Fort Gibson Lake
Grand (Neosho) River, Oklahoma

Shoreline Management Plan

Department of the Army
Tulsa District, US Army Corps of Engineers
Oklahoma
July 2021

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 Fort Gibson Lake, Oklahoma.

VISION

Fort Gibson Lake is a multi-purpose project providing flood risk management and hydroelectric power and is also instrumental in development of the Arkansas River and the McClellan-Kerr Arkansas River Navigation System. The project is operated for optimum flood risk management in the Grand (Neosho) River basin as part of the larger Arkansas River Basin. Potable water for many local communities is also supplied by storage at the lake.

PUBLIC INPUT

The draft 2021 SMP revision was developed through a process of public participation that included an initial scoping meeting on 25 February 2020 in Wagoner, OK with 196 people in attendance. USACE received eight written comments from the public. All comments received were considered during the draft SMP development process. A summary of the comments and government response are included in Appendix H.

The 2021 Fort Gibson Lake SMP draft release was completed virtually from May 20, 2021 through June 21, 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, 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. Two agencies and four members of the public provided written comments. A summary of the comments and USACE responses for the final draft release can be found in Appendix H.

PRIMARY CHANGES FROM THE 1996 SHORELINE MANAGEMENT PLAN

Changes to shoreline allocation were a result of recognition of historical uses, changes in federal regulations, public input, and alignment with the 2016 Fort Gibson Master Plan. Changes to shoreline allocation from the 1996 SMP to the 2021 SMP are found in Appendix I. In accordance with the National Environmental Policy Act (NEPA) 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 K.

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1.0 INTRODUCTION

1.1 PURPOSE

The *Shoreline Management Plan (SMP) for Fort Gibson Lake* establishes policy and furnishes guidelines for the protection and preservation of the desirable environmental characteristics of the shoreline while maintaining a balance between public and private shoreline uses. The plan also considers means of restoration of the shoreline where degradation has occurred because of private use. This plan is intended to develop management strategies for the review, approval, and administration of private shoreline uses on Fort Gibson Lake. The SMP does not apply to the management and administration of public park areas, commercial concession leases, quasi-public use areas/leases and public utilities, except as specifically stated herein. In addition, the SMP does not address the specifics of water quality, water level management, water level changes due to flood or drought, hydroelectric power management, or the operation and maintenance of project operations facilities.

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.

a. To manage and protect shoreline under jurisdiction of the 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 2016 Fort Gibson Lake Master Plan.

1.3 POLICY

The policy of the Chief of Engineers is to protect and manage shorelines of all Civil Works water resource development projects under U.S. Army Corps of Engineers (USACE) jurisdiction in a manner which will promote the safe and healthful use of these shorelines by the public while maintaining environmental safeguards to ensure a quality resource for use by the public. The authority to implement the Shoreline Management Plan is Engineer Regulation (ER) 1130-2-406, Shoreline Management at Civil Works Projects, originally dated 13 December 1974, and revised 31 October 1990 (Appendix J). 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 (CFR).

1.4 APPLICABILITY

This plan is applicable to Fort Gibson Lake on the Neosho River in Oklahoma. 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 conservation pool elevation of 554.0 feet National Geodetic Vertical Datum (ft. NGVD29) and the boundary of the Government fee owned land. Approximately 71,213 acres are owned in fee title for the dam site and reservoir. There are approximately 55,815 acres classified as land above elevation 554.0 ft. NGVD29, and the remaining acreage is classified as water surface. Flowage easements were acquired in some locations up to elevation 585.0 ft. NGVD29. Flowage easements grant to USACE the right to periodically inundate land associated with the operation of the project without owning fee title to the land. There are approximately 1,101 acres of flowage easement at Fort Gibson Lake. The guidance in this SMP does not apply to flowage easements. This SMP establishes what and where 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 Fort Gibson Lake. Rules and regulations applicable to shoreline management are addressed in Title 36, Chapter III, Part 327, CFR, and are enforced by the USACE.

1.5 RELATIONSHIP TO OTHER PLANS

The overall management of project lands, water surface, and related public recreational use is guided by the 2016 Fort Gibson Lake 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.

1.6 REFERENCES

a. §4, 1944 Flood Control Act, as amended (16 USC 460d).

b. The Rivers and Harbors Act of 1894, as amended and supplemented (33 USC 1).

c. §10, River and Harbor Act of 1899 (33 USC 403).

d. National Environmental Policy Act of 1969 (42 USC 4321. et seq.).

e. National Historic Preservation Act of 1966 (P.L. 89-665; 80 Stat. 915) as amended (16 USC 470 et seq.).

f. The Federal Water Pollution Control Act of 1972 (FWPCA).

g. The Clean Water Act (33 USC 1344, et seq.).

h. Title 36, Chapter III, Part 327, CFR, "Rules and Regulations Governing Public Use of Water Resources Development Projects Administered by the Chief of Engineers."

i. The Water Resources Development Act of 1986 (P.L. 99-662).

j. 3 CFR 320-330, "Regulatory Programs of the Corps of Engineers."

k. Executive Order 12088 (13 Oct 78).

l. ER and EP 1130-2-540, "Environmental Stewardship Operations and Maintenance Policies," 15 November 1996.

m. ER and EP 1130-2-550, "Recreation Operations and Maintenance Policies," 15 November 1996.

n. ER 1130-2-406, "Shoreline Management at Civil Works Projects," 31 October 1990.

o. EM 385-1-1, "Safety and Health Requirements Manual."

1.7 HISTORY AND BACKGROUND OF FORT GIBSON LAKE

Construction of Fort Gibson Lake was authorized by Congress under the Flood Control Act approved 18 August 1941 and incorporated in the Arkansas River Multiple-Purpose Plan by the Rivers and Harbors Act of July 1946.

Dam construction began in 1942, was suspended during World War II, and resumed in May 1946, and the project was placed in operation for full flood regulation in September 1953.

The total shoreline length at Fort Gibson at normal conservation pool elevation of 554.0 ft. NGVD29 is 225 miles. The terrain on the east side of the lake is generally rugged and hilly, and supports an oak-hickory forest type, with occasional areas of prairie and oak savannah. Dominant species of trees include post oak, red oak, blackjack oak, hickory, and elm. The east side of the lake lies within two Level IV Ecoregions, the Lower Boston Mountains to the south and the Dissected Springfield Plateau – Elk River Hills to the north. The west shoreline of the lake is characterized by flat to rolling plains and is located entirely within the Level IV Ecoregion known as the Osage Cuestas. Vegetation is composed of a tall grass association consisting of big bluestem, prairie-beard grass, Indian grass, and switchgrass, with many acres of blackjack and post oak trees.

The total fee-owned lands above normal conservation pool is 55,815 acres, of which 733 acres are classified as Project Operations; 5,485 acres are classified as High Density Recreation; 113 acres are classified as Multiple Resource Managed Lands - Low Density Recreation; 49,246 acres are Multiple Resource Managed Lands - Wildlife Management; and there are 238 acres classified as Environmentally Sensitive Area.

1.8 HISTORY OF SHORELINE MANAGEMENT

USACE policy during the time period 1950 through about 1965 was to encourage lake usage and development of public lands at certain areas around the lake.

Promotion of this policy was advanced through the sale and/or lease of club and cottage sites on public land. Commercial marinas were few and most boats owned by individuals during this time required aquatic storage. Persons desiring private storage for their boats were allowed to place boathouses at sites of their choosing and regulation of these private facilities was minimal.

Photo 1.1 Older Facility Doesn't Meet Current Spacing and Construction Requirements

In 1974, the Lakeshore Management regulation was published in the Federal Register requiring public input into Lakeshore Management Plans. The Fort Gibson Lake Lakeshore Management Plan was derived from input from the general public, Lake Associations, and other interested parties and was approved by the Southwestern Division Engineer in 1976.

In 1981, the plan was reviewed and opened for comment in keeping with SWD guidance to review plans every 5 years. Few comments were received, and only minor changes were made which consisted of zoning 2 grandfathered areas for limited development, and shifting footage zoned in under-utilized areas to areas where additional space was needed.

The review in 1986 resulted in a grandfathered area being re-designated as limited development since adjacent land use had changed.

In 1991, the Lakeshore Management Plan, now referred to as the *Shoreline Management Plan*, was again reviewed and updated. No changes were made to the allocations of the plan.

The plan was again reviewed in 1996. As a result of physical factors limiting vehicular access and shallow lake depths the area open for limited development in Cat Creek was modified and the areas open for boat docks in Sportsman Ridge, Longmire Development and Chouteau Creek were eliminated.

The Shoreline Management Plan was reviewed in 2001; however, a revision was not finalized due to budget constraints. The current 2021 revision of the Plan resulted in the updated land allocations reflected in Table 1.1.

1.9 PRIMARY CHANGES FROM THE 1996 SHORELINE MANAGEMENT PLAN

Changes to the shoreline allocations were a result of historical uses, changes in federal regulations, and public input, as well as alignment with the 2016 Fort Gibson Lake Master Plan. The changes to the shoreline allocations from the 1996 SMP to the 2021 SMP are summarized in Tables 1.1 and 1.2.

Table 1.1 Summary of Map Changes

Shoreline Designation	1996 Designated Miles	2021 Designated Miles	Difference
Prohibited Access Area	3.31	3.45	+0.14
Protected Shoreline Area	177.54	190.37	+12.83
Limited Development Area	15.83	11.22	-4.61
Public Recreation Area	60.94	52.59	-8.35

Note: The sum changes from 1996 to 2021 are not equal due to improved measuring techniques, changes from erosion and siltation, as well as changes in mapping methodology including the use of GIS software.

Table 1.2 Detail of Map Changes

Shoreline Designation Changes	Miles
From Limited Development to Protected	5.59
From Limited Development to Public Recreation	0.65
From Prohibited to Public Recreation	0.05
From Protected to Limited Development	0.36
From Protected to Prohibited Access	0.19
From Protected to Public Recreation	1.80
From Public Recreation to Limited Development	0.85
From Public Recreation to Protected	9.77

The primary policy and management changes to this SMP are due to changes in Public Law (PL) or Engineer Regulation (ER) since the implementation of the 1996 revision of the SMP, changes in land use classifications with the 2016 Master Plan revision, and incorporating specific private floating facility and vegetation alteration criteria that have been in use for years. A detailed summary of changes from the 1996 to the 2021 SMP can be found in Appendix I of this Plan.

2.0 SHORELINE ALLOCATION

The shoreline is allocated into the following four (4) use classifications: Limited Development Areas, Public Recreation Areas, Protected Shoreline Areas, and Prohibited Access Areas.

2.1 LIMITED DEVELOPMENT AREAS

These areas are allocated for private activities, such as vegetative modification, and/or the installation of privately-owned floating facilities such as docks following the issuance of a permit in accordance with current Federal regulations and this SMP. Approximately 11.2 miles of shoreline are allocated for limited development.

2.2 PUBLIC RECREATION AREAS

Public Recreation Areas are designated as developed public recreational and commercial concessions such as marinas. Private floating facilities will not be permitted in these areas. Modification of landform or vegetation by private individuals or groups will not be permitted. Quasi-public organization recreational areas, operating under lease agreements with USACE, are also zoned under this allocation. These quasi-public areas are designated for use by organizations such as the Girl Scouts, YMCA, and the YWCA. Floating facilities owned by the quasi-public organization and within quasi-public lease areas will be managed under the terms of the real estate agreement for the individual site. No private floating facilities are allowed in the quasi-public sites. Approximately 52.6 miles of shoreline are allocated for public recreation.

2.3 PROTECTED SHORELINE AREAS

Protected shoreline areas are designated primarily to protect or restore aesthetic, fish and wildlife, cultural, or other environmental resources in accordance with ER 1130-2-406, the USACE Environmental Stewardship mission stated in ER 1130-2-540, and the policies of the National Environmental Policy Act of 1969 (PL-190). 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 aesthetic, environmental, and natural resource values are not damaged or destroyed, but private floating facilities are not permitted in these areas. Modification of landform or vegetation by private individuals will be permitted only after due consideration of the effects of such action on the environmental and physical characteristics of the area. Approximately 190.4 miles of shoreline are classified as protected shoreline.

2.4 PROHIBITED ACCESS AREAS

These shoreline areas are allocated for security reasons and the physical safety of the recreation visitors; for example, certain hazardous locations and areas located near dams or spillways are included in this allocation. Private floating facilities such as docks and/or the modification of landform and vegetation are not permitted in these areas. Approximately 3.5 miles of shoreline are allocated as prohibited access areas.

3.0 SHORELINE USE PERMITS

A Shoreline Use Permit is required for installation of private floating facilities and vegetation modification, including pedestrian paths, of adjacent Government Property. All permittees must agree to adhere to the Shoreline Use Permit Conditions which are attached to each permit.

Shoreline Use Permits are non-transferable and become null and void upon sale or transfer of the permitted facility or the death of the permittee and his/her legal spouse. Before a permitted facility is sold, the prospective new owner must submit a Shoreline Use Permit Application (see Appendix A) and provide proof of legal land access as described in Section 3.1. if the facility is to remain on Fort Gibson Lake.

All Shoreline Use Permits are issued and enforced in accordance with the provisions of Title 36, Chapter III, Part 327, CFR. Noncompliance with any of the terms and conditions of a permit, general or specific, may result in termination of the permit, issuance of a Notice of Violation, and/or permanent removal of the private floating facility from the lake.

3.1 PROOF OF LEGAL LAND ACCESS

All persons applying for a Shoreline Use Permit to construct, replace, or relocate an existing private floating facility; obtain a permit for a purchased private floating facility; or perform vegetation modification must provide proof of direct legal land access to USACE property at the location of the proposed private floating facility or activity. The applicant must provide a recorded deed or easement agreement. Such deeds or easements must be perpetual. Temporary or time-limited easements will not be considered sufficient for the legal land access requirement. In situations where a minor public road and public land have a common boundary, adjacent landowners along this road/boundary may be considered as having legal land access. State highways, major highways, interstate highways, or other restricted access roadways cannot be used to qualify as legal land access. Where access is from a publicly accessible road or parking area that is not in a public recreation area, pedestrian access may be allowed if environmental features such as terrain are conducive but will be limited to 150 feet from the vehicular access point. USACE cannot guarantee that access to private facilities via public road will always be available. Access from a public use recreation area shall not constitute legal land access. Use of a single adjacent parcel of land (or multiple easements, leases, etc. on a single parcel of land) as access for the permitting of or construction of multiple facilities is prohibited. Each parcel may only be associated with a single private floating facility for the purpose of establishing access.

3.2 PERMIT OR LICENSE ON PUBLIC PROPERTY

The permittee assumes full liability and responsibility for the safe conduct of the activity and must ensure the safe condition of any permitted structure.

All Shoreline Use Permits are issued and enforced in accordance with the provisions of Title 36, Chapter III, Part 327, CFR. Failure to obtain the proper permits or noncompliance with any of the terms and conditions, general or specific, may result in termination of the permit and/or issuance of a Notice of Violation.

Shoreline Use Permits are issued to individuals. Where multiple ownership exists, one of the individual owners must agree to be the permittee and act as a point of contact ensuring all owners receive information provided by the USACE Lake Manager. All owners of permitted

private floating facilities must comply with the permit conditions. Non-compliance of the permit conditions by any owner may result in termination of the permit and require removal of the private floating facility from the lake and from government property.

Individuals issued a Shoreline Use Permit must agree to give the USACE Lake Manager or designated representative access over their property for the purpose of inspecting permitted private floating facilities or other activities. The USACE has no liability or responsibility for the safety of individuals engaged in any activity associated with private floating facilities or activities authorized by Shoreline Use Permit.

3.3 STAIRWAY POLICY

This policy applies to all new and existing private floating facilities that have an issued permit at Fort Gibson Lake. The objective of all management actions is to achieve a balance between permitted private uses and resource protection for general public use.

The Lake Manager maintains the ability to approve/deny private floating facility construction requests based on parameters of topography, fetch, environmental damage and cove capacity. This policy is not intended to decide where or when private floating facilities get permitted; however, it is intended to allow stairs, if deemed necessary by the Lake Manager, once a private floating facility is authorized.

Stairways can be authorized on a limited basis where the Lake Manager has verified no safe, viable alternative exists for accessing the permitted private floating facility. All stairways, including the use of natural or manmade materials, require 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. Requirements for stairways are as follows:

1. If painted, all steps and stairways will be painted with a neutral color. White, yellow, orange, and other highly visible colors will not be allowed.
2. Stairways must be constructed so structures are kept at ground level and do not project above the surface of the ground. 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.
3. Stairways must meet the standards stated in EM 385-1-1, with regard to tread and riser specifications, handrails, and allowable angle of ascent. If not maintained to these standards, stairways must be removed as determined by the lake office.
4. Stairways must be certified by a licensed structural engineer and certification submitted to the Lake Manager prior to issuance of a license. The Lake Manager may require re-certification upon renewal.
5. The Government reserves the right to prohibit stairway construction on sheer rock bluffs or other sensitive landscape features.
6. Modifications of existing stairways so they're compliant with the Americans with Disabilities Act (ADA) standards will be considered on a case-by-case basis in situations where the owner or an immediate family member 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 construction of such access.

7. Abandoned stairways are subject to removal in accordance with Title 36 CFR, §327.20 Unauthorized Structures.
8. Stairways must be constructed so general public use of public lands is not adversely impacted.
9. See walkway requirements for specifications such as materials, dimensions, and further provisions.

3.4 REAL ESTATE INSTRUMENTS

USACE issues real estate instruments such as leases, licenses, easements and consents for easement 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.

3.5 SHORELINE EROSION CONTROL

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. These structures must not be for the purpose of landscaping or beautifying the area with little erosion control value. A listing of permit requirements is as follows:

a. All work must meet the specifications of §10 of the Rivers and Harbors Act of 1899 and §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.

b. All vegetative species to be utilized for the purpose of planting and seeding must be native species and approved by the Lake Manager. Grass planting for erosion control is not to be mowed unless located within a vegetation modification area.

c. 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 the USACE Office Real Estate Division. Interested parties should contact the lake office for information.

3.6 CULTURAL, HISTORICAL, & ARCHAEOLOGICAL

The National Historic Preservation Act of 1966, Archaeological and Historic Preservation Act of 1974, and Archaeological Resources Protection Act of 1979 and amended in 1988 were provided by Congress to protect historic sites and recover historic and archeological data. If it is determined that a previously issued permit or license infringes upon or impacts a historic site, the permit will be rescinded.

4.0 PRIVATE FLOATING FACILITY (DOCK) 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. Shoreline Use Permits are required for all private floating facilities, excluding registered vessels. Private floating facilities include single owner and multi-owner facilities. Because private floating facilities are private structures, the permittee may restrict use of the facility but may not impede public pedestrian traffic along the shoreline. All new permits for private floating facilities and any modifications to existing private floating facilities must meet the requirements in this SMP.

4.1 APPLICATION

Prior to application the applicant must contact the Fort Gibson Lake Office to determine if the desired location is within the proper zoning and whether adequate space is available for the requested private floating facility. See Section 4.8 for location and spacing requirements. In cases of multiple ownership of a private floating facility, one owner will be designated as the primary responsible party on the permit and will be responsible for receiving information or correspondence from USACE regarding the permit and for ensuring that permit conditions are met. At the time of application, the permit applicant must provide the name and contact information for the owner(s) for each slip in the private floating facility.

4.2 NEW PRIVATE FLOATING FACILITIES

Shoreline Use Permits for new private floating facilities will be issued on a first-come, first-served basis in the name of the new owner only. Completed shoreline use permit applications must be submitted to the USACE Lake Manager with the following items.

1. Certified Design Plans

Two (2) sets of plans and specifications signed and sealed by a licensed structural engineer that indicate engineering details, structural design, anchorage method and construction materials.

2. Proof of legal land access

Application must include proof of legal land access or adjacent land ownership for a new private floating facility, including a scale map or plat sufficient to determine the common boundary. Refer to Section 3.1 for proof of legal land access requirements.

3. Shoreline Use Permit

A signed copy of the Shoreline Use Permit Conditions to attest to applicant's agreement to abide by the rules, regulations, and conditions of the permit. (See Appendix A).

4. Permit Fee

Fees will be collected prior to the issuance of a Shoreline Use Permit.

Written Authorization to Begin Construction

Once the plans are approved, the USACE Lake Office will provide written authorization to begin construction and will mark or otherwise designate the location for the installation. Only after receiving written authorization may construction begin. Applicants will have six months to

complete construction. If construction is not completed within the six-month time frame, the permit will become void and the permittee must re-submit the request. All permits are issued on a first-come, first-served basis. Permits for new structures will only be issued for private floating facilities to be placed in areas designated for Limited Development.

All private floating facility construction must occur off Government property, in a commercial marina, or on-site on the water at the approved place of the permit. Final bolt-together assembly of major components may occur on Government Property near boat ramps with approval from the USACE Lake Office.

4.3 MODIFICATION TO EXISTING PRIVATE FLOATING FACILITIES

Modifications to or replacements of existing permitted private floating facilities must be approved by the USACE Lake Office prior to any construction. A letter of request with two sets of plans and specifications signed and certified by a licensed structural engineer that indicate engineering details, structural design, and construction materials must be provided to the USACE Lake Office. All modifications or replacements must comply with requirements set in the SMP Appendix C and Appendix D.

After the plans have been approved, the USACE Lake Office will provide written authorization to begin construction. Only after receiving written authorization may construction begin. Permittees will have six months to complete construction.

4.4 CHANGE OF OWNERSHIP

Applications for a new permit due to change of private floating facility ownership will only be approved for existing permitted private floating facilities. If the permitted private floating facility is no longer on the lake, not at the approved location, or was never constructed, a permit will not be issued. Permits are not transferrable. An applicant requesting a permit due to a change of ownership of an existing private floating facility must submit a signed application; proof of legal land access to the facility as specified in Section 4.2.3; a bill of sale or other proof of ownership transfer from the current permittee; and a check, money order, or other approved payment type for the permit fee.

4.5 REISSUE (PERMIT RENEWALS)

Applications for “renewal” of expiring permits require the applicant to submit a signed application form and a check, money order or other approved payment type for the permit fee. After an inspection is performed by USACE the applicant will be required to correct any deficiencies noted before the permit is re-issued. All permit conditions of the new permit will apply at that time.

4.6 REPLACEMENT OR RELOCATION OF EXISTING PRIVATE FLOATING FACILITIES

The USACE Lake Manager must authorize the relocation of existing facilities prior to the private floating facility being moved. All persons applying for a Shoreline Use Permit to relocate an existing facility must have proof of legal land access to USACE property at the proposed site. Once access has been verified, the Lake Manager can authorize the relocation of an existing facility if it is compliant with the requirements found in this SMP. Applicants requesting to replace an existing private floating facility must meet the same access requirements as applicants for new or relocated private floating facilities.

4.7 HOMEOWNERS' ASSOCIATION, CLUB SITES, COTTAGE SITES, ETC.

In subdivisions, club sites, cottage sites, etc. where a dedicated easement or common access corridor provides legal land access to public lands and waters for all associated landowners, the easement or access corridor will be considered a legal access for applications from within the associated development area. Homeowner's associations must be not-for-profit entities registered with the State of Oklahoma under the name of the subdivision. The location of the private floating facility will be determined in the same manner as the Location and Spacing Requirements (Section 4.8), substituting the access corridor for the adjacent land ownership.

4.8 LOCATION AND SPACING REQUIREMENTS

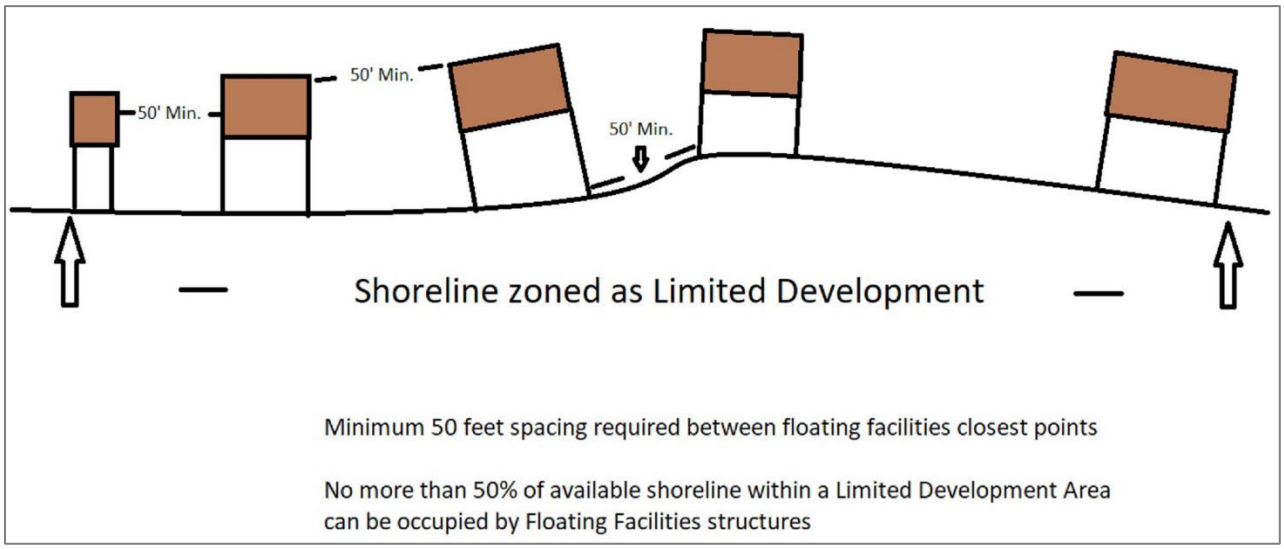
4.8.1. Location Requirements

No private floating facility will extend out from the shoreline more than one-third the total width of any particular cove, as determined by the USACE Lake Office. Private floating facilities cannot render any portion of a cove non-navigable or create any navigational hazard. No new private floating facility will be permitted on shorelines within 300 feet of bridges, road crossings, boat ramps, water intake structures, certain other manmade structures, and road ends, measured perpendicular to the right-of-way and from the edge of the road fill. New private floating facilities or movement of existing private floating facilities will be allowed in the areas allocated as Limited Development Areas at Fort Gibson Lake and found to be suitable for private floating facilities as indicated on the shoreline allocation maps. The entire private floating facility must be located within the suitable shoreline. No new private floating facilities will be allowed in other shoreline allocations except for private floating facilities located in areas covered by real estate outgrants. Private floating facilities may not be moved to other locations without written permission from the USACE Lake Manager.

4.8.2. Spacing and Density Requirements

Each private floating facility is to be located no closer than 50 feet from the nearest point of an adjacent private floating facility. All distances will be measured at the normal conservation pool level of 554.0 ft. NGVD29 elevation. Add-ons for personal watercraft storage and all other attachments to the private floating facilities will be considered part of the private floating facility with regards to the spacing requirement.

Figure 4.1 Spacing Requirements for Floating Facilities within Limited Development Areas



Maximum density of a Limited Development Area (LDA) shall not exceed 50 percent to preserve public access to the shoreline. Maximum LDA density occurs when 50 percent or more of the suitable shoreline footage in an LDA is occupied by private floating facilities. When calculating 50 percent density, the calculation will use the total aggregate width of the private floating facilities, including any anchorages that restrict the full unobstructed use of that portion of shoreline. All measurements shall be based on normal 554.0 NGVD29 lake pool level. No other new or re-located private floating facilities will be permitted in an LDA that has reached maximum density or that would exceed maximum density with an additional private floating facility. In all cases, sufficient open area will be maintained for safe maneuvering of watercraft. In those cases where current LDA density exceeds the maximum, the density will be reduced to the prescribed level through attrition.

4.9 GRANDFATHERED FACILITIES AND PRE-EXISTING FACILITIES

Floating facilities that do not meet current SMP guidelines fall into two categories: Grandfathered Facilities and Pre-Existing Facilities.

4.9.1. Grandfathered by Public Law

Floating facilities that were in place on and before November 17, 1986 are considered Grandfathered. These facilities may not meet current standards or may be located outside current Limited Development Areas.

Congress enacted legislation protecting facilities meeting certain criteria defined in two public laws. On December 29, 1981, P.L. 97-140 was adopted, which provided that no lawfully installed private floating facility or appurtenant structure would 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 then passed P.L.99-662, prohibiting the forced removal, on or after December 31, 1989, of previously authorized private floating facilities and appurtenant structures that were in the place on November 17, 1986, providing the following conditions are met:

a. The facility must be maintained in a usable and safe condition.
b. The facility does not pose a threat to life or property.
c. The holder of the permit is in substantial compliance with the existing conditions of the permit.

To meet the requirements for a facility to be considered to be in a usable and safe condition, the facility must be structurally sound to provide a stable walking surface and stable superstructure, must be adequately supported by flotation, must be properly anchored to prevent excessive lateral movement, must be free from loose boards or other items that could constitute tripping hazards, must be properly wired according to the National Electric Code if electric power is installed, and otherwise must be in a condition that does not present hazards to persons or other property.

These laws apply except where removal of a facility is deemed necessary for public purposes, higher public use, or for support of a navigation or flood control project.

4.9.2. Pre-Existing Facilities

This section pertains to structures installed prior to the current SMP and 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 exempted from some current requirements to honor previous written commitments. 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 permits if the current handrails do not meet OSHA requirements, or if there are no handrails (see Section 4.12 for walkway construction requirements).

If these structures become damaged to the point where the substructure is not floating, safe, or usable; or where the substructure requires modification or replacement, the private floating facility must be rebuilt in accordance with the SMP's 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 private floating facilities must conform to the SMP's general requirements and minimum design standards.

To meet the requirements for a facility to be considered to be in a usable and safe condition, the facility must be structurally sound to provide a stable walking surface and stable superstructure, must be adequately supported by flotation, must be properly anchored to prevent excessive lateral movement, must be free from loose boards or other items that could constitute tripping hazards, must be properly wired according to the National Electric Code if electric power is installed, and otherwise must be in a condition that does not present hazards to persons or other property.

4.10 PRIVATE FLOATING FACILITY 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 40 feet long. All requested docks and slips will require documentation including a vessel registration in the name of the slip owner for an appropriately sized vessel for all existing and proposed slips in the private floating facility. No private floating facility may exceed 20 slips.

4.11 PRIVATE FLOATING FACILITY CONSTRUCTION REQUIREMENTS

Requests for new private floating facilities, relocation of existing private floating facilities, or modification of existing private floating facilities must include plans signed by a licensed structural engineer. Alterations to the original approved plan may not be made without prior approval from the USACE Fort Gibson Lake Office. Two-story structures, side walls, swim platforms, and sun decks/patios are prohibited. Additions of railings can generally be approved if securely fastened to the private floating facility in a safe manner.

Minimum/Maximum Dimensions of Private floating facilities

The following are the minimum and maximum dimensions for components on any private floating facility:

Table 4.1 Minimum and Maximum Dimensions of Private floating facilities

Component	Minimum Size (feet)	Maximum Size (feet)
Walkway (width)	4	5
Header (width)	4	6
Finger (width)	4	5
Slip Divider (width)	4	5
Slip (width)	6	14
Slip (length)	10	40
Walkway (length)	30	200

4.12 WALKWAYS

Walkways must comply with the following guidelines:

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 4 feet wide and not more than 5 feet wide and must comply with standard designs.

c. Decking shall be constructed of metal, concrete, wood, or similar types of approved flooring and decking. All wood material associated with the deck must be pressure treated and/or treated with other types of environmentally safe preservative.

d. Flotation required for the walkway will be determined by the length of the walkway in the water and/or connections on the private floating facility 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 USACE Fort Gibson Lake Office.

f. All walkways must have at least one handrail the entire length of walkway. New private floating facility plans must be signed 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.

g. Walkways cannot be supported by fixed piers or posts located below normal conservation pool elevation (554.0 ft NGVD29).

h. If renovation or modification occurs, the walkway must meet current standards and sizes.

i. If a lock is used to secure entrance to the private floating facility, 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.

Photo 4.1 Example of Private Floating Facility, Walkway, and Stiff Arm

4.13 STORAGE AND ATTACHMENTS

An enclosed storage area or locker not to exceed three (3) feet by six (6) feet floor dimension may be constructed for the storage of safety devices and other equipment necessary for recreational boating. In addition, items associated with approved solar electric or licensed electric systems and centrifugal pumps associated with licensed water lines are authorized on private floating facilities. Slides, diving boards, grills, household goods, and other items not necessary for the safe moorage of a vessel or used for recreational boating may not be attached to private floating facilities or stored on private floating facilities. Attachments to private floating facilities for the storage of small watercraft such as personal watercraft may be authorized. All changes to private floating facilities, including the installation of these attachments, must be approved in writing by the USACE Lake Manager before installation. The attachments will be counted in the total private floating facility size for purpose of determining spacing requirements.

4.14 FLOTATION

All flotation for private floating facilities shall be of materials commercially manufactured for marine use. Flotation shall be of materials that 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, encapsulated expanded polystyrene, or encapsulated polyurethane.

Encapsulated foams must be fully encased with a protective covering that is warranted by the manufacturer for eight (8) years or more against cracking, peeling, sloughing, and deterioration from ultraviolet rays, while retaining its resiliency against ice and bumps by watercraft. Reuse of plastic, metal, or other previously used drums or containers for encasement or flotation purpose is prohibited.

Private floating facilities with existing flotation that does not meet the current standards will be allowed to remain until a USACE inspector deems the flotation is no longer serviceable.

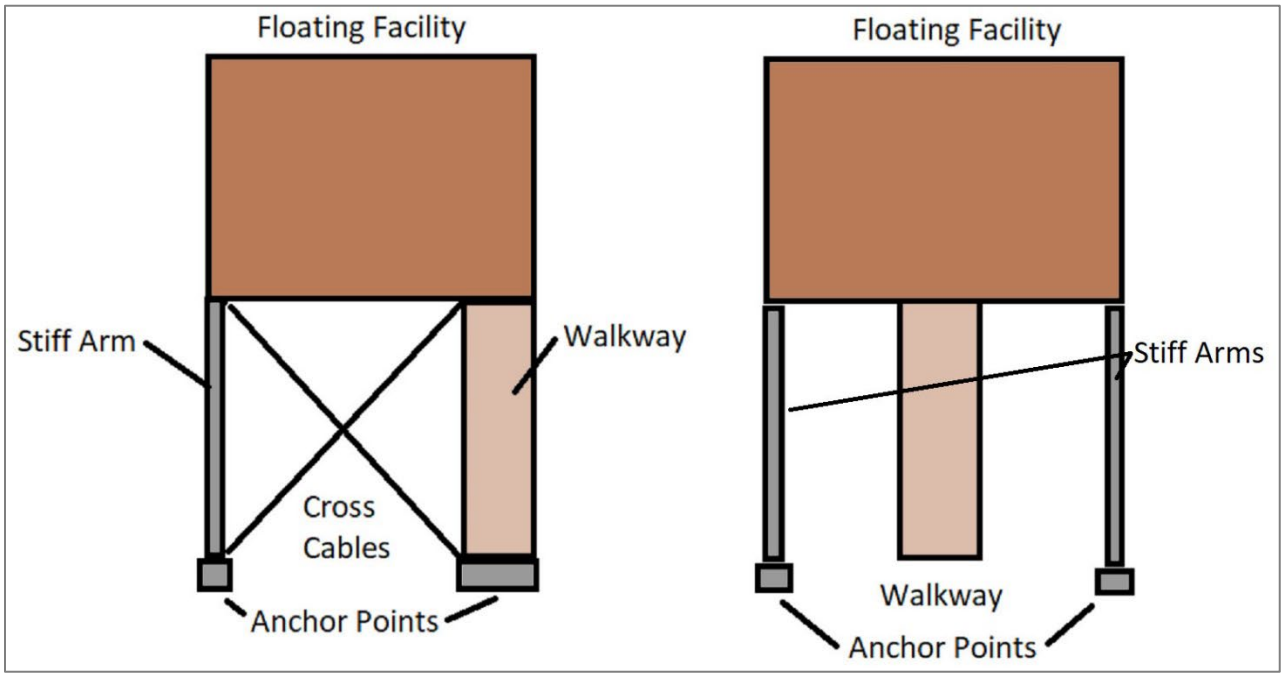
Unserviceable flotation includes those that are waterlogged, sinking, damaged from animals or vegetation, or otherwise deteriorated. A minimum 40 percent of each flotation section shall be above the waterline at all times (four inches for every ten inches of thickness). If less than 40 percent of a section is above the waterline, it is no longer considered serviceable. Unserviceable flotation shall be replaced with an approved flotation upon written notification from the USACE.

Photo 4.2 Example of Flotation on a Private Floating Facility

4.15 ANCHORAGE

Design of anchorage systems will be included in the engineered plans for each separate structure. The plans must be developed in accordance with the site conditions of the location, taking into consideration the water depth, exposure to fetch, wind loads, and other factors affecting private floating facility installation. The anchorage system must allow the dock to rise and fall with the lake's elevation fluctuation while preventing lateral movement.

Figure 4.2 Floating Facility Typical Anchorage



4.16 PERMIT SIGN

Permit holders are required to post two metal tags with the current permit sticker affixed on their private floating facility. These tags will be sent to the applicant upon initial inspection and approval of the newly constructed private floating facility. One metal tag must be conspicuously displayed on the shoreline side and the other to the lake side.

4.17 DECKING

Flooring or decking shall be constructed of not less than 1-inch thickness nominal rough boards, 2-inch x 6-inch treated wood or ¾ inch marine plywood and will be spaced in such a manner to allow for expansion. Coated metal, concrete, high performance wood alternative products or similar types of flooring and decking may also be approved. All decking materials must be noted on the submitted engineered plans. All wood material in the deck must be treated with an environmentally safe preservative. All decking and associated structures must be maintained in a safe condition. Failure to maintain any private floating facility in a safe condition constitutes a deficiency and may result in issuance of a Notice of Violation under Title 36, Chapter III, Part 327, CFR, revocation of the permit, and removal of the private floating facility.

4.18 ELECTRICAL SERVICE TO PRIVATE FLOATING FACILITIES

In accordance with the nationwide USACE Non-Recreational Outgrant Policy dated March 30, 2009, no new electrical service licenses will be issued across Government Property. Existing licensed underground electric service may remain if the service meets the National Electric Code (N.E.C.) and the license remains current.

In addition, the installation of private overhead electrical lines to boat private floating facilities is no longer allowed on USACE property due to public safety concerns from lake inundation of these lines. Existing overhead lines have been grandfathered until such time that

the private floating facility changes ownership or until substantial damage or degradation of the service occurs. At that time the USACE requires that the overhead electrical service across government property be removed at the expense of the private floating facility permit owner. Any overhead lines that are identified as an imminent public safety hazard must be removed immediately.

All overhead power lines must be maintained to ensure a minimum low sag requirement as described in ER 1110-2-4401, as measured from the lowest sag point to the top of the flood pool. Power poles that are leaning excessively and any sagging power lines due to excessive power pole lean must be removed as determined by the USACE Lake Manager.

Alternative electrical service such as solar may be installed after approval of plans submitted to the USACE Lake Office.

All electrical service must be compliant with or exceed the requirements of ER 1130-2-406, or the electric service must be removed from Government Property if it remains noncompliant.

A weatherproof disconnect or circuit breaker box for all shore power electric service must be installed on private property, as near to the USACE fee or easement line as practical. Electric power to private floating facilities must be disconnected when they become inaccessible from the shoreline due to high lake levels.

An *Electrical Affidavit* signed by a licensed electrician stating compliance with the NEC will be required for all shoreline use permit renewals involving electric power, electrical modifications, or other instances deemed necessary by the Lake Manager, regardless of power source.

Light 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 that they remain off most 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 should be shielded to prevent light emission above the fixture. This initiative seeks to reduce light pollution to preserve the visibility and aesthetics of the night sky.

4.19 WOOD MATERIAL

The use of wood in private floating facility construction shall only be used for decking construction of slip fingers, headers, and walkways (see Sections 4.12 and 4.16). The use of wood will not be permitted below the decking construction. All wood must be treated with an environmentally safe preservative.

4.20 METAL FINISH

All metal used in the construction of private floating facilities must be galvanized or have a patented enamel and/or anodized aluminum finish.

4.21 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 other material approved by USACE.

Photo 4.3 An Approved Chain Link Enclosure

4.22 PRIVATE FLOATING FACILITY REPAIR, MODIFICATION, OR REPLACEMENT

All private floating facility repair, modification or replacement requires prior written approval from USACE. Installing additional walkways or add-ons for mooring small vessels such as personal watercraft are considered modifications and thus require prior written approval from USACE. Work beyond minor repairs will require submission of engineered plans signed by a licensed structural engineer for the private floating facility if they are not already on file. All replacements or alterations must be in accordance with approved plans. All alterations to private floating facilities including relocation, changing structure, or major repairs require written authorization from the USACE Lake Manager prior to any work taking place.

Inspections of private floating facilities are performed periodically by USACE. If deficiencies are found, the permittee will be notified and required to make repairs within 30 days. If a private floating facility is found to be in such poor condition that total replacement is required, the permittee will be required to remove the old private floating facility and/or debris from the lake and USACE property within 60 days. The permittee may request replacement of the private floating facility if spacing, location, and all other requirements for a new private floating facility are met. The new private floating facilities must comply with all requirements stated in this SMP.

4.23 CONSTRUCTION PERIOD

Construction includes modifications to existing private floating facilities in addition to the installation of new private floating facilities. The USACE Lake Office will issue written authorization to construct and place the private floating facility at the approved location. The authorized construction period may be for a maximum of six (6) months. If the private floating facility is not in place by the specified time period, the authorization for the private floating facility will expire and future requests for similar work by the applicant cannot be made for a period of one (1) year after the expiration of the construction period. Shorter authorized construction periods may be used at the discretion of the Lake Manager.

4.24 CONSTRUCTION PROVISIONS

Any type of fixed pier or platform either on the land or extending into the water from the shoreline is prohibited with the exception of piers located out of the normal lake pool that support or anchor the private floating facility's walkway or stiff arms. Any type of piling or post driven into the lake bottom for the purpose of mooring or tying boats is prohibited. Any type of channel, ditch, canal, or excavation is prohibited unless the excavation is in conjunction with an approved erosion control structure or other approved work. Any type of landform modification, construction, or other activity that changes the original or present condition of the land is prohibited. This includes, but is not limited to, beach construction, channel construction, bank terracing, cuts, fills, and road construction.

4.25 PERMIT REVOCATION AND REMOVAL OF UNAUTHORIZED STRUCTURES

The USACE 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. The permittee shall receive written notice from USACE by registered or certified letter within 30 days of the floating facility inspection that identified the non-compliance issue(s). The letter will detail the reason for non-compliance. Upon permit revocation, the permittee shall remove the facility within 60 days at the permitee's expense and restore the waterway and lands to their former condition. 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.

Examples of conditions that may lead to permit revocation and removal of a private floating facility include, but are not limited to, the following:

a. **Unusable and unsafe:** Private floating facilities that do not meet the handrail and/or flotation standards in this SMP, or private floating facilities with missing boards in walkways, are considered unusable and unsafe.

b. **Threat to life or property:** Private floating facilities that do not meet the handrail and/or flotation standards in this SMP, have missing boards in walkways, or have faulty electrical systems are considered a threat to life. Private floating facilities that do not meet the anchorage standards in Section 4.15 of this SMP are also considered a threat to life and property.

c. **Substantial noncompliance:** Failure of permittees to pay the required permit fee is considered a substantial issue of noncompliance. Private floating facilities that do not meet standards listed above under "Unusable and unsafe" or "Threat to life or property" are in substantial noncompliance. Examples of compliance issues that are not substantial include peeling paint, presence of aquatic weeds or moss on flotation, leaking roof, or loose siding. However, if a permittee fails to make these minor repairs in a timely manner, USACE may pursue revocation of the permit. In situations where minor repairs are not made in a timely manner, the USACE Lake Manager, or designee, will establish together with the permittee, a schedule for making needed repairs.

In addition, USACE has determined that all existing facilities must comply with certain safety-related design features that may or may not have been required at time of permit issuance. These design features include the following:

- Replacement flotation must meet all current requirements.
- Handrails must be installed as required. Replacement handrails will be required at time of inspection for renewal of permits if the current handrails do not meet OSHA requirements, or if there are no handrails (see Section 4.12 for walkway construction requirements).
- Electrical systems must meet current National Electrical Code standards. 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 §327.20, Part 327, Chapter III, Title 36, CFR. All structures not in accordance with this regulation will be removed.

5.0 VEGETATION MODIFICATION PERMITS

Grass cutting, underbrushing, tree trimming, clearing, and all other related work performed on USACE property around the lake must have prior written approval from the USACE Lake Manager. The approval is granted in the form of a vegetation modification permit and must comply with specifications set forth in Section 5.2 of this SMP. Vegetation modification permits may be issued within areas of the lake allocated as *Limited Development*. Permits may be issued in areas allocated as *Protected* if the USACE Lake Manager determines the environmental and physical characteristics will not be impacted. Vegetation modification permits are issued to allow vegetation modification within the area of USACE property between the prospective permittee's property lot lines extended onto USACE property up to 30 feet from the common private/USACE property line. Individuals that have been issued a current permit for mowing that does not meet the current criteria may be exempted from current SMP standards to allow continued mowing unless environmental or other conditions warrant a change. Where significant wildlife habitat or scenic/aesthetic areas occur requests for vegetation modification permits may be denied or additional restrictions may be included on the permit.

Existing permits or licenses issued for vegetation modification that do not comply with the SMP's vegetation modification specifications are exempt from the new guidelines, as long as the current permittee or his or her spouse own the adjacent private property and comply with the existing permit specifications. New owners must re-apply for a Shoreline Use Vegetation Modification Permit. The new permit may require adherence to the current SMP's vegetation modifications requirements unless an exemption is approved by the USACE.

5.1 APPLICATION

An application must be made to the USACE Lake Manager for a permit prior to modification of vegetation on USACE property. If the applicant has a private floating facility permit and is an adjacent landowner, he/she may be eligible for a vegetation modification permit without additional cost.

5.1.1. New or Change of Ownership Permit Requests

All persons applying for a vegetation modification permit in a new area or persons requesting a change of ownership of an existing vegetation modification permit must submit a completed Shoreline Use Permit application along with the required fee and proof of ownership of property adjacent to USACE property.

5.1.2. Reissue (Renewal)

Applications for "renewal" of expiring vegetation modification permits require the applicant to submit a signed application form and a check or money order for the permit fee. The permit will then be reissued with a new expiration date to the existing permittee. All permit conditions in place at the time of the new permit issuance will apply at that time.

5.1.3. Applicant Access Requirements

All persons applying for a vegetation modification permit must provide proof of ownership of land adjacent to USACE property such as a recorded deed. A plat of the adjacent private property, with the dimensions of ownership clearly delineated, must be furnished for inclusion in the Shoreline Use Permit application.

5.2 VEGETATION MODIFICATION SPECIFICATIONS

5.2.1 Grass and Brush Cutting

Within specified areas of the vegetation modification permit, lawn mowers and string trimmers may be used to cut grass and/or brush. The use of chemicals is prohibited.

5.2.2 Tree Trimming

Trees and shrubs up to two (2) inches in diameter (measured at ground level) may be cut. Trimming of tree limbs up to the lessor of 1/3 of the trees' height or up to a maximum of eight (8) feet will be allowed under this permit.

5.2.3 Tree Cutting

Dead trees that have fallen to the ground within the vegetation modification permit area may also be cut into sections and removed from USACE property for noncommercial use. Standing dead trees require a separate wood-cutting permit issued by the USACE Lake Office. Only dead, standing trees that are determined by USACE staff to present a potential safety hazard or hazard to a permanent structure on private property will be considered for removal. Cutting of standing dead trees without a wood-cutting permit or cutting of live trees over two (2) inches in diameter at ground level is prohibited (See Section 6.0 Unauthorized Activities and Violations).

5.2.4 Reforestation and Regeneration of Open Areas

Planting of vegetation on public property may be allowed provided it is in accordance with a planting plan approved by the lake office. Planting of vegetation is allowed only when non-nuisance native plant materials are used. Upon planting, all materials become public property and cannot be removed. Ornamental flower beds and other non-native plants are not authorized.

5.3 MORATORIUMS ON VEGETATION MODIFICATION

Wherever an unauthorized vegetation modification occurs, a moratorium on future vegetation modifications on the affected properties 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 for the properties affected 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 moratoriums is five (5) years, which will generally be implemented for lesser impacts such as unpermitted grass cutting. This time period 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 result in 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 returned to its pre-existing condition and the ecological value restored, the moratorium will be removed. Any subsequent unauthorized vegetation modification of the same infraction in the area will restart the term of the moratorium period.

Moratoriums are administrative actions and 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. Changes in ownership of land adjacent to the USACE will not change the term

of any moratorium, as these are issued in an effort to repair the damage that has been done by the unauthorized act.

5.4 PEDESTRIAN ACCESS PATHS

Foot paths for pedestrian traffic may only be constructed in Limited Development Areas with permission of the USACE Lake Office. Use of motorized vehicles or equipment on paths is expressly prohibited and may result in access path permission being revoked.

Paths will not be authorized if other existing paths or roadways are present nearby.

Paths must be laid out to blend with existing topography and vegetation. Precautions will be taken to prevent erosion. Maximum width of the path will be 3 feet. If vegetation modification is requested the applicant must apply for a vegetation modification permit and adhere to its conditions including those detailed in Section 5 of this Shoreline Management Plan.

Native stone found on USACE property and lying loose on the ground surface may be placed to serve as improvised steps on steep slopes.

Construction or placement of structures such as benches, handrails, constructed steps, stairs, etc., will not be authorized.

If the USACE property line is fenced, a pedestrian access device, such as a walk-thru opening, may be authorized. Design plans for the access device must be submitted with the request for approval.

All portions of an access path on USACE property are open to the public, and no action is allowed that would exclude the public from using the path.

Access paths will be approved on a case-by-case basis. Therefore, additional conditions and/or restrictions may apply.

The USACE may revoke a permit for pedestrian access devices/trails if excessive deterioration of natural resources is observed. Additional fencing of an appropriate type may be installed on USACE property if necessary.

6.0 UNAUTHORIZED ACTIVITIES AND VIOLATIONS

All Shoreline Use Permits are issued and enforced in accordance with the provisions of Title 36, Chapter III, Part 327, CFR. Failure to obtain the proper permits or non-compliance with any of the terms and conditions, general or specific, may result in termination of the permit, issuance of a Notice of Violation, and/or civil litigation to recover damages.

6.1 ENCROACHMENTS

Any activities, other than public recreational activities or pedestrian access that are not covered by a Shoreline Use Permit or license will be considered an encroachment or degradation of public property. These unauthorized activities are considered violations of the rules and regulations contained in Title 36, Chapter III, Part 327, CFR. Examples of such violations may include, but are not limited to development of roads and trails, removal of or placement of debris-fill dirt, placement of dog pens, swings, patios, decks, steps, buildings, storage of equipment or vehicles, burning, tree and vegetation cutting, and grading of landforms. Violations of this nature may result in removal of property, restitution, restoration, and/or issuance of a Notice of Violation requiring the payment of a fine and/or the appearance before a Federal Magistrate and/or recovery of damages through civil litigation.

6.2 OFF-ROAD VEHICLE USE

The operation and/or parking of motorized vehicles on USACE property including but not limited to automobiles, trucks, motorcycles, mini-bikes, all-terrain vehicles (ATV's), golf carts, utility and lawn tractors, etc. are prohibited off authorized roadways. Taking any vehicle through, around, or beyond a restrictive sign, recognizable barricade, fence, or traffic control barrier is prohibited. The issue of off-road vehicle use is subject to §327.2, Part 327, Chapter III, Title 36, CFR.

6.3 ABANDONMENT OF PRIVATE PROPERTY

Private floating facilities and associated personal property will be considered abandoned after a diligent effort has been made to locate the rightful owner, his/her heirs, next-of-kin, or legal representative. Following a diligent search and/or a period of 24 hours, unattended property shall be presumed to be abandoned and may be impounded and stored or disposed of by the USACE Lake Manager in accordance with §327.15, Part 327, Chapter III, Title 36, CFR. The Lake Manager may collect a reasonable impoundment fee before the impounded property is returned to its owner.

6.4 UNAUTHORIZED STRUCTURES

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 §327.20, Part 327, Chapter III, Title 36, CFR. All structures not in accordance with this regulation will be removed.

6.5 SHORELINE TIE-UP OF VESSELS

Temporary shoreline tie-up of recreational vessels is defined as the intermittent moorage of private watercraft along the shoreline during a period of recreational activity. Temporary shoreline tie-up of vessels for occasional recreational activities is allowed. Vessels cannot be tied up to trees, shrubs, or other vegetation on the shoreline. All vessels shall be removed from

USACE Property or stored in private floating facilities or commercial marinas if not in actual use (Title 36, §3.27.15). However, campers registered at a designated campsite within a park may tie up vessels below their campsites throughout their stay. Commercial vessels must be stored in commercial marinas or removed from USACE property when not in actual use.

6.6 BOUNDARY LINE INTERFERENCE

The government boundary line at Fort Gibson Lake has been established and marked by the USACE in accordance with standard survey techniques. The boundary line is marked with a standard brass cap embedded in a concrete monument at each property corner and must not be damaged or moved. These monuments may be marked with a steel post.

Photo 6.1 A Monument and Post Marking the Boundary Line

In open areas where the distance between corners is such that the monuments are not in line-of-sight, in-line boundary line posts may be installed by the USACE to witness the line. These posts should not be moved or destroyed. Witness posts are used to mark the approximate boundary location but are not registered, legal survey markers. Adjacent property owner must use a licensed surveyor at their own expense if a private need arises for the exact location of the common private/USACE property line. The USACE will provide information to surveyors or property owners which might assist in the location of boundary lines and property corners. This information is available at the USACE Lake Office and available online at https://swt.usace.army.mil. Any discrepancies identified by the survey should be resolved with the USACE Lake Manager.

6.7 BURNING

No burning of any kind is allowed on USACE property without prior approval from the Lake Office.

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 #:	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
Fort Gibson Lake
Corps of Engineers

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 does it obviate the necessity of obtaining state or local assent required by law for the construction, operation, use or 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 Lake 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 Lake 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, 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 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, fragmenting, 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 non-compartmentalized 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 Lake 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 Lake 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 Lake Manager.

18. No vegetation other than that prescribed in the permit will be damaged, destroyed or removed. No vegetation of any kind will be 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 action. If the permittee requests a hearing in writing to the District Commander through the Lake 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 will be rendered and a copy, mailed to the permittee by certified letter.

22. Notwithstanding the conditions 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 Lake 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 Lake 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 Lake 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 Lake Manager may require all portions of the facility be removed from public property.

28. Maintained permitted facilities that do not meet the new minimum design specifications can be sold and remain at current locations as long as the new owner applies and receives a valid permit. Existing docks that have significant damage or are no longer floating will not be issued a new permit. All new/replacement construction must meet minimum design specifications and open side requirement.

29. Existing facilities must meet new design specifications to be moved to another approved location. Fully enclosed or wooden framed docks cannot be moved to new locations. The dock must be certified by a structural engineer prior to final written approval by the Lake Manager.

30. If no public access is available to dock location, the permittee must provide proof of land access. Permits will not be issued to individuals that only have access via water.

31. All newly permitted docks must be 50 feet from the nearest part of any other floating structure.

32. No new electric service installations will be allowed across government property. Existing overhead electric service or buried lines without a valid license must be removed upon sale of the dock or upon significant damage/deterioration of the service. Buried electric lines with a valid Real Estate license must meet the National Electrical Code to remain on Government property. All docks with electrical service must have service and wiring inspected every five years and a signed electrical affidavit provided with the renewal application.

33. New overhead or rooftop deck/patios are prohibited. Existing rooftop decks are grandfathered, but their structural integrity must be certified by a licensed engineer each time the permit is due for renewal. Replacement of these structures will not be allowed.

34. As with new construction, non-certified engineer drawings may be included in requests for modification of existing facilities. The request should also include a list of materials to be used and a description and/or drawing of the proposed modification to the boat dock. Once the application is reviewed and before approval can be issued, the dock owner must submit plans certified by a structural engineer and an electrical engineer where applicable, prior to receiving written approval by the Lake Manager.

I, _____ HAVE READ AND UNDERSTAND THE PERMIT CONDITIONS.
(PRINT NAME)

_____ _____
(SIGNATURE) (DATE)

Appendix C: Minimum Design Standards for Floating Facilities

MINIMUM DESIGN STANDARD SPECIFICATIONS
FLOATING FACILITIES
U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

1. Design Criteria.

a. Metal Material: Metal will be used and designed in accordance with the American Institute of Steel Construction Specifications or applicable 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 the structure is mandatory.

b. 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.

2. Design Loads (Minimum).

a. Deck Loads (substructure)	50#/sq. ft.
b. Approach bridges of walkways	50#/sq. ft.
c. Wind loads (substructure and superstructure)	20#/sq. ft.
d. Roof loads (superstructure)	To provide for a 2" 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.

3. Roofs (Superstructure).

a. Roofs may be gabled or mono-sloped.

b. Metal roof joists or rafters must be of 1 1/4" or greater ID standard pipe, structural steel or structural aluminum tubing and spaced not more than 2' 0" center-to-center. Consideration will be given to approving 4' 0" or greater spacing where sufficient vertical supports and bracing are provided. Purlins shall be not less than 1" ID pipe, structural steel or structural aluminum tubing and spaced not more than 2' 0" center-to-center.

c. Metal roofs must be steel, minimum gauge of 28 or aluminum, minimum thickness of 0.032".

d. Roofs must be securely fastened to the superstructure to resist wind uplift.

4. Decking and Framing.

a. Floor joists and flotation frames shall be constructed of not less than 2" 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 1/4" ID standard pipe, structural steel, or structural aluminum tubing. Studs shall not exceed 48" 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" nominal rough or 2" by 6" S4S material, or 3/4" marina 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 in the deck must be treated with a preservative.

5. Metal Finish. All metal used in the construction of the docks must be galvanized or have a patented enamel and/or anodized aluminum finish. 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.

6. Security Locker. An enclosed storage area not to exceed
3' 0" by 6' 0" floor dimension may be constructed for the storage of gear essential to vessel or watercraft operation.

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.

8. Flotation Units. 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.

9. Anchorage for Floating Facilities. Design of the anchorage system will be submitted for each separate structure and will be developed in accordance with the site where the facility will be anchored, taking into consideration the water depth, exposure to fetch, and wind loads. New or relocated floating facilities are to be located no closer than 50' from the nearest point to an adjacent dock.

10. Walkways.

a. Walkways shall not be less than 4 feet wide and not more than 5 feet wide.

b. Flotation required will be determined on the length of the walkway in the water and/or connections on the dock and the shore.

c. The proposed method of anchoring the walkway to the floating structure and the shore must be shown on the plans submitted for approval to the Resident/Project Office.

d. All walkways on new docks must have one handrail as a minimum. Plans must show the proposed handrail construction details.

11. Stabilizer or Underwater Brace.

a. A stabilizer or underwater brace is recommended between the fingers on the front (lake side) of the boat dock.

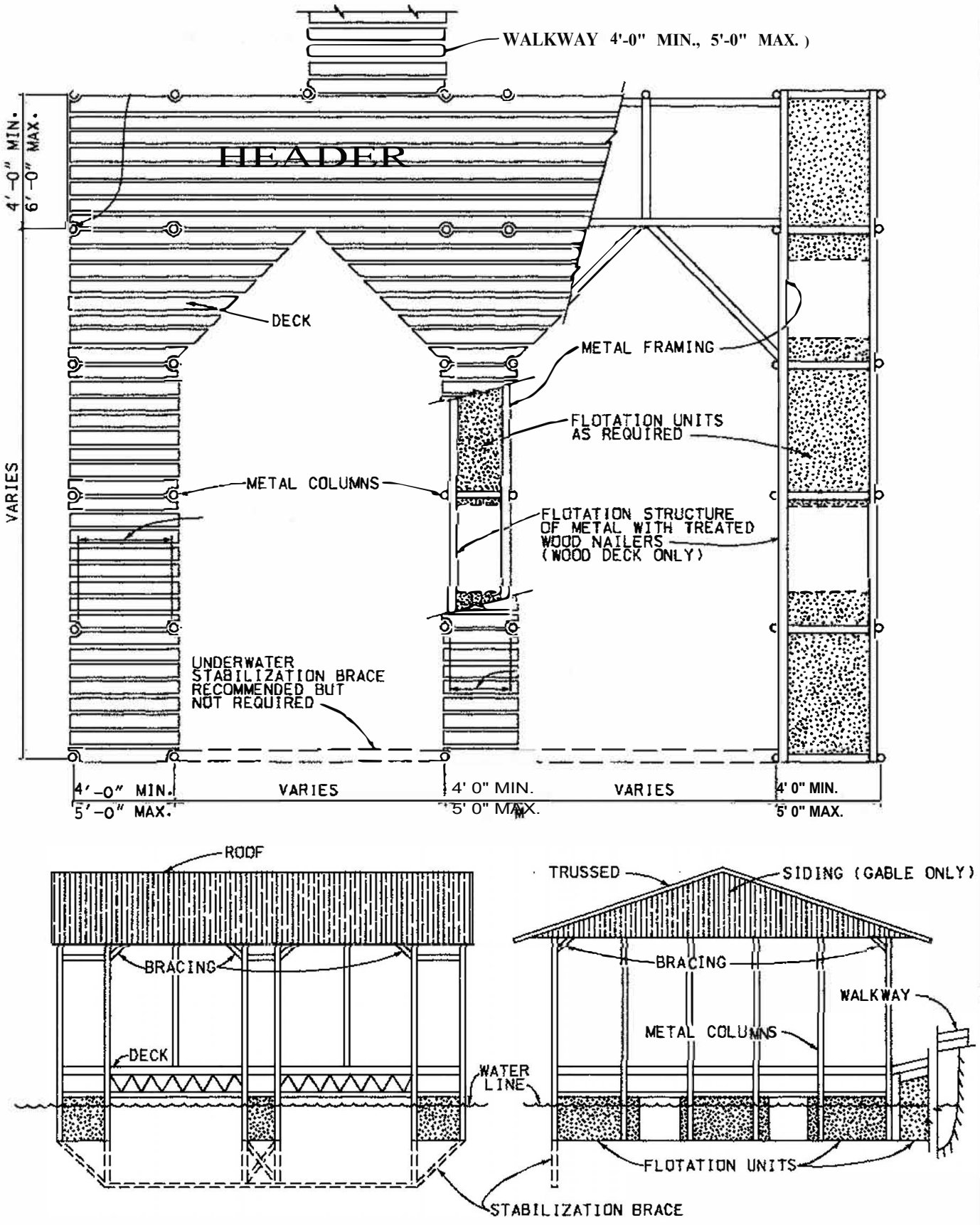
b. The size of the metal brace will be determined by the width between the dock fingers.

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 boat dock.

Appendix D: Typical Floating Facility Design

APPENDIX D

TYPICAL FLOATING FACILITY AND AUTHORIZED DIMENSIONS



FRONT ELEVATION SIDE ELEVATION

TYPICAL FLOATING FACILITY NOT TO SCALE

Appendix E: Flotation Requirements

FLOTATION REQUIREMENTS

PRIVATE FLOATING FACILITIES

FORT GIBSON LAKE

Flotation for docks must be one of the following types:

ENCAPSULATED

1. **EXPANDED POLYSTYRENE:** Must have a minimum density of 1.0 lb/cu ft. and must be encased with an approved protective covering*.

2. **POLYURETHANE:** Must meet the minimum density of 1.0 lb/cu ft. and must be encased with an approved protective covering*.

> * An approved protective covering is one that is warranted by the manufacturer for 8 years or more against cracking, peeling, sloughing and deterioration from ultra violet rays while retaining its resiliency against ice and bumps by watercraft. A warranty statement meeting or exceeding this standard is required from the foam manufacturer and must be furnished to the Fort Gibson Lake Office prior to installation of the foam.

NON-ENCAPSULATED

1. **EXTRUDED POLYSTYRENE:** Trade name Styrofoam is blue in color. This material will require the minimum density of 1.2 lb/cu ft.

2. **EXPANDED POLYOLEFIN:** This is a combination of Polyethylene and Polystyrene.

3. **POLYETHYLENE:** Trade name Ethafoam. This is a new material that the Waterways Experimental Station has determined to be acceptable.

> NOTE: These materials are the only approved flotation products that do not require encapsulation.

Appendix F: Vegetation Modification Guidelines

US Army Corps of Engineers ®
Tulsa District

VEGETATION MODIFICATION GUIDELINES

(Max 30 feet)

VM #: _____

THESE CONDITIONS ARE FOR _____
(Print Name)

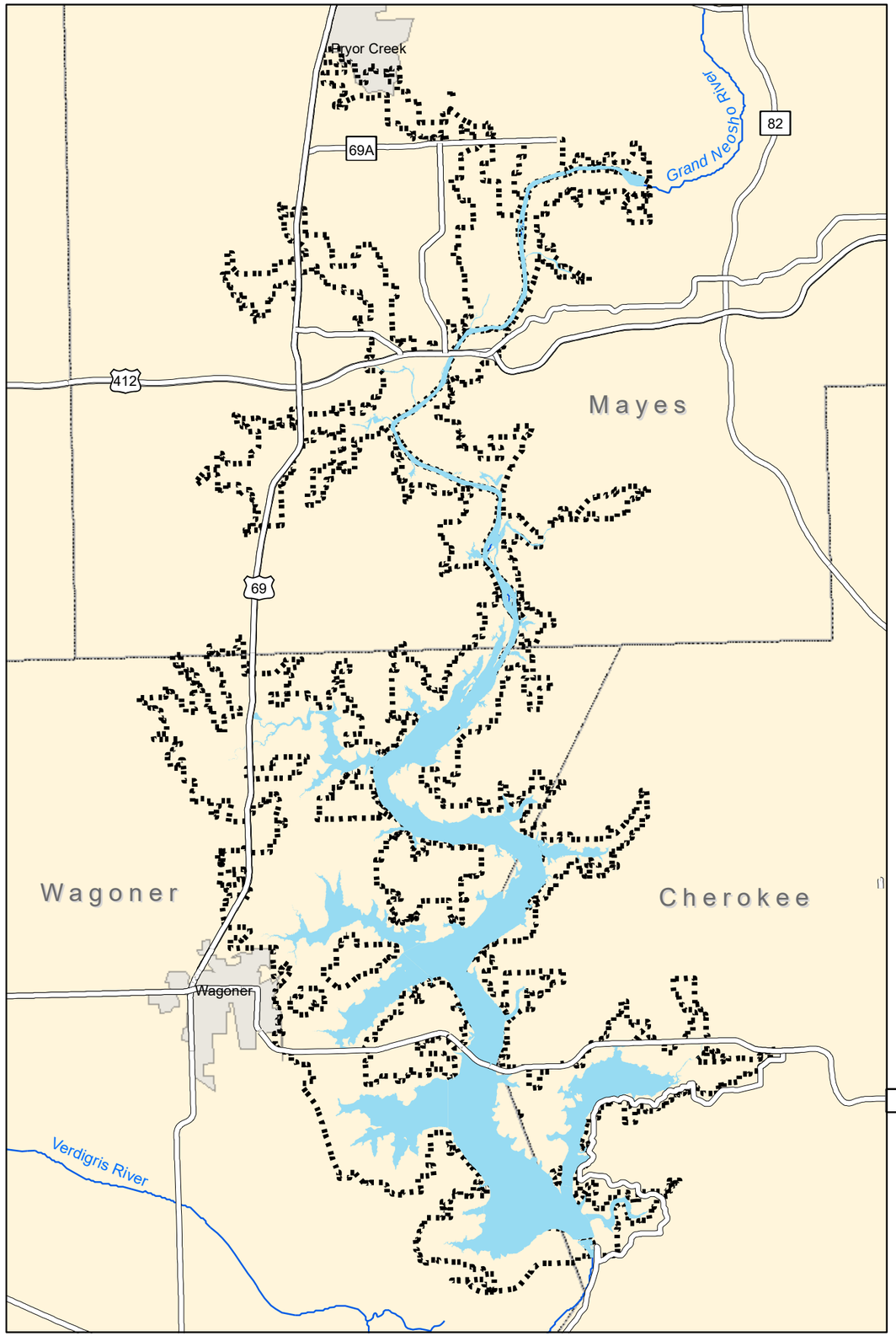
IN _____ COVE/SUBDIVISION
(Print Subdivision) (Lot Number)

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 Fort Gibson 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 Fort Gibson 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 3' 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 G: Shoreline Allocation Maps



INDEX TO SHORELINE MANAGEMENT PLAN MAPS

GENERAL

MAP NO.	TITLE
FG20SMP-OI-00	PROJECT LOCATION AND MAP INDEX

SHORELINE CLASSIFICATION

MAP NO.	TITLE
FG20SMP-OC-00	SHORELINE CLASSIFICATIONS (00)
FG20SMP-OC-01	SHORELINE CLASSIFICATIONS (01)
FG20SMP-OC-02	SHORELINE CLASSIFICATIONS (02)
FG20SMP-OC-03	SHORELINE CLASSIFICATIONS (03)
FG20SMP-OC-04	SHORELINE CLASSIFICATIONS (04)
FG20SMP-OC-05	SHORELINE CLASSIFICATIONS (05)
FG20SMP-OC-06	SHORELINE CLASSIFICATIONS (06)

COVES

MAP NO.	TITLE
FG20SMP-CO-00	COVE INDEX SHEET 00
FG20SMP-CO-01 THRU FG20SMP-CO-18	COVE INDEX SHEET 01 THRU COVE INDEX SHEET 18

RESERVOIR

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

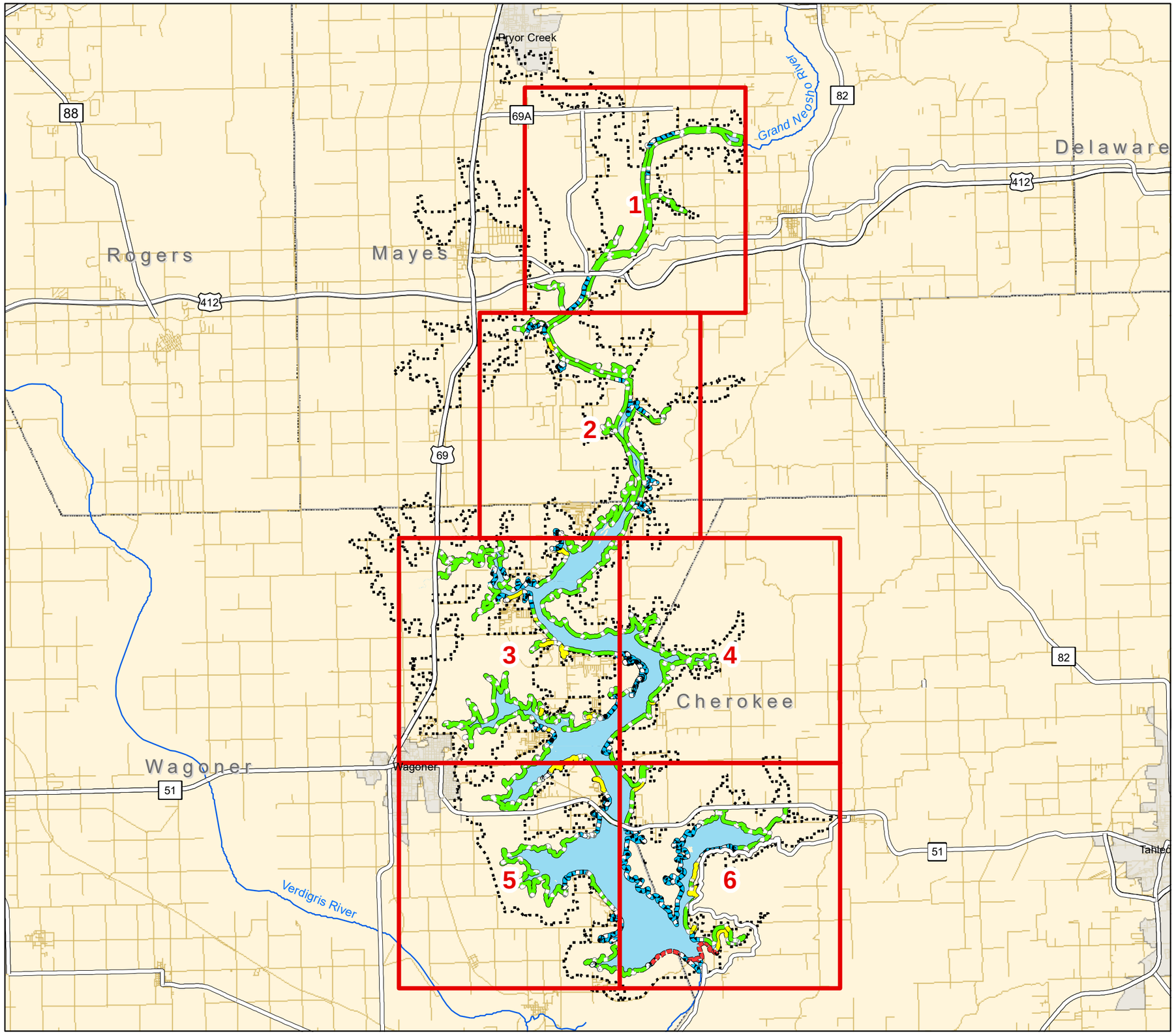
FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

PROJECT LOCATION AND MAP INDEX

N

0 1 2 4 6 Miles

DATE:	MAP NO.
MARCH 2021	FG20SMP-OI-00



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

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

INDEX SHEET 00

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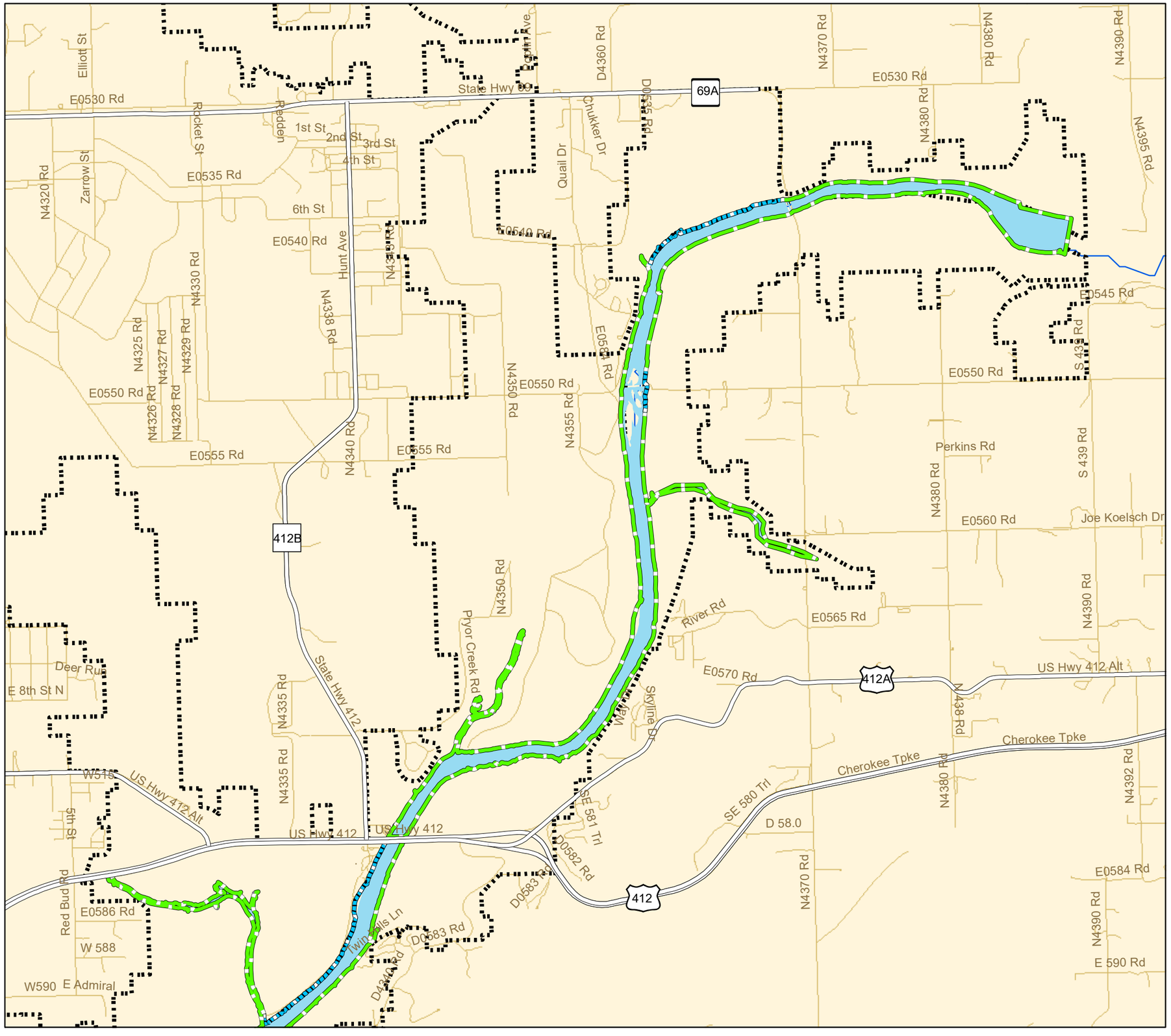
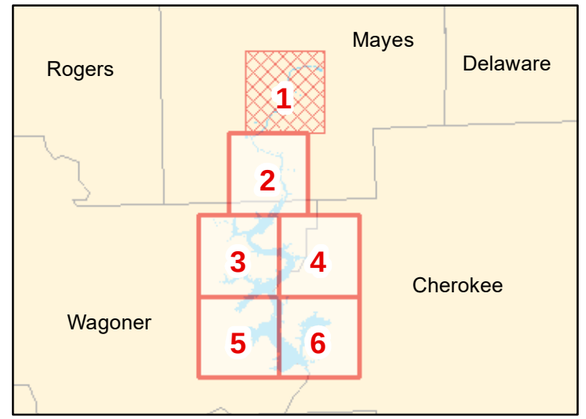
FEBRUARY 2021	FG20SMP-OC-00





PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
RESERVOIR
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

INDEX SHEET 01

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0 0.5 1 Miles

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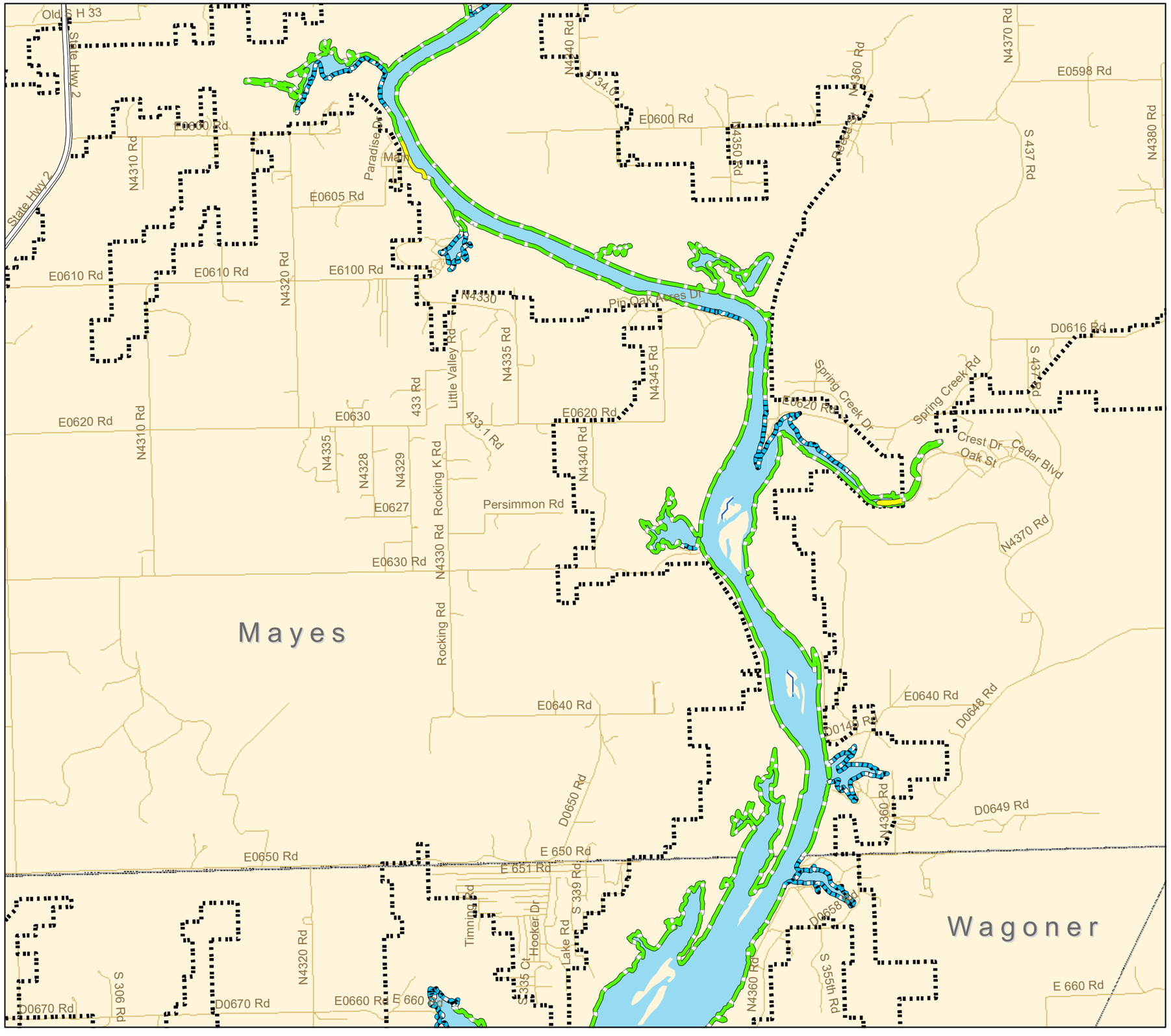
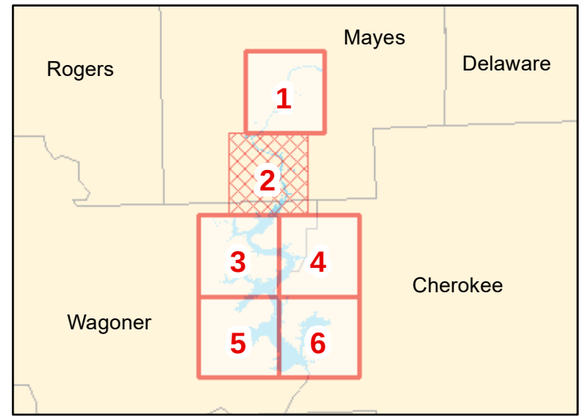
FEBRUARY 2021	FG20SMP-OC-01





LIMITED DEVELOPMENT AREA
PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
RESERVOIR
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

INDEX SHEET 02

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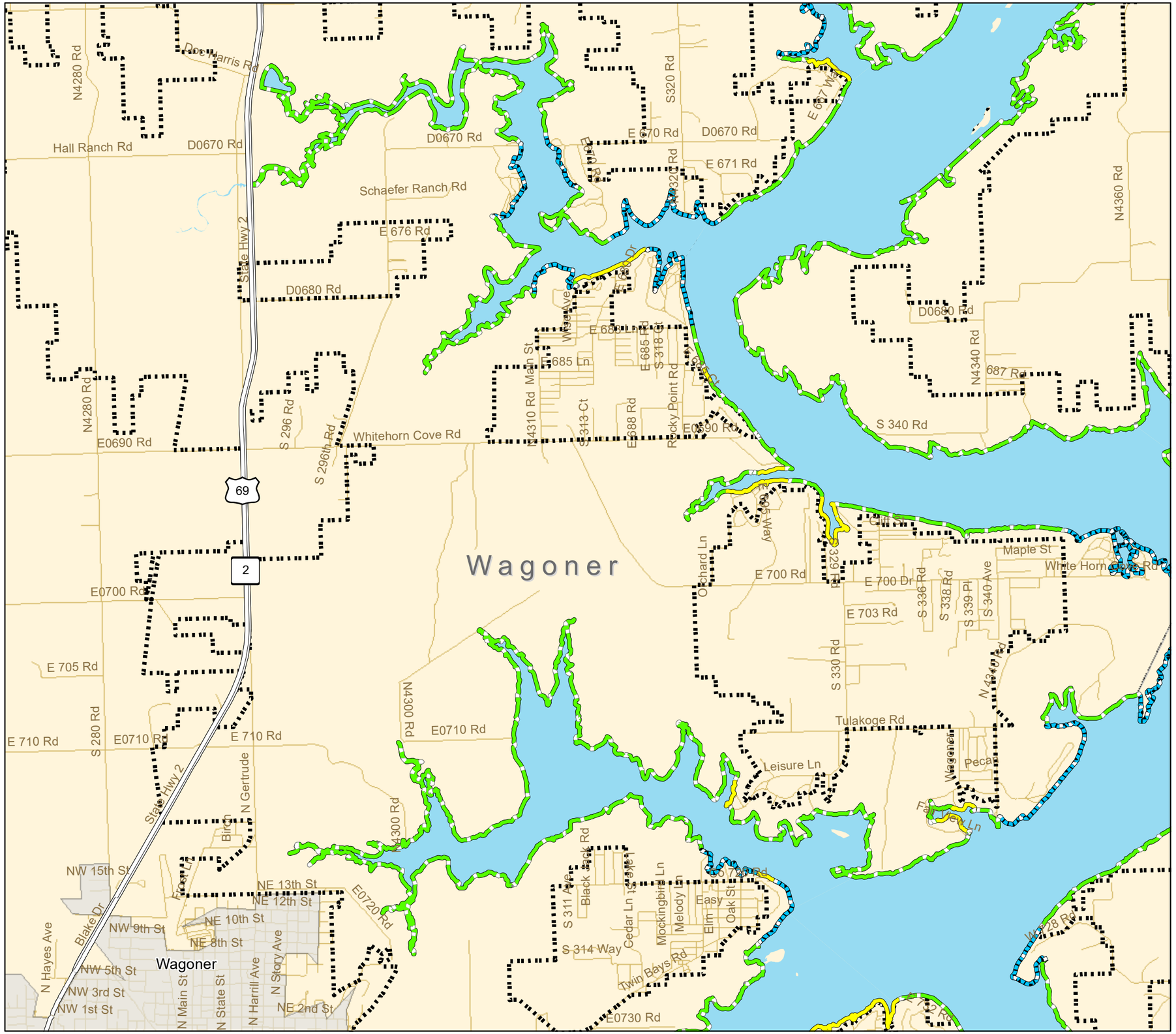
FEBRUARY 2021	FG20SMP-OC-02



LIMITED DEVELOPMENT AREA
PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
RESERVOIR
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

INDEX SHEET 03

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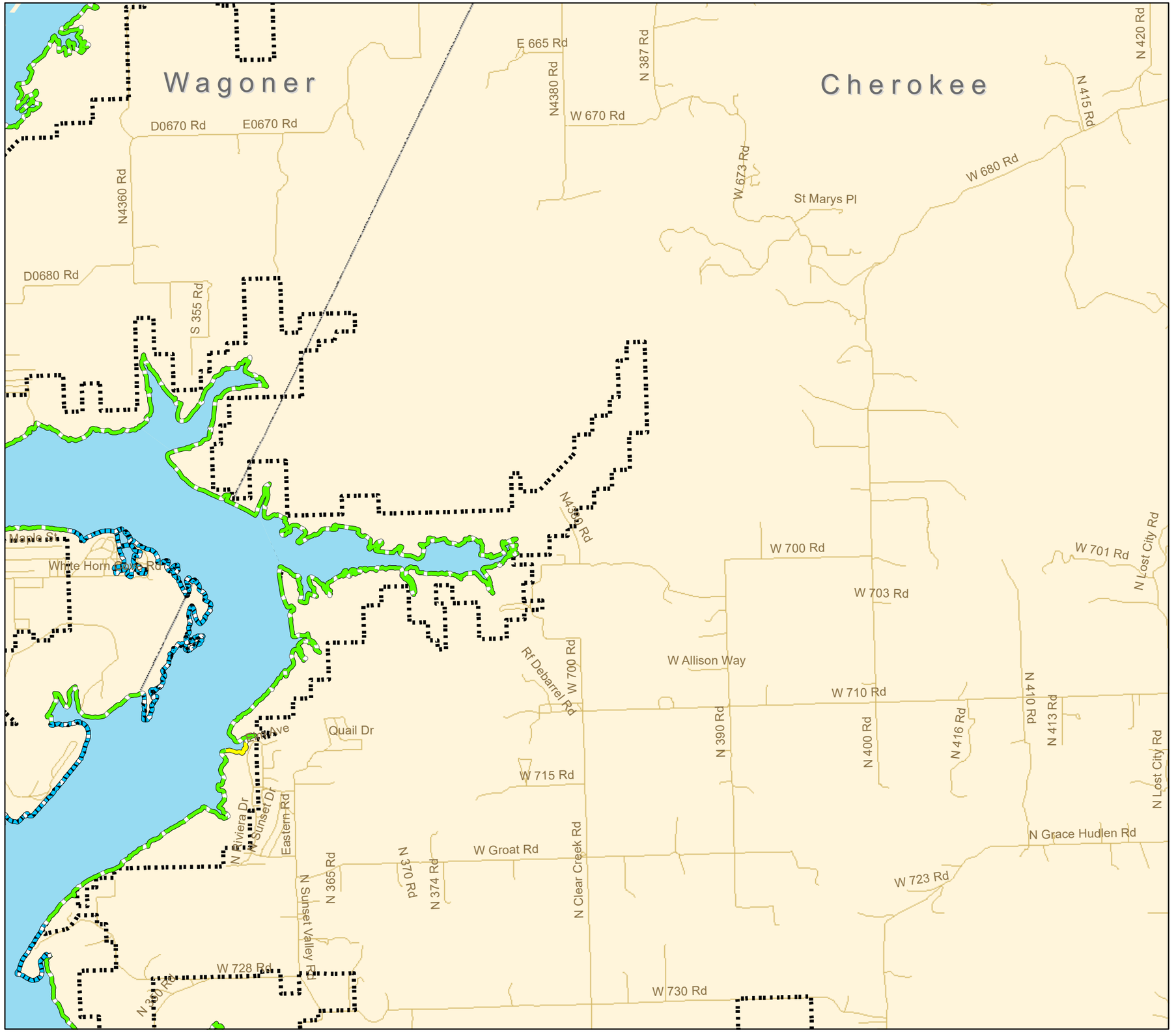
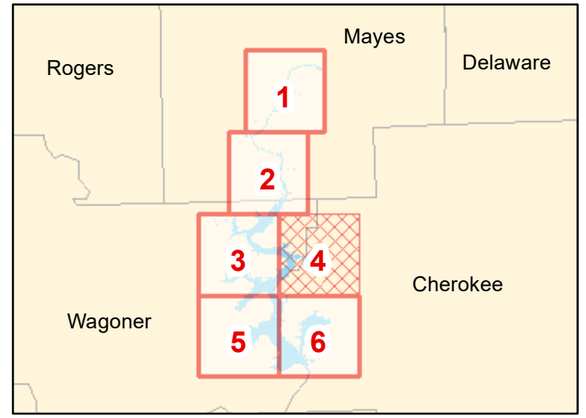
FEBRUARY 2021	FG20SMP-OC-03





LIMITED DEVELOPMENT AREA
PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
RESERVOIR
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

INDEX SHEET 04

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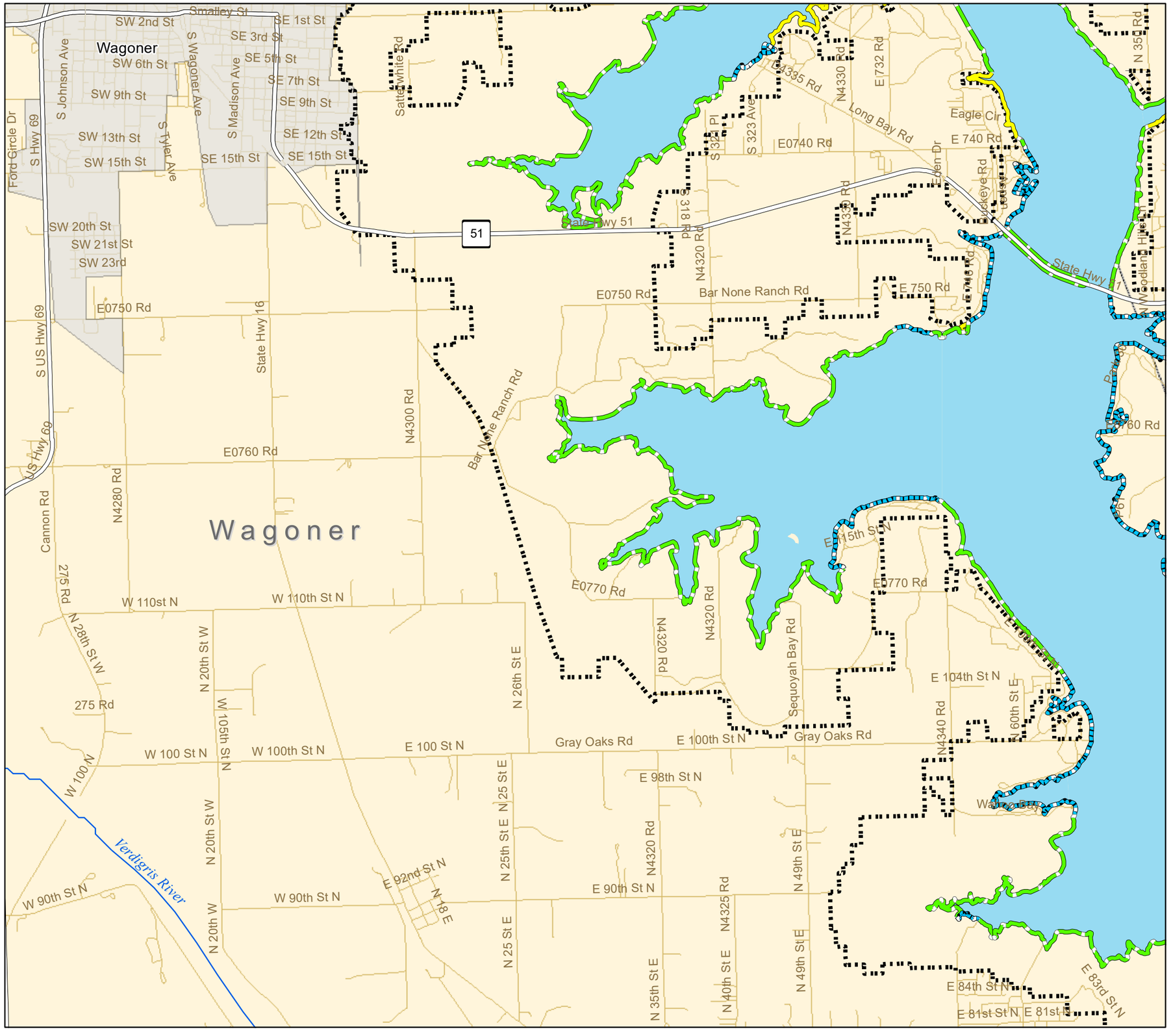
FEBRUARY 2021	FG20SMP-OC-04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SW 2nd St
Smalley St
SE 1st St
SE 3rd St
SW 6th St
SE 5th St
SW 9th St
SE 7th St
SE 9th St
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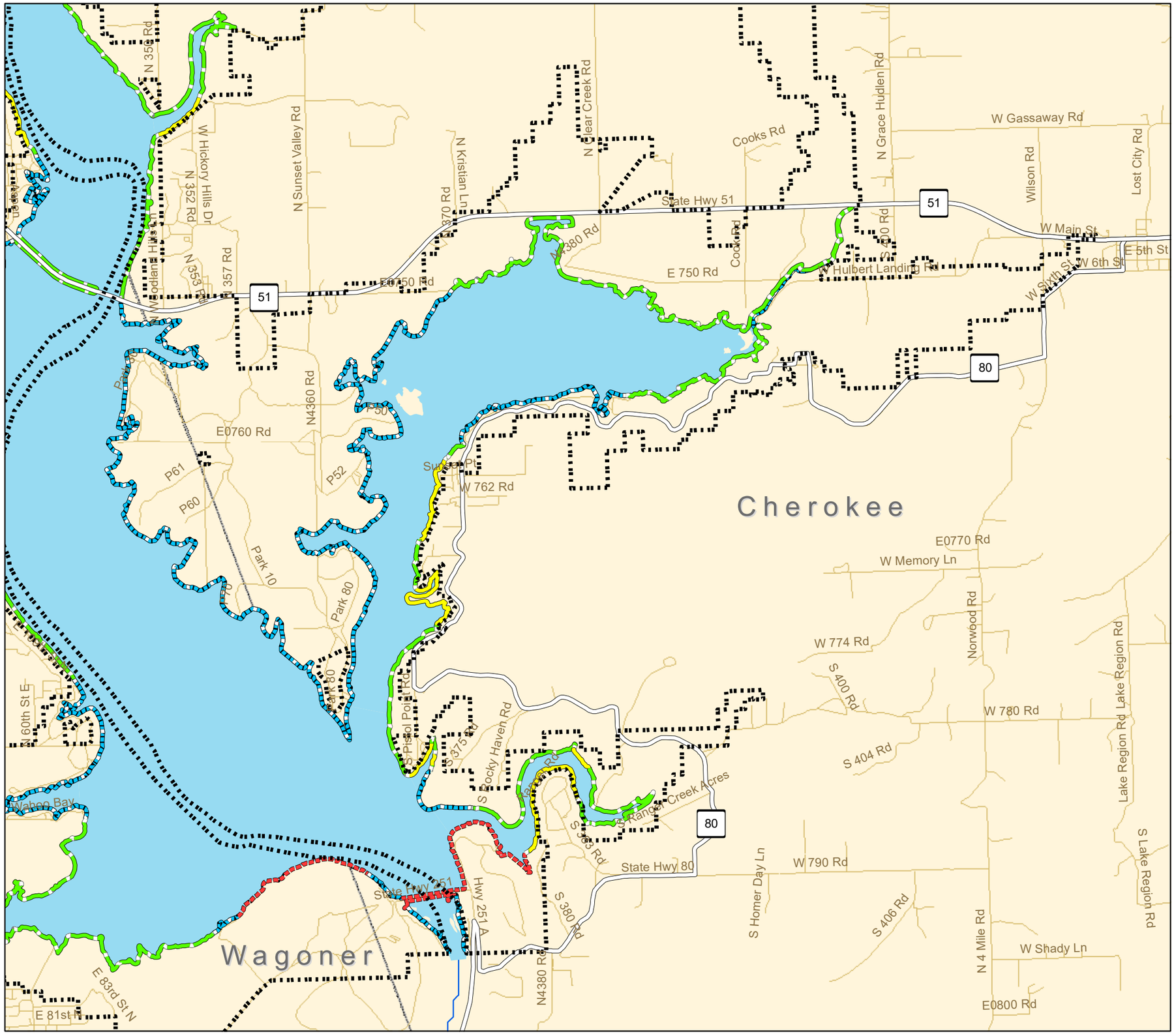
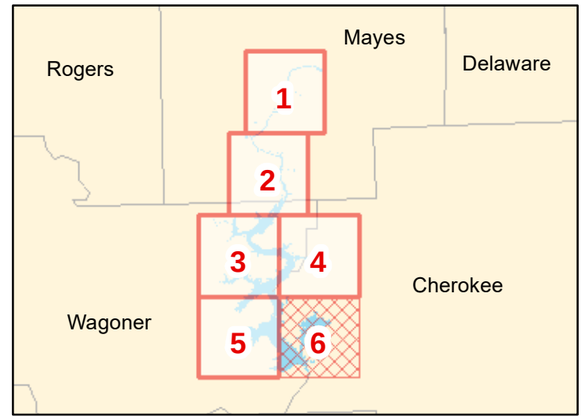
SE 12th St
SW 15th St
SE 15th St
SE 15th St
SW 20th St
SW 21st St
SW 23rd
E0750 Rd
S Johnson Ave
S Wagoner Ave
S Madison Ave
S Tyler Ave
Ford Circle Dr
S Hwy 69
Satterwhite Rd
51
State Hwy 51
S 318 Rd
N4320 Rd
N4335 Rd
N4330 Rd
E 732 Rd
S 323 Pl
S 323 Ave
E0740 Rd
Long Bay Rd
Eagle Cir
E 740 Rd
Eden Dr
Buckeye Rd
Laurel Ln
N 350 Rd
N Woodland Hills Rd
State Hwy 16
E0750 Rd
Bar None Ranch Rd
E 750 Rd
E 748 Rd
State Hwy 16
S US Hwy 69
N4300 Rd
E0760 Rd
Bar None Ranch Rd
Cannon Rd
N4280 Rd
275 Rd
E0770 Rd
E 115th St N
E 104th St N
N4340 Rd
N 60th St E
Sequoyah Bay Rd
W 110st N
W 110th St N
N 28th St W
N 20th St W
W 105th St N
N 26th St E
275 Rd
W 100 St N
W 100th St N
E 100 St N
Gray Oks Rd
E 100th St N
Gray Oks Rd
E 98th St N
W 100 N
Verdigris River
W 90th St N
W 90th St N
E 92nd St N
N 18 E
N 20th St W
N 20th W
N 25th St E
N 25 St E
N4320 Rd
E 90th St N
N4325 Rd
N 49th St E
N 35th St E
N 40th St E
E 84th St N
E 83rd St N
E 81st St N
E 81st St
Rogers
Mayes
Delaware
Cherokee
Wagoner
1
2
3
4
5
6
LIMITED DEVELOPMENT AREA
PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
RESERVOIR
FEE BOUNDARY
U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT
FORT GIBSON LAKE
GRAND (NEOSHO) RIVER, OKLAHOMA
FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN
INDEX SHEET 05
N
0
0.5
1
Miles
DATE:
FEBRUARY 2021
MAP NO.
FG20SMP-OC-05





LIMITED DEVELOPMENT AREA
PROHIBITED ACCESS AREA
PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
RESERVOIR
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

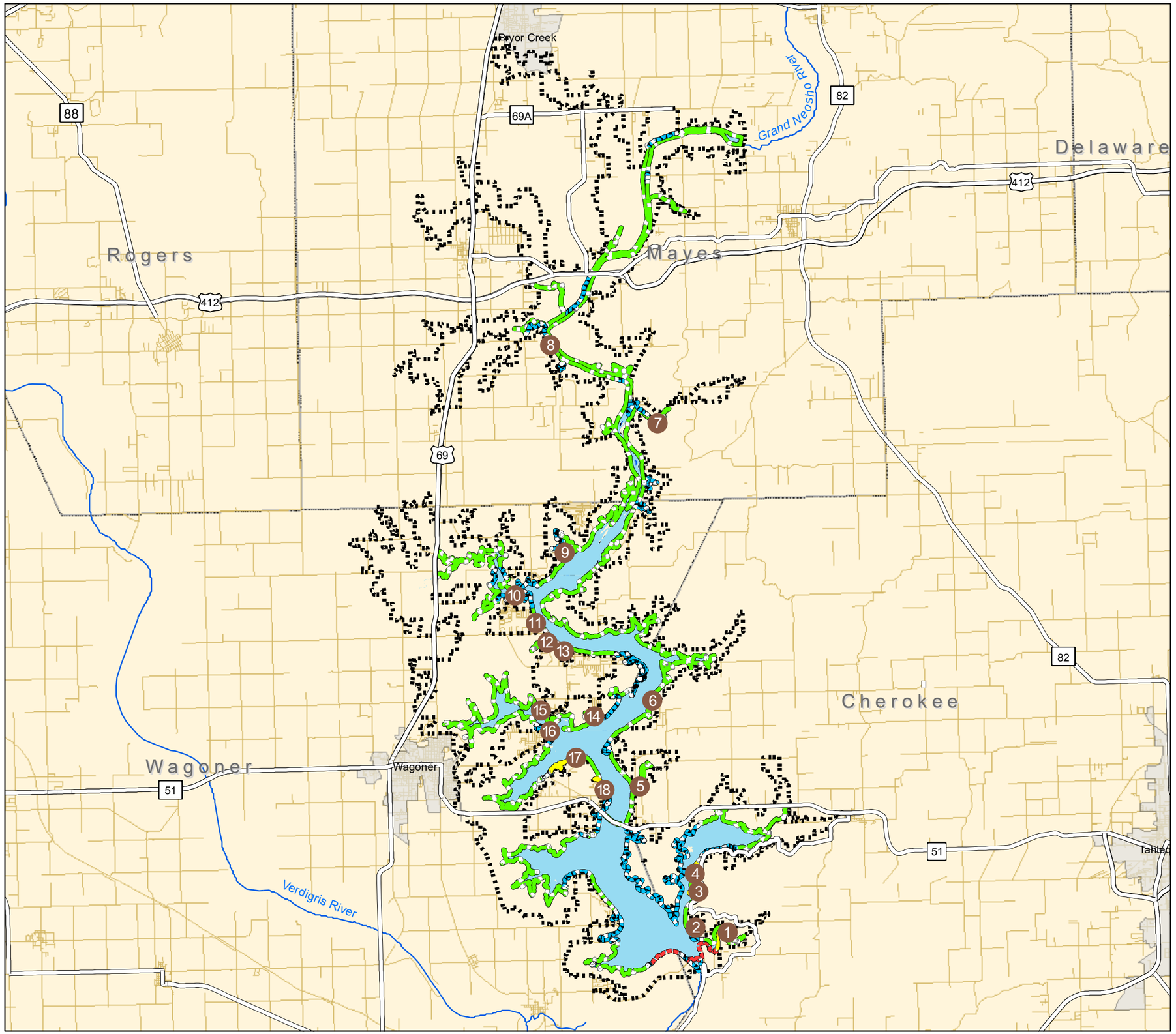
FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

INDEX SHEET 06

N

0 0.5 1 Miles

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-OC-06



ID #	COVE NAME	INDEX SHEET #
1	RANGER CREEK COVE	FG20SMP-CO-01
2	BASORE COVE	FG20SMP-CO-02
3	BANANA COVE & CLUB 61	FG20SMP-CO-03
4	14 MILE CREEK COVE	FG20SMP-CO-04
5	HICKORY CREEK COVE	FG20SMP-CO-05
6	SUNSET VALLEY COVE	FG20SMP-CO-06
7	SPRING CREEK COVE	FG20SMP-CO-07
8	PARADISE VIEW COVE	FG20SMP-CO-08
9	CAT CREEK COVE	FG20SMP-CO-09
10	FLATROCK CREEK COVE	FG20SMP-CO-10
11	CHANNEL VIEW COVE	FG20SMP-CO-11
12	SNUG HARBOR COVE	FG20SMP-CO-12
13	HOLIDAY COVE	FG20SMP-CO-13
14	FAIRVIEW COVE	FG20SMP-CO-14
15	LAKEVIEW COVE	FG20SMP-CO-15
16	TOPPERS COVE	FG20SMP-CO-16
17	SOUTH LONGBAY COVE & BLACK BASS COVE	FG20SMP-CO-17
18	CYCLONE HOLLOW COVE	FG20SMP-CO-18

- LIMITED DEVELOPMENT AREA
- PROHIBITED ACCESS AREA
- PROTECTED SHORELINE AREA
- PUBLIC RECREATION AREA
- RESERVOIR
- FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 00

N

0 1 2 4 6 Miles

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-00

(997 Feet)

RANGER CREEK COVE
(Total: 6,515 Feet)

(5,518 Feet)

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

- LIMITED DEVELOPMENT AREA
- PROHIBITED ACCESS AREA
- PROTECTED SHORELINE AREA
- LIMITED DEVELOPMENT SHORELINE MANAGEMENT ZONE
- FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 01

N

0 450 900 Feet

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-01

LIMITED DEVELOPMENT AREA
PROTECTED SHORELINE AREA
PUBLIC RECREATION AREA
LIMITED DEVELOPMENT SHORELINE MANAGEMENT ZONE
FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 02

N
0 175 350
Feet

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-02

LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

LIMITED DEVELOPMENT SHORELINE MANAGEMENT ZONE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 03

N

0 250 500 Feet

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-03

- LIMITED DEVELOPMENT AREA
- PROTECTED SHORELINE AREA
- PUBLIC RECREATION AREA
- LIMITED DEVELOPMENT SHORELINE MANAGEMENT ZONE
- FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 04

N

0 350 700 Feet

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-04

LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

LIMITED DEVELOPMENT SHORELINE MANAGEMENT ZONE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 05

N

0 200 400 Feet

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-05

LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

LIMITED DEVELOPMENT SHORELINE MANAGEMENT ZONE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

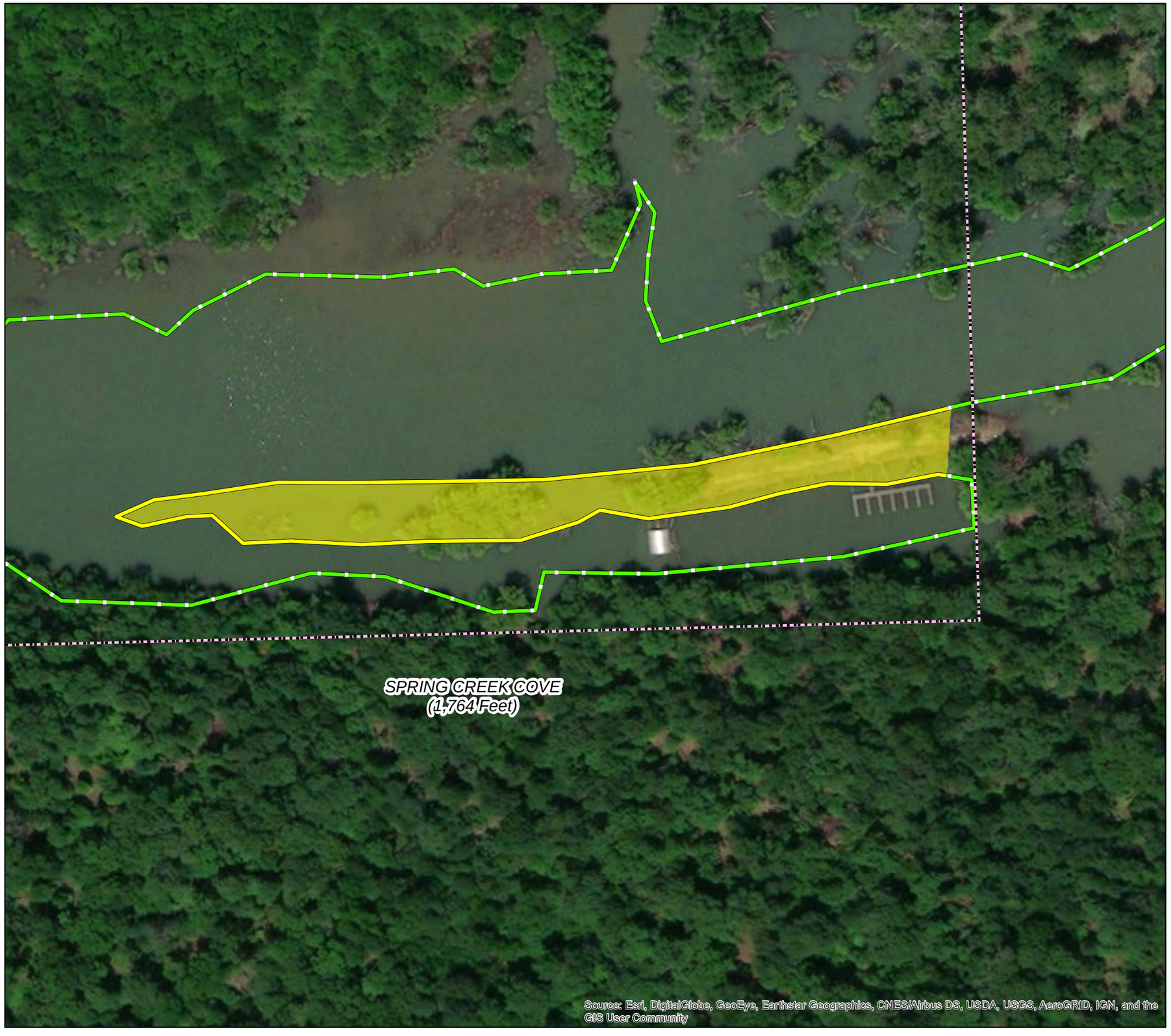
FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 06

N

0 150 300 Feet

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-06



LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

LIMITED DEVELOPMENT SHORELINE MANAGEMENT ZONE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

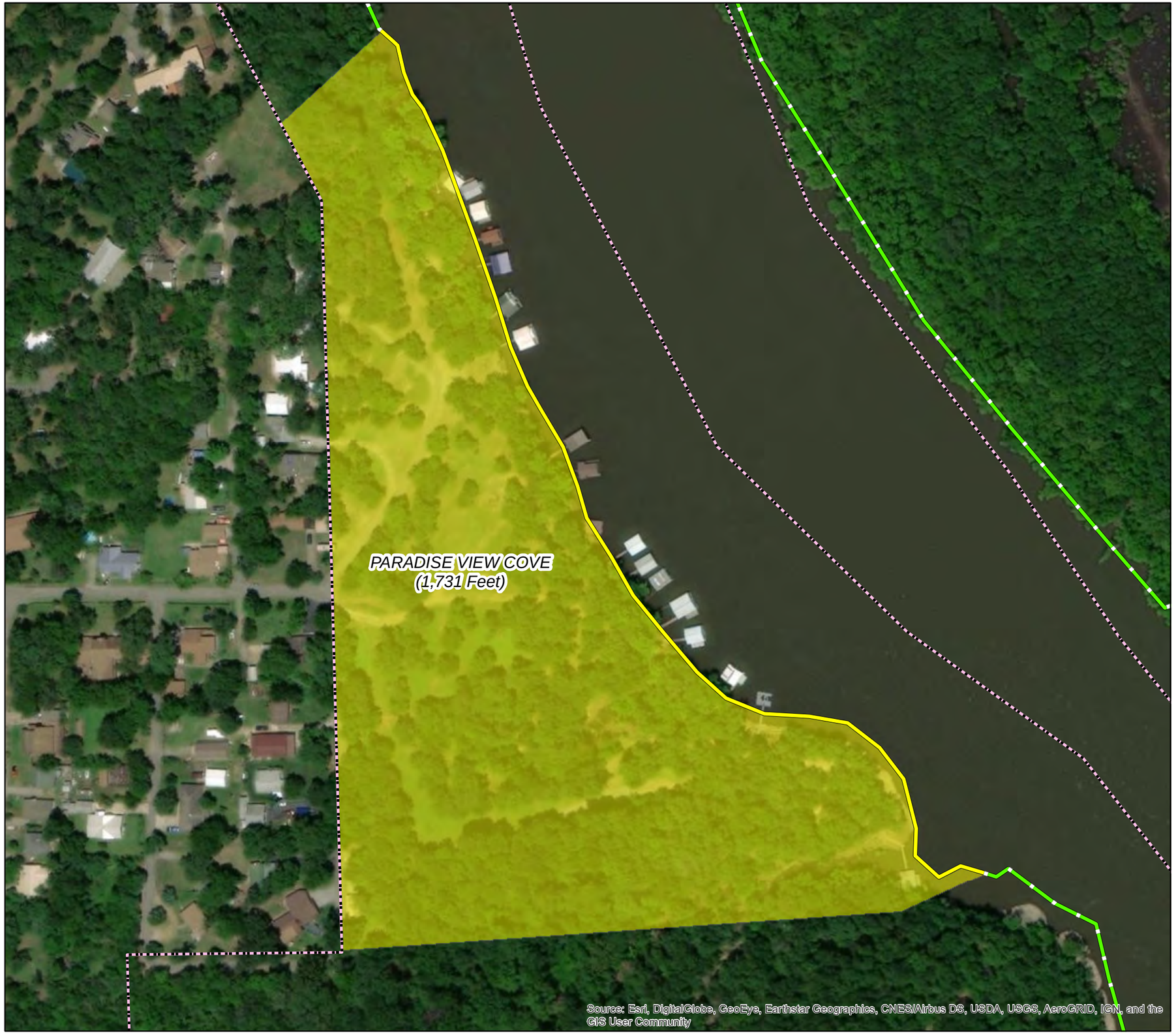
FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 07

N

0 100 200 Feet

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-07



LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

LIMITED DEVELOPMENT SHORELINE MANAGEMENT ZONE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 08

N

0 150 300 Feet

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-08

LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

PUBLIC RECREATION AREA

LIMITED DEVELOPMENT SHORELINE MANAGEMENT ZONE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

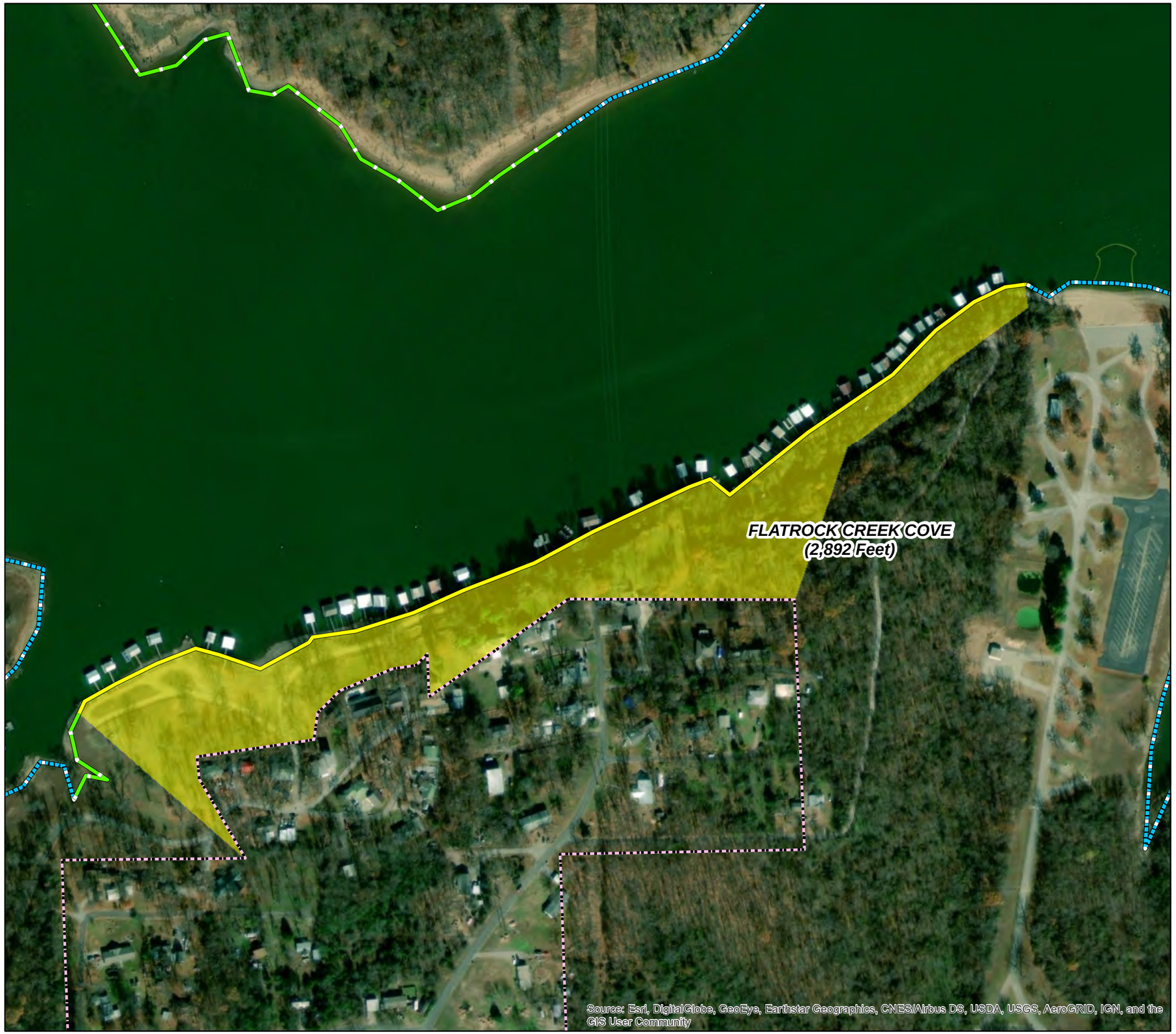
FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 09

N

0 150 300 Feet

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-09



LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

PUBLIC RECREATION AREA

LIMITED DEVELOPMENT SHORELINE MANAGEMENT ZONE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

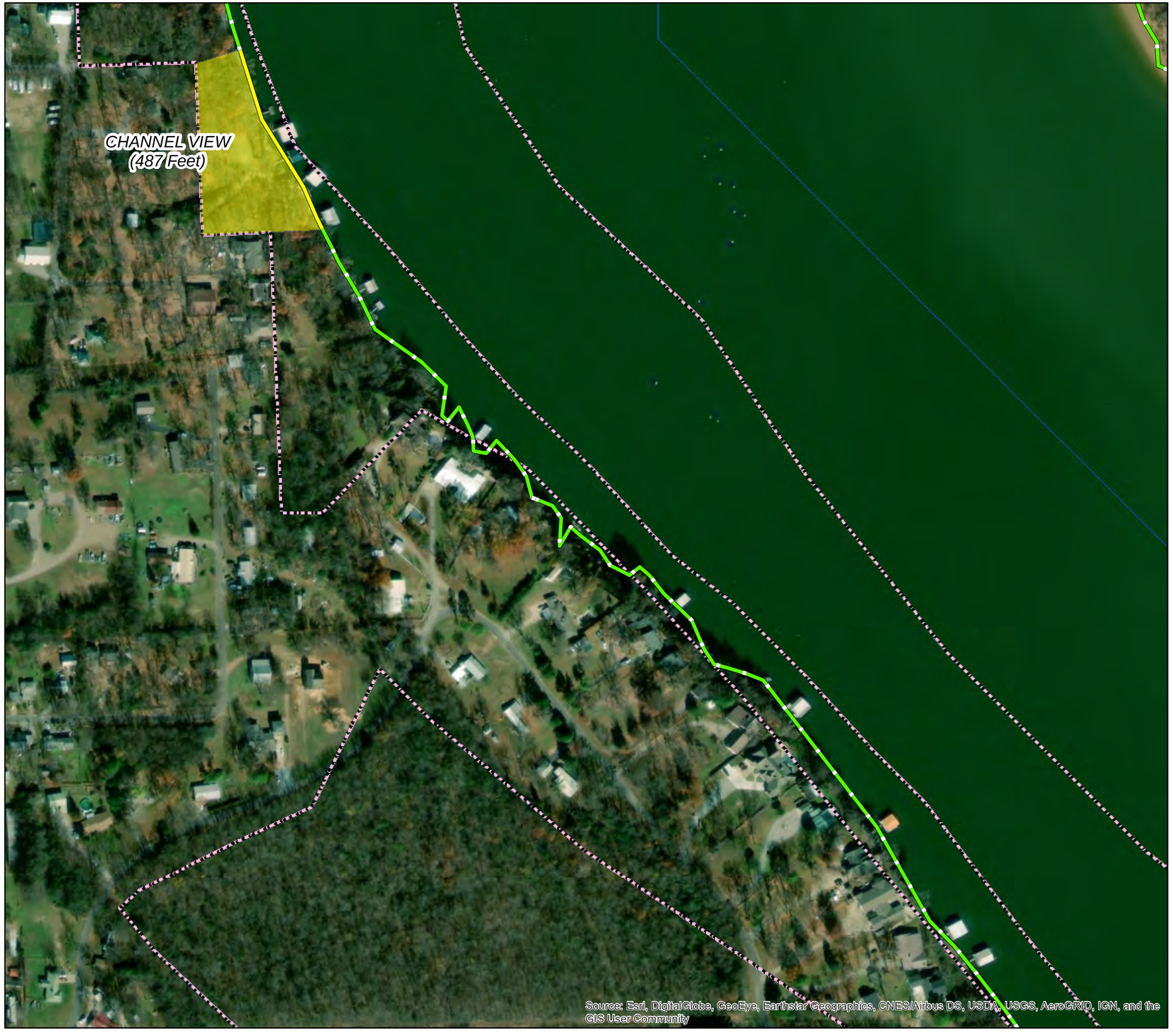
FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 10

N

0 300 600 Feet

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-10



LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

LIMITED DEVELOPMENT SHORELINE MANAGEMENT ZONE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

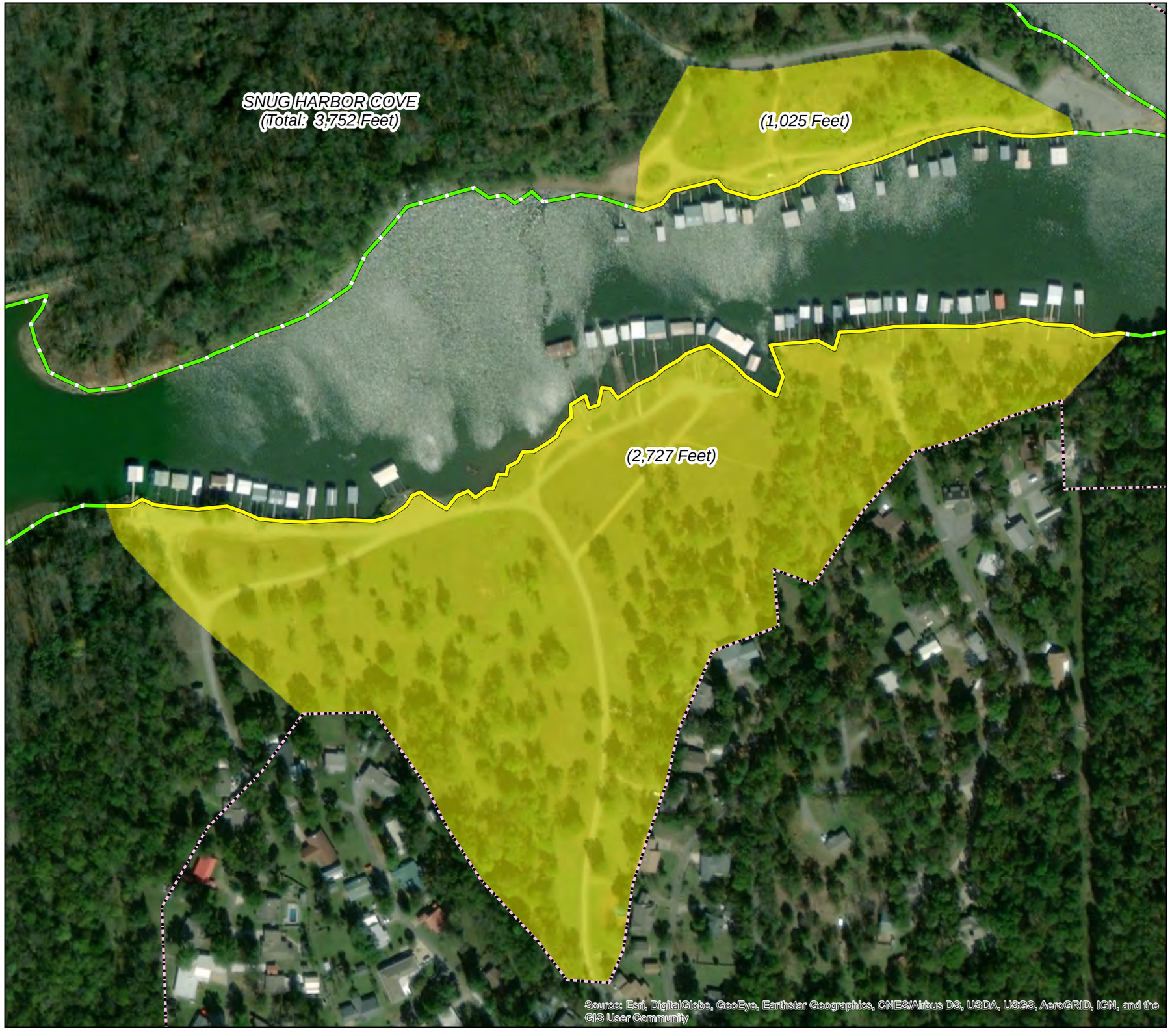
FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 11

N

0 300 600 Feet

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-11



LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

LIMITED DEVELOPMENT SHORELINE MANAGEMENT ZONE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 12

N

0 250 500 Feet

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-12

LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

LIMITED DEVELOPMENT SHORELINE MANAGEMENT ZONE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 13

N

0 200 400 Feet

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-13

LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

LIMITED DEVELOPMENT SHORELINE MANAGEMENT ZONE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 14

N

0 200 400 Feet

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-14

LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

LIMITED DEVELOPMENT SHORELINE MANAGEMENT ZONE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 15

N

0 150 300 Feet

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-15

LIMITED DEVELOPMENT AREA

PUBLIC RECREATION AREA

LIMITED DEVELOPMENT SHORELINE MANAGEMENT ZONE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 16

N

0 100 200 Feet

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-16

LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

PUBLIC RECREATION AREA

LIMITED DEVELOPMENT SHORELINE MANAGEMENT ZONE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 17

N

0 500 1,000 Feet

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-17

LIMITED DEVELOPMENT AREA

PROTECTED SHORELINE AREA

LIMITED DEVELOPMENT SHORELINE MANAGEMENT ZONE

FEE BOUNDARY

U.S. ARMY CORPS OF ENGINEERS
TULSA DISTRICT

FORT GIBSON LAKE — GRAND (NEOSHO) RIVER, OKLAHOMA

FORT GIBSON LAKE
SHORELINE MANAGEMENT PLAN

COVE INDEX SHEET 18

N

0 300 600 Feet

DATE:	MAP NO.
FEBRUARY 2021	FG20SMP-CO-18

Appendix H: Summary of Public Comments

Table H.1 Comments and Responses from Initial Public Workshop

Affiliation	Comment	USACE Response
Dock Owner	It would be nice if there was a dam alarm system, if the dam breaks, to warn people down stream, Grand Lake Dam, Hudson Dam, Gibson Lake Dam. If you Google the life of a dam, they say 50 to 100 years. Grand Lake Dam is 83 years old.	Noted. This is addressed by USACE emergency notification plans to ensure communities downstream are notified in case of emergency. The emergency plan is updated as needed.
Dock Builder	Why am I the only certified dock builder on Fort Gibson? I think that all dock builders that work on this lake should be certified and licensed through the state of Oklahoma. It would keep the riprap off the lake and a better quality of work.	Noted. USACE does not certify dock builders. Other agencies may have certification requirements, but USACE does not have such requirements.
Dock Owner	In the engineering regulation 1130-2-406 Appendix A Section 2 Paragraph 7 or the DoD Section 327.30 paragraph 7 it states that as long as we meet the National Electric Code guidelines we should be allowed to continue with our electrical service. Why then do you continue to remove electric from many of the docks in Holiday Cove. Many of us have boats with lifts that need electric & also enjoy night fishing. We have worked hard to obtain these things so that we can enjoy them during our retirement and do not think it's right for the Corps to change the rules after we have gone through a considerable expense. These rules have been in place for a long time and we would like the shoreline management plan to stay as it is.	Existing licensed underground electric service may remain if the service meets the National Electric Code (N.E.C.) and the license remains current. Existing overhead lines have been grandfathered until such time that the private floating facility changes ownership or until substantial damage or degradation of the service occurs. At that time the USACE requires that the overhead electrical service across government property be removed, at the expense of the private floating facility permit holder. Any overhead lines that are identified as an imminent public safety hazard must be removed immediately. All overhead power lines must be maintained to ensure a minimum low sag requirement as described in ER 1110-2-4401, as measured from the lowest sag point to the top of the flood pool. Power poles that are leaning excessively and any sagging power lines due to excessive power pole lean must be removed.
Neighboring Property Owner	I was born in Wagoner 77+ years ago and grew up on Ft Gibson Lake. I am a member of Bluff Creek Club on Long Bay. We are between Anchorage Club & Black Bass Club. I love the lake. I was on the Lake in the 50s when a lot of the development occurred. My dad actually built a number of “cabins” and boat docks during that time. Some of the	Much of the shoreline just north of Sequoyah Marina is very exposed to significant wind and wave action and has drastic changes in elevation and is not optimal for private floating facilities. USACE policy honors past

Affiliation	Comment	USACE Response
	docks are still there today. I found your website to be somewhat difficult for those of us that are tech challenged. However I think I managed to look at most of the shoreline. I also own five lots in Sunrise View Subdivision on the west side of the Lake across from Sequoyah Park and north from Sequoyah Marina. I note that there are no Vegetative Management Lands on the Lake. It does appear that the shore in front of my lots is Protected Shoreline Area. I don't know why that is so designated. I would like that changed to Limited Development Area. There are many areas on the Lake not capable of being developed just because of the elevation of the flood pool. I would suggest a review of all areas capable of being developed and changing said designation. Better for the Lake, State and our Country. I was a State Senator for 16 years and retired USAF Brig General.	commitments to private dock owners but the objective of all management actions carried out by USACE is to achieve a balance between permitted private use and resource protection for general public use. USACE does not have a policy or directive that encourages expansion of private use on public lands and waters. Balancing private use with public use requires that many shorelines be protected from private use.
Dock Owner	My name is [removed PII] and I am the permit holder for dock #[removed PII] located in Holiday Cove on Ft. Gibson lake license #[removed PII]. This is in regards to how [a USACE employee] has been disrespectful in the way he has treated us as customers and the pulling of our overhead electricity to the dock. We just spent several thousand dollars to fix our dock to core standards and have cooperated with the core every step of the way. We were almost finished with the walkway, which was the final thing needing repaired, before the flood in 2019. We were unable to reach the docks for most of the year and when the water finally receded there was some damage to the dock and caused the power pole to begin to lean. Lake Region came out after the water went down, pulled the pole to set a new pole, and was getting everything hooked back up. Right before Lake Region finished, [USACE employee] pulled up and told Lake Region that since they had pulled the existing pole, the new pole was no longer grandfathered in and our dock could no longer have power. We had our dock inspected by an Electrician just before the flood and everything was good to go. We spent several hundred dollars on the inspection and we have been very good customers and worked with the core and it is unfair and unjust that because of a leaning	Existing licensed underground electric service may remain if the service meets the National Electric Code (N.E.C.) and the license remains current. Existing overhead lines have been grandfathered until such time that the private floating facility changes ownership or until substantial damage or degradation of the service occurs. At that time the USACE requires that the overhead electrical service across government property be removed, at the expense of the private floating facility permit holder. Any overhead lines that are identified as an imminent public safety hazard must be removed immediately. All overhead power lines must be maintained to ensure a minimum low sag requirement as described in ER 1110-2-4401, as measured from the lowest sag point to the top of the flood pool. Power poles that are leaning excessively and any sagging power lines due to excessive power pole lean must be removed. Alternatives to conventional electrical power, such as solar power, are encouraged to allow owners of private floating facilities

Affiliation	Comment	USACE Response
	power pole we lose power to our dock. We ask that if there is something that can be changed in the Shoreline Act or if there is something that can be done to help us keep power to our dock we would greatly appreciate it. Please feel free to contact me via email or call my husband, [removed PII].	to have reasonable electrical power on their dock.
	1. When a Ranger is talking to a dock owner, they should have some respect for that owner. The owner should not be threatened. Example: Ranger will condemn their dock. If some of the stuff is a rusty color (and no holes) does not mean it is bad and has to be replaced or condemned. 2. Consider the elderly and disabled that are on a fixed income and allow them extra time to make repairs if needed. 3. If repairs are needed please do not threaten the dock owner that you are going to condemn their dock if it repairable. They should be allotted enough time to repair the damage depending on the situation. 4. Ranger should not be able to condemn a dock if it is at least 50% damaged. Dock owner should be able to make repairs. 5. We as dock owners have to have a licensed engineer to inspect our docks if there is a structural problem. So I don't think that a Ranger would have the authority to condemn a dock because he/she is not a licensed engineer. 6. I think that a licensed engineer will need to inspect the dock to make sure that it is structurally sound before it is contemned by a Ranger. 7. If you a grandfathered in you should stay grandfathered in. I do not think that a Ranger should be able to tell you that your dock had some problems and because of that you are no longer grandfathered in. 8. A little bit of leeway would be much appreciated instead of going strictly by the book on minor things. 9. There has been several dock owners that has stated that a Ranger stated to them that they are trying to get rid of all the docks, especially the ones that are grandfathered in. This is very upsetting to the dock owners and a lot of the dock owners are elderly or disabled which is not good for their health.	Noted. This response is intended to respond to approximately 10 comments submitted by this individual. Only serious infractions described in Section 4.25 of the SMP can result in permit revocation and removal of a dock. In general, docks may not be removed unless they are determined by USACE to be unusable and unsafe; a threat to life or property; or the permittee is in substantial noncompliance with the permit. If a dock is in substantial noncompliance, the permittee is allowed 30 days to make repairs. There is no intent or plan to deliberately "get rid of all docks". To the contrary, USACE is committed to honoring past written commitments to dock owners. §1134 (d) of P.L.99-662 is very clear that all docks lawfully installed under a valid shoreline use permit as of November 17, 1986 have grandfather privileges. USACE will seek removal of these docks only if they are in substantial noncompliance. Ownership of a private dock located on public lands and waters is a substantial privilege. Owners of these facilities must be prepared to care for the facility and make needed repairs in a timely fashion to keep the facility safe and usable.

Affiliation	Comment	USACE Response
	10. The Corp of Engineers wants the dock owners to keep their dock and surrounding area clean, nice and up to standard. If the Corp wants this from the dock owner's then I think the Corp needs to step up and do their part to keep the area clean and safe for wildlife and people: a. At some of the locations there are a lot of trees washed up on shore, along with a lot of debris. b. There are huge deep holes going to the docks. c. There are trees that have fallen and are leaning up against other trees which could be very dangerous. d. There are dead trees that could fall at any time. e. There are also downed power poles. f. The Corp could put down some gravel to help the roads when it has been under water for so long. g. The dock owners have offered to help clean up, but the Ranger stated that we could not because it affects wildlife. h. There are trees in the water by the docks and walk ways that could possible tear the dock's up.	
Dock Owner	1. Property owners whose property abuts the corps of engineers land around the shoreline are beginning to see erosion starting due to the loss of vegetation due to recent high lake levels. Would like to see programs, guidelines, etc. for the restoration of shoreline and erosion control.	Concur. The SMP addresses shoreline erosion in Section 3.5. Funding for shoreline erosion control is limited and generally used to protect public recreation areas. Landowners may be issued cost-free permits to conduct shoreline erosion activities where warranted.
Dock Owner	2. Legacy dock owners - the recent high lake levels occasionally cause damage or structural problems to the dock substructure and/or anchoring. Current guidelines appear to be very restrictive on dock maintenance in this area. For those owners that are attempting to improve, repair, and keep their docks safe for use, would like to see some updated rules in this area. Maybe by encouraging better maintenance, we can reduce the number of derelict docks on the lake?	Concur. The SMP includes maintenance standards for all docks, whether grandfathered or not. We assume that by "Legacy Dock", you mean a dock with grandfather privileges. The SMP clearly states that grandfathered docks can remain as originally constructed with the exception of certain critical safety concerns to include a requirement for handrails, the need to meet current electrical standards and the requirement to replace unserviceable flotation with flotation that meets current

Affiliation	Comment	USACE Response
		standards. Aside from these required upgrades, grandfathered docks must simply meet maintenance standards specified in the SMP. Through periodic inspections of all docks, USACE strives to prevent "derelict docks".
Resident	I suggest areas that are accessible to public (in addition to current marina operators) be opened up for commercial use. Allow vendors to operate in approved areas and maintain said areas under the guidelines of the shore use management team. All current camping areas-and existing beach areas could be managed by outside sources.	The Shoreline Management Plan does not address how "vendors" or "outside sources" may manage camping areas or beach areas. So our response provided here has no bearing on the revision of the SMP. However, in the interest of providing information, the means by which recreation areas are managed is a matter of national recreation development policy for outgranted (leased) areas. Current national policy will allow governmental entities as well as commercial entities to manage park areas under a park and recreation lease agreement, and it is possible for commercial marina concessions to expand their operations to take adjacent park areas into their respective lease area. Leasing entities also sublease certain operations to others who provide recreation services within the respective lease area. Current national policy restricts recreational development to that dependent on a lake's natural resources or other resources. Recreational development is generally water-dependent and reflects traditional camping, swimming, fishing boating, hiking, and picnicking activities.

Table H.2 Comments and Responses from Virtual Public Workshop Draft Release

Affiliation	Comment	USACE Response
U.S. Department of Energy	Thank you for the opportunity to comment on the draft 2021 Fort Gibson Lake Shoreline Management Plan (draft SMP) and associated Environmental Assessment (draft EA). As the Federal agency responsible for scheduling and marketing the hydroelectric power and energy from the Fort Gibson project, Southwestern Power Administration (Southwestern) has comments regarding the draft SMP and draft EA, presented as follows. First and foremost, any updates made in the draft SMP should not negatively impact hydroelectric power operations at the Fort Gibson project. Hydroelectric power is one of the original Congressionally authorized purposes of the project, and Southwestern applies the power sales revenues collected each year to repaying the U.S. taxpayers' original investment and ongoing reinvestment, plus interest, as well as annual operation and maintenance costs for the Fort Gibson hydroelectric power plant and for an allotted portion of the joint-use infrastructure and project facilities. Therefore, other project uses should not receive additional benefits to the detriment of hydroelectric power. Note the annual value of $4.6 million provided for hydropower on page 24 of the draft EA is actually estimated annual revenue. The estimated value, or benefits to the Federal hydropower customers, is an estimated $10.9 million annually. Please update this value in the draft EA. It is important to note that the SMP is not intended to address water level management at Fort Gibson Lake. Southwestern suggests explicitly stating within the draft SMP that lake levels will fluctuate depending on a variety of factors, including rainfall (or lack thereof), flood control operations, water supply withdrawals, and power demand. Lake users should also be made aware of this information when applying for permits. Prior to the permitting and construction of additional facilities in or around Fort Gibson Lake, developers should continue to be informed of these routine and sometimes significant fluctuations.	To clarify that the SMP does not address hydroelectric power, water level, and other related topics, the following text was added to Section 1: "In addition, the SMP does not address the specifics of water quality, water level management, water level changes due to flood or drought, hydroelectric power management, or the operation and maintenance of project operations facilities." In addition, the text in the EA was changed to reflect the revenue and value provided.

Affiliation	Comment	USACE Response
	We appreciate the opportunity to provide feedback on the draft SMP and draft EA. If you have any questions or comments, please contact Brad Vickers at brad.vickers@swpa.gov.	
Oklahoma Department of Environmental Quality	In response to your request, we have completed a general environmental impact review for the project listed below. Project Email dated May 21, 2021 – Fort Gibson Lake Shoreline Management Plan Draft Release, Cherokee, Mayes, and Wagoner Counties, OK. No adverse environmental impact under DEQ jurisdiction are anticipated. Thank you for the opportunity to provide our comments. If you have any questions or need clarification, please contact me.	Noted.
General Public	Mowing to get to boat dock. Mowing & leaf blowing below cabin for fire purposes. Mowing & entrance to boat dock	These activities are allowed with a vegetation modification permit as described in Section 5 of the SMP.
General Public	The biggest issue I run into after the water has been high, there is a lot of debris floating, so a clean up of shore would be greatly appreciated. To some degree it is a safety issue when boating.	USACE appreciates the concern, however floating or shoreline debris are not topics covered in the SMP. USACE does not have a lake-wide policy covering shoreline or debris removal, and such debris is part of the risk of lake-based recreation. Debris cleanup does happen near public recreation areas and boat ramps. On a case-by-case basis, neighboring landowners can be given permission to perform cleanup of shoreline adjacent to their property. Some shoreline cleanup is performed by organized volunteer organizations. Individuals or groups wanting additional information can contact the Fort Gibson Lake Office.
General Public	I need to know what the future plans are for existing tram docks/swim platforms. I live on [removed address] and have an existing one.	Stairways are covered in Section 3.3 of the SMP. Tramways are no longer permitted. Existing docks may remain as long as they maintain the standards defined in the SMP.
General Public	Please provide color/clarity regarding the following statement appearing on page 81 of presentation: "ownership of a private dock located on public lands and waters is a substantial privilege." Is this the belief and understanding of the rules & regulations by the USACE that its interface with the public	ER 1130-2-406 states that any exclusive use for individuals or groups that preclude the use of the land or water by the general public is a “special privilege” and the SMP used the term “substantial” because it also offers great benefit

Affiliation	Comment	USACE Response
	is superior to that of an individual and is somehow demeaning to a citizen by interpretation? Is "substantial privilege" defined, appears in rules & regulations or a belief embraced by the USACE or a statement rendered by this particular author for this specific response? Thank you in advance for any of my misinterpretations you can dispel.	to dock owners that is not allowed or available to everyone. Only 8 of the 38 projects in the Tulsa District allow boat docks. Any lakes built after 1974 do not allow any boat docks, so allowing any boat docks is a privilege.

Appendix I: Summary of Shoreline Management Changes

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action(s)
PL 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.	PL 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.	PL 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.
Shoreline Allocations Shoreline Allocations (in miles) in the 1996 SMP consisted of the following: • Prohibited Access Areas: 3.31 • Protected Shoreline Areas: 177.54 • Limited Development Areas: 15.83 • Public Recreation Areas: 60.94 The 1996 plan aligned shoreline allocation with the land classifications included in the 1978 version of Fort Gibson Lake Master Plan. The 1978 Master Plan and related supplements were revised in 2016.	Shoreline Allocations Shoreline Allocations (in miles) in the 2021 SMP revision consist of the following: • Prohibited Access Areas: 3.45 • Protected Shoreline Areas: 190.37 • Limited Development Areas: 11.22 • Public Recreation Areas: 52.59 Completion of the 2016 revision of the Master Plan resulted in numerous changes to land classification. Many of the 2016 changes in land classification resulted in shoreline allocation changes from Public Recreation Area to Protected Shoreline Areas in the 2021 SMP.	Shoreline Allocations The majority of the shoreline allocation changes were to align with updated Master Plan land use classification, which were based on historic land uses. Shoreline miles for each of the four shoreline allocations were measured using Geographic Information System (GIS) technology at approximately elevation 554.0 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 2016 Master Plan. Examples of shorelines not measured are 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

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action(s)
	Prohibited Access Areas increased by 0.14 miles. Protected Shoreline Areas increased by 12.83 miles. Limited Development Areas decreased by 4.61 miles, and Public Recreation Areas decreased by 8.35 miles.	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.
<u>Public Recreation Areas</u> The 1996 SMP states "Facilities (in quasi-public and private club sites) will be designated for restricted limited development in the Shoreline Management Plan".	<u>Public Recreation Areas</u> Those shoreline use permits in good standing and currently located in quasi-public and private club site recreational areas will be exempt from current standards but must meet the conditions stated in Section 4.9 Grandfathered Facilities and Pre-Existing Facilities.	The term "restricted limited development" in the 1996 SMP was discontinued to align with the 2016 Master Plan. The 2021 SMP clarifies how private floating facilities (PFF) will be managed in lessee-operated areas. Although lessee-operated areas are classified in the 2016 MP as High Density Recreation Areas, changes were needed in the 2021 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
<u>Shoreline Use Permits</u> 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.	<u>Shoreline Use Permits</u> Shoreline use applicants must show proof of legal access to fee-owned government land.	

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action(s)
		property to access fee-owned government land.
<u>Private Floating Facilities</u> Shoreline Use Permits are required for all private floating facilities, excluding registered vessels. Minimum Design standards specifications outlines requirements for the private floating facility and walkways. No restriction of number of PFF's a household or individual may own.	<u>Private Floating Facilities</u> PFF's include privately-owned boat docks, platforms, breakwaters, and buoys whether single owner or multi-owner. Minimum design standards set minimum and maximum size requirements on slip length and width for the PFF and walkways. All PFF construction must occur off Government property, in a commercial marina, or on-site on the water at the approved place of the permit.	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. Construction requirement added for all construction of PFF's to prevent damage to government owned shoreline, prevent storage of construction supplies equipment 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 Floating Facilities</u> Anchorage methods must be included in plans for PFFs and are to be included with applications for shoreline use permits.	<u>Anchorage of Private Floating Facilities</u> Design of anchorage systems will be included in the engineered plans for each separate structure. The plans must be developed in accordance with the site conditions of the location, taking into consideration the water depth, exposure to fetch, wind loads, and other factors affecting private floating facility installation.	This ensures safe and reliable PFF anchorage and also 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. Exceptions for pre-existing facilities are granted in order to honor previous commitments as long as the pre-existing facility maintains requirements in 4.9.2 to ensure safety while minimizing the impact on natural resources.
<u>Walkways</u>	<u>Walkways</u>	

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action(s)
No walkway requirements were included in the 1996 SMP.	Walkways must be included in the construction plans approved by an engineer and must meet new size, material, anchoring, handrail, and elevation requirements. Renovation or modification of existing walkways must meet current standards. If locks are used to secure the entrance to the PFF, USACE must be provided with the combination.	New walkway requirements added to ensure public safety, and to provide clear and consistent construction guidelines. Guidelines also allow USACE staff to inspect facilities as needed.
<u>Stairways, Tramways, and or Steps</u> Structures may be permitted in LDAs and must meet construction, material, color, and other requirements.	<u>Stairways, Tramways, and or Steps</u> Tramways are no longer permitted. Added district stairway policy: Stairways will not be authorized for new private floating facilities but may be authorized for existing private floating facilities on a limited basis where the Lake Manager has verified no safe, viable alternative exists for accessing the permitted private floating facility. Stairs must meet new construction, material, color, and other requirements.	To achieve balance between permitted private uses and resource protection for general public use. The District Stairway Policy allows for stairs where no safe, viable alternative exists, but ensures stairs are constructed and maintained to be safe for users while minimizing the impact on natural resources. Tramways have been discontinued due to the low demand and to limit impacts on natural resources.
<u>Vegetation</u> Mowing permits may be issued for a maximum 30-foot strip of Government property adjacent to private property in Limited Development Areas and can include mowing, brush-hogging, or tree trimming including a 6-foot wide path to the lake, and may be approved but will be limited to firebreaks along protected areas.	<u>Vegetation</u> Permits along Protected areas will only be approved if the Lake Manager determines environmental and physical characteristics will not be impacted. 30-foot firebreaks may still be approved in LDAs, and Protected areas. However, additional restrictions may be placed on permits when significant wildlife habitat or scenic/aesthetic areas occur, and a vegetation modification	This change allows private property owners to mow firebreaks that could impact the safety of their own property, but under the discretion of the Lake Manager must not adversely affect the natural resources of the lake or government property. Added vegetative modification moratorium period to allow vegetation

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action(s)
	permit may negatively affect those features. Existing vegetation modification permits may be exempt from new standards until the permit is modified, expired, or revoked. Added vegetative modification moratorium period on areas where unauthorized modification occurs	and habitat to recover from damage.
<u>Grandfathered</u> The Grandfather Rights Clause applied to every privately owned facility presently on the lake except those in limited development that had less than 50 percent suitable shoreline available.	<u>Grandfathered</u> The term grandfathered is used to designate a floating facilities that was in place on or before November 17, 1986 and may not meet current standards or may not be located in an LDA. Grandfathered facilities can remain if they meet the conditions in 4.9.1. 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.	Some structures and activities that were licensed or permitted previously will be grandfathered according to public law to honor previous commitments. The new description clearly defines grandfathered facilities and reflects the public laws and conditions which must be met to prevent removal.
<u>Pre-Existing Facilities</u> No pre-existing facility descriptions or requirements were included in the 1996 SMP.	<u>Pre-Existing Facilities</u> Some pre-existing facilities will be exempted from current requirements by PL 97-140. Some structures will be exempt from new guidelines if they are in limited development areas that do not meet current general requirements and minimum design standards. The only exceptions to this policy are that replacement flotation	Exceptions for pre-existing facilities are granted in order to honor previous commitments as long as the pre-existing facility maintains requirements in 4.9.2 to ensure safety while minimizing the impact on natural resources.

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action(s)
	must meet all current requirements, handrails must be installed as required, and electrical systems must meet current National Electrical Code standards. Once these structures have been damaged to the point where the substructure is not floating or usable or where the substructure required modification or replacement, the private floating facility must be rebuilt in accordance with the general requirements and minimum design standards for new private floating facilities.	
Electrical Power and Lights Electric service could be added to docks by licensed electricians, but lines must be buried except where the terrain will not allow it or there may be excessive environmental damage. All new electric lines will require a real estate instrument. Existing electrical licenses would be allowed to remain as long as they are maintained in a safe working condition and meet USACE standards and all local and state codes and the required National Electric Code.	Electrical Power and Lights No new underground utility license to private floating facilities will be issued. Overhead electric service to private floating facilities must be removed upon change of private floating facility ownership or upon identification as a safety hazard. In accordance with the nationwide USACE Non-Recreation 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.	This requirement brings the SMP within compliance of the nationwide USACE Non-Recreation Outgrant Policy dated March 30, 3009, ER 1130-2-550 Chapter 17, and needed for public safety during elevated lake levels.
Flotation None	Flotation Flotation shall be of materials intended for marine use that will not become waterlogged, are resistant to damage by animals, and will not sink or	Needed to reduce environmental impacts due to deteriorating unencapsulated beaded foam.

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action(s)
	contaminate the water if punctured. Approved flotation materials include extruded polystyrene, polyethylene, encapsulated expanded polystyrene, or encapsulated polyurethane and must meet other durability requirements. Private floating facilities with existing flotation that does not meet the current standards will be allowed to remain until a USACE inspector deems the flotation is no longer serviceable. If less than 40 percent of a section is above the waterline, it is no longer considered serviceable. Unserviceable flotation shall be replaced with an approved flotation upon written notification from the USACE	
<u>PFF Sides</u> Plexi-glass sides were permitted on PFF.	<u>PFF Sides</u> Plexiglass or other clear, solid materials are no longer authorized for PFF (Section 4.21).	Clear sides are often not maintained, can become cloudy, or broken and impede the ability to inspect facilities and to prevent human habitation on PFF.
<u>Lighting</u> None	<u>Lighting</u> Lighting should remain off when not in use and should be shielded to prevent light emissions above the fixture. Permittees are also encouraged to abide by the Best Management Practices for what is referred to as the Dark Skies Initiative (Section 4.18).	These changes are consistent with nationwide lighting guidelines meant to ensure public safety and to minimize the environmental effects of light pollution.
<u>Real Estate License</u> Required (1) length of the license, (2) description, (3) maps, (4) archeological	<u>Real Estate Instruments</u> Provided more detailed list of real estate instruments for a variety of activities, but	Includes a variety of real estate instruments and language in order to comply

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action(s)
review, and (5) licensed electrician certification as well as a required license fee.	removed requirements from the SMP, as each instrument could have specific requirements based on the type of instrument, activity, location, and many other factors. 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.	with USACE regulation and outgrant policies.

Appendix J: ER 1130-2-406 – Shoreline Management Regulation

CECW-ON Engineer Regulation 1130-2-406	Department of the Army U.S. Army Corps of Engineers Washington, DC 20314-1000	ER 1130-2-406 31 October1990/ 28 May 1999
	Project Operation SHORELINE MANAGEMENT AT CIVIL WORKS PROJECTS	
	Distribution Restriction Statement Approved for public release; distribution is unlimited.	

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
Washington, D.C. 203 14-1000

ER 1130-2-406
Change 2

CECW-ON

Regulation
No. 1130-2-406

28 May 1999

Project Operation
SHORELINE MANAGEMENT AT CIVIL WORKS PROJECTS

1. This change 2 to ER 1130-2-406, 3 1 October 1990, and change 1, 14 September 1992, revises the guidelines for special conditions on permits, Guideline 2.c.(9) of Appendix A and corrects dock and mooring buoy flotation standards, Condition 14 of Appendix C.

2. Substitute pages indicated below:

Appendix	Remove pages	Insert pages
A	A-3, A-4 and A-5	A-3 and A-4
C	C-3 and C-4	C-3 and C-4

3. File this change sheet in front of the publication for reference purposes.

FOR THE COMMANDER:

RUSSELL L. FUHRMAN
Major General, USA
Chief of Staff

Regulation
No. 1130-2-406

14 September 1992

Project Operation
SHORELINE MANAGEMENT AT CIVIL WORKS PROJECTS

1. This change 1 to ER 1130-2-406, 31 October 1990, corrects dock and mooring buoy floatation standards, Condition 14 of Appendix C.

2. Substitute pages indicated below:

Appendix	Remove pages	Insert pages
C	C-3 and C-4	C-3 and C-4

3. File this change sheet in front of the publication for reference purposes.

FOR THE COMMANDER:

MILTON HUNTER
Colonel, Corps of Engineers
Chief of Staff

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
CECW-ON Washington, D. C. 20314-1000

Regulation
No. 1130-2-406 31 October 1990

Project Operation
SHORELINE MANAGEMENT AT CIVIL WORKS PROJECTS

1. Purpose. The purpose of this regulation is to provide policy and guidance on management of shorelines of Civil Works projects where 36 CFR Part 327 is applicable.

2. Applicability. This regulation is applicable to HQUSACE/OCE elements, major subordinate commands, districts, laboratories, and all field operating activities (FOA) with Civil Works responsibilities except when such application would result in an impingement upon existing Indian rights.

3. References.

a. Section 4, 1944 Flood Control Act, as amended (16 USC 460d).

b. The Rivers and Harbors Act of 1894, as amended and supplemented (33 USC 1).

c. Section 10, River and Harbor Act of 1899 (33 USC 403).

d. National Historic Preservation Act of 1966 (P.L. 89-665; 80 Stat. 915) as amended (16 U.S.C. 470 et seq.).

e. The National Environmental Policy Act of 1969 (42 U.S.C. 4321, et seq.).

f. The Clean Water Act (33 U.S.C. 1344, et seq.).

g. The Water Resources Development Act of 1986 (P.L. 99-662).

h. Title 36, Chapter III, Part 327, Code of Federal Regulations, "Rules and Regulations Governing Public Use of Water Resource Development Projects Administered by the Chief of Engineers."

i. Executive Order 12088 (13 Oct 78).

j. 33 CFR 320-330, "Regulatory Programs of the Corps of Engineers."

k. ER 1130-2-400, "Management of Natural Resources and Outdoor Recreation at Civil Works Water Resource Projects."

This Regulation Supersedes ER 1130-2-406 dated 13 Dec 74

1. EM 385-1-1, "Safety and Health Requirements Manual."

4. Policy.

a. It is the policy of the Chief of Engineers to protect and manage shorelines of all Civil Works water resource development projects under Corps jurisdiction in a manner which will promote the safe and healthful use of these shorelines by the public while maintaining environmental safeguards to ensure a quality resource for use by the public. The objectives of all management actions will be to achieve a balance between permitted private uses and resource protection for general public use. Public pedestrian access to and exit from these shorelines shall be preserved. For projects or portions of projects where Federal real estate interest is limited to easement title only, management actions will be appropriate within the limits of the estate acquired.

b. Private shoreline uses may be authorized in designated areas consistent with approved use allocations specified in Shoreline Management Plans. Except to honor written commitments made prior to publication of this regulation, private shoreline uses are not allowed on water resource projects where construction was initiated after December 13, 1974, or on water resource projects where no private shoreline uses existed as of that date. Any existing permitted facilities on these projects will be grandfathered until the facilities fail to meet the criteria set forth in paragraph 8.

c. A Shoreline Management Plan, as described in paragraph 5, will be prepared for each Corps project where private shoreline use is allowed. This plan will honor past written commitments. The plan will be reviewed at least once every five years and revised as necessary. Shoreline uses that do not interfere with authorized project purposes, public safety concerns, violate local norms, or result in significant environmental affects should be allowed unless the public participation process identifies problems in these areas. If sufficient demand exists, consideration should be given to revising the shoreline allocations (e.g., increases/decreases). Maximum public participation will be encouraged as set forth in paragraph 5f. Except to honor written commitments made prior to publication of this regulation, shoreline management plans are not required for those projects where construction was initiated after December 13, 1974, or on projects not having private shoreline use as of that date. In that case, a statement of policy will be developed by the district commander to present the shoreline management policy. This policy statement will be subject to the approval of

the division commander. For projects where two or more agencies have jurisdiction, the plan will be cooperatively prepared with the Corps as coordinator.

d. Where commercial or other public launching and/or moorage facilities are not available within a reasonable distance, group owned mooring facilities may be allowed in Limited Development Areas to limit the proliferation of individual facilities. Generally only one permit will be necessary for a group owned mooring facility with that entity, if incorporated, or with one person from the organization designated as the permittee and responsible for all moorage spaces within the facility. No charge may be made for use of any permitted facility by others nor shall any commercial activity be engaged in thereon.

e. The issuance of a private shoreline use permit does not convey any real estate or personal property rights or exclusive use rights to the permit holder. The public's right of access and use of the permit area must be maintained and preserved. Owners of permitted facilities may take necessary precautions to protect their property from theft, vandalism or trespass, but may in no way preclude the public right of pedestrian or vessel access to the water surface or public land adjacent to the facility.

f. Shoreline Use Permits will only be issued to individuals or groups with legal right of access to public lands.

5. Shoreline Management Plan.

a. General. The policies outlined in paragraph 4 will be implemented through preparation of Shoreline Management Plans, where private shoreline use is allowed.

b. Preparation. A Shoreline Management Plan is prepared as part of the Operational Management Plan. A moratorium on accepting applications for new permits may be placed in effect from the time an announcement of creation of a plan or formal revision of a plan is made until the action is completed.

c. Approval. Approval of Shoreline Management Plans rests with division commanders. After approval, one copy of each project Shoreline Management Plan will be forwarded to HQUSACE (CECW-ON) WASH DC 20314-1000. Copies of the approved plan will also be made available to the public.

d. Scope and Format. The Shoreline Management Plan will consist of a map showing the shoreline allocated to the uses listed in paragraph 5.e., related rules and regulations, a

discussion of what areas are open or closed to specific activities and facilities, how to apply for permits and other information pertinent to the Corps management of the shoreline. The plan will be prepared in sufficient detail to ensure that it is clear to the public what uses are and are not allowed on the shoreline of the project and why. A process will be developed and presented in the Shoreline Management Plan that prescribes a procedure for review of activities requested but not specifically addressed by the Shoreline Management Plan.

e. Shoreline Allocation. The entire shoreline will be allocated within the classifications below and delineated on a map. Any action, within the context of this regulation, which gives a special privilege to an individual or group of individuals on land or water at a Corps project, that precludes use of those lands and waters by the general public, is considered to be private shoreline use. Shoreline allocations cover that land and/or water extending from the edge of the water and waterward with the exception of allocations for the purpose of vegetation modification which extends landward to the project boundary. These allocations should compliment, but certainly not contradict, the land classifications in the project master plan. A map of sufficient size and scale to clearly display the shoreline allocations will be conspicuously displayed or readily available for viewing in the project administration office and will serve as the authoritative reference. Reduced or smaller scale maps may be developed for public dissemination but the information contained on these must be identical to that contained on the display map in the project administration office. No changes will be made to these maps except through the formal update process. District commanders may add specific constraints and identify areas having unique characteristics during the plan preparation, review, or updating process in addition to the allocation classifications described below.

(1) Limited Development Areas. Limited Development Areas are those areas in which private facilities and/or activities may be allowed consistent with paragraph 8 and Appendix A. Modification of vegetation by individuals may be allowed only following the issuance of a permit in accordance with Appendix A. Potential low and high water conditions and underwater topography should be carefully evaluated before shoreline is allocated as Limited Development Area.

(2) Public Recreation Areas. Public Recreation Areas are those areas designated for commercial concessionaire facilities, Federal, state or other similar public use. No private shoreline use facilities and/or activities will be permitted within or near designated or developed public recreation areas. The term "near"

depends on the terrain, road system, and other local conditions, so actual distances must be established on a case by case basis in each project Shoreline Management Plan. No modification of land forms or vegetation by private individuals or groups of individuals is permitted in public recreation areas.

(3) Protected Shoreline Areas. Protected Shoreline Areas are those areas designated to maintain or restore aesthetic, fish and wildlife, cultural, or other environmental values. Shoreline may also be so designated to prevent development in areas that are subject to excessive siltation, erosion, rapid dewatering, or exposure to high wind, wave, or current action and/or in areas in which development would interfere with navigation. No Shoreline Use Permits for floating or fixed recreation facilities will be allowed in protected areas. Some modification of vegetation 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 resource 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 affect on water quality will also be considered.

(4) Prohibited Access Areas. Prohibited Access Areas are those in which public access is not allowed or is restricted for health, safety or security reasons. These could include hazardous areas near dams, spillways, hydro-electric power stations, work areas, water intake structures, etc. No shoreline use permits will be issued in Prohibited Access Areas.

f. Public Participation. District commanders will ensure public participation to the maximum practicable extent in Shoreline Management Plan formulation, preparation and subsequent revisions. This may be accomplished by public meetings, group workshops, open houses or other public involvement techniques. When master plan updates and preparation of the Shoreline Management Plans are concurrent, public participation may be combined and should consider all aspects of both plans, including shoreline allocation classifications. Public participation will begin during the initial formulation stage and must be broad-based to cover all aspects of public interest. The key to successful implementation is an early and continual public relations program. Projects with significant numbers of permits should consider developing computerized programs to facilitate exchange of information with permittees and to improve program efficiency. Special care will be taken to advise citizen and conservation organizations; Federal, state and local natural resource management agencies; Indian Tribes; the media; commercial concessionaires; congressional liaisons; adjacent

landowners and other concerned entities during the formulation of Shoreline Management Plans and subsequent revisions. Notices shall be published prior to public meetings to assure maximum public awareness. Public notices shall be issued by the district commander allowing for a minimum of 30 days for receipt of written public comment in regard to the proposed Shoreline Management Plan or any major revision thereto.

g. Periodic Review. Shoreline Management Plans will be reviewed periodically, but no less often than every five years, by the district commander to determine the need for update. If sufficient controversy or demand exists, consideration should be given, consistent with other factors, to a process of reevaluation of the shoreline allocations and the plan. When changes to the Shoreline Management Plan are needed, the plan will be formally updated through the public participation process. Cummulative environmental impacts of permit actions and the possibility of preparing or revising project NEPA documentation will be considered. District commanders may make minor revisions to the Shoreline Management Plan when the revisions are consistent with policy and funds for a complete plan update are not available. The amount and type of public involvement needed for such revision is at the discretion of the district commander.

6. Instruments for Shoreline Use. Instruments used to authorize private shoreline use facilities, activities or development are as follows:

a. Shoreline Use Permits.

(1) Shoreline Use Permits are issued and enforced in accordance with provisions of 36 CFR Part 327.19.

(2) Shoreline Use Permits are required for private structures/activities of any kind (except boats) in waters of Civil Works projects whether or not such waters are deemed navigable and where such waters are under the primary jurisdiction of the Secretary of the Army and under the management of the Corps of Engineers.

(3) Shoreline Use Permits are required for non-floating structures on waters deemed commercially non-navigable, when such waters are under management of the Corps of Engineers.

(4) Shoreline Use Permits are also required for land vegetation modification activities which do not involve disruption to land form.

(5) Permits should be issued for a term of five years to reduce administration costs. One year permits should be issued only when the location or nature of the activity requires annual reissuance.

(6) Shoreline Use Permits for erosion control may be issued for the life or period of continual ownership of the structure by the permittee and his/her legal spouse.

b. Department of the Army Permits. Dredging, construction of fixed structures, including fills and combination fixed-floating structures and the discharge of dredged or fill material in waters of the United States will be evaluated under authority of Section 10, River and Harbor Act of 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act (33 U.S.C. 1344). Permits will be issued where appropriate.

c. Real Estate Instruments. Commercial development activities and activities which involve grading, cuts, fills, or other changes in land form, or establishment of appropriate land-based support facilities required for private floating facilities, will continue to be covered by a lease, license or other legal grant issued through the appropriate real estate element. Shoreline Management Plans should identify the types of activities that require real estate instruments and indicate the general process for obtaining same. Shoreline Use Permits are not required for facilities or activities covered by a real estate instrument.

7. Transfer of Permits. Shoreline Use Permits are non-transferable. They become null and void upon sale or transfer of the permitted facility or the death of the permittee and his/her legal spouse.

8. Existing Facilities Now Under Permit. Implementation of a Shoreline Management Plan shall consider existing permitted facilities and prior written Corps commitments implicit in their issuance. Facilities or activities permitted under special provisions should be identified in a way that will set them apart from other facilities or activities.

a. Section 6 of Public Law 97-140 provides that no lawfully installed dock or appurtenant structures shall be required to be removed prior to December 31, 1989, from any Federal water resources reservoir or lake project administered by the Secretary of the Army, acting through the Chief of Engineers, on which it was located on December 29, 1981, if such property is maintained in usable condition, and does not occasion a threat to life or property.

b. In accordance with Section 1134(d) of Public Law 99-662, any houseboat, boathouse, floating cabin or lawfully installed dock or appurtenant structures in place under a valid shoreline use permit as of November 17, 1986, cannot be forced to be removed from any Federal water resources project or lake administered by the Secretary of the Army on or after December 31, 1989, if it meets the three conditions below except where necessary for immediate use for public purposes or higher public use or for a navigation or flood control project:

(1) such property is maintained in a usable and safe condition;

(2) such property does not occasion a threat to life or property;

(3) and, the holder of the permit is in substantial compliance with the existing permit.

c. All such floating facilities and appurtenances will be formally recognized in an appropriate Shoreline Management Plan. New permits for these permitted 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 terms of the permit as to notice, time, and appeal.

9. Facility Maintenance. Permitted facilities must be operated, used and maintained by the permittee in a safe, healthful condition at all times. If determined to be unsafe, the resource manager will establish, together with the permittee a schedule, based on the seriousness of the safety deficiency, for correcting the deficiency or having it removed, at the permittee's expense. The applicable safety and health prescriptions in EM 385-1-1 should be used as a guide.

10. Density of Development. The density of private floating recreation facilities will be established in the Shoreline Management Plan for all portions of Limited Development Areas consistent with ecological and aesthetic characteristics and prior written commitments. The facility density in Limited Development Areas should, if feasible, be determined prior to the development of adjacent private property. The density of facilities will not be more than 50 per cent of the Limited Development Area in which they are located. Density will be measured by determining the linear feet of shoreline as compared to the width of facilities plus associated moorage arrangements which restrict the full unobstructed use of that portion of the shoreline. When a Limited Development Area or a portion of a

Limited Development Area reaches maximum density, notice should be given to the public and facility owners in that area that no additional facilities will be allowed. In all cases, sufficient open area will be maintained for safe maneuvering of watercraft. Docks should not extend out from the shore more than one-third of the width of a cove at normal recreation or multipurpose pool. 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.

11. Permit Fees. Fees associated with the Shoreline Use Permits shall be paid prior to issuing the permit in accordance with the provisions of Section 4 of the 1944 Flood Control Act. The fee schedule will be published separately.

FOR THE COMMANDER:

ALBERT J. GENETTI, JR.
Colonel, Corps of Engineers
Chief of Staff

4 APPENDICES
APP A - Guidelines for Granting Shoreline Use Permits
APP B - Application for Shoreline Use Permit
APP C - Shoreline Use Permit Conditions
APP D - Permit (Sample)

APPENDIX A

GUIDELINES FOR GRANTING SHORELINE USE PERMITS

1. General.

a. Decisions regarding permits for private floating recreation facilities will consider the operating objectives and physical characteristics of each project. In developing Shoreline Management Plans, district commanders will give consideration to the effects of added private boat storage facilities on commercial concessions for that purpose. Consistent with established policies, new commercial concessions may be alternatives to additional limited development shoreline.

b. Permits for individually or group owned shoreline use facilities may be granted only in Limited Development Areas when the sites are not near commercial marine services and such use will not despoil the shoreline nor inhibit public use or enjoyment thereof. The installation and use of such facilities will not be in conflict with the preservation of the natural characteristics of the shoreline nor will they result in significant environmental damage. Charges will be made for Shoreline Use Permits in accordance with the separately published fee schedule.

c. Permits may be granted within Limited Development Areas for ski jumps, floats, boat moorage facilities, duck blinds, and other private floating recreation facilities when they will not create a safety hazard and inhibit public use or enjoyment of project waters or shoreline. A Corps permit is not required for temporary ice fishing shelters or duck blinds when they are regulated by a state program. When the facility or activity is authorized by a shoreline use permit, a separate real estate instrument is generally not required.

d. Group owned boat mooring facilities may be permitted in Limited Development Areas where practicable (e.g., where physically feasible in terms of access, water depths, wind protection, etc.).

2. Applications for Shoreline Use Permits.

a. Applications for private Shoreline Use Permits will be reviewed with full consideration of the policies set forth in this and referenced regulations, and the Shoreline Management Plan. Fees associated with the Shoreline Use Permit shall be

paid prior to issuing the permit. Plans and specifications of the proposed facility shall be submitted and approved prior to the start of construction. Submissions should include engineering details, structural design, anchorage method, andconstruction materials; the type, size, location and ownership of the facility; expected duration of use; and an indication of willingness to abide by the applicable regulations and terms and conditions of the permit. Permit applications also shall identify and locate any land-based support facilities and any specific safety considerations.

b. Permits will be issued by the district commander or his/her authorized representative on ENG Form 4264-R (Application for Shoreline Use Permit) (Appendix B). Computer generated forms may be substituted for ENG Form 4264-R provided all information is included. The computer generated form will be designated, "ENG Form 4264-R-E, Oct 87 (Electronic generation approved by USACE, Oct 87)".

c. The following are guides to issuance of Shoreline Use Permits:

(1) Use of boat mooring facilities, including piers and boat (shelters) houses, will be limited to vessel or watercraft mooring and storage of gear essential to vessel or watercraft operation.

(2) Private floating recreation facilities, including boat mooring facilities shall not be constructed or used for human habitation or in a manner which gives the appearance of converting Federal public property on which the facility is located to private, exclusive use. New docks with enclosed sides (i.e. boathouses) are prohibited.

(3) No private floating facility will exceed the minimum size required to moor the owner's boat or boats plus the minimum size required for an enclosed storage locker for oars, life preservers and other items essential to watercraft operation. Specific size limitations may be established in the project Shoreline Management Plan.

(4) All private floating recreation facilities including boat mooring facilities will be constructed in accordance with plans and specifications, approved by the resource manager, or a written certification from a licensed engineer, stating the facility is structurally safe will accompany the initial submission of the plans and specifications.

(5) Procedures regarding permits for individual facilities shall also apply to permits for non-commercial group mooring facilities.

(6) Facilities attached to the shore shall be securely anchored by means of moorings which do not obstruct the free use of the shoreline, nor damage vegetation or other natural features. Anchoring to vegetation is prohibited.

(7) Electrical service and equipment leading to or on private mooring facilities must not pose a safety hazard nor conflict with other recreational use. Electrical installations must be weatherproof and meet all current applicable electrical codes and regulations. The facility must be equipped with quick disconnect fittings mounted above the flood pool elevation. All electrical installations must conform to the National Electric Code and all state, and local codes and regulations. In those states where electricians are licensed, registered, or otherwise certified, a copy of the electrical certification must be provided to the resource manager before a Shoreline Use Permit can be issued or renewed. The resource manager will require immediate removal or disconnection of any electrical service or equipment that is not certified (if appropriate), does not meet code, or is not safely maintained. All new electrical lines will be installed underground. This will require a separate real estate instrument for the service right-of-way. Existing overhead lines will be allowed, as long as they meet all applicable electrical codes, regulations and above guidelines, to include compatibility and safety related to fluctuating water levels.

(8) Private floating recreation facilities will not be placed so as to interfere with any authorized project purposes, including navigation, or create a safety or health hazard.

* (9) The district commander or his/her authorized representative may place special conditions on the permit when deemed necessary. Requests for waivers of shoreline management plan permit conditions based on health conditions will be reviewed on a case by case basis by the Operations Manager. Efforts will be made to reduce onerous requirements when a limiting health condition is obvious or when an applicant provides a doctor's certification of need for conditions which are not obvious. *

(10) Vegetation modification, including but not limited to, cutting, pruning, chemical manipulation, removal or seeding by private individuals, are allowed only in those areas designated as Limited Development Areas or Protected Shoreline Areas. An existing (as of February 1, 1989) vegetation modification permit, within a shoreline allocation which normally would not allow vegetation modification, should be grandfathered. Permittees will not create the appearance of private ownership of public lands.

(11) The term of a permit for vegetation modification will be for five years. Where possible, such permits will be consolidated with other shoreline management permits into a single permit. The district commander is authorized to issue vegetation modification permits of less than five years for one-time requests or to aid in the consolidation of shoreline management permits.

(12) When issued a permit for vegetative modification, the permittee will delineate the government property line, as surveyed and marked by the government, in a clear but unobtrusive manner approved by the district commander and in accordance with the project Shoreline Management Plan and the conditions of the permit. Other adjoining owners may also delineate the common boundary subject to these same conditions. This delineation may include, but is not limited to, boundary plantings and fencing. The delineation will be accomplished at no cost to the government.

(13) No permit will be issued for vegetation modification in Protected Shoreline Areas until the environmental impacts of the proposed modification are assessed by the resource manager and it has been determined that no significant adverse impacts will result. The effect of the proposed modification on water quality will also be considered in making this determination.

(14) The original of the completed permit application is to be retained by the permittee. A duplicate will be retained in the resource manager's office.

3. Permit Revocation. Permits may be revoked by the district commander when it is determined that the public interest requires such revocation or when the permittee fails to comply with terms and conditions of the permit, the Shoreline Management Plan, or of this regulation. Permits for duck blinds and ice fishing shelters will be issued to cover a period not to exceed 30 days prior to and 30 days after the season.

4. Removal of Facilities. Facilities not removed when specified in the permit or when requested after termination or revocation of the permit will be treated as unauthorized structures pursuant to 36 CFR Part 327.20.

5. Posting of Permit Number. Each district will procure 5" x 8" or larger printed permit tags of light metal or plastic for posting. The permit display tag shall be posted on the facility and/or on the land area covered by the permit, so that it can be visually checked, with ease in accordance with instructions provided by the resource manager. Facilities or activities permitted under special provisions should be identified in a way that will set them apart from other facilities or activities.

APPLICATION FOR SHORELINE USE PERMIT

(ER 1130-2-406)

(See reverse side for Privacy Act Statement)

Print or type information requested below. Submit two completed and original signed copies of this application with two complete sets of plans and specifications to the Resource Manager.

PROJECT	DATE OF APPLICATION
NAME OF APPLICANT *(and Spouse if applicable)*	TELEPHONE, AREA CODE AND NUMBER
STREET	CITY, STATE, ZIP CODE

TYPE OF FACILITY *(Check one or more blocks as appropriate)* ☐ NEW ☐ RENEWAL

WATER-BASE		LAND-BASE	
☐ SINGLE-OWNER DOCK	☐ SKI JUMP	☐ UNDERBRUSHING	☐ MOWING
☐ COMMUNITY DOCK	☐ SKI COURSE	☐ PLANT / LANDSCAPING	☐ FOOT PATH
☐ MOORING BUOY	☐ SWIM FLOAT	☐ EROSION CONTROL	
☐ MOORING POST	☐ DUCK BLIND		

☐ OTHER *(Describe)* _____

BRIEF DESCRIPTION OF FACILITY LOCATION, STATE LICENSE NUMBER(S) OF BOAT(S) TO BE DOCKED *(If this application is for a boat mooring facility)* OR DEVELOPMENT *(if this application is for land use)*:

FOR ILLUSTRATION PURPOSES ONLY

(Local reproduction authorized - blank masters available from local FMO)

THE FOLLOWING ALTERNATE PARTY WILL BE READILY AVAILABLE ON SHORT-NOTICE CALL AND RESPONSIBLE FOR PROVIDING ANY NEEDED SURVEILLANCE OF THE STRUCTURE IN MY ABSENCE.

NAME	TELEPHONE, AREA CODE AND NUMBER
STREET	CITY, STATE, ZIP CODE

I UNDERSTAND AND AGREE TO THE CONDITIONS OF THE PERMIT FOR SHORELINE USE. TWO COMPLETE SETS OF THE PLANS AND SPECIFICATIONS, INCLUDING SITE LOCATION AND LAYOUT PLAN, FOR THE PROPOSED ACTIVITY, STRUCTURE OR ANCHORAGE SYSTEM ARE ENCLOSED.

_____ *(Date)* _____ *(Signature of Applicant)*

_____ *(Date)* _____ *(Signature of Alternate)*

(DO NOT WRITE BELOW THIS LINE)

PERMIT

SHORELINE PERMIT NO.	DATE ISSUED	DATE EXPIRES *(Date)*

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 CORPS OF ENGINEERS ON WATERS UNDER THE CONTROL OF THE U S ARMY, CORPS OF ENGINEERS. THE PERMITTEE SHALL ADHERE TO THE CONDITIONS FOR SHORELINE USE SET FORTH IN APPENDIX C OF ER 1130-2-406.

_____ *(Date)* _____ *(Signature of Resource Manager)*

ENG FORM 4264-R, Oct 90 EDITION OF 1 DEC 74 IS OBSOLETE (Proponent: CECW-ON)

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 a 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.

Reverse of ENG Form 4264-R, Oct 90

APPENDIX C
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 does it obviate the necessity of obtaining state or local assent required by law for the construction, operation, use or 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, 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 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, fragmenting, 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 non-compartmentalized 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 permitter 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 be 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 action. 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 will 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 permitter 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.

APPENDIX D

Permit (Sample)

Permit 01234 Expires 30 Nov. 1987

This Permit is Non-Transferrable and May be Revoked at Any Time

US Army Corps
of Engineers

Appendix K: Environmental Assessment

Environmental Assessment for the 2021 Fort Gibson Lake Shoreline Management Plan Revision

Grand (Neosho) River, Oklahoma

Wagoner, Cherokee, and Mayes Counties, Oklahoma

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 Fort Gibson Lake. 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*

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ENVIRONMENTAL ASSESSMENT
2021 Fort Gibson Lake Shoreline Management Plan Revision
CHEROKEE, WAGONER, AND MAYES COUNTIES, OKLAHOMA

SECTION 1: INTRODUCTION

The United States Army Corps of Engineers (USACE) is proposing to adopt and implement the 2021 Fort Gibson Lake Shoreline Management Plan (SMP). The 2021 SMP is a revision of the 1996 SMP. The 2021 SMP serves to protect and manage the shorelines of Fort Gibson Lake's under Corps jurisdiction in a manner which will promote the safe and healthful use of these shorelines by the public while maintaining environmental safeguards to ensure a quality resource for use by the public along the shoreline throughout the life of the Fort Gibson Lake project. It is a vital tool for responsible stewardship and sustainability of the project's natural and cultural resources, as well as the provision of outdoor recreation facilities and opportunities on federal land associated with Fort Gibson Lake for the benefit of present and future generations. The 2016 Master Plan (MP) is incorporated in this document by reference; the proposed SMP is intended to be subservient and complimentary to the 2016 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 Fort Gibson Lake Dam is located on the Grand (Neosho) River at river mile 7.7, in Cherokee and Wagoner Counties, Oklahoma (Figure 1.1). The project dam site is approximately five miles north of the town of Fort Gibson, Oklahoma, about 12 miles northeast of Muskogee, and approximately 50 miles southeast of Tulsa, Oklahoma. The reservoir extends north upstream from the dam about 39 miles through Cherokee, Wagoner, and Mayes counties to a point just downstream from the Markham Ferry Dam Site (Lake Hudson). This EA includes all of Fort Gibson Lake and its appurtenant structures including the earthen embankment (dam), spillway, and outlet works, and surrounding lands managed by the USACE as part of Fort Gibson Lake. Total drainage area for the lake is 12,494 square-miles.

The Fort Gibson Dam and Reservoir was authorized by the Flood Control Act approved 18 August 1941 (Public Law No. 228, 77th Congress, 1st Session). The departmental authority for administration of land and water areas related to Fort Gibson Lake is contained in Section 4 of the Flood Control Act, approved 22 December 1944 (58 Stat. 889), and by Section 4 of the Flood Control Act of 1946 (60 Stat. 642), as further amended by Section 209 of the Flood Control Act of 1954, which was approved 3 September 1954. Fort Gibson Lake was incorporated in the Arkansas River

multipurpose plan by the River and Harbor Act of 24 July 1946; Project document HD 107, 76th Congress, 1st Session; and the Water Resources Development Act of 1986 (Public Law 99-662). Project purposes are flood control, navigation, fish & wildlife, and hydroelectric power.

The dam and reservoir were approved in 1941, and construction began on 1942 and was suspended during World War II, and resumed in May 1946. Closure of the embankment was completed in June 1949. The project became fully operational when the last of the four generators started producing commercial power in September 1953. The dam includes two concrete, gravity, non-overflow sections. One section is 285 feet long and extends from the spillway to the earth embankment at the right abutment. The other section is 460 feet long and extends from the intake structure to the earth embankment at the left abutment. The dam also includes two earth embankment sections, one of which extends about 374 feet from the natural ground at the right abutment to the right bank, concrete, non-overflow section. The other embankment is 63 feet long, extending from the left abutment to the left bank, concrete, non-overflow section. The powerhouse intake structure is located adjacent to the spillway on the left and is 318 feet long. The total length of the structures, including the spillway, is 2,990 feet, and the maximum height above the streambed is 110 feet. Oklahoma State Highway 251A extends across the top of the structures. There are seven rolled earthfilled dikes on the west side of the reservoir, which have a total length of 21,678 feet.

The spillway section is a concrete, gravity, ogee weir that extends across the existing river channel and a major portion of the right bank floodplain. Spillway capacity is 986,000 cubic feet per second at the top of the flood control pool. The spillway is equipped with thirty 40- by 35-foot tainter gates operated by individual electric-motored hoists. The total length of the spillway is 1,490 feet. Outlet works consist of ten 5-foot-8-inches by 7-foot rectangular sluices located through the spillway weir. Capacity of the outlet works varies from 21,000 cfs, at the flood control pool elevation with no spillway discharge, to 14,400 cfs at the flood control pool elevation with the spillway discharging at full capacity.

Flows through the sluices are controlled by a means of hydraulically operated, cast-iron slide gates. Emergency closure of the sluices can be accomplished using a bulkhead lowered by a hoist into frames provided at the sluice entrances. A 48-inch-diameter pipe is located through the right abutment of the dam for municipal water supply for the city of Muskogee. Bank-full capacity on the Grand (Neosho) River below the dam is about 100,000 cfs. The area of the lake at the top of the power pool (554.0 feet MSL) is 19,900 acres with shoreline length of approximately 225 miles.

The powerhouse contains four 11,250-kilowatt generators and a concrete penstock provides water for each power unit. Flow through each penstock is controlled by two 14-foot-6 inches by 20-foot-2.25-inches caterpillar type gates.

1.2 PURPOSE OF AND NEED FOR THE ACTION

The purpose of the Proposed Action is to ensure that the revision of the 2021 Fort Gibson Lake 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 2016 Fort Gibson Lake 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 2016 Fort Gibson Lake 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 2016 Fort Gibson Lake 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; these changes are described further in Table 3.

Table 1 - Table of Proposed SMP Changes

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action(s)
Public Law National USACE Policy and Engineer Regulation 1130-2-406 The 1996 plan contains numerous outdated requirements related to changes in national USACE	Public Law National USACE Policy and Engineer Regulation Numerous changes are proposed to bring the revised plan into compliance with national USACE policy and	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

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action(s)
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.	the current version of ER 1130-2-406. Changes resulting from implementation of WRDA 2007 are also incorporated.	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.
<u>Shoreline Allocations</u> Shoreline Allocations (in miles) in the 1996 SMP consisted of the following: • Prohibited Access Areas: 3.31 • Protected Shoreline Areas: 177.54 • Limited Development Areas: 15.83 • Public Recreation Areas: 60.94 The 1996 plan aligned shoreline allocation with the land classifications included in the 1978 version of Fort Gibson Lake Master Plan. The 1978 Master Plan and related supplements were revised in 2016.	<u>Shoreline Allocations</u> Shoreline Allocations (in miles) in the 2021 SMP revision consist of the following: • Prohibited Access Areas: 3.45 • Protected Shoreline Areas: 190.37 • Limited Development Areas: 11.22 • Public Recreation Areas: 52.59 Completion of the 2016 revision of the Master Plan resulted in numerous changes to land classification. Many of the 2016 changes in land classification resulted in shoreline allocation changes from Public Recreation Area to Protected Shoreline Areas in the 2021 SMP. Prohibited Access Areas increased by 0.14 miles. Protected Shoreline Areas increased by 12.83 miles. Limited Development Areas decreased by 4.61 miles, and Public Recreation Areas decreased by 8.35 miles.	<u>Shoreline Allocations</u> The majority of the shoreline allocation changes were to align with updated Master Plan land use classification, which were based on historic land uses. Shoreline miles for each of the four shoreline allocations were measured using Geographic Information System (GIS) technology at approximately elevation 554.0 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 2016 Master Plan. Examples of shorelines not measured are 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

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action(s)
		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.
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 quasipublic and private club site recreational areas will be exempt from current standards but must meet the conditions stated in Section 4.9 Grandfathered Facilities and Pre-Existing Facilities.	The term "restricted limited development" in the 1996 SMP was discontinued to align with the 2016 Master Plan. The 2021 SMP clarifies how private floating facilities (PFF) will be managed in lessee-operated areas. Although lessee-operated areas are classified in the 2016 MP as High Density Recreation Areas, changes were needed in the 2021 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.	
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 and	Private Floating Facilities PFF's include privately-owned boat docks, platforms, breakwaters, and buoys whether single owner or multiowner. Minimum design standards set minimum and maximum size requirements	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

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action(s)
walkways. No restriction of number of PFF's a household or individual may own.	on slip length and width for the PFF and walkways. All PFF construction must occur off Government property, in a commercial marina, or on-site on the water at the approved place of the permit.	and ownership when displaced by high waters. Construction requirement added for all construction of PFF's to prevent damage to government owned shoreline, prevent storage of construction supplies equipment 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 Floating Facilities</u> Anchorage methods must be included in plans for PFFs and are to be included with applications for shoreline use permits.	<u>Anchorage of Private Floating Facilities</u> Design of anchorage systems will be included in the engineered plans for each separate structure. The plans must be developed in accordance with the site conditions of the location, taking into consideration the water depth, exposure to fetch, wind loads, and other factors affecting private floating facility installation.	This ensures safe and reliable PFF anchorage and also 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. Exceptions for pre-existing facilities are granted in order to honor previous commitments as long as the pre-existing facility maintains requirements in 4.9.2 to ensure safety while minimizing the impact on natural resources.
<u>Walkways</u> No walkway requirements were included in the 1996 SMP.	<u>Walkways</u> Walkways must be included in the construction plans approved by an engineer and must meet new size, material, anchoring, handrail, and elevation requirements. Renovation or modification of existing walkways must meet current standards. If locks are used to secure the entrance to the PFF, USACE	New walkway requirements added to ensure public safety, and to provide clear and consistent construction guidelines. Guidelines also allow USACE staff to inspect facilities as needed.

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action(s)
	must be provided with the combination.	
<u>Stairways, Tramways, and or Steps</u> Structures may be permitted in LDAs and must meet construction, material, color, and other requirements.	<u>Stairways, Tramways, and or Steps</u> Tramways are no longer permitted. Added district stairway policy: Stairways will not be authorized for new private floating facilities but may be authorized for existing private floating facilities on a limited basis where the Lake Manager has verified no safe, viable alternative exists for accessing the permitted private floating facility. Stairs must meet new construction, material, color, and other requirements.	To achieve balance between permitted private uses and resource protection for general public use. The District Stairway Policy allows for stairs where no safe, viable alternative exists, but ensures stairs are constructed and maintained to be safe for users while minimizing the impact on natural resources. Tramways have been discontinued due to the low demand and to limit impacts on natural resources.
<u>Vegetation</u> Mowing permits may be issued for a maximum 30-foot strip of Government property adjacent to private property in Limited Development Areas and can include mowing, brush-hogging, or tree trimming including a 6-foot wide path to the lake, and may be approved but will be limited to firebreaks along protected areas.	<u>Vegetation</u> Permits along Protected areas will only be approved if the Lake Manager determines environmental and physical characteristics will not be impacted. 30-foot firebreaks may still be approved in LDAs, and Protected areas. However, additional restrictions may be placed on permits when significant wildlife habitat or scenic/aesthetic areas occur, and a vegetation modification permit may negatively affect those features. Existing vegetation modification permits may be exempt from new standards until the permit is modified, expired, or revoked. Added vegetative modification moratorium period on areas where	This change allows private property owners to mow firebreaks that could impact the safety of their own property, but under the discretion of the Lake Manager must not adversely affect the natural resources of the lake or government property. Added vegetative modification moratorium period to allow vegetation and habitat to recover from damage.

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action(s)
	unauthorized modification occurs	
<u>Grandfathered</u> The Grandfather Rights Clause applied to every privately owned facility presently on the lake except those in limited development that had less than 50 percent suitable shoreline available.	<u>Grandfathered</u> The term grandfathered is used to designate a floating facilities that was in place on or before November 17, 1986 and may not meet current standards or may not be located in an LDA. Grandfathered facilities can remain if they meet the conditions in 4.9.1. 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.	Some structures and activities that were licensed or permitted previously will be grandfathered according to public law to honor previous commitments. The new description clearly defines grandfathered facilities and reflects the public laws and conditions which must be met to prevent removal.
<u>Pre-Existing Facilities</u> No pre-existing facility descriptions or requirements were included in the 1996 SMP.	<u>Pre-Existing Facilities</u> Some pre-existing facilities will be exempted from current requirements by Public Law 97-140. Some structures will be exempt from new guidelines if they are in limited development areas that do not meet current general requirements and minimum design standards. 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. Once these structures have been damaged to the point where the substructure is not floating or usable or where the substructure required	Exceptions for pre-existing facilities are granted in order to honor previous commitments as long as the pre-existing facility maintains requirements in 4.9.2 to ensure safety while minimizing the impact on natural resources.

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action(s)
	modification or replacement, the private floating facility must be rebuilt in accordance with the general requirements and minimum design standards for new private floating facilities.	
<u>Electrical Power and Lights</u> Electric service could be added to docks by licensed electricians, but lines must be buried except where the terrain will not allow it or there may be excessive environmental damage. All new electric lines will require a real estate instrument. Existing electrical licenses would be allowed to remain as long as they are maintained in a safe working condition and meet USACE standards and all local and state codes and the required National Electric Code.	<u>Electrical Power and Lights</u> No new underground utility license to private floating facilities will be issued. Overhead electric service to private floating facilities must be removed upon change of private floating facility ownership or upon identification as a safety hazard. In accordance with the nationwide USACE Non-Recreation 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.	This requirement brings the SMP within compliance of the nationwide USACE Non-Recreation Outgrant Policy dated March 30, 3009, ER 1130-2-550 Chapter 17, and needed for public safety during elevated lake levels.
<u>Flotation</u> None	<u>Flotation</u> Flotation shall be of materials intended for marine use that 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, encapsulated expanded polystyrene, or encapsulated polyurethane and must meet other durability requirements. Private floating facilities with existing flotation that does	Needed to reduce environmental impacts due to deteriorating unencapsulated beaded foam.

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action(s)
	not meet the current standards will be allowed to remain until a USACE inspector deems the flotation is no longer serviceable. If less than 40 percent of a section is above the waterline, it is no longer considered serviceable. Unserviceable flotation shall be replaced with an approved flotation upon written notification from the USACE	
PFF Sides Plexi-glass sides were permitted on PFF.	PFF Sides Plexiglass or other clear, solid materials are no longer authorized for PFF (Section 4.21).	Clear sides are often not maintained, can become cloudy, or broken and impede the ability to inspect facilities and to prevent human habitation on PFF.
Lighting None	Lighting Lighting should remain off when not in use and should be shielded to prevent light emissions above the fixture. Permittees are also encouraged to abide by the Best Management Practices for what is referred to as the Dark Skies Initiative (Section 4.18).	These changes are consistent with nationwide lighting guidelines meant to ensure public safety and to minimize the environmental effects of light pollution.
Real Estate License Required (1) length of the license, (2) description, (3) maps, (4) archeological review, and (5) licensed electrician certification as well as a required license fee.	Real Estate Instruments Provided more detailed list of real estate instruments for a variety of activities, but removed requirements from the SMP, as each instrument could have specific requirements based on the type of instrument, activity, location, and many other factors. Commercial development activities and other activities by private or public interests	Includes a variety of real estate instruments and language in order to comply with USACE regulation and outgrant policies.

1996 Shoreline Management Plan (SMP)	Proposed 2021 Shoreline Management Plan (SMP)	Justification of the Proposed Action(s)
	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.	

Table 2 - Summary of Shoreline Mileage Designation Changes

Shoreline Designation	1996 Designated Miles	2021 Designated Miles	Difference
Prohibited Access Area	3.31	3.45	+0.14
Protected Shoreline Area	177.54	190.37	+12.83
Limited Development Area	15.83	11.22	-4.61
Public Recreation Area	60.94	52.59	-8.35

Table 3 - Details of Shoreline Mileage Changes

Shoreline Designation Changes	Miles
From Limited Development to Protected	5.59
From Limited Development to Public Recreation	0.65
From Prohibited to Public Recreation	0.05
From Protected to Limited Development	0.36
From Protected to Prohibited Access	0.19
From Protected to Public Recreation	1.80
From Public Recreation to Limited Development	0.85
From Public Recreation to Protected	9.77

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 Fort Gibson Lake'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 Fort Gibson Lake, or the policies and management guidelines set in place by the 2016 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 Fort Gibson Lake natural resources and providing recreational experiences for the next 25 years. Tables 1-3 detail all changes to shoreline allocations, and are further described in Appendix I of the SMP.

The proposed shoreline allocation categories are defined as follows:

2.2.1 LIMITED DEVELOPMENT AREAS: These areas are allocated for private activities, such as vegetative modification, and/or the installation of privately-owned floating facilities such as docks following the issuance of a permit in accordance with current Federal regulations and this SMP. Approximately 11.2 miles of shoreline are allocated for limited development areas (LDA).

2.2.2 PUBLIC RECREATION AREAS: These areas are designated as developed public recreational and commercial concessions such as marinas. Private floating facilities will not be permitted in these areas. Modification of landform or vegetation by private individuals or groups will not be permitted. Quasi-public organization recreational areas, operating under lease agreements with USACE, are also zoned under this allocation. These quasi-public areas are designated for use by organizations such as the Girl Scouts, YMCA, and the YWCA. Floating facilities owned by the quasi-public organization and within quasi-public lease areas will be managed under the terms of the real estate agreement for the individual site. No private floating facilities are allowed in the quasi-public sites. Approximately 52.6 miles of shoreline are allocated for public recreation areas (PRA).

2.2.3 PROTECTED SHORELINE AREAS: Protected shoreline areas (PSA) are designated primarily to protect or restore aesthetic, fish and wildlife, cultural, or other environmental resources in accordance with ER 1130-2-406, the USACE Environmental Stewardship mission and the policies of the National Environmental Policy Act of 1969 (PL-190). 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 aesthetic, environmental, and natural resource values are not damaged or destroyed, but private floating facilities are not permitted in these areas. Modification of landform or vegetation by private individuals will be permitted only after due consideration of the effects of such action on the environmental and physical characteristics of the area. Approximately 190.4 miles of shoreline are classified as protected shoreline.

2.2.4 PROHIBITED ACCESS AREAS: These shoreline areas are allocated for security reasons and the physical safety of the recreation visitors; for example, certain hazardous locations and areas located near dams or spillways are included in this allocation. Private floating facilities such as docks and/or the modification of landform and vegetation are not permitted in these areas. Approximately 3.5 miles of shoreline are allocated as prohibited access areas (PAA).

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.

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

Fort Gibson Lake Dam is located on the Grand (Neosho) River in Cherokee and Wagoner counties, Oklahoma. The project damsite is approximately five miles north of the town of Fort Gibson, Oklahoma, and about 12 miles northeast of Muskogee, Oklahoma. The reservoir extends upstream northeast through Wagoner, Cherokee, and Mayes counties; the lake forms the lower 26 miles of the boundary line between the western slope of the Ozark uplift and the Cherokee Plains which compose the flat divide between the Verdigris and Grand (Neosho) rivers. Construction began in 1942, was suspended during World War II, and resumed in May 1946. Closure of the embankment was completed in June 1949; the project became fully operational when the last of the four generators started producing commercial power in September 1953. The dam includes two concrete, gravity, non-overflow sections. One section is 285 feet long, extending from the spillway to the earth embankment at the right abutment. The other section is 460 feet long, extending from the intake structure to the earth embankment at the left abutment. The dam also includes two earth embankment sections, one of which extends about 374 feet from the natural ground at the right abutment to the right bank, concrete, non-overflow section. The other embankment is 63 feet long, extending from the left abutment to the left bank, concrete, non-overflow section. The powerhouse intake structure is located adjacent to the spillway on the left and is 318 feet long. The total length of the structures, including the spillway, is 2,990 feet, and the maximum height above the streambed is 110 feet. Oklahoma State Highway 251A extends across the top of the structures. There are eight rolled earth-filled dikes that the Corps maintains on the west side of the reservoir, which have a total length of 21,678 feet.

The shoreline for Fort Gibson Lake is determined by all land along the perimeter of the lake lying between and bounded by the shoreline formed at the conservation pool elevation of 554.0 feet National Geodetic Vertical Datum (NGVD29) and the boundary of the Government fee owned land. The 1996 SMP designates a total of 257.6 miles of shoreline, 3.3 of which are PAA, 177.5 are PSA, 15.8 are LDA, and 60.9 are PRA. Differences between the sum of shoreline miles between 1996 and the Proposed SMP are due to improvements in measuring techniques, changes from erosion and siltation, as well as changes in mapping methodology including the use of GIS software. Topography of the area includes undulating to rolling valley land, wooded ravines, and hilly slopes; on the west, the land surface is flat to undulating with streams entrenched in broad flood plains.

Fort Gibson Lake has 1,284,400 acre-feet of storage that is utilized for flood control and generation of hydroelectric power. Of that storage, 365,200 acre-feet is located within the conservation and inactive pools. The lake area at elevation 582.0 feet above sea level (ft msl), which is the top of the flood control pool, consists of 51,000 total acres; the top of the power pool elevation is 554.0 ft msl, comprising 19,900 acres. A total of 75,169 acres were acquired in fee for the operation of the lake, along with an

additional easement of 1,101 acres which was acquired for flowage easement purposes and 320 acres for operational easement purposes. In general, when the lake covers 19,900 acres (elevation 554.0 ft msl) it encompasses approximately 225 miles of shoreline. The maximum discharge that can occur through the outlet works without downstream flooding is about 100,000 cfs.

Fort Gibson Lake was authorized by the Flood Control Act, approved 18 August 1941. Authorized Project Purposes include flood control,hydroelectric power, water conservation, and recreation. Construction was completed in 1953 at an approximate cost of $42,525,000. The Fort Gibson Lake powerhouse contains four 11,250-kilowatt hydroelectric generators and produces commercial electric power which is valued at approximately $4.6 million a year.

Currently there are five Class A Campgrounds, three Class B Campgrounds, and nine day use parks operated by the U.S. Army Corps of Engineers (USACE) with numerous other facilities operated by State, private entities and local governments that have approximately 1.5 to 2 million visitors annually. USACE licenses over 21,800 acres of land to the Oklahoma Department of Wildlife Conservation (ODWC) for the purpose of wildlife management, of which 17,300 acres are managed for public hunting and 4,500 acres are used for a waterfowl refuge. There are also areas managed by the USACE that provide game and non-game habitat, totaling approximately 27,446 acres, that are popular with hunters and wildlife observers. The USACE and ODWC cooperate to provide an annual fish habitat enhancement program for the lake, as well as supervise a handicap hunter access area, which is managed by ODWC.

3.1.1 Alternative 1: No Action Alternative

The No Action Alternative for Fort Gibson Lake 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 Fort Gibson Lake 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 Fort Gibson Lake.

3.1.2 Alternative 2: Proposed Action

The objectives for revising the Fort Gibson Lake 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 1-3 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, as well as updated shoreline management practices that will further conserve the environment.

3.2 WATER RESOURCES

Surface Water

Fort Gibson Lake is located on the Grand (Neosho) River. Fort Gibson Lake has 1,284,400 acre-feet of storage that is utilized for flood control and generation of hydroelectric power. Of that storage, 365,200 acre-feet is located within the conservation and inactive pools. The lake area at elevation 582.0 feet above sea level (ft msl), which is the top of the flood control pool, consists of 51,000 total acres; the top of the power pool elevation is 554.0 ft msl, comprising 19,900 acres. A total of 75,169 acres were acquired in fee for the operation of the lake, along with an additional easement of 1,101 acres which was acquired for flowage easement purposes and 320 acres for operational easement purposes. In general, when the lake covers 19,900 acres (elevation 554.0 ft msl) it encompasses approximately 225 miles of shoreline. The maximum discharge that can occur through the outlet works without downstream flooding is about 100,000 cfs.

Hydrology and Groundwater

The primary purpose of the construction of Fort Gibson Lake was hydropower, which remains to be a large benefit to the surrounding area in terms of energy production. The Lake powerhouse contains 4 turbines, which can produce 48 megawatts (MW) at maximum operation and approximately 208,482,000 kilowatt-hours (KWh) per year, with revenue estimated at $4.6 million annually and benefits to Federal hydropower customers estimated at $10.9 million annually.

The total drainage area of Fort Gibson Lake is 12,494 square miles. Groundwater naturally discharges to springs, streams, and rivers. The Grand (Neosho) River and the Spring River receive substantial base flows from the Boone Aquifer. Some ground water also discharges downward through the underlying Chattanooga Shale into the Roubidoux aquifer, the major bedrock aquifer within the Fort Gibson Lake region. The Boone groundwater basin is a minor basin and is part of a large groundwater system that includes parts of northeastern Oklahoma, northern Arkansas, southeastern Kansas, and southern Missouri. The Boone aquifer is comprised of Mississippian limestone and chert. Formation thickness ranges from zero to greater than 400 feet. Recharge to the Boone aquifer is almost entirely from infiltration of precipitation in areas where the Boone Formation crops out. Bedding plane openings, fractures, and joints are the principal avenues for water recharge.

Water Quality

The State of Oklahoma manages and monitors water quality through its Oklahoma Water Resources Board (OWRB). The OWRB samples water quality randomly as part of its Beneficial Use Monitoring Program (BUMP) and has two reports for Fort Gibson Lake, one for the lower and upper portions of the lake each. The sampling window used to generate these reports was in October 2014 – June 2015, using 4 sample sites for each section. The only area of concern noted in both reports is that the dissolved oxygen levels are not high enough to support fish and wildlife propagation. The reports are summarized in tables 4 and 5. 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 Fort Gibson Lake to meet all authorized purposes into the future.

Table 4 - Fort Gibson Lake BUMP Report: Lower Lake

Beneficial Use	Turbidity	pH	Dissolved Oxygen	Metals	TSI	True Color	Sulfates	Chlorides	Total Dissolved solids	Enterrococcus & E. coli	Chloraphyll-a
Fish and Wildlife Propagation	S	S	NS	NEI							
Aesthetics					NEI	*					
Agriculture							S	S	S		
Primary Body Contact Recreation										NEI	
Public & Private Water Supply				NEI							
S = Fully Supporting NS = Not Supporting NEI = Not Enough Information	Notes	The lake is currently listed in the Oklahoma Water Quality Standards (WQS) as a Nutrient Limited Watershed (NLW). This listing means that the lake is considered threatened from nutrients until a more intensive study can confirm the aesthetics beneficial use non-support status. *Standards revision, color for permitting purposes only.									

Table 5 - Fort Gibson Lake BUMP Report: Upper Lake

Beneficial Use	Turbidity	pH	Dissolved Oxygen	Metals	TSI	True Color	Sulfates	Chlorides	Total Dissolved solids	Enterrococcus & E. coli	Chloraphyll-a
Fish and Wildlife Propagation	S	S	NS	NEI							
Aesthetics					NEI	*					

Beneficial Use	Turbidity	pH	Dissolved Oxygen	Metals	TSI	True Color	Sulfates	Chlorides	Total Dissolved solids	Enterrococcus & E. coli	Chloraphyll-a
Agriculture							S	S	S		
Primary Body Contact Recreation										NEI	
Public & Private Water Supply				NEI							
S = Fully Supporting NS = Not Supporting NEI = Not Enough Information	Notes	The lake is currently listed in the Oklahoma Water Quality Standards (WQS) as a Nutrient Limited Watershed (NLW). This listing means that the lake is considered threatened from nutrients until a more intensive study can confirm the aesthetics beneficial use non-support status. *Standards revision, color for permitting purposes only.									

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.

USFWS National Wetlands Inventory data (U.S. Fish and Wildlife Service, 2014) identifies about 36,918 acres of wetlands on Fort Gibson Project lands as indicated in Table 6. Types of wetlands occurring on Fort Gibson Lake include freshwater emergent wetland, freshwater forested/shrub wetland, freshwater pond, lake, and riverine areas.

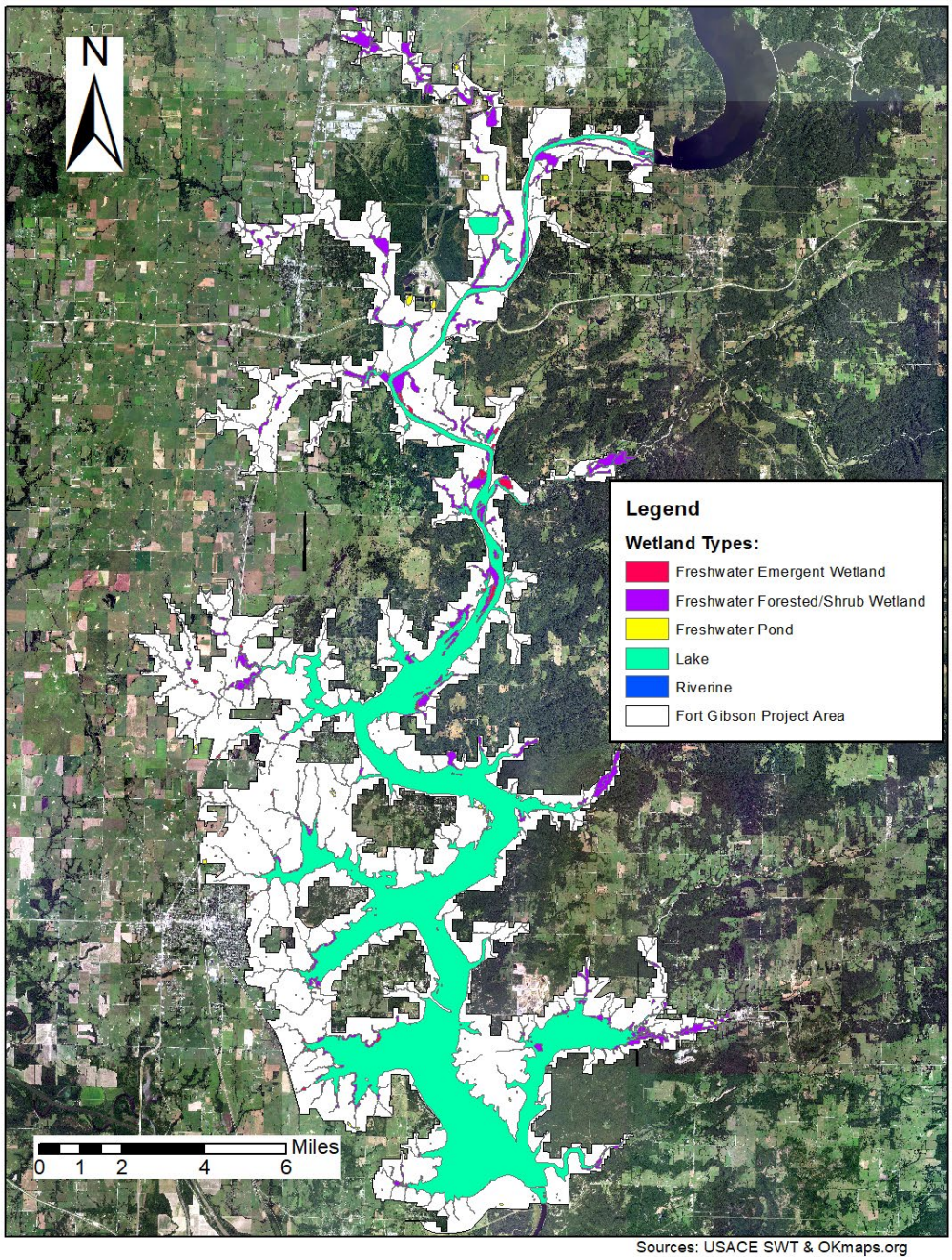

Figure 1 - Map of Fort Gibson Lake Wetlands

Wetlands identified with the United States Fish and Wildlife Service (USFWS) National Wetland Inventory tool (NWI) that are within Fort Gibson's project area are shown in Figure 1. The approximate area of these wetlands is 36,918 acres and is sorted by wetland type in Table 6.

Table 6 – Fort Gibson Lake Wetland Acreage

Wetland Type:	Acreage:
Freshwater Emergent Wetland	202.72
Freshwater Forested/Shrub Wetland	3,539.46
Freshwater Pond	265.71
Lake	31,508.43
Riverine	1,402.03
Total Acreage:	**36,918.35**

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 12.83 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. Increased requirements on construction of PFF facilities and flotation materials will also help improve water quality. The area would experience no new adverse effects, possibly resulting 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

The climatic characteristics of the Fort Gibson Lake region include moderate winters and relatively long summers, with mean air temperatures of 37°F in January to 81°F in July. The average length of the growing season (April to September) in this region of Oklahoma is 210 to 220 days. The Fort Gibson Lake watershed has a drainage basin of approximately 12,494 square miles with an average annual rainfall of 40 to 49 inches, with greater than 60% occurring during the growing season.

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 Fort Lake Gibson 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 still requires climate change analysis, stating “The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct." *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008). Consistent with case law, an analysis of climate change impacts are conducted within EAs/EISs.

CEQ drafted guidelines for determining meaningful GHG decision-making analysis. The CEQ guidance states that if a project would be reasonably anticipated to cause direct emissions of 25,000 metric tons or more of carbon dioxide (CO_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 are 3 GHG contributors within the project vicinity: the Chouteau Power Plant, the Grand River Dam Authority, and the Muskogee Power Plant. The power plants’ GHG emissions are described in Table 7.

Table 7 - 2018-2019 Greenhous Gas Emissions from Contributors near Fort Gibson Lake

	Facilities:		
Emissions:	Chouteau Power Plant	Grand River Dam Authority	Muskogee Power Plant
2018 Heat (mmBTU)	41,354,750	23,170,299	44,261,855
2019 Heat (mmBTU)	48,020,007	16,929,100	18,114,936

	Facilities:		
Emissions:	Chouteau Power Plant	Grand River Dam Authority	Muskogee Power Plant
2018 Sulfur Dioxide (tons)	12.4	643.1	10,767.8
2019 Sulfur Dioxide (tons)	14.4	163.5	1,695.9
2018 Nitric Oxide (tons)	328.7	955.4	4,684.2
2019 Nitric Oxide (tons)	359.2	336.1	1,752.9
2018 Carbon Dioxide (tons)	2,457,660	1,645,411	4,626,191
2019 Carbon Dioxide (tons)	2,853,753	1,071,901	1,429,527

The general operations and recreation facilities associated with Fort Gibson Lake do not approach the proposed reportable limits. The Fort Gibson Lake 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 Fort Gibson Lake 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 Fort Gibson Lake 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 Fort Gibson Lake, 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 Fort Gibson Lake project, including all USACE-administered lands is located in USEPA Air Quality Control Regions 188 (Oklahoma). AQCR 188 is classified as in attainment by the USEPA (USEPA 2021). 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 Fort Gibson Lake 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 12.83 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

The Grand (Neosho) River, in the Fort Gibson Reservoir and Dam areas, forms the boundary line between the Cherokee Plains to the West and the Springfield Plateau is the lower part of the dissected ancient westerly sloping plain, which forms the western slope of the Ozark dome. The Grand (Neosho) River watershed to the east reaches isolated elevations in excess of a thousand feet, rising approximately 500 feet above the valley bottom. The flat divide between the Grand (Neosho) River and the Verdigris River to the west has isolated maximum elevations of 800 feet and minimum elevations in low saddles of 573 feet. The Grand River valley flood plain averages 510 feet in elevation.

Geology

The area is mostly underlain by Pennsylvanian-age sandstone and shale, and minor amounts of Pennsylvanian- and Mississippian-age limestone occur. The Lower Boston Mountains is a part of the Ozark Plateau; within the Lower Boston Mountains, slopes are mantled by Quaternary colluvium, and valleys are veneered with Quaternary alluvium. The mountaintops are often capped by resistant sandstone and the sideslopes are often underlain by interbedded sandstone and shale. Rock outcrops are common.

The Dissected Springfield Plateau-Elk River Hills includes mantles of Quaternary cherty clay solution residuum, colluvium, and alluvium, and uplands are underlain by Mississippian-age limestone and interbedded chert. The deepest valleys expose early Mississippian- or Devonian-age shale, dolomite, and limestone.

Soils

The Fort Gibson Project area includes broad areas of three Oklahoma counties and a diversity of soil types associated with mountains, rocky outcrops, karst features, hills and hill slopes, valleys, flood plains, and prairies. The Fort Gibson Lake project area is comprised of eight general soil associations. They include Steprock-Nella-Mountainburg-Linker-Enders (25.5% of total project area), Verdigris-Taloka-Dennis-Bates (19.8% of project area), Dennis-Coweta-Collinsville-Bates (17.3% of project area), Eldorado-Dennis-Craig (4.6% of project area), Verdigris-Osage-Lanton (3.9% of

project area), Taloka-Parsons-Dennis (1.6% of project area), Summit-Catoosa (1.0% of project area), and Rueter-Moko-Clarksville (0.5% of project area). Approximately 25.8% of the total project area is water with lake elevation at the top of the power pool. A condensed list of ecological sites within the Fort Gibson Lake project area that includes the bulk of specific soil types includes Heavy Bottomland, Loamy Bottomland, Claypan Prairie, Eroded Claypan Prairie, Loamy Prairie, Eroded Loamy Prairie, Shallow Prairie, Sandy Savannah, Shallow Savannah, Smooth Chert Savannah, Savannah Breaks, and Very Shallow.

A more detailed description of each of the above ecological sites and associated soils are described in the Natural Resource Conservation Service (NRCS) soil surveys for Wagoner, Cherokee, and Mayes counties available online at http://www.nrcs.usda.gov.

Prime Farmland

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent.

Using data from the NRCS' Web Soil Survey Tool (WSST), it was calculated that the Fort Gibson Lake Project lands are composed of approximately 30.5% of prime farmland, approximately 23,198 acres out of 76,009 acres surveyed using the Fort Gibson Lake boundary. Table 8 details the acreage of Prime Farmland in each county that is part of the Project footprint.

Table 8 - Prime Farmland Acreage in Fort Gibson Lake Lands

	Counties:			Total:
	Wagoner	Cherokee	Mayes	
Acres of Prime Farmland:	12,731.1	3,102.8	7,364.4	**23,198.30**
Percentage of Total Acreage	16.8	3.9	9.8	**30.5%**

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, Prime Farmlands, sedimentation, or shoreline erosion as a result of implementing the No Action Alternative.

3.6.2 Alternative 2: Proposed Action

The proposed action decreases PRA by 8.35 miles and increases PSA by 10.15 miles; these changes will help reduce erosion and the loss of soil stability. The increase in PSA limits public use and the degradation of existing topography, geology, soils, Prime Farmland, 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 increase in PSAs will also provide beneficial effects by reducing erosion and helping to reduce soil disturbance for vegetation. The proposed changes regarding stairways and tramways will also help to reduce erosion along the shoreline. Changes to policy in vegetation management may also serve to stabilize the soil, by allowing extant plants to colonize areas that may have been previously mowed. 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 Fort Gibson Lake. Approximately 29,000 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 sustainability of habitat for game species such as turkey and whitetail deer. The ODWC manages the Fort Gibson Wildlife Management Area (WMA), which covers approximately 22,000 acres, consists of a mixture of upland and bottomland habitats. The WMA is managed for game species with the understanding that it also benefits non-game species.

Vegetation

Forest resources in Oklahoma are influenced by the geographical and seasonal variability in precipitation and temperature. As a consequence of this dynamic, the largest expanses of deciduous forests in the state generally occur in the eastern third of the state. The eastern forests transition into tall grass prairie in the central portions of the state, which transition to the short grass prairie in the western parts of the state.

In the physiographic regions that comprise the Fort Gibson Lake watershed, natural vegetation generally consists of woody and herbaceous species typically found in the oak–hickory forest association with some areas of species in the oak-hickory-pine forest association. Native upland tree species in this forest association include blackjack oak (*Quercus marilandrica*), post oak (*Quercus stellata*), white oak (*Quercus alba*), burr oak (*Quercus macrocarpa*), various hickory species (*Carya* sp.), and persimmon (*Diospyros virginiana*) in the drier upland areas. Where the forest association is comprised of species in the oak-hickory-pine association, shortleaf pine (*Pinus echinata*) can be found along with the previously- mentioned upland species. In many areas that have been cleared but lie fallow, eastern redcedar (*Juniperus virginiana*) has become dominant.

Species that are generally found along stream banks and on floodplains typically consist of bottomland forests and include species of pecan (*Carya illinoensis*), pin oak (*Quercus palustris*), silver maple (*Acer saccharinum*), red maple (*Acer rubrum*), Boxelder (*Acer negundo*), river birch (*Betula nigra*), sycamore (*Platanus occidentalis*), cottonwood (*Populus deltoides*), elm species (*Ulmus sp.*), and willow (*Salix nigra*). Common understory species include woody species of redbud (*Cercis canadensis*), sumac (*Rhus sp.*), hawthorn (*Crataegus viridis*), Chickasaw plum (*Prunus angustifolia*), and rough leaved dogwood (*Cornus drummondi*). Herbaceous species include bluestems, sedges, panic grass, and broomsedge.

In the western portions of the watershed, natural vegetation includes predominately the tall grass prairie species of big bluestem (*Andropogon gerardii*), broomsedge (*Andropogon virginicus*), little bluestem (*Schizachyrium scoparium*), switch grass (*Panicum virgatum*), and Indian grass (*Sorghastrum nutans*), interspersed with species from the oak-hickory forest association. On rocky hilltops, cross timbers mosaics are generally dominated by blackjack oak, post oak and little bluestem. Tall grass prairie species are generally native to deep loam derived from limestone and shale. Bottomland forests are generally native to floodplains and low terraces, and include species such as boxelder, pecan, walnut (*Juglans nigra*), silver maple, bur oak, Shumard oak (*Quercus shumardii*), elm, hackberry (*Celtis occidentalis*), willow, and eastern cottonwood.

Fisheries and Wildlife Resources

The impoundment of the Grand (Neosho) River and other tributary streams that form Fort Gibson Lake changed the composition of fish populations from riverine species to lacustrine species. The lake offers excellent game fishing and is a regional asset for fishermen. Wildlife and fisheries within the project area are managed cooperatively between the ODWC and USACE. Shoreline habitat in Fort Gibson Lake is primarily comprised of rock and gravel. Additional habitat includes man-made structures

such as rip-rap, brush piles, and boat docks. Little aquatic vegetation or standing timber exists within the lake. Flooded brush can be found in some areas along the shoreline and most creek arms have some timber and stumps present. The ODWC has established and maintained 17 brush piles on Fort Gibson Lake. These brush piles were refurbished with cedar trees and spider blocks in 2011 (Johnston & Foster, 2011).

The major sport fish in Fort Gibson Lake include largemouth bass (*Micropterus salmoides*), spotted bass (*Micropterus punctulatus*), white bass (*Morone chrysops*), white crappie (*Pomoxis annularis*), black crappie (*Pomoxis nigromaculatus*), blue catfish (*Ictalurus furcatus*), channel catfish (*Ictalurus punctatus*), flathead catfish (*Pylodictis olivaris*), and paddlefish (*Polyodon spathula*). The primary forage species include threadfin shad (*Dorosoma petenense*) and gizzard shad (*Dorosoma cepedianum*) (Johnston & Foster, 2011). Recently, fish from Fort Gibson Lake have been tested to have lower levels of mercury and can be eaten without excessive exposure to mercury (ODEQ, 2013).

Management goals of the ODWC for Fort Gibson Lake include working with USACE and other appropriate entities to enhance boating and fishing access, conducting public outreach to solicit feedback regarding fisheries management issues, and to coordinate and assist with documentation and monitoring of aquatic nuisance species. Zebra mussel presence in Fort Gibson Lake was confirmed in 2010, and bighead carp have been confirmed in an upstream reservoir, Grand Lake.

Management objectives identified by ODWC in the Fort Gibson Lake Management Plan (Johnston & Foster, 2011) include:

- Maintain total largemouth bass catch rates at or above 100/hour with catch rates of largemouth bass >14 inches at or above 40/hour and relative weights that exceed 90% for all size groups.
- Maintain sufficient levels of forage species.
- Protect and enhance aquatic habitat.

Strategies to accomplish ODWC goals and objectives include the following: conducting sampling and populations of major sport fish and forage species; determining if current length and creel limits are appropriate; protecting and enhancing aquatic habitat; monitoring and assessing summer water quality in the forebay and tailrace of the dam; soliciting ideas for additional boating access; and, performing public outreach focused on threats and prevention of, aquatic nuisance species (Johnston & Foster, 2011).

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 Fort Gibson Lake, there are many opportunities for consumptive recreation (hunting and fishing) and non-consumptive recreation (hiking, nature study/wildlife viewing, birdwatching, photography, outdoor education).

The principle wildlife habitats exist on savannas, oak-hickory forests, old agricultural fields, and forested bottomlands. Each of these vegetative types provide habitat for a variety of organisms at all trophic levels. Most of the project lands have potential for supporting large numbers of desirable wildlife.

Game species found within the project area of influence include whitetail deer, bobwhite quail, mourning dove, fox squirrel, gray squirrel, cottontail rabbit, swamp rabbit, raccoon, turkey, and various waterfowl species. Other species include gray fox, bobcat, coyote, muskrat, beaver, common striped skunk, and opossum. Various species of migratory waterfowl and shorebirds are abundant in the area during the fall, winter, and early spring months.

The Fort Gibson Wildlife Management Area (WMA), managed by the ODWC, covers 21,798 acres in Wagoner and Cherokee Counties and is located north and east of Wagoner, OK. ODWC's primary objective in these areas is to manage game species with the understanding those actions benefit both game and non-game species. The WMA is a mixture of upland and bottomland habitats. Upland areas consist of tall grass prairie mixed with farm fields and brushy thickets. Bottomland areas consist of Crosstimbers oak forest with cottonwood and sycamores in and around Fort Gibson Lake. Game species of interest include white-tailed deer, bobwhite quail, cottontail rabbit, coyote, bobcat, raccoon, mourning dove, fox squirrel, and multiple waterfowl species. Within the WMA, 2,700 acres are planted to row crops annually, and controlled burns are utilized to manage upland habitats. A 3,500-acre waterfowl refuge, in the Jackson Bay area, is managed for waterfowl with nine wetland units and numerous fields planted to wheat, sunflower, milo, and millet (ODWC, 2014).

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 12.83 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 and the proposed changes in lighting, PFF, flotation, and stairways and walkways, 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 9 may occur on the Fort Gibson Lake project property.

Table 9 - Federally Listed Threatened and Endangered Species

Common Name	Scientific Name	Conservation Status	Likelihood of Occurrence
Gray Bat	*Myotis griscens*	Endangered	Unlikely

Common Name	Scientific Name	Conservation Status	Likelihood of Occurrence
Northern Long-eared Bat	*Myotis septentrionalis*	Threatened	Unlikely
Ozark Big-eared Bat	*Corynorhinus towsnendii ingens*	Endangered	Unlikely
Piping Plover	*Charadrius melodus*	Threatened	Unlikely
Red Knot	*Calidris canutus rufa*	Threatened	Unlikely
Whooping Crane	*Grus americana*	Endangered	Moderate
Ozark Cavefish	*Amblyopsis rosae*	Threatened	Unlikely
Neosho Mucket	*Lampsilis rafinesqueana*	Endangered	Unlikely
Rabbitsfoot Quadrula	*Quadrula cylindrica cylindrica*	Threatened	Unlikely
American Burying Beetle	*Nicrophorus americanus*	Threatened	Moderate

Table 10 - 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
Bobolink	*Dolichonyx oryzivorus*	Breeds 20-MAY to 31-JUL
Eastern Whip-poor-will	*Antrostomus vociferus*	Breeds 1-MAY to 20-AUG
Lesser Yellowlegs	*Tringa flavipes*	Breeds Elsewhere
Prothonotary Warbler	*Protonaria citrea*	Breeds 1-APR to 31-JUL
Red-Headed Woodpecker	*Melanerpes erythrocephalus*	Breeds 10-MAY to 10-SEP
Rusty Blackbird	*Euphagus carolinus*	Breeds Elsewhere
Semipalmated Sandpiper	*Calidris pusilla*	Breeds Elsewhere
Wood Thrush	*Hylocichla mustelina*	Breeds 10-MAY to 31-AUG

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 9. 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 9. The USFWS also provided a list of migratory bird species of conservation concern that may seasonally utilize Fort Gibson Lake, these species are listed in Table 10.

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

The USFWS reports are listed in Section 10 of this EA. Please note that the ONHI report that was also used to make effects determinations are not listed in Section 10, 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 12.83 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, 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 10 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. Any projects or construction that could impact the American Burying Beetle may require surveying to the standards of the USFWS and the Lake Manager. The American Burying Beetle may also experience minor long-term beneficial impacts as a result of an increase in Protected Shoreline Areas.

The proposed action is not likely to adversely affect any of the previously mentioned Threatened and Endangered spcies, due to any changes regarding land use and construction being written with the intent to conserve and improve existing habitat. Any of the Threatened and Endangered species are unlikely to experience any new adverse

impacts as a result of the proposed action, and are likely to experience some beneficial effect as a result of increases in PSA as well as proposed policy changes regarding PFFs, stairways and walkways, vegetation management, flotation materials, and lighting that are intended to decrease environmental impacts.

3.9 INVASIVE SPECIES

Fort Gibson Lake monitors and manages the presence of invasive species on its fee lands and waters. Both aquatic and terrestrial invasive species are listed in Table 11, which uses data from the OMBIL (USACE 2015).

The most significant invasive species present at Fort Gibson Lake is the zebra mussel (*Dreissana polymorpha*). Zebra mussels first appeared at Fort Gibson Lake in 2010, while other USACE Lakes in the area have had zebra mussels since the 90's. Zebra mussels are a critical invasive species to manage since they establish easily and rapidly in uninfected bodies of water and are easily spread by boats and ballast water. The zebra mussel can easily attach to any hard surface present in the Lake including docks, boats, piers, etc. This species is known to cause issues with intake and outflow structures, clogging pipes, and generally reducing aquatic habitat quality.

Table 11 - Invasive Species Occurring on Fort Gibson Lake Fee Lands & Waters

Species Group	Species Common Name	Species Scientific Name	Type of Occurrence	Acreage Impacted
Aquatic and Wetland Animals	Zebra Mussel	*Dreissena polymorpha*	Significant/Major	19,000
Terrestrial Animals	European Starling	*Sturnus vulgaris*	Moderate	10,000
Terrestrial Animals	Feral hog	*Sus scrofa*	Moderate	5,000
Terrestrial Plants	Red Cedar	*Juniperus virginiana*	Moderate	20,000
Terrestrial Plants	Chinese Bushclover	*Sericea lespedeza*	Moderate	20,000
Terrestrial Plants	Johnsongrass	*Sorghum halepense*	Moderate	20,000
Terrestrial Plants	Japanese Honeysuckle	*Lonicera japonica*	Minor	2,000
Terrestrial Plants	Chinese Privet	*Ligustrum sinense*	Minor	1,000
Terrestrial Plants	Musk Thistle	*Carduus nutans*	Minor	500
Terrestrial Plants	Tree of Heaven	*Ailanthus altissima*	Minor	20
Terrestrial Plants	False Grape	*Ampelopsis cordata*	Minor	50
Terrestrial Plants	Burr Cucumber	*Sicyos angulatus*	Minor	50
Terrestrial Plants	Hemp Sesbania	*Sesbania herbacea*	Minor	200

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 Fort Gibson Lake 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 Fort Gibson Lake SMP are compatible with the lake's invasive species management practices. The addition of the 12.83 mile increase in protected shoreline areas in the 2021 SMP will further add to these protections already provided by the 2016 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. Fort Gibson currently has 13 sites eligible for listing on the National Register for Historic Places (NRHP), with another 70 sites being ineligible, and 197 sites of unknown eligibility. It is an ongoing effort to identify and determine the eligibility of sites located at Ft. Gibson Lake for the National Register of Historic Places. As significant cultural resources are identified, they will be protected in accordance with federal law, and can be incorporated into protected shoreline areas. The cultural, historical, and archaeological resources are described in Section 3.7 of the Fort Gibson Lake MP and are incorporated herein by reference (USACE 2016).

Numerous cultural resources laws establish the importance of cultural resources to our Nation's heritage, including the National Historic Preservation Act (NHPA), NEPA, the Archaeological Resources Protection Act (ARPA), the Native American Graves Protection and Repatriation Act (NAGPRA) and other federal guidance. 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. Treatment of cultural sites and resources will continue to be managed as per the 2016 MP.

Under both Alternative 1 and 2 equally, it will be necessary to comply with federal environmental and cultural resources laws and regulations, as appropriate, when future actions are planned. These federal environmental laws and regulations include, but are not limited to, Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended); the National Environmental Policy Act (NEPA) of 1969; and the Endangered Species Act. Additionally, under both Alternative 1 and 2 equally, protection of cultural resources is authorized specifically by the Archaeological Resources Protection Act (ARPA) of 1979; Native American Graves Protection and Repatriation Act (NAGPRA); and Title 36 Code of Federal Regulations; among other laws and regulations.

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.

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 2016 MP, and would closely reflect changes made in the Master Plan intended to protect known cultural resources. The proposed action serves to further protect cultural resources and their associated areas by increasing the area of protected shoreline areas, as well as decreasing land disturbance by changing requirements and limitations on walkways, stairways, vegetation management, and construction. The proposed action would have minor to moderate beneficial impacts to cultural resources over the planning horizon of the project.

3.11 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

Zone of Interest: The zone of interest for this project regarding socioeconomics involves Adair, Cherokee, Delaware, Haskell, Mayes, McIntosh, Muskogee, Okmulgee, Rogers, Sequoyah, Tulsa, and Wagoner Counties in Oklahoma.

Population: The total population for the zone of interest is 1,148,555, as shown in Table 12. Tulsa County accounts for approximately 57% of the population in the zone of interest, with all other counties making up less than 10% each. The population in the zone of interest makes up approximately 29% of Oklahoma's total population. The population in the zone of interest is expected to grow approximately 54.5% by 2075, at a rate of 1% a year from 2018; Compared to the state of Oklahoma, which is expected to grow

approximately 41.0% by 2075, at a rate of 0.72% a year from 2018. The distribution of the population among gender is approximately 49.4% Male and 50.6% Female, as shown in Table 13.

Table 12 - 2010 Census Data, Population Estimates to 2018, and Population Projection to 2075

Geography	April 1, 2010 Census Data		Population Estimates (July)		Population Projection (2075)
	Census	Estimate	2010	2018	2075
State of Oklahoma	3,751,351	3,751,583	3,759,632	3,943,079	5,560,007
Adair County	22,683	22,683	22,738	22,082	34,158
Cherokee County	46,987	46,982	47,106	48,675	85,897
Delaware County	41,487	41,491	41,581	42,733	79,945
McIntosh County	20,252	20,252	20,261	19,815	31,852
Mayes County	41,259	41,263	41,307	41,107	68,504
Muskogee County	70,990	70,988	71,118	68,362	87,840
Okmulgee County	40,069	40,069	40,082	38,335	44,406
Rogers County	86,905	86,918	87,000	91,984	173,122
Sequoyah County	42,391	42,439	42,465	41,179	72,730
Tulsa County	603,403	603,437	605,008	646,360	934,215
Wagoner County	73,085	73,082	73,426	80,110	144,991
Haskell County	5,899	5,902	5,879	5,813	16,711
Estimated Zone of Interest Total				**1,148,555**	**1,774,371**

Table 13 - 2018 Population Estimate by Gender

Geography	Percent Male (%)	Percent Female (%)
State of Oklahoma	**49.5**	**50.5**
Adair County	49.9	50.1
Cherokee County	48.9	51.1
Delaware County	49.3	50.7
McIntosh County	49.4	50.6
Mayes County	50.0	50.0
Muskogee County	48.7	51.3
Okmulgee County	49.5	50.5
Rogers County	49.9	50.1
Sequoyah County	49.2	50.8

Geography	Percent Male (%)	Percent Female (%)
Tulsa County	48.8	51.2
Wagoner County	49.5	50.5
Haskell County	50.0	50.0
Zone of Interest Average	**49.4**	**50.6**

Table 14 shows the population by age group, some of which are combined for consistency with tables from the 2016 Master Plan. The distribution by age group is fairly consistent for each category, except for the combined categories (25-34, 35-44, 45-54, 65-74, and 75-84) which are mostly similar compared to each other, except the 75-84 category. The largest non-combined category for the zone of interest is the 10-14 age group, with the largest combined age group being the 25-34 age group.

Population by Race and Hispanic Origin is displayed in Table 15. For the zone of interest, approximately 63% of the population are Caucasian, 6.5% are African American, 9.6% are American Indian or Alaskan Native, 2% are Asian, 0.1% are Native Hawaiian or other Pacific Islander, 2.5% are Other, 8.4% are two or more races, and 8.2% are of Hispanic or Latino Origin.

Education and Employment: In the zone of interest, approximately 30% of the population 25 or older have achieved a high school diploma or equivalent as their highest form of education. Approximately 24% achieved some college with no degree, 9% have an associate's degree, 18% have a bachelor's degree, and 8% have a graduate or professional degree.

Employment by sector is presented in Table 17. In the zone of interest, the sector with the most employment is the Health Care & Social Assistance at 17%, with the Retail Trade following at 14%, the Manufacturing sector at 13%, and the Accommodation and Food Services at 11%. All other sectors are less than 10% each, with the smallest sector other than Industries Not Classified and Other services, is the Agriculture, Forestry, Fishing, and Hunting sector at 0.08%.

Table 18 displays the total labor force, employment, and unemployment rates for the zone of interest. The workforce within the zone of interest accounts for approximately 29% of Oklahoma's total workforce. The average employment rate for the zone of interest, 55%, is lower than the state of Oklahoma's employment rate of 61.4%. Compared to the state of Oklahoma, only 2 counties in the zone of interest, Rogers and Tulsa counties, have higher rates of employment at 64.2% and 67% respectively; all other counties have rates of employment lower than 55%. The average unemployment rate for the zone of interest, 7.3%, is higher than the state of Oklahoma's unemployment rate of 5.7%. Only 3 of the counties in the zone of interest Adair, Mayes, and Rogers, have unemployment rates lower than the state of Oklahoma's, at 5.5%, 5.3%, and 5% respectively; All other counties have a higher rate of unemployment, up to 10% as seen in Okmulgee county.

Table 14 - 2018 Population Estimates by Age

Geography	<5	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-59	60-64	65-74	75-84	85+
State of Oklahoma	260,429	267,797	270,110	264,140	273,690	543,218	490,388	460,310	255,026	238,418	358,646	187,711	73,196
Adair County	1,637	1,557	1,677	1,522	1,311	2,757	2,626	2,798	1,518	1,258	2,086	1,090	336
Cherokee County	2,775	3,046	3,034	3,721	5,374	5,951	5,479	5,278	3,035	2,852	4,790	2,513	827
Delaware County	2,153	2,230	2,592	2,479	2,191	4,366	4,246	4,580	3,300	3,300	3,275	5,166	1,018
Haskell County	764	820	861	821	668	1,438	1,525	1,472	876	853	1,456	831	283
Mayes County	2,442	2,636	2,810	2,692	2,358	4,905	4,916	5,085	2,848	2,839	4,468	2,405	703
McIntosh County	1,111	1,054	1,117	1,117	984	1,926	2,028	2,352	1,547	1,575	2,772	1,668	564
Muskogee County	4,471	4,665	4,748	4,612	4,326	8,807	8,384	8,032	4,502	4,382	6,568	3,480	1,385
Okmulgee County	2,295	2,522	2,596	2,733	2,472	4,585	4,267	4,463	2,676	2,485	4,074	2,287	880
Rogers County	5,355	5,808	6,321	6,325	5,667	11,484	11,171	12,182	6,666	5,924	8,814	4,692	1,575
Sequoyah County	2,581	2,396	2,734	2,689	2,418	4,841	4,631	5,410	2,959	2,547	4,522	2,510	770
Tulsa County	46,314	45,924	45,417	42,259	41,251	95,003	83,609	76,971	40,268	38,026	54,792	26,620	11,906
Wagoner County	4,756	5,563	5,731	5,192	4,259	10,358	10,440	10,208	5,455	5,091	7,999	3,896	1,162
Zone of Interest Total	76,654	78,221	79,638	76,162	73,279	156,421	143,322	138,831	75,650	71,132	105,616	57,158	21,409

Table 15 - 2017 American Community Survey Race/Ethnic Origin Estimates

Geographic Area	Caucasian	African American	American Indian & Alaska Native	Asian	Native Hawaiian & Other Pacific Islander	Other	Two or More Races	Hispanic or Latino
State of Oklahoma	**2,828,569**	**283,821**	**289,871**	**80,670**	**5,543**	**105,686**	**302,091**	**394,879**
Adair County	9,490	67	9,617	138	49	341	2434	1,407
Cherokee County	24,864	672	16,688	336	145	456	4,943	3,322
Delaware County	27,394	107	8,925	466	47	594	4,345	1,526
Haskell County	9,357	105	1,804	1,804	3	73	1,328	530
McIntosh County	13,922	549	3,283	33	10	30	2,047	517
Mayes County	27,623	220	5,957	175	108	119	6,727	1,364
Muskogee County	41,045	7,514	12,683	492	17	1,927	5,793	4,076
Okmulgee County	25,614	3,370	5,313	144	16	148	4,516	1,491
Rogers County	67,464	947	10,556	996	56	1,352	8,727	3,980
Sequoyah County	26,803	811	7,948	279	21	604	4,898	1,621
Tulsa County	447,002	63,631	29,880	19,434	552	24,872	51,752	77,359
Wagoner County	58,119	2,680	6,516	1,060	53	946	7,456	4,375
Zone of Interest Total	**778,697**	**80,673**	**119,170**	**25,357**	**1077**	**31,462**	**104,966**	**101,568**

Table 16 - American Community Survey 2013-2017 Education Attainment Estimates

Geography	Population 25 years and older	Less than 9th Grade	9th-12th grade, no diploma	High School Graduate & Equivalency	Some college, no degree	Associate's Degree	Bachelor's Degree	Graduate or Professional Degree
State of Oklahoma	**2,553,488**	**107,434**	**211,219**	**803,755**	**602,859**	**193,857**	**422,888**	**211,476**
Adair County	14,315	837	2,110	6,185	2,584	655	1,450	494
Cherokee County	30,014	1,296	3,099	9,663	7,109	1,654	4,760	2,433
Delaware County	30,075	1,135	3,488	11,190	7,032	2,259	3,213	1,758
Haskell County	8,663	436	1,109	3,459	1,730	787	969	257
Mayes County	27,701	1,150	2,699	10,742	6,859	1,989	2,941	1,321
McIntosh County	14,439	545	1,563	6,112	3,121	1,137	1,323	638
Muskogee County	46,106	1,529	5,313	16,761	9,891	3,910	6,141	2,561
Okmulgee County	25,862	968	2,437	9,171	6,484	3,030	2,621	1,151
Rogers County	59,989	1,581	3,402	20,084	15,189	5,616	10,040	4,077
Sequoyah County	28,253	1,523	3,714	10,817	5,817	2,440	2,768	1,120
Tulsa County	416,441	17,801	27,800	106,664	99,635	35,671	87,487	41,383
Wagoner County	51,623	1,448	3,799	17,221	12,853	4,600	8,482	3,220
Zone of Interest Total	**753,481**	**30,249**	**60,533**	**228,069**	**178,304**	**63,748**	**132,195**	**60,413**

Households, Income, and Poverty: Table 19 shows the number of households and average household size for the state of Oklahoma and the zone of interest in 2017. In the state of Oklahoma, there are approximately 1,712,841 homes with a median household size of 5.4 rooms. The median room size is used to eliminate outliers such as studio apartments versus mansions. The zone of interest, by comparison, has 511,029 households, approximately 30% of Oklahoma's homes, with an average median size of 5.36 rooms.

Table 20 shows the median household income as well as the per capita income for the state of Oklahoma and the zone of interest. As seen in the table, the average median household income and the average per capita income for the zone of interest are lower than the median household income and per capita income than the state of Oklahoma which are $49,767 and $26,461 respectively. Four of the counties in the zone of interest have a median household income higher than the state of Oklahoma; Muskogee, Rogers, Tulsa, and Wagoner counties have higher median household incomes of $52,304, $61,230, $52,017, and $67,452 respectively. Only three of the counties have a per capita income higher than the state of Oklahoma, being Rogers, Tulsa, and Wagoner Counties, with $29,824, $29,797, and $27,337 respectively.

Table 17 - Employment by Sector (2016)

Employment Sector	State of Oklahoma	Adair County	Cherokee County	Delaware County	Haskell County	Mayes County	McIntosh County	Muskogee County	Okmulgee County	Rogers County	Sequoyah County	Tulsa County	Wagoner County
Total	**1,360,379**	**3,102**	**1,283**	**7,580**	**2,468**	**10,181**	**3,130**	**23,234**	**6,795**	**27,747**	**7,324**	**335,082**	**8,548**
Agriculture, Forestry, Fishing, & Hunting	733	313	a	a	x	a	x	a	4	a	a	26	x
Mining, Quarrying, Oil & Gas Extraction	40,201	a	25	a	212	c	6	58	44	580	124	5,412	18
Utilities	8,725	b	89	b	b	19	13	266	b	c	b	1,904	5
Construction	72,570	65	352	460	136	918	117	1,363	175	3,125	210	17,118	918
Manufacturing	129,975	1,020	129	632	b	2,865	48	3,340	1,357	6,725	310	38,037	1,912
Wholesale Trade	58,394	80	861	54	35	426	26	863	110	955	74	16,352	355
Retail Trade	186,499	550	1,762	1,524	481	1,832	946	3,501	1,290	3,044	1,247	41,617	1,514
Transportation & Warehousing	47,463	59	8	69	269	188	54	779	64	1,795	146	11,333	166
Information	27,919	10	122	56	b	59	7	334	36	483	82	10,285	61

Employment Sector	State of Oklahoma	Adair County	Cherokee County	Delaware County	Haskell County	Mayes County	McIntosh County	Muskogee County	Okmulgee County	Rogers County	Sequoyah County	Tulsa County	Wagoner County
Finance & Insurance	60,301	131	341	331	63	313	157	578	325	825	382	15,470	286
Real Estate, Rental, & Leasing	22,786	11	167	260	a	43	34	196	43	238	24	7,226	56
Professional, Scientific, & Technical Services	73,514	75	119	189	49	409	127	549	195	919	117	20,437	271
Management Of Companies & Enterprises	38,100	a	127	5	a	14	b	217	36	462	a	10,763	b
Administrative & Support & Waste Management & Remediation Services	102,931	a	362	283	23	368	77	957	198	988	444	23,603	462
Educational Services	21,515	x	156	a	x	b	x	380	a	40	x	7,929	30
Health Care & Social Assistance	221,349	515	2,706	1,229	796	1,049	807	5,675	1,505	2,903	2,410	53,965	833
Arts, Entertainment, & Recreation	29,878	a	217	426	x	39	41	532	c	g	173	4,807	164
Accommodation & Food Services	154,255	313	1,283	1,615	133	1,139	463	2,669	871	2,249	1,351	33,042	1,097
Other Services	63,126	58	467	377	85	369	139	970	304	930	184	15,737	380
Industries Not Classified	145	x	a	x	x	a	x	a	a	a	a	19	x

a = 0 to 19 employees; b = 20-99 employees; c = 100-249 employees; g = 1,000-2,499; x = data unavailable

Table 18 - American Community Survey 2017 Employment Status Estimates

Geography	Workforce Population	Employment Rate (%)	Unemployment Rate (%)
State of Oklahoma	**3,043,261**	**61.4**	**5.7**
Adair County	16,885	51.1	5.5
Cherokee County	36,602	54.6	7.9
Delaware County	34,192	50.1	8.3
Haskell County	10,030	51.0	8.9
McIntosh County	16,251	47.5	8.5
Mayes County	32,393	56.0	5.3
Muskogee County	54,180	53.3	6.9
Okmulgee County	30,813	54.2	10.0
Rogers County	70,828	64.2	5.0
Sequoyah County	32,897	52.1	8.7
Tulsa County	491,744	67.0	5.9
Wagoner County	59,756	60.0	6.4
Zone of Interest Total/Avg %	**886,571 (total)**	**55.09 (avg.)**	**7.28 (avg.)**

Table 19 - American Community Survey 2017 Households and Household Size

Geography	Total Number of Households	Median Household Size (Rooms)
State of Oklahoma	**1,712,841**	**5.4**
Adair County	9,305	5.2
Cherokee County	21,983	5.1
Delaware County	25,290	5.2
Haskell County	6,113	5.3
McIntosh County	13,636	4.8
Mayes County	19,455	5.4
Muskogee County	30,948	5.6
Okmulgee County	17,862	5.5
Rogers County	37,093	5.7
Sequoyah County	19,061	5.1
Tulsa County	278,844	5.5
Wagoner County	31,439	5.9
Zone of Interest Total / Avg.	**511,029**	**5.36**

Table 20 - American Community Survey 2017 Household Income and Per Capita Income

Geography	Median Household Income	Per Capita Income
State of Oklahoma	**49,767**	**26,461**
Adair County	33,366	16,576
Cherokee County	39,187	19,799
Delaware County	38,234	22,175
Haskell County	38,017	20,009

Geography	Median Household Income	Per Capita Income
McIntosh County	38,163	22,241
Mayes County	45,302	22,575
Muskogee County	52,304	21,800
Okmulgee County	39,567	21,436
Rogers County	61,230	29,824
Sequoyah County	37,455	19,253
Tulsa County	52,017	29,797
Wagoner County	67,452	27,337
Zone of Interest Average	**45,191.17**	**22,735.17**

Table 21 - American Community Survey 2017 Poverty Level Assessment

Geography	Population Assessed	Persons Below Poverty Level (%)
State of Oklahoma	**3,780,828**	**16.2**
Adair County	21,873	30.8
Cherokee County	46,607	21.1
Delaware County	41,336	19.0
Haskell County	12,625	19.2
McIntosh County	19,571	18.5
Mayes County	40,229	19.2
Muskogee County	65,584	21.9
Okmulgee County	37,635	19.5
Rogers County	88,586	9.4
Sequoyah County	40,798	24.6
Tulsa County	627,168	15.5
Wagoner County	76,337	10.7
Zone of Interest Average	**93,195.75**	**19.12**

Table 21 shows the percent of the population living below the poverty level in 2017 for the state of Oklahoma and the zone of interest. Three counties in the zone of interest have a lower percentage of persons living below the poverty level compared to the state of Oklahoma at 16.2%. These three counties are Rogers, Tulsa, and Wagoner counties, with 9.4%, 15.5%, and 10.7% of persons living below the poverty level. Adair county has a significantly higher percentage of persons living in poverty compared to both the state of Oklahoma and counties in the zone of interest, with 30.8% of persons living below the poverty line.

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 $26,500 for a family of four in 2021 with two children under 18 (US Census Bureau, 2021). 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 Fort Gibson Lake 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 Proposed Action.

3.11.2 Alternative 2: Proposed Action

Fort Gibson Lake 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 2.8 of the 2016 MP provides analysis of recreation needs for Fort Gibson Lake; Section 3.1.3 of the 2016 MP details the recreational objectives support improving and modernizing recreation opportunities at Fort Gibson Lake 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 Fort Gibson Lake come from within a 100 mile radius of the lake area. Fort Gibson Lake visitors are a diverse group ranging from campers who utilize the campgrounds around the lake, full time and part time residents that border the lake, hunters who utilize the Wildlife Management Areas around the lake, day users who picnic in the city, state and federally operated parks, marina customers and many other user groups. The peak visitation months on Fort Gibson Lake are April through September when 89% of the visits occur. June is the highest visitation month and accounts for 17 to 19% of the annual total. Approximately 50% of visits to recreation areas occur in USACE managed recreation areas. Recreational analysis, facilities, and needs are discussed in section 2.8 of the 2016 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 Fort Gibson Lake 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 Fort Gibson Lake 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 2016 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 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.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

Fort Gibson Lake is located in the unique Central Irregular Plains ecoregion, which is comprised of tallgrass prairie, forests, and woodland 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. Fort Gibson Lake 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 Fort Gibson Lake. More specifically, Fort Gibson Lake is mostly comprised of the Osage Cuestas ecoregion, which is known for undulating plains, distinct topography, tallgrass prairies, and oak-hickory forests. An increase in protected shoreline areas will continue to protect and preserve valuable cultural and environmental resources that contribute to the aesthetic properties of Fort Gibson Lake. 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 12.83 mile increase in PSAs, as well as proposed changes to construction of walkways, PFFs, and electrical lines 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 Fort Gibson Lake.

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 Fort Gibson Lake 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, Fort Gibson Lake 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 Fort Gibson Lake 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 Fort Gibson Lake 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. Changes to vegetation management, electrical lines, walkway requirements and private floating facilities as a result of the 2021 SMP will improve public health and safety. Overall there are no shoreline allocations that would have any impact on human health or safety. Existing regulations and safety programs throughout the Fort Gibson Lake 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.

3.16 SCENIC AND WILD RIVERS

Pursuant to the Wild and Scenic River Act (Public Law 90-542), Wild River Areas are defined as those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. Scenic river areas are defined as those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads. There are no designated wild and scenic rivers in the State of Oklahoma, nor are any streams in the Fort Gibson watershed designated as 'scenic rivers' pursuant to the Oklahoma Scenic Rivers Act (82 O.S. § 1451-1470 as amended).

Certain segments of tributary streams to the reservoir are designated as 'high quality waters' by the State of Oklahoma indicating existing water quality exceeds levels necessary to support propagation of fish, shellfish, wildlife and recreation in and on the water. Portions of streams with this designation in the watershed include Fourteen Mile Creek, Spring Creek, Little Spring Creek, and Snake Creek.

Under the Proposed Action, there would be no adverse impacts to Scenic and Wild Rivers.

3.16.1 Alternative 1: No Action Alternative

Under the No Action Alternative, the 1996 SMP would not be revised. No major, adverse, long-term impacts on Scenic and Wild Rivers or the hiqh quality waters would be expected.

3.16.2 Alternative 2: Proposed Action

Under the Proposed Action, there would be no negative effects to Scenic and Wild Rivers, or the areas of streams and rivers considered high quality waters by the State of Oklahoma. There may be minor beneficial effects to these waters due to the increase in PSA.

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

Fort Gibson Lake is approximately 55 miles from the large metropolitan area of Tulsa, Oklahoma. As the city expands and populations increase, there will be projects in the vicinity of Lake zone of interest. Listed below are several road and bridge improvement projects that are near Fort Gibson Lake.

The websites of several organizations were reviewed to determine significant planned or projected road projects within the area of influence. The agency website for the Oklahoma Department of Transportation (ODOT) was used to determine the location of any road or bridge projects. Review of this information did not show any major projects of significance to the zone of interest, but did show many small projects such as road improvements, resurfacing, widening, utility easements, right of ways, and bridge repair or bridge construction. These minor projects are available to view on the ODOT website’s GIS hub.

Reasonably foreseeable future development is difficult to predict with certainty in the Fort Gibson Lake area. Given the proximity of the lake to the Tulsa metropolitan area, future development is anticipated due to increased recreational needs.

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 Fort Gibson Lake 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 Fort Gibson Lake, when combined with past and proposed actions in the region, are anticipated to be minimal.

4.2.2 Water Resources

Fort Gibson Lake 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 Fort Gibson Lake, 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 Fort Gibson Lake are anticipated to be negligible when combined with past and proposed actions in the area.

4.2.3 Air Quality

For the area surrounding Fort Gibson Lake, 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 Fort Gibson Lake 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 Fort Gibson Lake 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 Fort Gibson Lake grounds. Cumulative adverse impacts on topography, geology, and soils within the area surrounding Fort Gibson Lake, when combined with past and proposed actions in the region, are anticipated to be negligible on the long-term basis.

Land use around Fort Gibson Lake 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 Fort Gibson Lake 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 Fort Gibson Lake, 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 ODWC to preserve, enhance, and protect critical wildlife habitat resources.

Projects proposed within the Fort Gibson Lake 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. Therefore, there would be minor long-term beneficial impacts on

threatened and endangered species resulting from the revision of the 1996 Fort Gibson Lake 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 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 Fort Gibson Lake.

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 Fort Gibson Lake invasive species management practices as described in the 2016 MP. Therefore, there would be minor, long-term, beneficial impacts on reducing and preventing invasive species within the area surrounding Fort Gibson Lake.

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 2016 MP.

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 Fort Gibson Lake as a result of implementing the revised shoreline allocations. The potential 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 Fort Gibson Lake area, are anticipated to have negligible long-term beneficial impacts.

4.2.10 Recreation

Fort Gibson Lake is beneficial to the local visitors and also offers a variety of free recreation opportunities. Some of the popular recreation activities at Fort Gibson Lake 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 2016 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 no adverse effects to recreation.

4.2.11 Aesthetic Resources

Fort Gibson Lake 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 Fort Gibson Lake.

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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, 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 and OWRB 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 Oklahoma State Historic Preservation Officer. 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 Fort Gibson Lake. The 2021 SMP would not impact Prime Farmland present on Fort Gibson Lake.

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 Fort Gibson Lake project lands.

Executive Order 12898, Environmental Justice – This EO directs federal agencies to achieve environmental justice to the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review. Agencies are required to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. The 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 Fort Gibson Lake 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. The USACE hosted a public scoping meeting on February 25, 2020 at the Wagoner Civic Center in Wagoner, OK. The Tulsa District placed advertisements on the USACE webpage and provided news releases to media prior to the public scoping meetings.

The USACE hosted an online public presentation due to COVID-19 to inform the public of the Draft release for the 2021 Fort Gibson Lake SMP and SMP-EA, with a public comment period that went from May 20 through June 21, 2021. The comments received from the public have been incorporated into their respective documents. The SMP and comments are available at: https://www.swt.usace.army.mil/Missions/Recreation/Shoreline-Management-Plans/. All public coordination documents are in Section 11 of this document.

SECTION 8: REFERENCES

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SECTION 9: ACRONYMS/ABBREVIATIONS

%	Percent
°	Degrees
AQCR	Air Quality Control Regions
ARPA	Archaeological Resources Protection Act
BMP	Best Management Practices
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
cfs	cubic-feet per second
CI	Critically Imperiled
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
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
M	Meter
MCL	Maximum Containment Level
mg/L	Milligrams per Liter
mg/m3	Milligrams per cubic meter
mmBtu	Million British Thermal Units
MP	Master Plan
mW	Megawatts
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NEC	National Electric Code
NEPA	National Environmental Policy Act
NGVD	National Geodetic Vertical Datum
NHPA	National Historic Preservation Act
NOx	Nitric Oxide
NRCS	National Resources Conservation Service

NRHP	National Register of Historic Places
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
SGCN	Species of Greatest Conservation Need
SMCL	Secondary Maximum Containment Level
SMP	Shoreline Management Plan
SO2	Sulfur Dioxide
SWT	Southwestern District - Tulsa
T	Threatened
US	United States
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
V	Vulnerable
VOC	Volatile Organic Compounds
WRDA	Water Resources Development Act

SECTION 10: AGENCY COORDINATION DOCUMENTS

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:
Consultation Code: 02EKOK00-2020-SLI-0589
Event Code: 02EKOK00-2021-E-06443
Project Name: Fort Gibson Shoreline Management Plan

July 20, 2021

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

To Whom It May Concern:

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

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

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

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

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

Project Summary

Consultation Code: 02EKOK00-2020-SLI-0589
Event Code: 02EKOK00-2021-E-06443
Project Name: Fort Gibson Shoreline Management Plan
Project Type: LAND - MANAGEMENT PLANS
Project Description: This project is essentially a zoning project for the Fort Gibson shoreline. There will be no construction or otherwise disturbance-related impacts. The project primarily concerns recreation access and environmental stewardship of any sensitive areas along the shoreline.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@36.0676421337083,-95.36410551067311,14z

Counties: Cherokee, Mayes and Wagoner counties, Oklahoma

Endangered Species Act Species

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

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

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

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

Mammals

NAME	STATUS
Gray Bat *Myotis grisescens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened
Ozark Big-eared Bat *Corynorhinus (=Plecotus) townsendii ingens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7245	Endangered

Birds

NAME	STATUS
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane *Grus americana* Population: Wherever found, except where listed as an experimental population There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/758	Endangered

Fishes

NAME	STATUS
Ozark Cavefish *Amblyopsis rosae* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6490	Threatened

Clams

NAME	STATUS
Neosho Mucket *Lampsilis rafinesqueana* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3788	Endangered
Rabbitsfoot *Quadrula cylindrica cylindrica* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5165	Threatened

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.

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

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 Aug 31

NAME	BREEDING SEASON
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Eastern Whip-poor-will *Antrostomus vociferus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Kentucky Warbler *Oporornis formosus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20
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
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
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
Rusty Blackbird *Euphagus carolinus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Semipalmated Sandpiper *Calidris pusilla* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability Of Presence Summary

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

Probability of Presence (■)

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

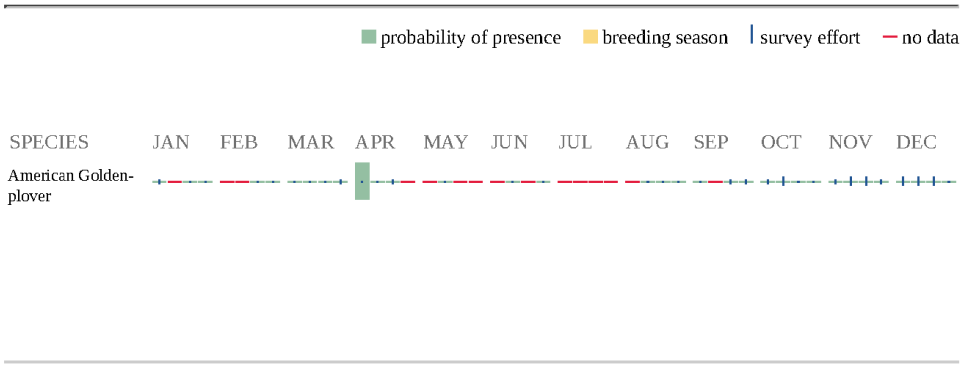
1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability 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 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

LAKE

- L1UBHh
- L1UBHx
- L2UBFh
- L2USCh

FRESHWATER POND

- PAB4H
- PAB4Hx
- PUBF
- PUBFh
- PUBFx
- PUBH
- PUBHh
- PUBHx
- PUSC

FRESHWATER EMERGENT WETLAND

- PEM1A
- PEM1Ah
- PEM1C
- PEM1Ch
- PEM1F
- PEM1Fh

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1/EM1Ah

- PFO1/EM1C
- PFO1/EM1Ch
- PFO1/SS1A
- PFO1/SS1Ah
- PFO1/SS1C
- PFO1/SS1Ch
- PFO1A
- PFO1Ah
- PFO1C
- PFO1Ch
- PFO1Fh
- PFO5/UBH
- PFO5/UBHh
- PSS1/EM1A
- PSS1/EM1Ad
- PSS1/EM1Ah
- PSS1/EM1C
- PSS1/EM1Ch
- PSS1A
- PSS1Ah
- PSS1C
- PSS1Ch
- PSS1F
- PSS1Fh

RIVERINE

- R2UBH
- R2USC
- R4SBC
- R5UBF

SECTION 11: PUBLIC COORDINATION DOCUMENTS

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, TULSA DISTRICT
2488 EAST 81st STREET
TULSA, OKLAHOMA 74137-4290

February 6, 2020

Public Notice

Public Meeting for Fort Gibson Lake Shoreline Management Plan Revision, Fort Gibson Lake, Grand – Neosho River Basin Wagoner, Cherokee, and Mayes Counties, Oklahoma

The Tulsa District, U.S. Army Corps of Engineers (USACE) is revising the Fort Gibson Lake Shoreline Management Plan (Plan). An open house public meeting will be held from **6:00 pm to 8:00 pm** on **February 25, 2020 at Wagoner Civic Center, 301 South Grant Ave., Wagoner, OK 74467**. 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 February 26, 2020 through March 26, 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 allocations is defined in ER 1130-2-406. The Plan is meant to compliment the 2016 Fort Gibson Lake 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 2016 Fort Gibson Lake Master Plan, and honor past commitments at Fort Gibson Lake. **Public participation is critical to the successful revision of the Plan**. Information provided at the open house public meetings, including the existing Plan, may be viewed on the Tulsa District website at the following link beginning February 26, 2020: https://www.swt.usace.army.mil/

Comments must be submitted in writing and can be given to USACE staff at the open house public meetings, emailed to Jonathan.Polk@usace.army.mil, or mailed to: Jonathan Polk, Fort Gibson Lake Manager, 8568 St. Hwy. 251A, Fort Gibson, OK 74434. For questions, you may contact Jonathan Polk at the aforementioned email or via telephone at 918-682-4314.

Sincerely,

Amanda M. McGuire
Chief, Environmental Branch
Regional Planning and Environmental Center

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, TULSA DISTRICT
2488 EAST 81st STREET
TULSA, OKLAHOMA 74137-4290

MAY 11, 2021

PUBLIC NOTICE

**DRAFT 2021 FORT GIBSON LAKE SHORELINE MANAGEMENT PLAN AND ENVIRONMENTAL ASSESSMENT
FORT GIBSON LAKE, GRAND – NEOSHO RIVER BASIN
WAGONER, CHEROKEE, AND MAYES COUNTIES, OKLAHOMA**

The Tulsa District, U.S. Army Corps of Engineers (USACE), hereby informs the public of the release of the 2021 Draft Fort Gibson Lake Shoreline Management Plan (Plan) and Environmental Assessment (EA) for review and comment.

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 allocation is defined in ER 1130-2-406. The Plan is meant to compliment the 2016 Fort Gibson Master Plan.

In lieu of a face-to-face public meeting due to the COVID-19 Pandemic, USACE will provide a virtual presentation that gives an overview of the proposed changes to the current shoreline management plan and instructions on how to submit comments. A 30-day public comment period will begin on **May 20, 2021 and end on June 21, 2021**. The draft Plan, EA, and comment instructions will be available for download starting May 20, 2021 at the following Tulsa District website:

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

Comments must be submitted in writing and can be emailed to Jim Montgomery, Assistant Lake Manager at James.R.Montgomery@usace.army.mil or mailed to Jim Montgomery, 8568 State Hwy 251A, Fort Gibson, Oklahoma 74434. Questions can also be sent using the previously mentioned email and mail addresses or by calling Jim Montgomery at 918-682-4314.

Sincerely,

Amanda McGuire

Amanda M. McGuire
Chief, Environmental Branch
Regional Planning and Environmental Center

News Release

Corps seeks public comment for draft Fort Gibson Lake Shoreline Management Plan revision

U.S. Army Corps of Engineers, Tulsa District

The 30-day public comment period for the review of the draft Fort Gibson Lake Shoreline Management Plan revision begins May 20, 2021 and will conclude June 21, 2021.

Information related to the draft shoreline management plan, public comment forms, and video of the shoreline management presentation, are available on the Tulsa District website at https://www.swt.usace.army.mil/Missions/Recreation/Shoreline-Management-Plans/.

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 USACE federally owned fee property.

The Shoreline Management Plan is intended to be complimentary to the 2016 Fort Gibson Lake Master Plan. The current Fort Gibson Lake SMP was implemented in 1996. The updated SMP will incorporate changes to federal laws and regulations related to public land management.

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

Jim Montgomery
Assistant Lake Manager, Fort Gibson Lake
8568 State Hwy 251A
Fort Gibson, OK 74434

918-682-4314

James.R.Montgomery@usace.army.mil

Please note that all comments regarding the Shoreline Management Plan revision must be in writing.