terrapene carolina*

Terrestrial: Eastern box turtles inhabit forests, fields, forest-brush, and forest-field ecotones. In some areas they move seasonally from fields in spring to forest in summer. They commonly enters pools of shallow water in summer. For shelter, they burrow into loose soil, debris, mud, old stump holes, or under leaf litter. They can successfully hibernate in sites that may experience subfreezing temperatures.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

slender glass lizard *Ophisaurus attenuatus*

Terrestrial: Habitats include open grassland, prairie, woodland edge, open woodland, oak savannas, longleaf pine flatwoods, scrubby areas, fallow fields, and areas near streams and ponds, often in habitats with sandy soil.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

smooth softshell *Apalone mutica*

Aquatic: Large rivers and streams; in some areas also found in lakes and impoundments (Ernst and Barbour 1972). Usually in water with sandy or mud bottom and few aquatic plants. Often basks on sand bars and mudflats at edge of water. Eggs are laid in nests dug in high open sandbars and banks close to water, usually within 90 m of water (Fitch and Plummer 1975).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Texas horned lizard *Phrynosoma cornutum*

Terrestrial: Open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive. Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3

timber (canebrake) rattlesnake *Crotalus horridus*

Terrestrial: Swamps, floodplains, upland pine and deciduous woodland, riparian zones, abandoned farmland. Limestone bluffs, sandy soil or black clay. Prefers dense ground cover, i.e. grapevines, palmetto.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4

GRAYSON COUNTY

western box turtle *Terrapene ornata*

REPTILES

Terrestrial: Ornate or western box trutles inhabit prairie grassland, pasture, fields, sandhills, and open woodland. They are essentially terrestrial but sometimes enter slow, shallow streams and creek pools. For shelter, they burrow into soil (e.g., under plants such as yucca) (Converse et al. 2002) or enter burrows made by other species.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

PLANTS

bigflower cornsalad *Valerianella stenocarpa*

Usually along creekbeds or in vernally moist grassy open areas (Carr 2015).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

Hall's prairie clover *Dalea hallii*

In grasslands on eroded limestone or chalk and in oak scrub on rocky hillsides; Perennial; Flowering May-Sept;

Fruiting June-Sept Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S2

APPENDIX B: PUBLIC COORDINATION

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
2488 EAST 81st STREET
TULSA, OKLAHOMA 74137-4290

15 January 2020

Public Notice

Public Meeting for Lake Texoma Shoreline Management Plan Revision
Lake Texoma, Red River Basin
Bryan, Marshall, Johnston, and Love Counties, Oklahoma
Cook and Grayson Counties, Texas

The Tulsa District, U.S. Army Corps of Engineers (USACE) is revising the Lake Texoma Shoreline Management Plan (Plan). Two open house public meetings will be held from **6pm to 8pm** on **29 January 2020 at Pottsboro High School**, 901 Highway 120, Pottsboro, TX 75076 and **30 January 2020 at Kingston High School,** 400 NE 3rd Street, Kingston, OK 73439. The meetings will provide attendees with information regarding the revision content and process, and provide a general schedule. Attendees can view current shoreline allocation maps and ask USACE staff questions. A 30-day comment period will follow the meeting from 29 January 2020 through 2 March 2020 in which the public can send comments, suggestions, and concerns.

The Shoreline Management Plan addresses the rules and guidelines that govern private shoreline uses, such as private boat docks, vegetation modification, and similar private uses of government property. The Shoreline Management Plan establishes shoreline allocations, which specify where certain private uses are allowable. Shoreline allocations are dictated by Engineering Regulation (ER) 1130-2-406 and include: Limited Development Areas, Protected Shoreline Areas, Public Recreation Areas, and Prohibited Access Areas. Each of these allocation is defined in ER 1130-2-406. The Plan is meant to compliment the 2017 Lake Texoma Master Plan revision.

The current Plan was implemented in 1996, and many changes have occurred in policy and use since that time. This revision is intended to bring the Shoreline Management Plan up to date, ensure environmental protection and public access of public lands, align with the 2017 Lake Texoma Master Plan, and honor past commitments at Lake Texoma. **Public participation is critical to the successful revision of the Plan.** Information provided at the public workshop meetings, including the existing Plan, may be viewed on the Tulsa District website at the following link beginning 29 January 2020:

https://www.swt.usace.army.mil/

Comments must be submitted in writing and can be given to USACE staff at the public workshop meetings, emailed to Joe.Custer@usace.army.mil, or mailed to: Joe Custer; Manager, Lake Texoma, 351 Corps Road, Denison, TX 75020-6425. For questions, please contact Mr. Joe Custer at 903-465-4990.

Sincerely,

Amanda M. McGuire
Chief, Environmental Branch
Regional Planning and Environmental Center

NEWS RELEASE

U.S. ARMY CORPS OF ENGINEERS BUILDING STRONG®

For Immediate Release:

Contact: Clay Church, 817-886-1314
clayton.a.church@usace.army.mil

USACE to host public information meeting for Lake Texoma Shoreline Management Plan Revision

Tulsa, Oklahoma – Public participation is requested for the revision of the Lake Texoma Shoreline Management Plan. The Tulsa District, U.S. Army Corps of Engineers (USACE) representatives will host a public information meeting on **Wednesday, 29 January 2020 at the Pottsboro High School, 901 Highway 120, and Thursday, 30 January 2020 at the Kingston High School, 400 NE 3rd Street, Kingston, OK** to provide information and receive public input on an initiative to revise the Shoreline Management Plan for Lake Texoma.

The 29 and 30 January meetings will be open house events beginning at 6 p.m. for individual one-on-one discussion with USACE representatives. The public can view maps, ask questions and provide comments about the Shoreline Management Plan revision. Comment forms and instructions for making comments will be provided at the meeting. The comment instructions and comment forms will be available shortly before the meeting on the USACE website at: https://www.swt.usace.army.mil/Locations/Tulsa-District-Lakes/Oklahoma/Lake-Texoma/

A Shoreline Management Plan addresses the rules and guidelines that govern private shoreline uses, such as private boat docks, vegetation modification, and similar private uses of government property. The Shoreline Management Plan establishes shoreline allocations, which specify where certain private uses are allowable. Shoreline allocations are dictated by Engineering Regulation (ER) 1130-2-406 and include: Limited Development Areas, Protected Shoreline Areas, Public Recreation Areas, and Prohibited Access Areas. Each of these allocation is defined in ER 1130-2-406. The Shoreline Management Plan compliments the Lake Texoma Master Plan.

The current Shoreline Management Plan for Lake Texoma was last updated in 1996. Revisions are needed to address changes in land use and policies since the current Shoreline Management Plan was published. Key topics to be addressed in the revision include revising shoreline allocations and updating the plan to incorporate changes in public law and national policies related to shoreline management. The objective of the revision and related management actions is to achieve a balance between permitted private uses and resource protection for general public use. Public participation is crucial to the successful revision of the Shoreline Management Plan.

Questions pertaining to the proposed revision can be addressed to: Joe L. Custer; Manager, Lake Texoma, 351 Corps Road
Denison, TX 75020-6425, Phone: 903-465-4990 or email: **Joe.Custer@usace.army.mil**

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~ Announcing ~

OPEN HOUSE WORKSHOPS

as related to the

Shoreline Management Plan Review/Revision
Lake Texoma, Oklahoma and Texas

The Tulsa District, U.S. Army Corps of Engineers will host two identical open house workshops related to the review and revision of the project Shoreline Management Plan for Lake Texoma, Oklahoma and Texas. Interested persons are invited to stop by either or both of the open houses to visit the information tables and discuss the project with Corps personnel. Workshops will be conducted between 6:00 - 8:00 p.m. on Wednesday, 29 January and Thursday, 30 January 2020 in an informal, come-and-go format with no formal presentation. While attendees will be provided forms for providing input and comments on revision of the lake master plan, written comments are welcome in any form within the 30-day public review period and throughout the process. The open house workshops will be held at:

Pottsboro High School
901 Highway 120, Pottsboro, TX
Monday, June 22, 2015
6:00-8:00 p.m.

Kingston High School
403 N.E. 3rd Street, Kingston, OK
Tuesday, June 23, 2015
6:00-8:00 p.m.

Shoreline Management Plan (SMP)

The Tulsa District is initiating a review and revision of the SMP for Lake Texoma. The SMP addresses the rules and guidelines that govern private shoreline uses, such as private boat docks, vegetation modification, and similar private uses of government property. The Shoreline Management Plan establishes shoreline allocations, which specify where certain private uses are allowable. Shoreline allocations are dictated by Engineering Regulation (ER) 1130-2-406 and include: Limited Development Areas, Protected Shoreline Areas, Public Recreation Areas, and Prohibited Access Areas. Each of these allocation is defined in ER 1130-2-406. The Shoreline Management Plan compliments the 2017 Lake Texoma Master Plan. Comments and questions regarding the open house workshop or MP review process can be directed to:

Mr. Joe L. Custer
Texoma Lake Manager
351 Corps Road
Denison, TX 75020-6425
Phone: 903-465-6571
e-mail: Joe.Custer@usace.army.mil

NEWS RELEASE

U.S. ARMY CORPS OF ENGINEERS BUILDING STRONG®

For Immediate Release:

Contact:

USACE to host a virtual public involvement presentation for the draft release of the Lake Texoma Shoreline Management Plan Revision

Tulsa, Oklahoma – Public participation is requested for the revision of the Lake Texoma Shoreline Management Plan. The Tulsa District, U.S. Army Corps of Engineers (USACE) will host a virtual public involvement presentation to provide information and receive public input regarding the draft Shoreline Management Plan revision for Lake Texoma. The presentation will be available from **Wednesday, December 02** through **Saturday, January 02, 2021, at which time the public is encouraged to view and send comments.**

The following website contains the presentation describing the changes and process, revised shoreline allocation maps, the 1996 Shoreline Management Plan, and the draft Shoreline Management Plan revision, as well as comment forms and instructions for making comments. https://www.swt.usace.army.mil/Locations/Tulsa-District-Lakes/Oklahoma/Lake-Texoma/

The public may contact the lake manager to ask questions at the address below. Please note that all comments regarding the Shoreline Management Plan revision must be in writing.

A Shoreline Management Plan addresses the rules and guidelines that govern private shoreline uses, such as private boat docks, vegetation modification, and similar private uses of government property. The Shoreline Management Plan establishes shoreline allocations, which specify where certain private uses are allowable. Shoreline allocations are dictated by Engineering Regulation (ER) 1130-2-406 and include: Limited Development Areas, Protected Shoreline Areas, Public Recreation Areas, and Prohibited Access Areas. Each of the allocations is defined in ER 1130-2-406. The Shoreline Management Plan compliments the Lake Texoma Master Plan.

The current Shoreline Management Plan for Lake Texoma was last updated in 1996. Revisions are needed to address changes in land use and policies since the current Shoreline Management Plan was published. Key topics addressed in the revision include revised shoreline allocations and updates to incorporate changes in public law and national policies related to shoreline management. The objective of the revision and related management actions is to achieve a balance between permitted private uses and resource protection for general public use. Public participation is crucial to the successful revision of the Shoreline Management Plan.

Questions pertaining to the proposed revision can be addressed to: Jake Ellison; Manager, Lake Texoma, 351 Corps Road, Denison, TX 75020-6425, Phone: 903-465-4990 or email: **Jake.W.Ellison@usace.army.mil**

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DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, TULSA DISTRICT
2488 EAST 81st STREET
TULSA, OKLAHOMA 74137-4290

2 December 2020

Notice of Availability for the 2020 Lake Texoma Shoreline Management Plan Revision
Lake Texoma, Red River Basin
Bryan, Marshall, Johnston, and Love Counties, Oklahoma
Cook and Grayson Counties, Texas

The public is hereby notified that the Draft 2020 Lake Texoma Shoreline Management Plan (Shoreline Management Plan), Finding of No Significant Impact (FONSI), and Environmental Assessment (EA) is available for public review. The Shoreline Management Plan addresses the rules and guidelines that govern private shoreline uses, such as private boat docks, vegetation modification, and similar uses of U.S. Army Corps of Engineers (USACE) federally owned fee property. Shoreline allocations include: Limited Development Areas, Protected Shoreline Areas, Public Recreation Areas, and Prohibited Access Areas. Each of the allocations are defined in Engineering Regulation 1130-2-406. The Shoreline Management Plan is intended to be complimentary to the 2017 Lake Texoma Master Plan.

The current Shoreline Management Plan was implemented in 1996, and many changes have occurred in policy and use since that time. This revision is intended to update the Shoreline Management Plan, ensure environmental protection and public access of public lands, align with the 2017 Lake Texoma Master Plan, and honor past commitments at Lake Texoma. **Public participation is critical to the successful revision of the Plan.**

The Tulsa District will provide a virtual public involvement presentation to inform the public and receive public input regarding the draft 2020 Shoreline Management Plan revision for Lake Texoma. The presentation will be made available during the 30-day public comment period which starts on **Wednesday, December 02, 2020 and concludes on Saturday, January 02, 2021.**

The following website contains the presentation describing the changes and process, revised shoreline allocation maps, the 1996 Shoreline Management Plan, and the draft 2020 Shoreline Management Plan revision, as well as comment forms and instructions for making and submitting comments. https://www.swt.usace.army.mil/Missions/Recreation/Shoreline-Management-Plans/

The public may contact the lake manager to ask questions at the address below. Please note that all comments regarding the Shoreline Management Plan revision must be in writing. Comments and questions pertaining to the proposed revision can be addressed to: Jake Ellison; Manager, Lake Texoma, 351 Corps Road, Denison, TX 75020-6425, Phone: 903-465-4990 or email: Jake.W.Ellison@usace.army.mil

Sincerely,

WADLINGTON.BRANDON.E.1514584296 Digitally signed by WADLINGTON.BRANDON.E.1514584296 Date: 2020.12.02 10:01:54 -06'00' on behalf of

Amanda M. McGuire
Chief, Environmental Branch
Regional Planning and Environmental Center