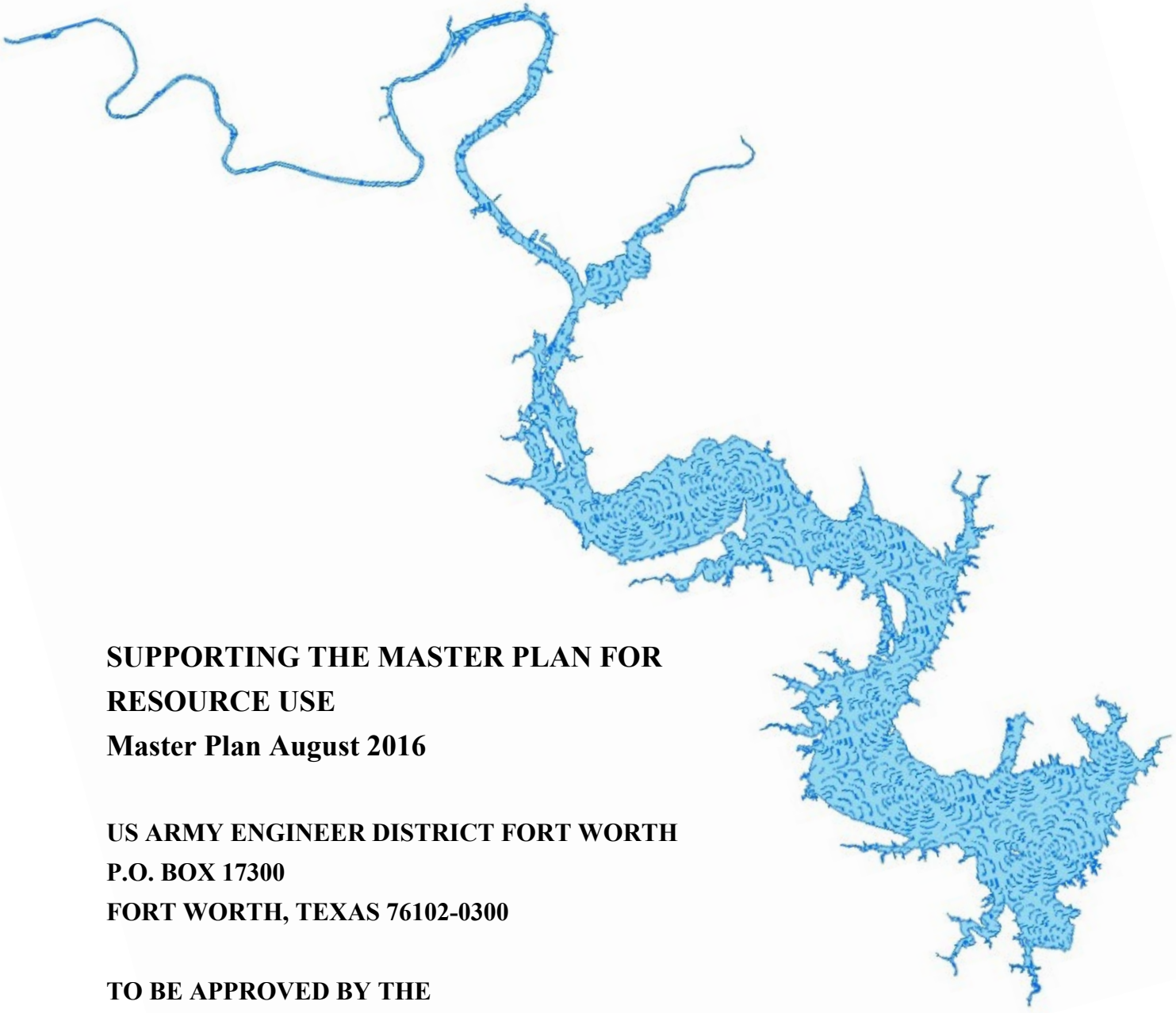
WHITNEY LAKE
SHORELINE MANAGEMENT PLAN
February 2020



SUPPORTING THE MASTER PLAN FOR RESOURCE USE
Master Plan August 2016

US ARMY ENGINEER DISTRICT FORT WORTH
P.O. BOX 17300
FORT WORTH, TEXAS 76102-0300

TO BE APPROVED BY THE
DIVISION ENGINEER

EXECUTIVE SUMMARY

PURPOSE

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

VISION

Whitney Lake is a flood control project and is managed to protect, conserve, and sustain natural and cultural resources, especially environmentally sensitive resources, and provide outdoor recreation opportunities that complement overall project purposes for the benefit of present and future generations.

PUBLIC INPUT

The 2020 SMP revision included public participation that included a scoping meeting held 15 May 2019 in Whitney, Texas with approximately 113 people in attendance. A total of 36 individual comments were received during 30-day public comment period, ending 15 June 2019, a summary of which can be found in Appendix G. The public meeting to review the final draft will be held in February 2020.

PRIMARY CHANGES FROM THE 1976 LAKESHORE MANAGEMENT PLAN

Changes to shoreline allocations were a result of the recognition of historical uses, changes in federal regulations, public input, and alignment with the 2016 Whitney Lake Master Plan. Changes to shoreline allocations from the 1976 Lakeshore Management Plan to the 2019 SMP are found in Appendix H. In accordance with the National Environmental Protection Act and Engineering Regulation 1130-2-406, a draft Environmental Assessment (EA) was prepared to evaluate impacts of the proposed action on the human environment. The draft EA and Finding of No Significant Impact (FONSI) are included in the draft SMP in Appendix I. Add this statement to section 2.2 of the report as well.

WHITNEY LAKE

SHORELINE MANAGEMENT PLAN

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SECTION 1: INTRODUCTION

1.1 Purpose: The purpose of the Shoreline Management Plan (SMP) is to establish policies and set guidelines by which the U.S. Army Corps of Engineers (USACE) manages use of public lands and waters along the shoreline of Whitney Lake.

1.2 Objective: The objective of the SMP is to protect and manage shorelines of all Civil Works water resource development projects under USACE jurisdiction in a manner that will promote the safe and responsible management of the shoreline, and maintain environmental safeguards to ensure a quality resource for use by the public, while supporting the greater project missions of flood protection and hydropower. The objective of all management actions will be to achieve a balance between permitted private uses and resource protection for general public use.

1.3 Authority: Engineer Regulation (ER) 1130-2-406, *Shoreline Management at Civil Works Projects*, originally dated 13 December 1974, and revised in 1990, 1992, and 1999, provides specific authority and directive to implement the Shoreline Management Plan (SMP).

1.4 References: The management and stewardship of lands and waters at USACE water resource development projects is guided by numerous Public Laws (PL), Executive Orders (EO), and ER that bear significantly on the shoreline management program. A comprehensive listing of these references can be found in ER 1130-2-540, *Environmental Stewardship Operations and Maintenance Policies*. A copy of ER 1130-2-540 and ER 1130-2-406 is available electronically at the USACE website at www.usace.army.mil.

- PL 91-190, National Environmental Policy Act of 1969, as amended (42 USC 4231, et seq.), 1 January 1970.
- The Clean Water Act (33 U.S.C. 1344, et seq.).
- PL 86-717, Forest Cover Act, (74 Stat. 817, 16 U.S.C. 580m et seq.), 6 September 1960.
- 16 USC. 470aa - 470mm, PL 100-588; 102 Stat. 2983, Archaeological Resources Protection Act (ARPA) of 1979, as amended.
- PL 93-205, Endangered Species Act of 1973, as amended (87 Stat 884, 16 USC 1531(b)).
- Executive Order 11990, Protection of Wetlands, 24 May 1977.
- Executive Order 13112, Invasive Species, 03 February 1999.

- Executive Order 11644, Use of Off-Road Vehicles on Public Lands, 08 February 1972.
- Engineer Regulation ER 1130-2-406, Shoreline Management at Civil Works Projects, 31 October 1990.
- Engineer Regulation ER 1130-2-540, Environmental Stewardship Operations and Maintenance Policies, 15 November 1996.
- Engineer Pamphlet EP 1130-2-550, Recreation Operations and Maintenance Guidance and Procedures, 15 November 1996.
- Section 4, 1944 Flood Control Act, as amended, Public Law 87-874.

SECTION 2: PUBLIC INVOLVEMENT AND RELATED ACTIONS

2.1 Shoreline Management History: During the period between 1955 and 1970, there was a proliferation of private use of public land by adjacent private landowners. The relatively unregulated increase of private facilities and various shoreline use activities resulted in a loss of environmental and aesthetic qualities, as well as a loss of public outdoor recreation opportunities. After several years of intense public and political interest, USACE published a new regulation, ER 1130-2-406, on 13 December 1974, titled Lakeshore Management at Civil Works Projects which was republished in October 1990 as Shoreline Management at Civil Works Projects. The ER established significant new restrictions on private use of the shoreline at USACE lakes. The regulation prohibited the construction of private floating facilities (boathouses) on newly constructed lakes and existing lakes with no boathouses present prior to 13 December 1974. Lakes with pre-existing boathouses were required to establish a Lakeshore Management Plan to describe how the shoreline would be managed. In order to comply with the requirements of the new ER, a Lakeshore Management Plan was drafted for Whitney Lake. Development of this plan included public meetings, workshops, and a lengthy public comment period. The final version of the Whitney Lake Lakeshore Management Plan was approved in August 1976.

2.2 Revision Summary: In 2019, USACE initiated a revision of the 1976 Lakeshore Management Plan. The Lakeshore Management Plan was revised to align with the 2016 Whitney Lake Master Plan, incorporate current terminology (such as “Shoreline Management” instead of “Lakeshore Management”) and to insure compliance and compatibility with ER 1130-2-406 and ER 1130-2-540, as well as Fort Worth District policy decisions related to shoreline management. The primary reasons for the revision of the Lakeshore Management Plan is to incorporate language that supports the natural resources mission statement to “manage and conserve natural resources consistent with ecosystem management principles” as set forth in ER 1130-2-540, and align the Shoreline Management Plan (SMP) with the 2016 Whitney Lake Master Plan, all while ensuring public participation. Appendix H of this plan describes the changes made herein.

2.3 Public Involvement: The public has been involved in the draft of this SMP through their written comments submitted subsequent to the initial public meeting. Approximately 113 people attended the initial public meeting held 15 May 2019 in Whitney, Texas. The meeting was followed by a 30-day public comment period, during which 41 individual comments were received. A summary of the public comments and USACE response can be found in Appendix G. A second public meeting will occur in February 2020, followed by another 30-day comment period.

SECTION 3: PROJECT DESCRIPTION

3.1 General: Whitney Lake was authorized by the Flood Control Acts of 18 August 1941 (Public Law 228, 77th Congress, 1st Session) and 22 December 1944 (Public Law 534, 78th Congress, 2nd Session) to provide flood control, hydroelectric power, water conservation for domestic and industrial uses, recreation opportunities, and other beneficial water uses. Construction of the dam was started in 1947 and completed in 1950. Construction of the powerhouse started in 1950 and was completed in 1953, with two Francis-type turbines capable of producing 15,000 kW of power each. The turbines were upgraded in 2014, increasing the power production capability to 22,300 kW each. The main body of the lake is located along the common boundary of Hill and Bosque Counties with the far upper reaches of the lake along the common boundary of Somervell and Johnson Counties. Whitney Lake encompasses a total of 52,693 fee simple acres and has a flood capacity of 1,999,500 acre-feet of water (based on Geographic Information System (GIS) technology). The lake covers 23,560 surface acres and has a capacity of 554,203 acre feet at the conservation pool level elevation of 533 foot National Geodetic Vertical Datum (NGVD29) and another 9,122 acres of flowage easement at the 573 foot NGVD29 contour. Approximately 25 miles of the shoreline is made up of vertical bluffs, which rise 15 feet or more from the water's edge. An additional 115 miles of shoreline offers steep banks adjacent to deep water, and roughly 85 miles of the shoreline provides gently sloping banks.

3.2 Definitions/Terms:

3.2.1 Government Owned (Public) Land: Land that is owned in fee by the government consists of both the land where Whitney Lake is located and the surrounding property. The limits of this public land are defined by USACE boundary line, the corners of which are marked by concrete markers or monuments, each topped with a bronze cap indicating a specific tract and monument number. The boundary line may or may not be delineated by a fence.

3.2.2 Flowage Easement Land: Flowage Easement Land is privately owned land on which USACE has acquired certain perpetual rights. The flowage easement estate conveys to the Government the right to periodically inundate the land for project operations purposes and to prevent human habitation on the easement or placement of fill material and changing contours in a manner that would reduce flood storage capacity. The flowage easement at Whitney Lake is generally located between the Government boundary line and the 573 feet contour (NGVD29). A complete description of the flowage easement can be found in the deed to the property. Formal written authorization and coordination with Fort Worth District Operations and Real Estate Divisions is required for placement of structures or changing of natural contours on the flowage easement.

3.3 Overview: A complete description of the environmental and socioeconomic setting, as well as a brief overview of the technical flood and water supply operational factors influencing the management of natural resources and public use at the lake can be found in the project Master Plan, dated August 2016, available at the project office and online at

USACE, Fort Worth District website at https://www.swf.usace.army.mil/About/Lakes-and-Recreation-Information/.

3.4 Public Use Areas: USACE operates the following parks on Whitney Lake where user fees are charged: East Lofers Bend Park, West Lofers Bend Park, Lofers Bend Day Use Park, McCown Valley Park and Day Use, Cedron Creek Park, Plowman Creek Park, and Kimball Bend Park. All fee parks combined provide 376 campsites, eight boat ramps, three group camping areas with pavilions, nine playgrounds, a hiking trail, 29 day use picnic sites, two swim beaches and 18 restrooms. The following no-fee or "free" parks on Whitney Lake include: Riverside Park, Cedar Creek Park, Steele Creek Park, Nolan River Park, Walling Bend Park, and Soldiers Bluff Park. These parks provide limited multi-use facilities (can be used for either camping or picnicking) and very basic amenities. The free parks combined provide 73 multiple use sites, eight restrooms, six boat ramps and three group use shelters. There are four additional parks at Whitney Lake, which are covered by a real estate outgrant lease that provides numerous public amenities: Hamm Creek in Johnson County, Chisholm Trail Park, Lake Whitney State Park, and the Whitney City Park in Hill County.

3.5 Commercial Concessions: Multiple public facilities and commercial establishments are located at Whitney Lake, and offer a variety of services to the general public, such as mooring of vessels and lake access. There are four marinas located at Whitney Lake including Harbor Master, Juniper Cove, Uncle Gus' and White Bluff. Harbor Master Marina is located in Hill County and provides 75 wet slips, dry storage slips, campsites, a restroom, boat ramp, and boat rental. Juniper Cove Marina is located in Hill County and provides 125 wet slips, dry storage slips, cabins, campsites, restrooms, boat ramps, boat rental, gas, and store. Uncle Gus Marina is located in Bosque County and provides 181 wet slips, boat ramp, boat rental, gas, store, and courtesy dock. White Bluff Marina is located in Hill County and provides 104 wet slips, a boat ramp and gas. USACE policy gives preference to the public use of commercial marina concessions.

Table 1: Marinas at Whitney Lake

Marinas	Total Existing Number of Wet Slips	Total Number of Wet Slips Occupied	Location of Marina	Map Number (see Appendix A)
Juniper Cove	102	91	*East side of Lake*	WH19-SMP-05
Harbor Master	71	57	*Northeast end of Lake*	WH19-SMP-09
Uncle Gus	144	120	*Northwest end of Lake*	WH19-SMP-09
White Bluff	92	61	*East side of Lake*	WH19-SMP-05

3.6 Existing Access: Vehicular access paths to areas outside the developed park areas exist but are considered unauthorized roadways. As funds permit, USACE will consolidate these paths, make minor improvements, and install barriers to prevent vehicles from being driven beyond that needed for reasonable access to boathouses and a few limited shoreline areas. USACE has no control over the continued public access to any unauthorized road, whether they lead from public or privately maintained existing roads. In no case will USACE authorize or construct a new trail or secondary road for the purpose of providing access to boathouses.

3.7 Joint Jurisdiction: No other federal, state, or local agencies have jurisdiction over the administration of the shoreline covered in this SMP.

SECTION 4: SHORELINE ALLOCATION AND DESCRIPTION

4.1 General: The shoreline allocations in this Plan are in accordance with criteria established in ER 1130-2-406 and align with the land classifications in the Master Plan. Details of shoreline allocation changes from the 1976 SMP can be found in Appendix H.

4.2 Limited Development Areas (LDA): LDAs are those areas allocated for mooring of privately owned floating facilities (boathouses). Five LDAs have been established at Whitney Lake (See Appendix A for locations). These areas include Steele Creek Harbor, Redwood Cove, King Creek, Three Fingers and Little Rocky. These areas are adjacent to existing high density private residential developments where coves or small inlets provide adequate depth and afford a degree of natural protection from high winds and wave action. Shorelines that do not qualify for an LDA allocation include areas that are too shallow, subject to severe shoreline erosion, where steep bluffs occur, or where environmentally sensitive conditions exist.

Boathouses located outside of an LDA may, upon written approval of the Lake Manager, be moved into an LDA, provided capacity exists at the desired location. Constructing or adding a new boathouse will not be authorized or permitted in any LDA, and when a boathouse is removed voluntarily or for reasons of non-compliance as set forth in paragraph 5.2.2 of this SMP, the space will be eliminated. Existing authorized shoreline use permits, to include boathouses, will be allowed to remain provided all criteria and permit conditions are met. Ownership of existing, permitted boathouses may be transferred and permits issued to new owners. New permit requests for other shoreline use activities, such as vegetation alteration in areas designated as LDA, requires review and written approval from the Lake Manager. There are 5.41 miles of LDA along the Whitney Lake shoreline.

4.3 Protected Shoreline Areas (PSA): Protected shoreline areas are designated primarily to protect aesthetic, environmental, cultural, and fish and wildlife resources. PSAs may also be allocated for physical protection reasons, such as heavy siltation or exposure to high winds and wave action. Shoreline segments where only scattered or isolated boathouses or vegetation alteration exist under previous permits do not qualify for LDA status and will be classified as PSA. There are 182.2 Miles of PSA along the Whitney Lake shoreline.

Existing private shoreline use, to include boathouses, that have a valid authorized shoreline use permit in areas allocated as PSA will be allowed to remain provided they meet the criteria and conditions established in this SMP. Boathouses located in PSA areas may not be relocated unless the owner desires to move the boathouse to an LDA as described above. However, no new boathouses will be permitted in the areas allocated as PSA. When a boathouse is removed voluntarily or for reasons of non-compliance or relocation to an LDA, the space will be eliminated. New permit requests for other shoreline use activities, such as minor vegetation alteration, requires review and written approval from the Lake Manager.

4.4 Public Recreation Areas (PRA): Public recreation areas are those shoreline segments located within or adjacent to developed or proposed public use and commercial concession areas. These areas have controlled access for the protection of park users and

resources. An adequate vegetative buffer has been established around each public use area to maintain aesthetic and environmental qualities. There are 36.88 miles of PRA along the Whitney Lake shoreline.

Shoreline use permits will not be issued or authorized in areas allocated as Public Recreation Areas. Commercial concession areas are governed by the conditions contained in the concession lease and are not subject to the permit requirements of this Plan.

4.5 Prohibited Access Areas (PAA): These shoreline areas are allocated for project operation facilities and the physical safety of visitors. The allocation includes hazardous areas that are restricted from public access near the dam embankment and powerhouse. Public and private shoreline use is not permitted in these areas. There are .51 miles of PAA at Whitney Lake.

SECTION 5: SHORELINE USE PERMITS

5.1 Shoreline Use Permits: A Shoreline Use Permit is an instrument used to authorize certain uses of the shoreline in accordance with Title 36 Code of Federal Regulations (CFR) Part 327.19 and a project's SMP. Shoreline Use Permits may authorize activities such as boathouses, vegetative alteration, and other water and land use permitted activities. Private shoreline use is defined in ER 1130-2-406 as "Any action, within the context of this rule Title [36 CFR 327.30], which gives special privilege to an individual or group of individuals on land or water at a Corps project, that precludes use of those lands or waters by the general public, is considered private shoreline use."

5.2 Private Floating Facilities (Boathouses):

5.2.1 General: In this Plan, the term Private Floating Facility refers to a typical floating dock or boathouse that is currently permitted on Whitney Lake. Boathouses are generally roofed structures, enclosed or open-sided, with slips for the mooring and storage of boats within the confines of the facility. Docks are described as floating platforms with or without individual slips.

5.2.2 Existing Facilities on 13 December 1974 and 17 November 1986: In accordance with ER 1130-2-406 and Section 1134(d) of Public Law 99-662, any private floating facility or lawfully installed dock or appurtenant structures in place under a valid Shoreline Use Permit as of 13 December 1974 or 17 November 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 31 December 1989, if it meets the three conditions below, except where necessary for immediate use for public purposes or higher public use 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; and 3) The holder of the permit is in substantial compliance with the existing permit.

5.2.3 Occupation and Use: The use of the permitted dock facility shall be limited to the mooring of the permit holder's vessel or watercraft, and the storage of gear essential to the operation of such vessel and watercraft in enclosed locker facilities. All boats or personal watercraft must be moored inside the facility. The permit does not convey any property rights either in real estate or material. No attempt shall be made by the permit holder 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 purpose. No items conducive to human habitation or which give the appearance of converting public property to private use is allowed. Facilities authorized under a shoreline use permit will not be leased, rented, sublet or provided to others by any means of engaging in commercial activities by the permit holder or his/her agent for monetary gain.

5.2.4 Inspection: All permitted facilities are subject to periodic inspection by a government representative. No deviation or changes from approved plans will be permitted without prior written approval of the Lake Manager. If an inspection reveals conditions that make the boathouse unsafe, or any deviations from the approved plans, such conditions must

be corrected within the time period specified by the Lake Manager. If the facility remains in substantial non-compliance with permit requirements, the permit holder will be given 30 calendar days to remove the facility.

5.2.5 Transfer of Ownership: Permits for a boathouse are not transferable and will become null and void upon the date of sale or other legal change of ownership. The new owner of a previously permitted facility must submit a Permit Relinquishment Notice, Bill of Sale, and apply for a Shoreline Use Permit within 14 days of ownership. An inspection will be performed and the facility must conform to the Maintenance and Construction Standards for Boathouses (Appendix E) before a permit is issued to the new owner. If the facility owner does not bring the facility into compliance within a timeframe approved by the Lake Manager, a Shoreline Use Permit will not be issued and the owner will be required to remove the facility from public lands and waters within 30 days.

5.2.6 Boathouse Specifications:

a. All boathouses permitted under this SMP shall adhere to the design standard depicted in the Maintenance and Construction Standards for Boathouses in Appendix E. Normal repairs to an existing facility that becomes unsafe or poses a hazard to the public as a result of normal wear, storm, flood, or any other event are permissible without prior authorization. Verification of standards is recommended prior to any repairs. After a permit has been issued, no alterations outside of general maintenance may be made to any boathouses without prior approval by the Lake Manager.

b. Complete replacement of an existing facility is permissible in accordance with the Maintenance and Construction Standards for Boathouses in Appendix E, following approval by the Lake Manager. The replacement facility shall be placed in the same exact location as the removed structure and be of a similar size footprint (square footage) unless variation is authorized in writing by the Lake Manager. Designs for replacement boathouses must be prepared by a licensed professional engineer and approved by the Lake Manager before construction of the replacement facility can begin.

c. Boathouses shall be securely attached to the shore in accordance with the approved plan by means of mooring that does not obstruct general public use of the shoreline or adversely affect the natural terrain or vegetation. Anchoring to vegetation is prohibited.

d. Existing floatation material for boathouses must be replaced once the material no longer supports the substructure of the facility a minimum of 8 inches above the water surface. All new and replacement floatation must be plastic encapsulated foam that meets marina industry standards.

5.3 Vegetation Alteration:

5.3.1 General: All mowing, brush clearing, dead tree removal, and all other work performed on any portion of public property around the lake must have prior written approval from the Lake Manager. Where significant wildlife habitat or scenic/aesthetic areas occur, requests for vegetation alteration may be denied or additional restrictions may be included on the permit. Vegetation Alteration Permits will not be issued solely for creating a view of the lake, or in situations where a fire hazard defensible space exists between public land and structures on private land. In all cases, the permit holder will avoid creating the appearance of private use of public property. Permits will not be granted adjacent to Public Recreation Areas, Prohibited Access Areas or lands classified as Environmentally Sensitive.

The following conditions apply to all Vegetation Alteration Permits:

a. Only hand-held tools and small lawn maintenance equipment may be used. No tractors, bulldozers, or heavy equipment of any kind may be used unless specifically authorized by permit conditions.

b. Any special restrictions on size and species of trees or shrubs to be removed, as well as pruning limitations, will be specifically listed in the permit conditions.

c. The area subject to a Vegetation Alteration Permit shall be described on the permit and accompanying map, and shall be in compliance with conditions set forth in this plan as well as any special conditions required by the Lake Manager.

d. No tree or shrub with a greater than one inch diameter at breast height may be removed for any purpose. Vegetation may not be mowed or trimmed to a height of less than three inches for any purpose.

5.3.2 Mowing and Underbrushing (Firebreak Permit): Adjacent landowners may request a Shoreline Use Permit for mowing and removal of underbrush where the Lake Manager determines there is a valid need to reduce the risk of damage to private property from wildfire. In these cases, mowing and removal of underbrush along a narrow strip of USACE land (no more than 35 feet wide) along the boundary line will be considered. In many situations, there is ample space on private land to provide for a defensible space. In circumstances where endangered species habitat is present, or soil erosion is occurring, mowing and removal of underbrush may not be authorized. Mowing and selective removal of vegetation may also be authorized for the purpose of controlling invasive or exotic species.

5.3.3 Pedestrian Access Path (Pathway Permit): In Limited Development Areas (LDA) and Protected Shoreline Areas (PSA), vegetation alteration may be acceptable for the clearing of meandering, natural-surface trails to provide walking access to the shoreline. Requests will be considered by the Lake Manager on a case-by-case basis, and require onsite inspection to determine the extent of conditions justifying a permit. Requests for pedestrian access from individuals with special accessibility requirements will be handled on a case-by-case basis with the intent to allow reasonable access while preventing adverse impacts to natural resources. Paths will not be allowed in Prohibited Access Areas, Public Recreation Areas, or areas where controlled public access is a necessity for security of lake visitors.

The following specific guidelines apply to pedestrian access paths:

a. Path is for pedestrian foot traffic only, and limited to 4 feet in width.

b. Path meanders and blends naturally with existing topography and vegetation.

c. Precautions are taken to prevent erosion.

d. The path located on government property must be open to public traffic.

e. Neighbors living in close proximity to one another may be required to share a single path.

f. The permit does not convey the right to construct or place any structures such as steps, bridges, handrails, benches, signs, light poles, or to make any changes in landform or topography.

g. The permit may contain other requirements deemed necessary by the Lake Manager.

5.3.4 Hazardous Trees: If an adjacent landowner discovers a tree they believe poses a hazard to the boundary fence or private property, they should contact the Whitney Lake Office to report the suspected hazard. Removal of hazardous trees will be handled in accordance with the Three Rivers Hazard Tree Management Plan which is on file at the Whitney Lake Office. Adjacent landowners may be allowed to remove the tree after being issued a shoreline use permit.

5.4 Other Land and Water Uses:

5.4.1 Erosion Control Structures: Individuals may be permitted to install erosion control structures such as rip-rap, gabions, or other measures where bank or shoreline erosion is endangering boathouses or structures. Any erosion control structure should blend with the natural setting as much as possible. Permission to install such structures may be granted only after review and approval of plans and specifications by the Lake Manager and issuance of the proper instrument from the Fort Worth District Real Estate Division.

5.4.2 Hunting Blinds: Permanent hunting blinds will not be permitted. The use of portable blinds is allowed. Prior to each hunting season, the Whitney Lake Project Office will issue maps showing authorized hunting areas at Whitney Lake. Specific USACE hunting regulations applicable to Whitney Lake will be publicized in the annual Fort Worth District Public Hunting Guide.

5.5 Prohibited Facilities and Activities:

5.5.1 Fixed Piers: Any type of fixed pier or platform extending into the water from the shoreline is prohibited.

5.5.2 Pilings or Posts: All pilings or posts driven into the lake bottom for the purpose of mooring or tying boats are prohibited.

5.5.3 Mooring Buoys or Waterway Markers: All privately owned buoys or waterway markers are prohibited.

5.5.4 Vessel Moorage: Mooring of boats or personal watercraft outside of permitted private floating facilities (boathouses) is prohibited. Vessels of any type, when not in use, shall be removed from project lands and waters unless moored in an approved boathouse or commercial marina.

5.5.5 Burning: The burning of any materials along the shoreline by private individuals is prohibited.

5.5.6 Landform Modification: Any type of private modification, construction, or other activity that changes the original or present condition of the shoreline is prohibited.

5.5.7 Unauthorized Private Structures or Facilities: Construction or placement of personal property, portable or permanent, on the shoreline or adjacent project lands is prohibited.

SECTION 6: OTHER APPLICABLE RESOURCES

6.1 Department of the Army Permits: USACE has broad regulatory authority pursuant to Section 404 of the Clean Water Act of 1972 and Section 10 of the Rivers and Harbors Act of 1899 to regulate the placement of dredged or fill material in certain waters and wetlands of the United States and placement of certain structures in waters that are, by definition, a navigable water of the United States. These regulatory permits generally have no relationship to Shoreline Use Permits except in rare instances where a facility that is authorized by a Shoreline Use Permit might also require a regulatory permit. Any shoreline erosion control structure located below the conservation pool elevation of 533-feet NGVD29 would require both a real estate instrument and a regulatory permit from USACE. Requests for such activities must be submitted to the Lake Manager.

6.2 Real Estate Instruments: USACE issues real estate instruments such as leases, licenses, easements and consents to easements structures for a wide variety of activities. Leases are issued to concessionaires for marinas and to governmental entities for operation of park areas. Easements are typically granted to public utilities and governmental entities for water lines, sewer lines, natural gas lines, electric lines, and roads. Licenses are typically granted to individuals for electrical lines, water lines for domestic irrigation, erosion control structures, and other activities that involve a change in land form 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.

6.2.1 Electrical: A real estate license may be issued for electrical power and light service to a permitted boathouse. A written request for a new or renewal license for electric service shall be submitted in writing to the Lake Manager. All electric lines on government land shall be installed underground. The underground electrical supply installation shall be protected and controlled by a readily accessible main cut-off switch and circuit breaker, no larger than 20 amps, located on the adjacent private property, above the flowage easement line or the 573 feet NGVD29 elevation, for which the installation permit is issued. Shoreline below the 573 feet NGVD29 elevation is considered a wet location. All electrical components shall be installed and maintained in accordance with the National Electric Code (NEC) and the National Electrical Safety Code (NESC) conducive to wet and damp locations. The licensee shall provide electrical certification of all components approved and signed by a licensed electrician. Applicants for electric line licenses are encouraged to consider solar applications that will meet the need for electrical power and eliminate the need for utility provided electric lines and meters.

6.2.2 Waterlines: Requests for a new or renewal license for a waterline shall be submitted to the Lake Manager. Any approval granted will be in the form of a Real Estate License. The request packet must have written approval from the water purveyor, i.e. river

authority, municipal water district, etc. to withdraw water from the reservoir. The use of submersible pumps for the purpose of withdrawing water for individual domestic uses at Fort Worth District Civil Works Reservoirs is prohibited. Proposed waterline installations must comply with National Environmental Policy Act (NEPA) requirements. Project personnel may be required to inspect the proposed installation site to determine potential damage to vegetation or obvious archeological resources. Generally, waterlines will not be allowed to hang over sheer cliffs where the line is visible when viewed from the lake. The aesthetic and safety impacts of all installations will be considered. Waterlines must not interfere with public recreational use. Where numerous waterlines exist in close proximity on sheer bluffs or badly eroded shorelines, the Lake Manager will consider consolidating these waterlines into the minimum number of intakes possible servicing multiple users. Requests for this type of license will be considered on a case by case basis.

6.2.3 Stairways: No new stairways will be authorized. Licenses for existing stairways will continue to be renewed if the facility is being maintained in a safe condition, certified by a licensed structural engineer, and approved by the Lake Manager.

a. 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.

b. Stairways must be of metal construction.

c. Stairways must meet the standards stated in EM 385-1-1, with regard to tread and riser specifications, handrails, and allowable angle of ascent.

d. Stairways must be certified by a licensed structural engineer and approved by the Lake Manager.

e. In all cases the Government reserves the right to prohibit stairway construction on sheer rock bluffs or other sensitive landscape features.

f. Proposals for stairways that are compliant with the Americans with Disabilities Act (ADA) standards will be considered on a case-by-case basis in situations where the owner or immediate family members of a permitted private floating facility need ADA-compliant access to the facility. Need shall be based on the same criteria used for granting a Federal Access Pass. ADA-compliant stairways may not be allowed if severe environmental or aesthetic damage would result from the construction of such access.

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

SECTION 7: PERMIT ADMINISTRATION

7.1 Request for Shoreline Use Permits: In order to obtain a permit the applicant shall submit a written request detailing the purposed shoreline use along with contact and location information for review and approval by the Lake Manager. “Application for Shoreline Use Permit", ENG 4264-R, (Appendix B) serves as the shoreline use permit issued by the Whitney Lake Project Office. Shoreline Use Permits will be managed in accordance with “Conditions of Permits for Shoreline Use” (Appendix C). Permits for private facilities are not transferable and will become null and void upon the date of sale or other legal change of ownership. 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 of a previously permitted facility must apply for a Shoreline Use Permit within 14 days or remove the facility and restore the area within 30 days of ownership transfer. A dock relinquishment form, signed by the previous owner, is also required for a boathouses when there is a change in ownership.

7.2 Permit Duration: Shoreline Use Permits will be issued for a five year duration, from date issued. Temporary or short term permits may also be issued when the nature of the proposed use requires a shorter duration.

7.3 Administrative Fees: An administrative fee will be assessed for a boathouse permit. The fee includes the processing of the permit and annual inspections of the dock. In the event that a permit is terminated or revoked before its expiration date, no portion of the administrative fee will be prorated or returned for the unused duration of the permit. This administrative fee paid by check and money order shall be made payable to the F&A Officer, US Army District, Millington, Tennessee (USAED), Fort Worth and submitted to Whitney Lake Project Office. Only the exact amount of the fees due will be accepted.

7.4 Revocation of Permits: The District Commander may revoke shoreline use permits by a 30-day written notice, mailed to the permit holder by certified letter, whenever the public interest necessitates such revocation or when the permit holder fails to comply with any permit conditions or terms. The revocation notice shall specify the reason for such actions. If the permit holder requests a hearing in writing to the District Commander through the Lake Manager within the 30 day period, the District Commander shall grant the hearing at the earliest opportunity. In no event shall the hearing occur 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 permit holder by certified mail. Upon determination of emergency circumstances, the District Commander may summarily revoke any permit.

7.5 Unauthorized Structure and Shoreline Use: Unauthorized structures or other unauthorized shoreline uses will be treated as a violations pursuant to Title 36, Chapter III, Code of Federal Regulations.

SECTION 8: CONCLUSION AND REVIEW

8.1 Conclusion: The SMP reflects changes that have occurred since the implementation of the original plan, including public laws, new environmental considerations, recreation trends, and increased development around the lake. A detailed description of changes from the 1976 to the 2019 SMP can be found in Appendix H of this Plan. The Plan has taken into consideration both the present and anticipated recreational needs of the area. Written public comments received at the public meetings and during the subsequent 30-day public comment periods were taken into consideration in the preparation of this plan.

8.2 Review: The Lake Manager will continually monitor the needs of the recreational users of the lake and recommend revisions that will minimize conflicts between various interests. Minor changes that would eliminate areas, or reduce the size of areas designated for limited development may be approved by the District Commander and be reported to the Division Engineer on an annual basis. Changes that may result in additional or expanded limited development areas will require significant public involvement and proper documentation pursuant to the National Environmental Policy Act, normally in the form of an Environmental Assessment.

APPENDIX A: SHORELINE USE MAPS

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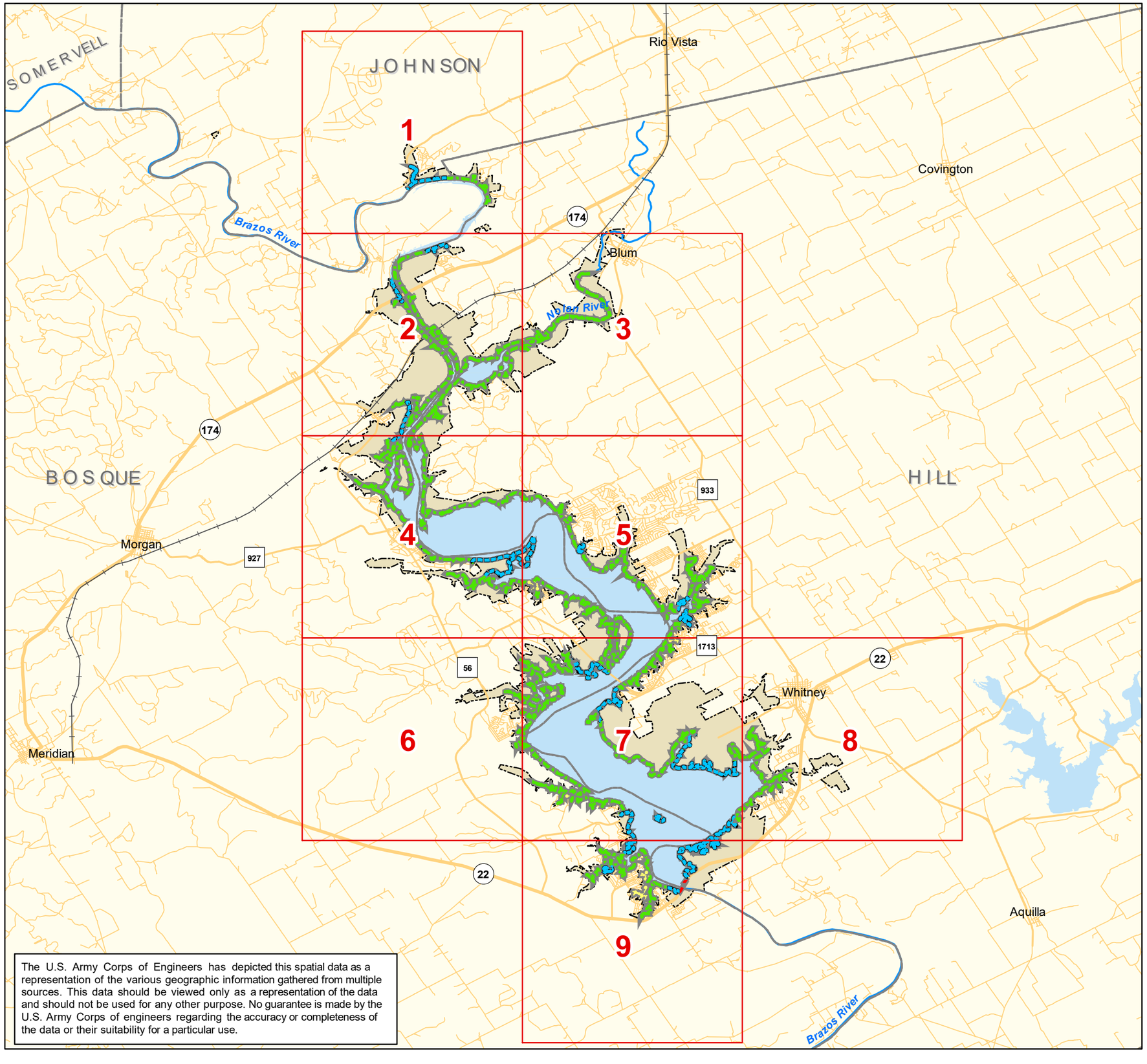


Limited Development Area

Prohibited Access Area

Protected Shoreline Area

Public Recreation Area

County

Reservoir

Government Property

The U.S. Army Corps of Engineers has depicted this spatial data as a representation of the various geographic information gathered from multiple sources. This data should be viewed only as a representation of the data and should not be used for any other purpose. No guarantee is made by the U.S. Army Corps of engineers regarding the accuracy or completeness of the data or their suitability for a particular use.

US Army Corps of Engineers
Fort Worth District

WHITNEY LAKE DAM & RESERVOIR — BRAZOS RIVER

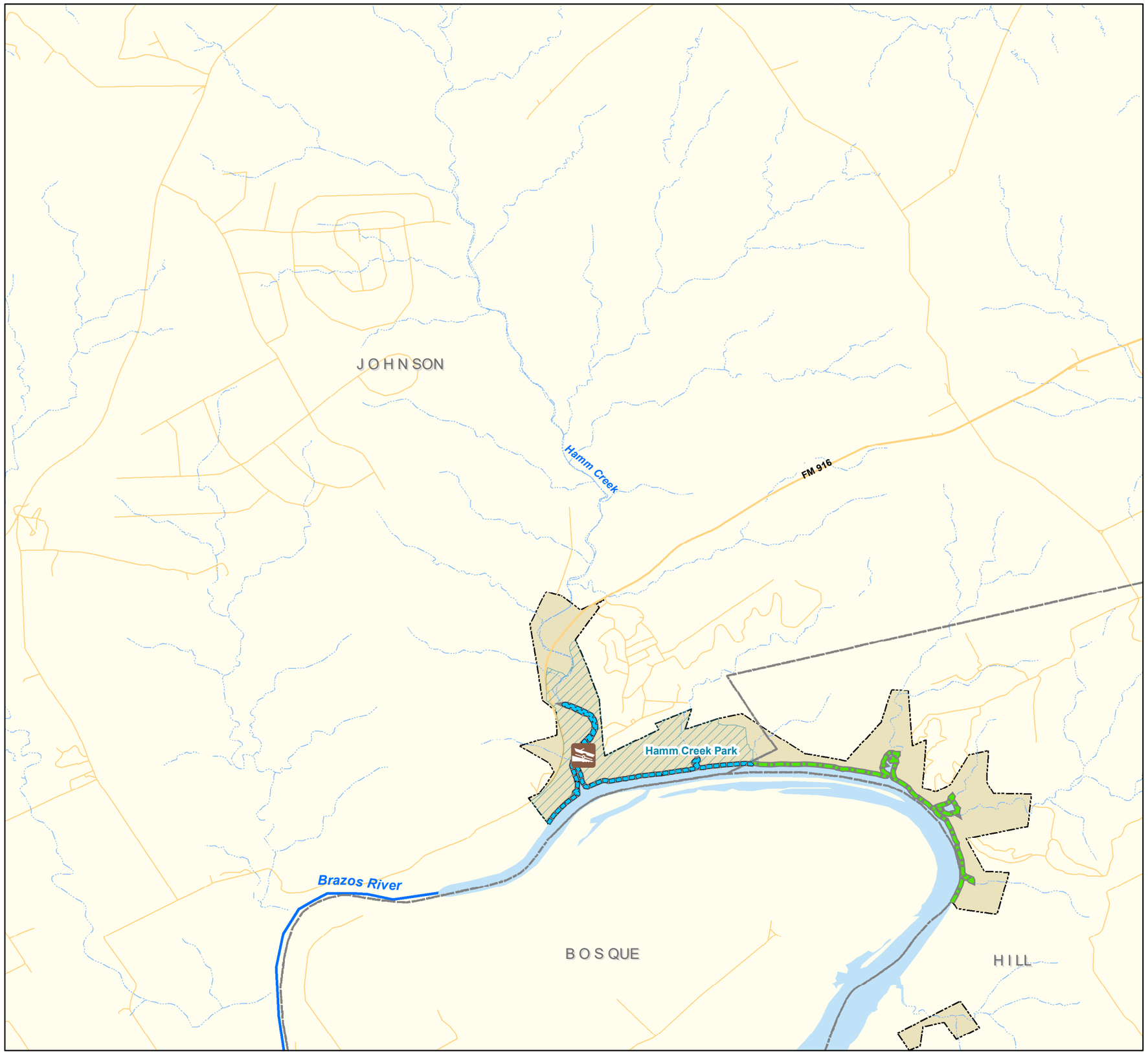
WHITNEY LAKE PROJECT

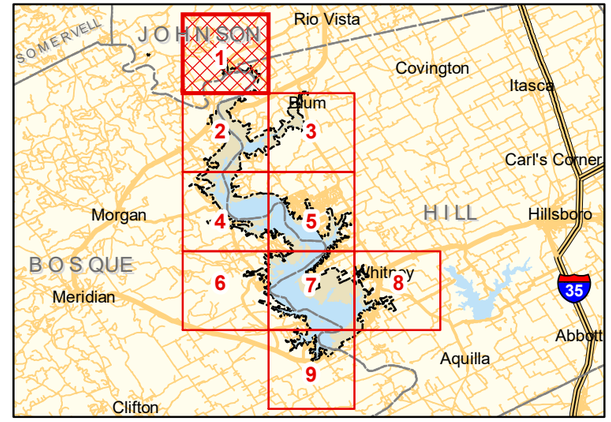
SHORELINE MANAGMENT PLAN

SHORELINE DESIGNATIONS

0 1 2 4 6 Miles

DATE:	MAP NO.
DECEMBER 2019	WH19-SMP-00





- Boat Ramp
- Limited Development Area
- Prohibited Access Area
- Protected Shoreline Area
- Public Recreation Area
- Recreation Area
- County
- Reservoir
- Government Property

US Army Corps of Engineers
Fort Worth District

WHITNEY LAKE DAM & RESERVOIR — BRAZOS RIVER

WHITNEY LAKE PROJECT

SHORELINE MANAGMENT PLAN

SHORELINE DESIGNATIONS

0 2,000 4,000 8,000 Feet

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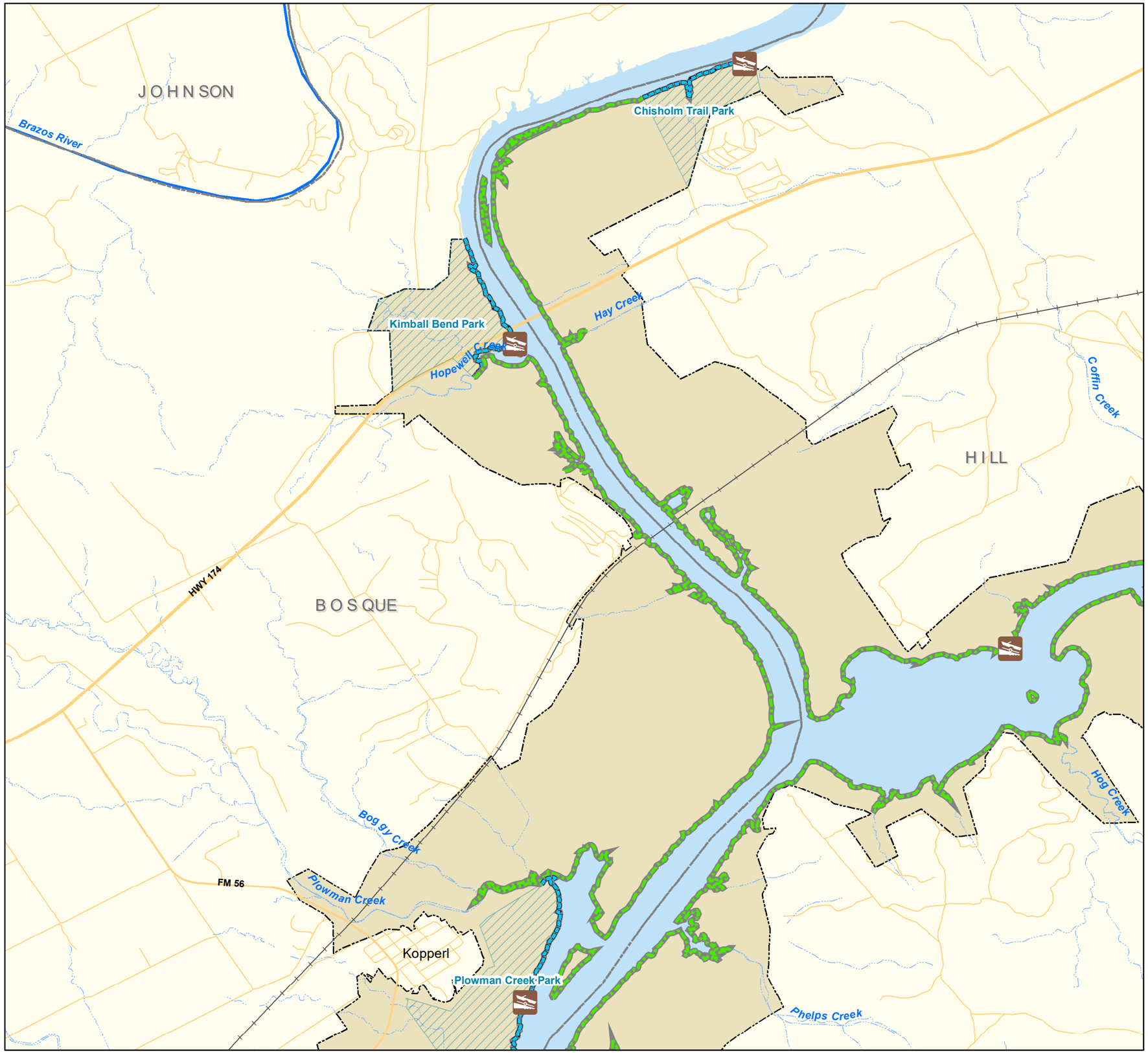
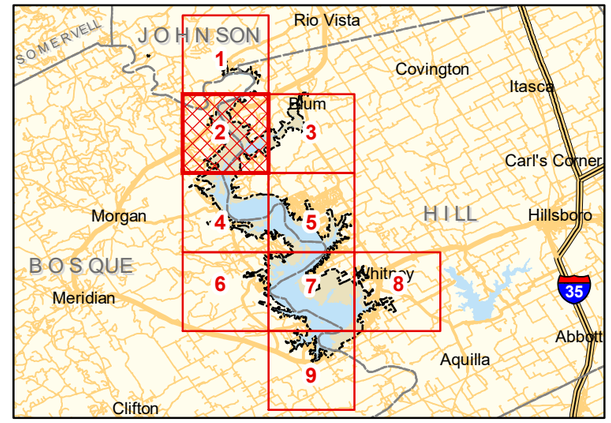
DECEMBER 2019	WH19-SMP-01





- Boat Ramp
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- Reservoir
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US Army Corps of Engineers
Fort Worth District

WHITNEY LAKE DAM & RESERVOIR — BRAZOS RIVER

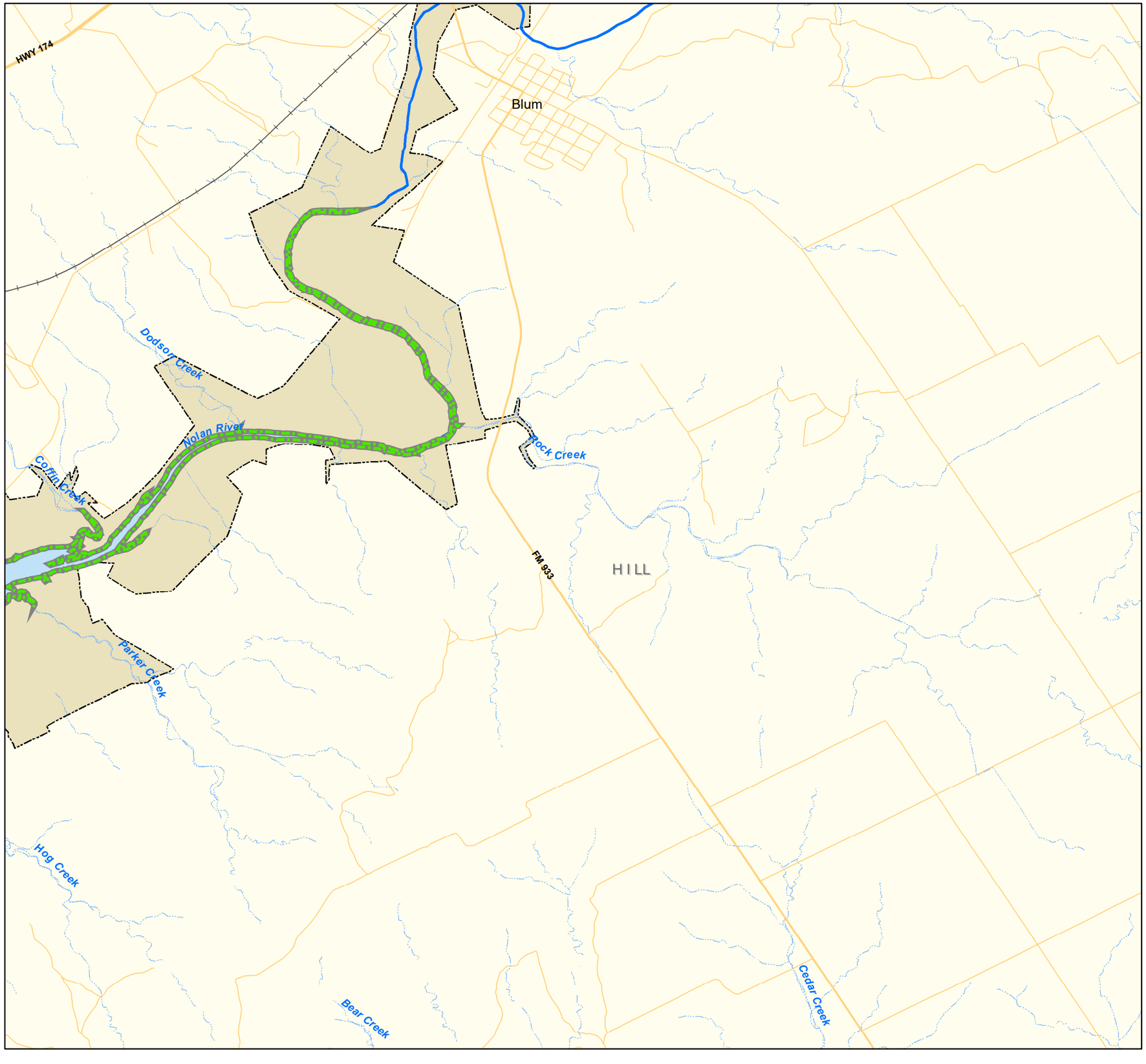
WHITNEY LAKE PROJECT

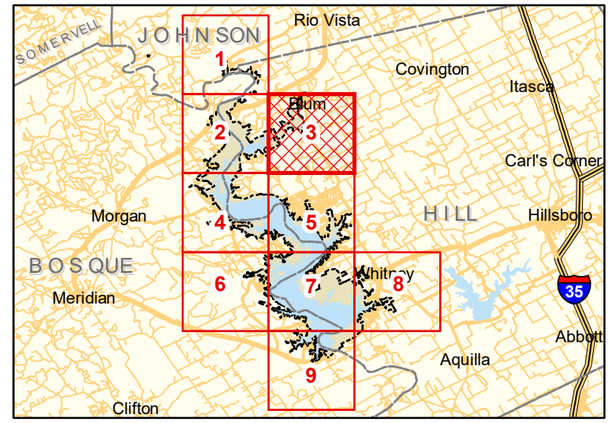
SHORELINE MANAGMENT PLAN

SHORELINE DESIGNATIONS

0 2,000 4,000 8,000 Feet

DATE:	MAP NO.
DECEMBER 2019	WH19-SMP-02





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US Army Corps of Engineers
Fort Worth District

WHITNEY LAKE DAM & RESERVOIR — BRAZOS RIVER

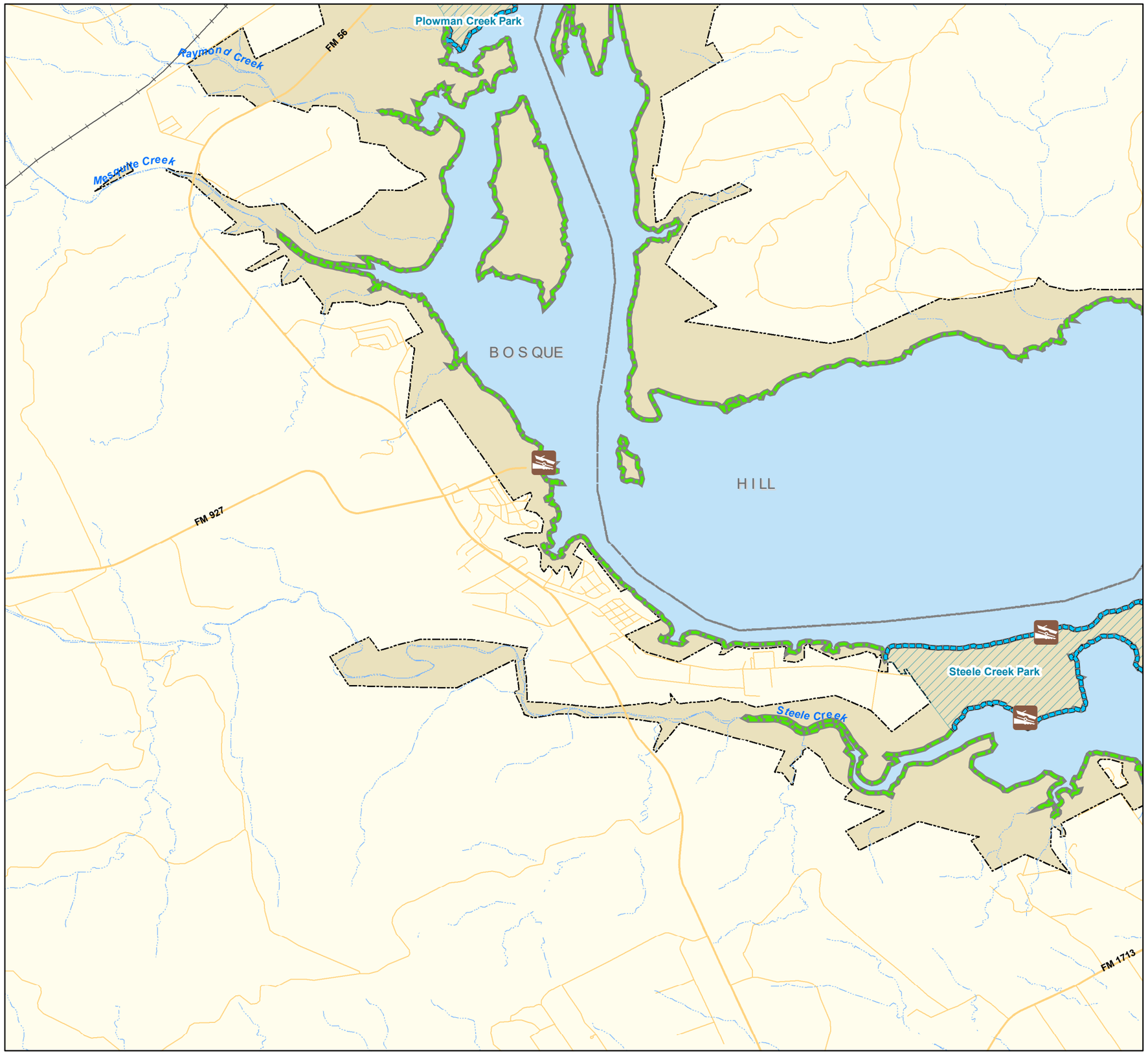
WHITNEY LAKE PROJECT

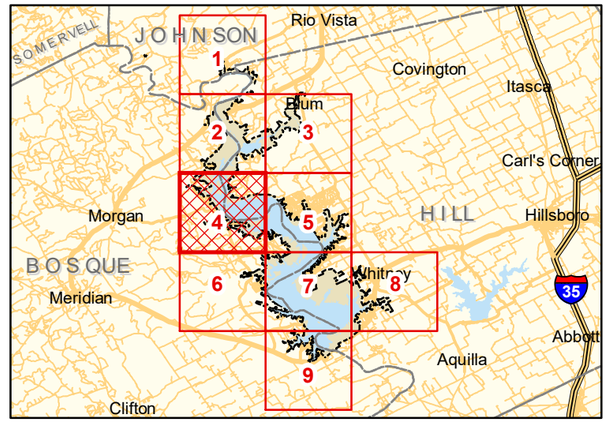
SHORELINE MANAGMENT PLAN

SHORELINE DESIGNATIONS

0 2,000 4,000 8,000 Feet

DATE:	MAP NO.
DECEMBER 2019	WH19-SMP-03





- Boat Ramp
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- Recreation Area
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- Reservoir
- Government Property

US Army Corps of Engineers
Fort Worth District

WHITNEY LAKE DAM & RESERVOIR — BRAZOS RIVER

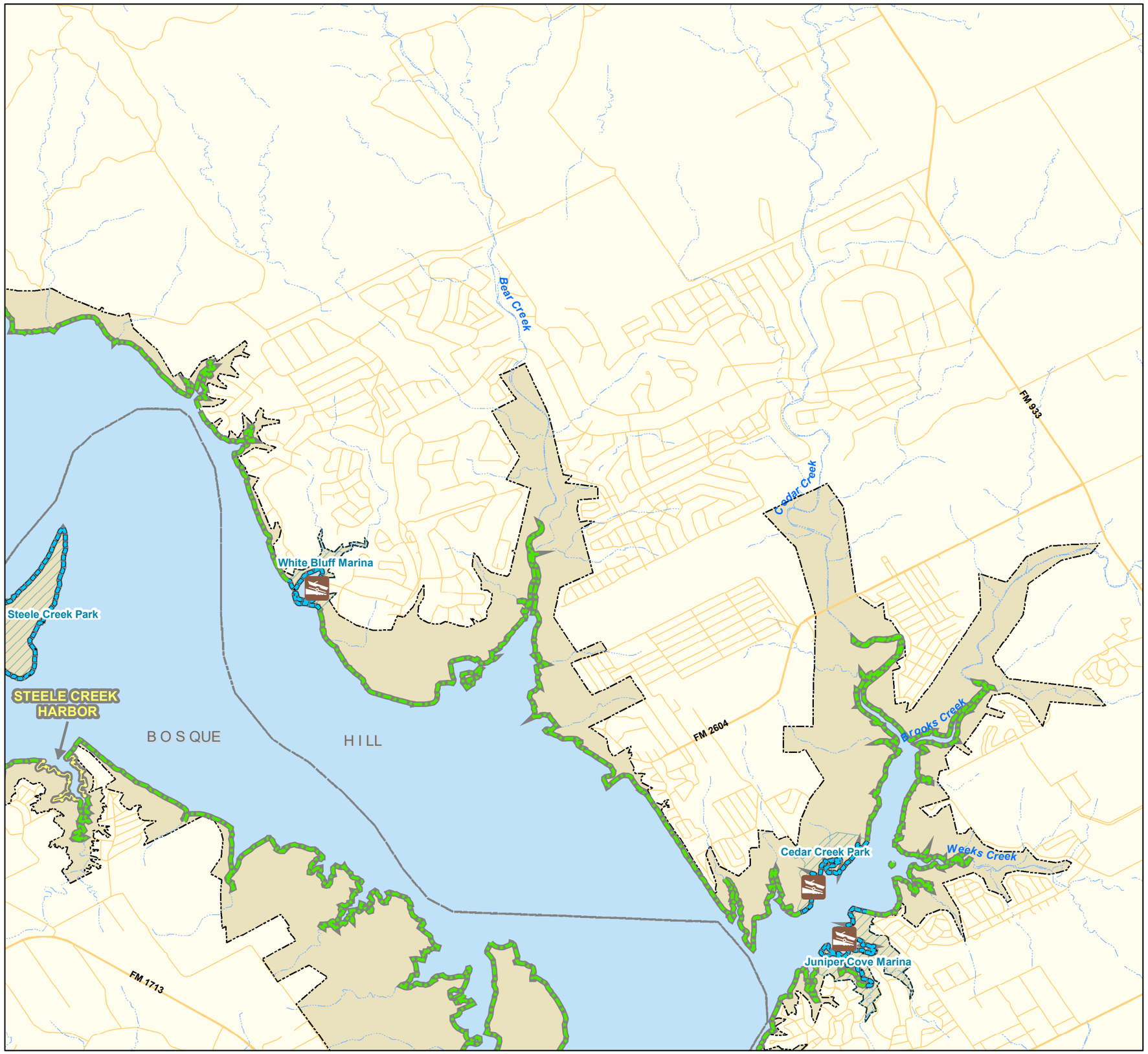
WHITNEY LAKE PROJECT

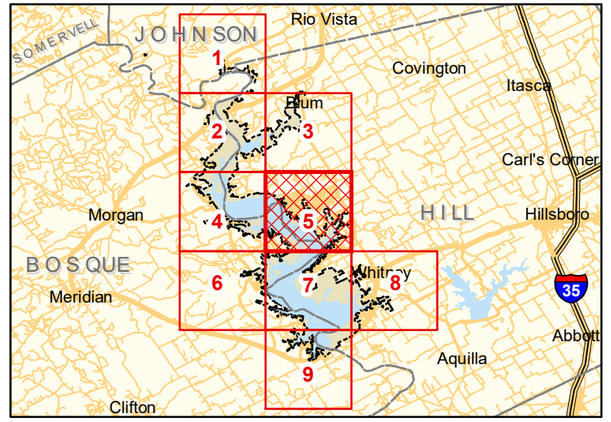
SHORELINE MANAGMENT PLAN

SHORELINE DESIGNATIONS

0 2,000 4,000 8,000 Feet

DATE:	MAP NO.
DECEMBER 2019	WH19-SMP-04





- Boat Ramp
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- Prohibited Access Area
- Protected Shoreline Area
- Public Recreation Area
- Recreation Area
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- Reservoir
- Government Property

US Army Corps of Engineers
Fort Worth District

WHITNEY LAKE DAM & RESERVOIR — BRAZOS RIVER

WHITNEY LAKE PROJECT

SHORELINE MANAGMENT PLAN

SHORELINE DESIGNATIONS

0 2,000 4,000 8,000 Feet

DATE:	MAP NO.
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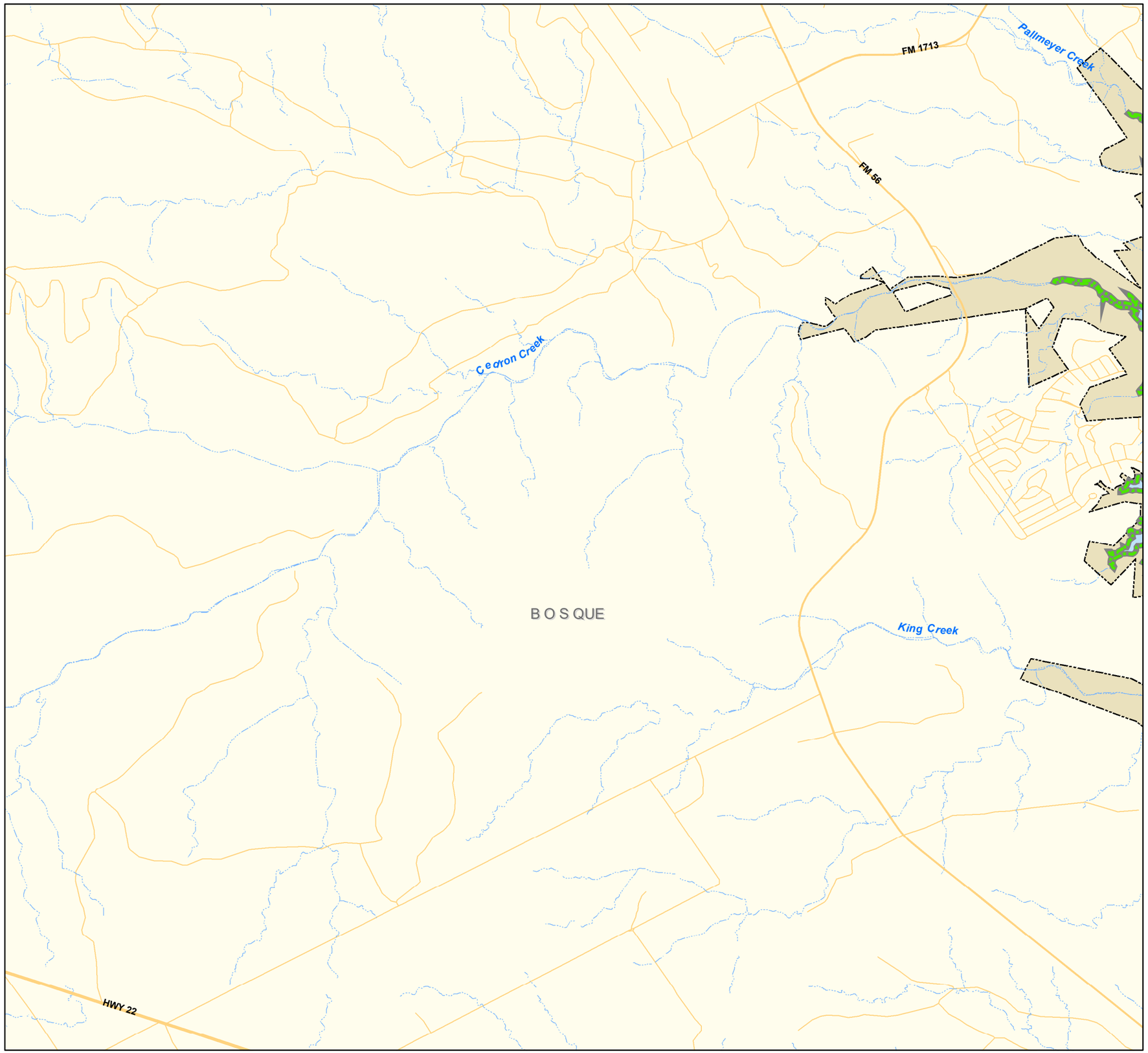

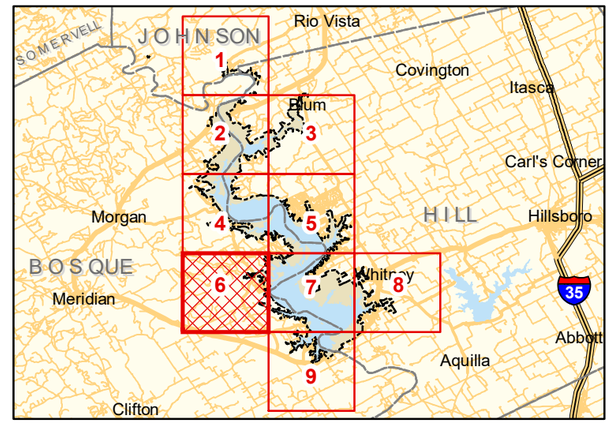

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US Army Corps of Engineers
Fort Worth District

WHITNEY LAKE DAM & RESERVOIR — BRAZOS RIVER

WHITNEY LAKE PROJECT

SHORELINE MANAGMENT PLAN

SHORELINE DESIGNATIONS

0 2,000 4,000 8,000 Feet

DATE:	MAP NO.
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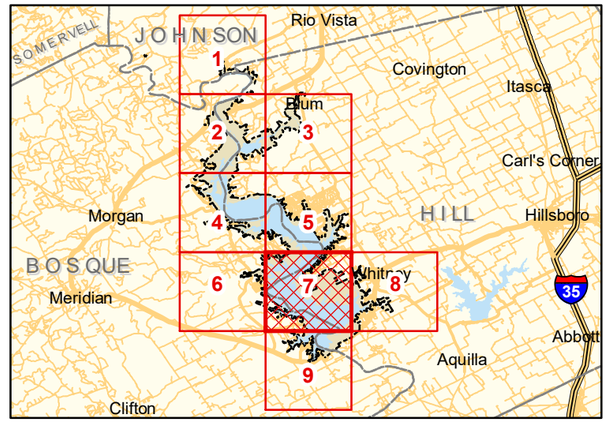

- Boat Ramp
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US Army Corps of Engineers
Fort Worth District

WHITNEY LAKE DAM & RESERVOIR — BRAZOS RIVER

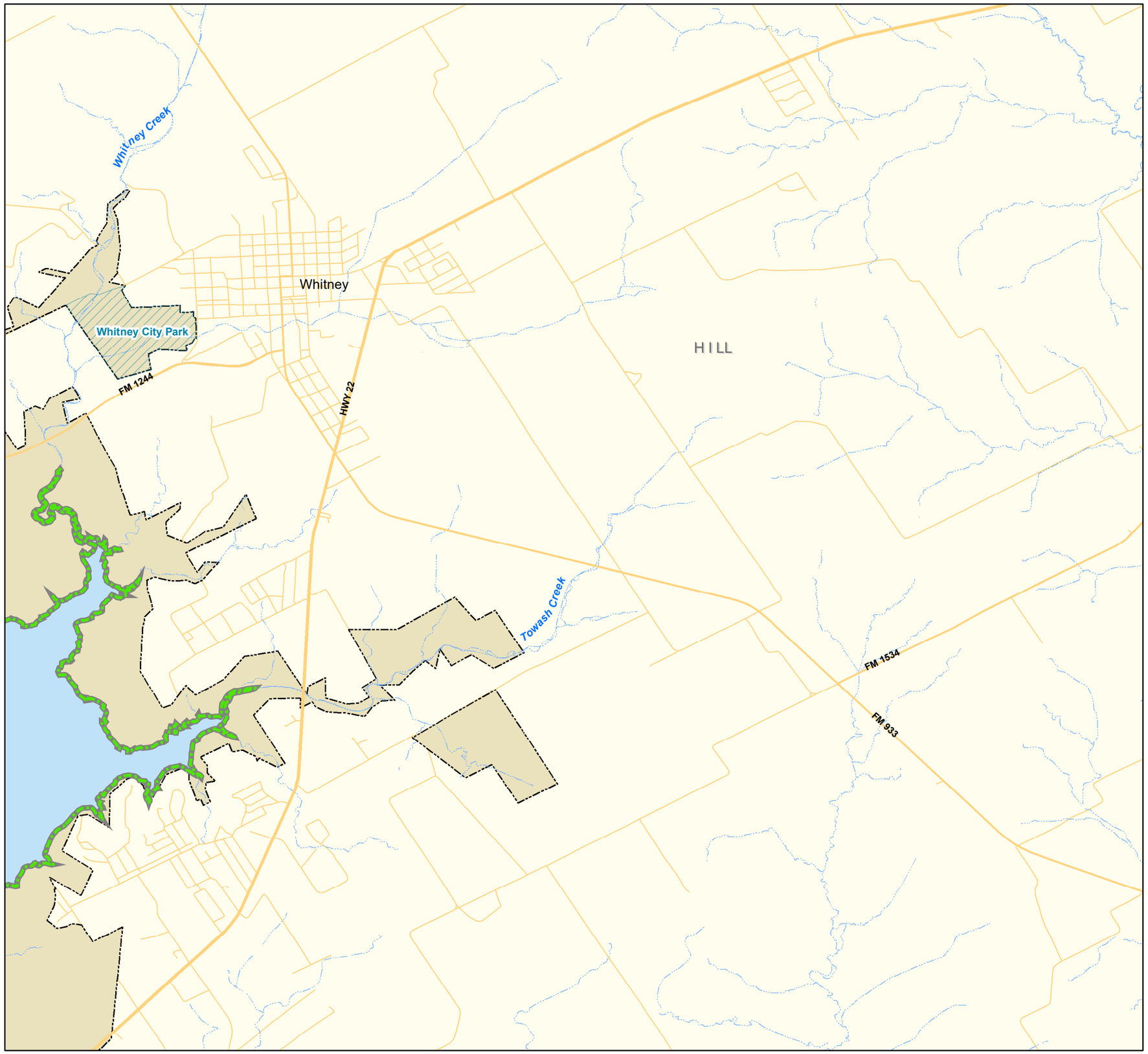
WHITNEY LAKE PROJECT

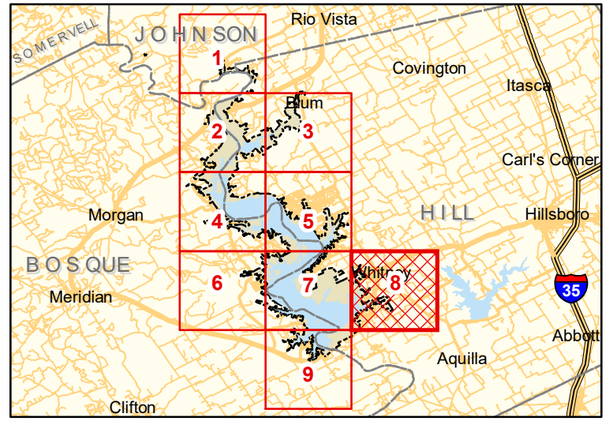
SHORELINE MANAGMENT PLAN

SHORELINE DESIGNATIONS

0 2,000 4,000 8,000 Feet

DATE:	MAP NO.
DECEMBER 2019	WH19-SMP-07





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US Army Corps of Engineers
Fort Worth District

WHITNEY LAKE DAM & RESERVOIR — BRAZOS RIVER

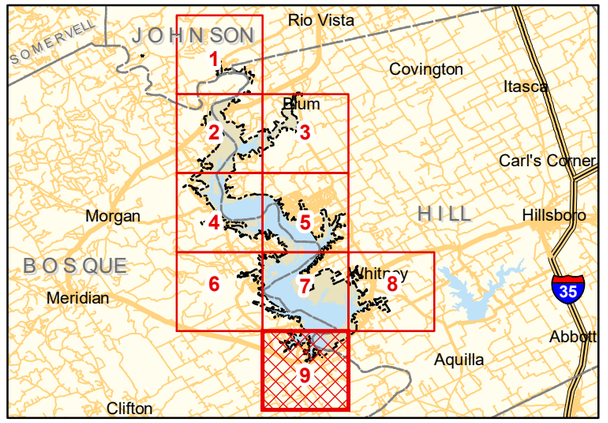
WHITNEY LAKE PROJECT

SHORELINE MANAGMENT PLAN

SHORELINE DESIGNATIONS

0 2,000 4,000 8,000 Feet

DATE:	MAP NO.
DECEMBER 2019	WH19-SMP-08



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US Army Corps of Engineers
Fort Worth District

WHITNEY LAKE DAM & RESERVOIR — BRAZOS RIVER

WHITNEY LAKE PROJECT

SHORELINE MANAGMENT PLAN

SHORELINE DESIGNATIONS

0 2,000 4,000 8,000 Feet

DATE:	MAP NO.
DECEMBER 2019	WH19-SMP-09

APPENDIX B: APPLICATIION FOR SHORELINE USE PERMIT

ENG FORM 4264-R

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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

☐ SINGLE-OWNER DOCK ☐ SKI JUMP
☐ COMMUNITY DOCK ☐ SKI COURSE
☐ MOORING BUOY ☐ SWIM FLOAT
☐ MOORING POST ☐ DUCK BLIND

LAND-BASE

☐ UNDERBRUSHING ☐ MOWING
☐ PLANT /LANDSCAPING ☐ FOOT PATH
☐ EROSION CONTROL

☐ OTHER *(Describe)* _____

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

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)*

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 invovlement.
DISCLOSURE	Disclosure of information is voluntary. However, failure to provide the requested information will preclude the issuance of a Shoreline Management permit.

APPENDIX C: SHORELINE USE PERMIT CONDITIONS

ER 1130-2-406

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Shoreline Use Permit Conditions

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

ER 1130-2-406, 31 Oct 90

APPENDIX D: PRIVATE DOCK INSPECTION CHECKLIST

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U.S. ARMY CORPS OF ENGINEERS, FORT WORTH DISTRICT

BOATHOUSE OR BOAT DOCK INSPECTION CHECKLIST

For use of this form, see ER 1130-2-406, ER 1130-2-314 and EM 1110-2-410; the proponent agency is CESWF-OD.

DATA REQUIRED BY THE PRIVACY ACT OF 1974 (*5 U.S.C. 552a*)

AUTHORITY: 10 U.S.C. Section 3012.

PRINCIPAL PURPOSE*(s)*: To conduct boathouse and boat dock inspections and note deficiencies.

ROUTINE USES: COE employees who have a need for such information in the performance of their duties for the purpose of inspecting boathouses and boat docks will use the information. Information will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations of prosecutions; or pursuant to a request by a Federal agency or such other agency in connection with hiring, firing, or retention of an employee, the issuance of a security clearance, the investigation of an employee, the letting of contract, or the issuance of a license, grant, or other benefit; or pursuant to a request from Congressional Officer. Record may be disclosed to another DoD component for personnel action, security actions, criminal investigations or other lawful functions; the information may be disclosed to OMB for review of private relief legislation (Circular A-19) or may be disclosed to foreign law enforcement, security, investigating or administrative authorities; and all blanket routine uses at Volume 48, Federal Register 25779-25780, June 6, 1983.

MANDATORY OR VOLUNTARY DISCLOSURE AND EFFECT ON INDIVIDUAL NOT PROVIDING INFORMATION: Failure to provide any part of the requested information will prevent processing of the application and issuance of an activity permit.

1. BOATHOUSE OR DOCK OWNER (*Last, First MI*)	2. PERMIT NUMBER
3. OWNER ADDRESS (*Post Office Box or Street, City, State and Zip Code*)	4. TELEPHONE NUMBER
5. INSPECTOR (*Last, First MI*)	6. INSPECTION DATE *(YYYYMMDD)*

NOTE: CHECK PERSON LISTED ON PERMIT AS BEING AVAILABLE ON SHORT NOTICE WITH A SET OF KEYS TO THE PERMITTED FACILITY.

7. NAME (*Last, First MI*)	8. TELEPHONE NUMBER	9. ADDRESS (*Post Office Box or Street, City, State and Zip Code*)

SECTION I - CHECKLIST

ITEM	YES	NO	N/A
1. POSTING OF PERMIT.			
a. IS PERMIT NUMBER POSTED ON LANDSIDE WITH 3-INCH NUMBERS?	☐	☐	☐
b. IS PERMIT NUMBER POSTED ON LAKESIDE WITH 3-INCH NUMBERS?	☐	☐	☐
c. ARE NUMBERS SERVICEABLE AND LEGIBLE?	☐	☐	☐
d. IS PERMIT POSTED INSIDE STRUCTURE?	☐	☐	☐
2. PLANS.			
a. DOES DOCK MATCH PLANS ON PERMIT FILE?	☐	☐	☐
3. ANCHORAGE.			
a. ARE ATTACHING CABLES SERVICEABLE?	☐	☐	☐
b. SERVICEABLE CONDITION OF CABLE ATTACHING POINTS?	☐	☐	☐
c. CHECK OF DEAD-MAN CABLES NOT ATTACHED TO TREES?	☐	☐	☐
d. ARE SERVICEABLE STIFF ARMS AND ATTACHMENTS HARDWARE?	☐	☐	☐
e. ARE MOORING PILING, POLES AND COLLARS SECURE?	☐	☐	☐
4. WALKWAYS.			
a. ARE WALKWAYS IN A SAFE AND USABLE CONDITION?	☐	☐	☐
b. ARE 2" X 6" OR EQUIVALENT STRENGTH USED?	☐	☐	☐
c. IS LUMBER FREE OF ROT, SPLITS OR PROTRUDING NAILS?	☐	☐	☐

ITEM	YES	NO	N/A
d. ARE WALKWAYS FREE FROM EXCESSIVE SPRING, DEFLECTION, OR LATERAL MOVEMENT?	☐	☐	☐
e. ARE WALKWAYS AT LEAST 3 FEET WIDE, EXCEPT BETWEEN SLIPS WHERE A MINIMUM WIDTH IS 2 FEET?	☐	☐	☐
f. IS WALKWAY APPROACH FREE OF WEEDS AND OBSTRUCTIONS?	☐	☐	☐
5. HANDRAILS.			
a. ARE HANDRAILS STRUCTURALLY SOUND, IN GOOD REPAIR AND 2" X 4" OR EQUIVALENT STRENGTH?	☐	☐	☐
b. IS HANDRAIL 42 INCHES IN HEIGHT, WITH GUARDRAIL 20 INCHES BELOW HANDRAIL?	☐	☐	☐
6. SUPERSTRUCTURE.			
a. HAVE ALL MAJOR WOOD AND STEEL CONNECTIONS BEEN CHECKED TO INSURE THEY ARE SECURE TO RESIST MOVEMENT THAT WOULD TEND TO DISMANTLE STRUCTURE? (*encourage chain link fence, not walls*).	☐	☐	☐
b. CHECK FOR NEAT ORDERLY APPEARANCE OF STRUCTURE.	☐	☐	☐
7. ROOF.			
a. ROOF WILL BE SECURELY FASTENED TO THE SUPERSTRUCTURE TO RESIST WIND UPLIFT BY USE OF STEEL PLATES, METAL STRAPS, OR			

ITEM	YES	NO	N/A	ITEM	YES	NO	N/A
a. PLYWOOD GUSSETS. (*Continuation previous page*).	☐	☐	☐	d. IS VENTILATION PRESENT FOR FLAMMABLE LIQUIDS?	☐	☐	☐
8. METAL FINISH.				12. FIRE PROTECTION.			
a. DOES ALL METAL PRESENT A NEAT APPEARANCE, NO EXCESSIVE RUST OR DAMAGE?	☐	☐	☐	a. ARE FIRE EXTINGUISHERS PRESENT (*ABC dry chemical 10lb*)?	☐	☐	☐
b. IF PAINTED, DOES IT NEED TOUCH-UP PAINT?	☐	☐	☐	b. ON DOCKS OVER 50 LINEAR FEET, ARE FIRE EXTINGUISHERS PRESENT EVERY 50 FEET?	☐	☐	☐
9. FLOTATION.							
a. IS FLOTATION IN APPLIANCE WITH ER 1130-2-406 APPENDIX C-3?	☐	☐	☐	c. DO FIRE EXTINGUISHERS HAVE DATE OF LAST INSPECTION TAGS AND ARE THEY INSPECTED AT LEAST QUARTERLY?	☐	☐	☐
b. DOES THE DESIGN LOAD LIFT THE STRUCTURE AT LEAST 8 INCHES ABOVE THE WATER SURFACE?	☐	☐	☐				
c. IS FLOTATION ADEQUATE TO MAINTAIN A STABILIZED AND SAFE DOCK AND OR WALKWAY?	☐	☐	☐	13. ENCLOSURES. *(chain link fencing may be provided in all areas of the perimeter not subjected to frequent loading and unloading of personnel).*			
10. ELECTRICAL.				a. IS CHAIN LINK FENCING IN A STATE OF GOOD REPAIR?	☐	☐	☐
a. ARE ELECTRICAL PLANS ON FILE?	☐	☐	☐				
b. IS ELECTRICAL CUT OFF SWITCH ABOVE FLOWAGE EASEMENT MEAN SEA LEVEL (*MSL*)?	☐	☐	☐	b. DOES SIDING PRESENT A NEAT APPEARANCE AND CONDITION?	☐	☐	☐
c. ARE CURRENT ELECTRICAL INSPECTION CERTIFICATES OF FILE? (*Electrical must meet marine requirements) g(2)* OVERHEAD?	☐	☐	☐	14. SHORELINE.			
d. ANY FRAYED OR WORN CONDITIONS?	☐	☐	☐	a. IS MOWING INCLUDED WITH PERMIT ON FILE?	☐	☐	☐
e. ARE RECEPTACLES GROUND FAULT CIRCUIT INTERRUPTERS (*GFCI*) TYPE?	☐	☐	☐	b. IS CLEAR OF LANDFORM CHANGES?	☐	☐	☐
f. IS LOCATION OF BREAKER BOX, ON SITE?	☐	☐	☐	c. IS CLEAR OF ANY VEGETATION DAMAGE?	☐	☐	☐
g. LOCATION OF WIRE CABLE FROM POLE TO STRUCTURE.				d. IS CLEAR OF ANY DEBRIS OR PRIVATE PROPERTY ON FEE PROPERTY?	☐	☐	☐
(1) BURIED?	☐	☐	☐				
(2) IS AREA SAFE FROM IMMEDIATE ELECTRICAL HAZARDS?	☐	☐	☐	e. IS SHORELINE KEEP IN A NEAT AND UNCLUTTERED APPEARANCE?	☐	☐	☐
11. SECURITY LOCKER / STORAGE ROOM.				15. LIVING ACCOMMODATIONS.			
a. LOCKER SHALL BE IN A STATE OF GOOD REPAIR.	☐	☐	☐	a. ARE ANY ITEMS CONDUCTIVE TO HUMAN HABITATION PRESENT? (*i.e. refrigerator, air conditioners, cooking facilities, heating facilities, tv, telephone, toilet facilities, shower facilities.)*	☐	☐	☐
b. WILL ONLY ITEMS FOR BOAT BE STORED IN LOCKER?	☐	☐	☐				
c. DO STORAGE ROOMS HAVE GAS AND BATTERIES SEPARATED?	☐	☐	☐				

16. REMARKS / SUMMARY

ACKNOWLEDGMENT OF INSPECTION

17a. INSPECTOR (*Last, First MI*)	b. DATE *(YYYYMMDD)*	c. INSPECTOR'S SIGNATURE
18a. BOATHOUSE / DOCK OWNER (*Last, First MI*)	b. DATE *(YYYYMMDD)*	c. BOATHOUSE / DOCK OWNER'S SIGNATURE

APPENDIX E: MAINTENANCE AND CONSTRUCTION STANDARDS FOR BOATHOUSES

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1.1 Inspection: Inspections will be conducted not less than annually, and more frequently as necessary because of storms and flooding. The Lake Manager and/or a Corps representative will notify the permit holder of any deficiencies and establish a timeline for correction. Unless authorized in writing, failure to comply with these standards within 30 days after any inspection will result in the revocation of the permit. The permit holder shall remove a permitted facility within 30 days, at permit holder's expense. Failure to remove the structure within 30 days will result in impoundment and removal by the Government or by contract, and the permit holder pays all the cost incurred.

1.2 Design Criteria: Any boat dock structure must be for the mooring of vessel or watercraft and the storage, in enclosed locker facilities, of gear essential to operation of such vessel or watercraft. A boathouse shall be only large enough to store the vessel or watercraft within the dimensions of the structure, with enough additional room for walkways and securing of the floatation. Designs for replacement of a boathouse must be prepared by a licensed professional engineer and approved by the Lake Manager before the construction of a replacement structure. Replacement structure designs will be limited to a similar size footprint (square footage) of the boathouse it is replacing.

1.3 Design Loads (Minimum):

- Deck Loads (Substructure): 50 lbs. per square foot
- Gangways/walkways: 50 lbs. per square foot
- Wind Loads (Substructure and Superstructure): 25 lbs. per square foot
- Roof Loads (Superstructure): To provide for a 2 inch ice load or equivalent amount of snow load.

1.4 Floatation Material: All new and replacement floatation must be plastic encapsulated foam that meets marina industry standards. Floatation must support the entire facility eight inches above the water surface.

1.5 Anchorage of Facilities: A design of the anchoring 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 and exposure to fetch and wind loads. The anchorage must not impinge on any area forward of a line drawn 45 degrees rearward from the front corners of the facility. The front shall be looking away from the bank at 90 degrees. Anchorage shall allow for a 10 foot plus or minus fluctuation from elevation 533 foot National Geodetic Vertical Datum (NGVD).

1.6 Walkways and Landing Areas: A shoreline landing to provide a place on the shoreline to access the gangway/walkway and in some cases to attach the gangway/walkway may be authorized but is not required. However, if requested and approved the shoreline landing shall be constructed of metal and no larger than six (6) feet by six (6) feet. The width for the gangway/walkway from the shoreline to the boathouse will be four (4) feet. Handrails are required on any new or replacement walkways or ramps that are more than 30 inches above ground or are located over water. Existing walkways or ramps are not required to have handrails unless the walkway or ramp is replaced or an imminent hazard exists. Sides

of docks and attached walkways used for loading and unloading boats do not require handrails. Handrails shall be constructed with a top rail at 42 inches above the walkway surface and a bottom rail constructed 20 inches below the top rail. Handrails shall be designed and constructed to resist a load of 50 pounds per linear foot applied in any direction at the top rail. The boathouse deck landing area will be a minimum of four (4) feet and a maximum of six (6) feet wide. Internal walkways around and in between slips within the boathouse will be a minimum of three (3) feet and maximum of four (4) feet in width.

1.7 Electrical: The design, installation and maintenance of all electrical systems shall meet the requirements of all local and state laws, the most current version of the National Electric Safety Code (NESC), and the National Electrical Code (NEC). Electrical systems must be designed by a Registered Professional Electrical Engineer or licensed Master Electrician and installed and inspected by a licensed electrician. A real estate instrument (license) is required for all electrical lines. Recertification is required at each permit renewal, change of ownership or at any time an inspection reveals that the service does not meet requirements. Applicants for electric line licenses are encouraged to consider solar applications that will meet the need for electrical power. Additional requirements for electrical installations are as follows:

1.7.1. All electric lines on Government land shall be installed underground.

1.7.2 Electrical service to a private floating facility (boathouse) is limited to 120 volt receptacles and lighting circuits.

1.7.3 Exterior lighting, including all lighting on open-sided docks, is limited to 150 watt, or equivalent, lamps. All exterior lighting shall be aimed directly downward to reduce glare when viewed from the water or adjacent homes.

1.7.4 Main electrical cutoff /disconnect switch for the electric line shall be maintained above flowage easement 573 feet National Geodetic Vertical Datum (NDVD) and permit holder is responsible for de-energizing the line during periods of rising water.

1.7.5 All electrical service must have ground fault interrupter (GFI) protection and adhere to NEC.

1.8 Fire Protection: An ABC dry chemical fire extinguisher of not less than ten pounds in capacity shall be located on every dock. All fire extinguishers shall be inspected by owner every 4 months and bear a date inspection tag.

1.9 Emergency Rescue Equipment: A United States Coast Guard approved ring buoy, having fifty 50 feet of 3/8" rope or equal, is recommended for each dock.

1.10 Dock Storage Lockers: Enclosed storage will not exceed a maximum floor area of 24 square feet in size and must be fastened securely to the dock. No individual dimension will exceed 8 feet. The storage locker(s) are not to interfere with walking space, nor are they to be used for the purpose of creating an enclosed boat dock. Dock storage boxes are authorized for storage of items essential to watercraft operation. Batteries may be stored in

an enclosed dock storage locker as long as it is stored separately from other authorized equipment and any flammable liquids. Storage of flammable liquids must be in an OSHA approved flammable storage cabinet.

1.11 Dock Furniture and Household Items: Furniture or household type items that denote habitation (such as, but not limited to, couches, stoves, sinks and refrigerators) are prohibited. Carpet and other materials covering decking and obscuring visual inspection of deck integrity are prohibited.

1.12 Siding on Structure: Siding material on existing boathouses may be replaced with new material when necessary, as long as the remainder of the boathouse is in good condition, free of holes, rust, patched appearances, etc. Any replacement of existing structures, which are permitted in designated limited development areas, must be open sided. Chain link mesh or similar material will be allowed for security.

1.13 Roofs or Superstructure: Roofs may be gabled or mono-sloped. The roof overhang may extend no more than 1 horizontal foot from the exterior walls of a boathouse. Construction materials commonly used for joist, rafters, studding and decking are wood and/or metal. Marine grade plywood may be used for decking. Metal decking must have a non-slip tread. All nails, bolts or screws must securely fasten supports and decking to maintain structural stability and must be galvanized or stainless steel. All wood shall be pressure treated with environmentally friendly chemicals. Arsenic treated wood materials are prohibited. When metal material is used it will be designed in accordance with American Institute of Steel Construction Specifications of the American Society of Civil Engineers' Proceedings for Aluminum Structures depending on the type of metal used. Welded or bolted connections are optional. New metal on the exposed exterior of the superstructure is desired. Used metal may be authorized if it is in good condition; however, if the used metal is of a dull color application of paint may be required. Paint colors will be approved by Lake Manager. All columns and stud walls will be adequately braced to resist wind loads of at least 25 pounds per square foot. Bracing will be designed and constructed to counteract design loads. The structure will have sufficient flexibility whereby wave actions will not damage the structural or roof system.

APPENDIX F: STARDARD DOCK PLANS

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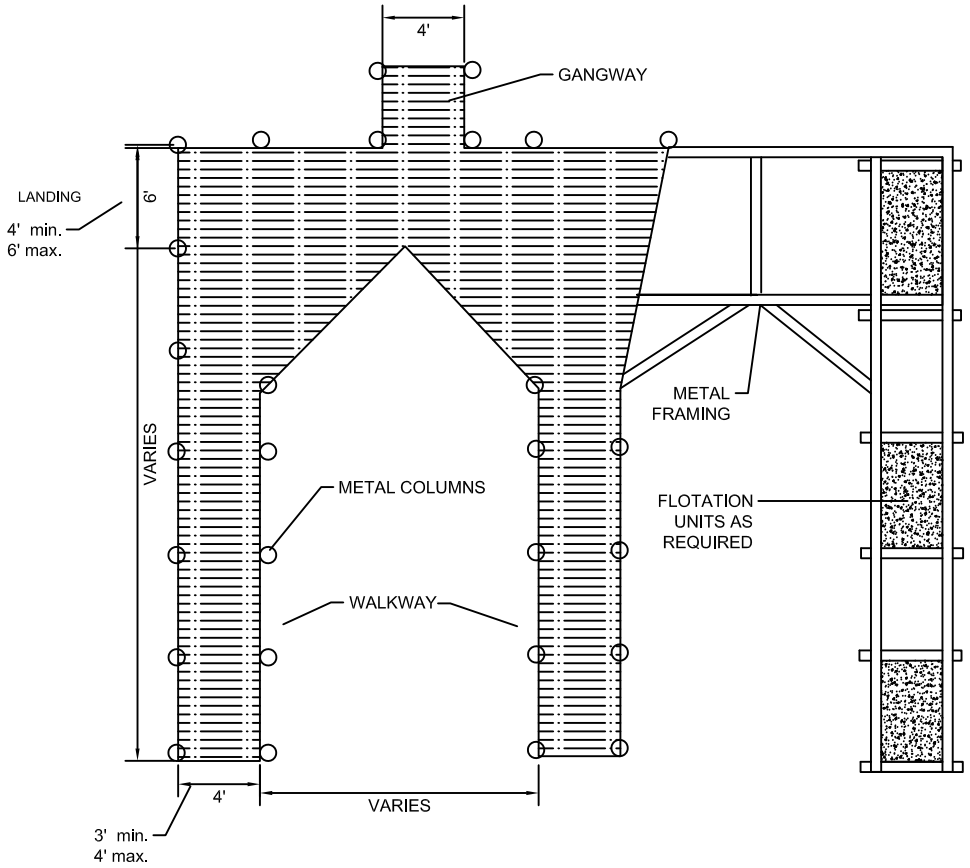
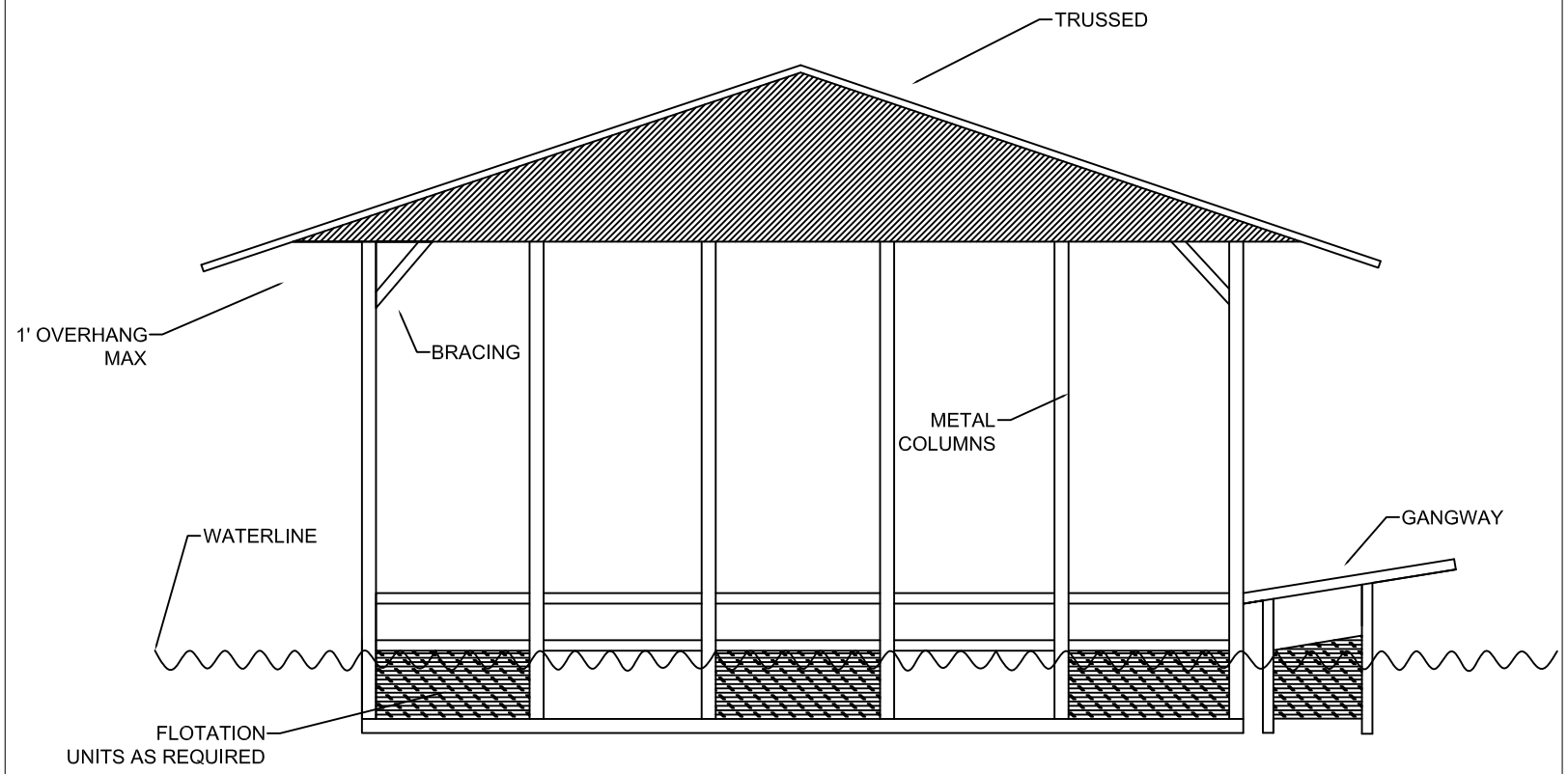
STANDARD DOCK PLANS



TOP VIEW

STANDARD DOCK PLANS



SIDE VIEW

APPENDIX G: SUMMARY OF PUBLIC COMMENTS

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LAKE WHITNEY SHORELINE MANAGEGMENT PLAN SCOPING MEETING COMMENTS 15 May 2019

Comment Description	USACE Response
PUBLIC COMMENTS	
Allow recreational activities on boat docks (Eleven (11) Comments)	**Nonconcur.** According to ER-1130-2-406, the use of a permitted boat dock facility shall be limited to the mooring of the permittees vessel or watercraft and the storage (in an enclosed locker facility) of gear essential to the operation of such vessel or watercraft. No additional recreational facilities such as slides, trampolines, roof top decks etc. are allowed.
Allow the removal of deadfall and underbrush (Two (2) Comments)	**Concur in part.** Adjacent land owners can currently apply for a vegetation modification permit from USACE. Currently, the limit for mowing and or under brushing is 35 feet from the USACE boundary. There are conditions associated with these permits that place limitations on the vegetation modification that is allowed. These conditions will be evaluated and potentially revised during the revision of the Whitney Lake SMP. Any specific instance of dead or downed trees that may be creating a hazard should be brought to the attention of the Whitney Lake Manager.
Private boat mooring buoys should be allowed in protected cove areas for watercraft that cannot be beached (Two (2) Comments)	**Nonconcur.** Private mooring buoys have not been allowed at Whitney Lake for many years. They create the appearance of additional private exclusive use of cove areas around the lake and create an “attractive nuisance” for boaters or recreational swimmers. According to ER 1130-2-406, mooring buoys are not allowed in Protected Shoreline Areas, only Limited Development Areas. With the amount of current boathouses in Limited Development Areas additional mooring buoys would create a density of mooring facilities that is not conducive to the protection of natural resources at Whitney Lake.

Comment Description	USACE Response
Allow private dock owners to add a small floating personal watercraft dock to the outside of their permanent dock.	**Noted.** Minimum design standards for all floating facilities will be reviewed and modified as part of the update for the Whitney SMP.
Increased issuance of seasonal "Mooring-Ball" or "Open flat dock" permits within Low Density Recreation Areas.	**Nonconcur.** Private mooring buoys have not been allowed at Whitney Lake for many years. They create the appearance of additional private exclusive use of cove areas around the lake and create an “attractive nuisance” for boaters or recreational swimmers. According to ER 1130-2-406, mooring buoys are not allowed in Protected Shoreline Areas, only Limited Development Areas. With the amount of current boathouses in Limited Development Areas additional mooring buoys would create a density of mooring facilities that is not conducive to the protection of natural resources at Whitney Lake.
Vegetation modification permits include the ability to remove invasive species without regard to size.	**Concur in part.** Adjacent land owners can currently apply for a vegetation modification permit from USACE. There are conditions associated with these permits that place limitations on the vegetation modification that is allowed. Invasive species are always a concern to USACE, as such the conditions associated with invasive species removal will be evaluated and potentially revised during the revision of the Whitney Lake SMP, however each permit will be evaluated individually and limited removal of known invasive species outside of the "typical area" of vegetation modification may be allowed.
Property owners living next to Corps lands that is not accessible to the public be allowed to mow and maintain the Corps land.	**Concur in part.** Adjacent land owners can currently apply for a vegetation modification permit from USACE. There are conditions associated with these permits that place limitations on the vegetation modification that is allowed. Currently, the limit for mowing and or under brushing is 35 feet from the USACE boundary. These conditions will be evaluated and potentially revised during the revision of the Whitney Lake SMP.

Comment Description	USACE Response
Boat houses be allowed to be replaced with all aluminum boat houses.	**Concur.** Aluminum structures may be permitted as long as they meet the minimum design loads as specified in the existing or revised Whitney Lake SMP.
Permitted path to be: 6’ wide (minimum) and 10’ wide (maximum) to mitigate poison ivy Johnson grass and accommodate mower width.	**Noted.** In the current 1976 Whitney Lake SMP the maximum width of pedestrian paths is three feet. This maximum width will be reviewed during the SMP revision process.
Complete the shoreline boundary survey and replace all missing boundary markers with permanent markers.	**Concur.** USACE is working as funding allows to rectify, re-mark and fence all the federal property boundaries at Whitney Lake.
Remove all non-permitted property and reclaim all USACE land that has been encroached upon.	**Concur.** USACE takes encroachments seriously and works to rectify them as soon as possible after they are discovered. Several longstanding encroachments have been recently resolved and USACE will continue to address backlogged encroachments as manpower and funding allows.
Remove/eradicate any/all invasive vegetation as is possible/practical.	**Concur.** USACE has several mechanisms for removing invasive species and it is a priority as funding and manpower allow. USACE works with other state and federal agencies cooperatively to address invasive species issues along with other tools such as work abatement from Agricultural Grazing leases to address as much invasive species control and removal as possible. USACE may work with adjacent landowners to remove invasive species as part of a vegetation modification permit.
Inspect entire shoreline for erosion/degradation and put a COMPLETE STOP to non-permitted activities.	**Concur.** USACE policy at Whitney Lake dictates that 1/3 of all federal boundary lines be inspected yearly and Whitney Lake staff also do regular boat patrols to inspect areas along the shoreline. As problem areas or encroachments are identified appropriate action is taken.

Comment Description	USACE Response
Prohibit large volumes of rain water runoff from adjacent private properties onto USACE land.	**Noted.** USACE has little control of development adjacent to its federal boundary line but relies on local, county and state agencies to control residential and commercial development, storm water runoff, sanitation and other issues. Where actions occur on federal flowage easements or fee-owned lands, USACE will ensure that stormwater runoff is properly managed.
Establish protective vegetation shelter belt-buffer zones of approximately 12 - 24 feet wide or greater along the shoreline which cannot be cut/trimmed/mowed or removed by anyone.	**Noted.** USACE property at Whitney Lake is protected from cutting, trimming or mowing by adjacent landowners or the general public except in an area 35-feet wide from the USACE boundary. These vegetation modification permits are issued on a case by case basis and approved locally by the Whitney Lake Manager. Also, limited pathway permits may be issued to adjacent private property owners whereby a narrow path may be trimmed and maintained down to the shoreline. These pathways are currently limited to 3-feet in width and also require approval on a case by case basis by the Lake Manager. All other areas of Federal land at Whitney Lake are protected from cutting, trimming or mowing.
Prohibit all unauthorized open burning.	**Concur.** United States Code of Federal Regulations, Chapter III, Title 36, Part 327 governs the use of all Water Resource Development Projects operated by USACE. Section 327.10 addresses fires and prohibits open burning.
Do not allow boat houses to have roof top or floating decks.	**Concur.** According to ER-1130-2-406, 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 facility, of gear essential to the operation of such vessel or watercraft. No additional recreational facilities such as slides, trampolines, roof top decks etc. are allowed.

Comment Description	USACE Response
STOP referring to problematic wildlife as pest. I have neighbors who consider ALL wildlife on USACE land to be pest and they have done everything they can to rid the area of all animals and the vegetation and biodiversity that supports wildlife.	**Nonconcur in part.** Pest is a common term that is applied to invasive or problematic animal and plant species. Some species such as Feral Hogs can be viewed as invasive (pests) and do damage to natural and man-made resources on public and private lands. The term "pest" is generally applied to any species having the potential to cause economic damage or health problems in humans and domesticated animals. Any mowing or vegetation modification permits for USACE property that are issued to adjacent landowners are limited in scope and size and the area is inspected and approved by Whitney Lake staff before the permit is issued. Pesticide and herbicide use by adjacent landowners is not allowed on USACE property at Whitney Lake, except to support permitted actions such as invasive plant control or in support of an authorized and permitted pathway.
Redesign the USACE websites for the Ft Worth District and Lake Whitney. They are dull, difficult to navigate and it is hard to find specific information quickly.	**Noted.** Since the US Army Corps of Engineers is part of the Department of Defense, and more specifically part of the US Army, our websites are mandated in the current format. In the Fort Worth District we have undertaken a process to train and teach more personnel the software programs necessary to keep these sites updated with correct information. USACE will strive to make important information easier to find and more user friendly.

Comment Description	USACE Response
Create a confidential TIP-LINE on-line and by telephone.	**Concur.** There is a confidential tip line that is associated with the U.S. Army Corps of Engineers, Corps Watch Program. The program is patterned after the neighborhood crime-watch deterrence program to protect Corps of Engineers assets. Each year, millions of dollars in property damage are lost on USACE-administered Federal lands due to vandalism, larceny, arson, and environmental and cultural degradation. This program is designed to heighten public awareness of the seriousness of the impacts of crime within or around dams, lakes, navigational locks, recreational areas, and other Corps of Engineers facilities. The national number for Corps Watch is 1-866-413-7970. A poster with information about Corps Watch is posted at each park entrance station located at Whitney Lake. Additionally, anyone can call and talk to a Ranger anonymously at Whitney Lake.
Review and rewrite as needed the rules and regulations for all activities, permits etc.	**Concur.** The rules and conditions for underbrushing and mowing permits on USACE property at Whitney Lake will be reviewed and re-written as part of this SMP revision. Every effort will be made to make them as clear and concise as possible. Each permit application for these areas must be approved prior to any work being done and each are evaluated on a case by case basis for the suitability of a permit being issued.

Comment Description	USACE Response
Communicate with the public, especially adjacent land owners.	**Concur.** USACE Park Rangers at Whitney Lake are required to inspect one third of the project boundary each year. The majority of these patrols are accomplished during the week while most landowners are at work. The Lake Office has developed a pamphlet, entitled "Know Your Boundaries," which addresses authorized and unauthorized activities and provides contact information. These pamphlets are available at the Lake Office, on the lake website, and should be stocked in the gatehouses and made available upon request. It is commonly understood that an individual should not go onto property they do not own and make modifications without consent. That being said, USACE does agree that communication of our rules, regulations, and restrictions to the public plays an important role in compliance.
Form a volunteer group of "Citizen Guardians."	**Nonconcur.** The Corps of Engineers does not have the authority to form a community group as described. However, USACE does have the Corps Watch Property Protection Program, which is patterned after the neighborhood crime-watch deterrence program. There is a national hotline (1-866-413-7970) to report information regarding theft, vandalism, property damage, any other threats and suspicious activity. The Whitney Lake Office will continue to promote the Corps Watch program.
TPWD RECOMMENDATIONS	
Scoping materials did not identify proposed shoreline allocations changes, such as any new or larger LDA's. Under the current plan there are 4 LDAs, 120 permitted docks, and 50 vegetation modification permits at the lake.	**Noted.** The initial public meeting was to seek input on any desired changes to the existing 1976 Whitney SMP. Any changes to the existing allocations will be included in the new draft SMP and Environmental Assessment and presented to the public and agencies for comment. The new draft SMP and Environmental Assessment is scheduled to be completed in December 2019.

Comment Description	USACE Response
Consider whether changes to the shoreline allocations could impact the GCWA and its habitat. TPWD recommends PSA allocations near GCWA habitat to avoid potential impacts. Even where private shoreline activity occurs outside GCWA habitat, paths to access docks could lead to habitat fragmentation or disturbance to nearby nesting GCWA.	**Noted.** USACE has worked with TPWD and USFWS over the last 20 years to do multiple surveys for both GCWA and BCV at Whitney Lake. Maps with locations of potential habitat for GCWA will be used to guide any and all future development around Whitney Lake including the designations of new shoreline allocations for this SMP.
If there would be any new shoreline allocated to LDA, TPWD recommends they should not be located adjacent to GCWA habitat.	**Noted.** USACE has worked with TPWD and USFWS over the last 20 years to do multiple surveys for both GCWA and BCV at Whitney Lake. Maps with locations of potential habitat for GCWA will be used to guide any and all future development around Whitney Lake including the designations of new shoreline allocations for this SMP.
No LDA be placed in or near the GCWA detections or habitat	**Concur.** USACE has worked with TPWD and USFWS over the last 20 years to do multiple surveys for both GCWA and BCV at Whitney Lake. Maps with locations of potential habitat for GCWA will be used to guide any and all future development around Whitney Lake including the designations of new shoreline allocations for this SMP.
The low density recreation area near the Canyons currently has an RLDA allocation which will be removed in the new plan. TPWD recommends a PSA allocation	**Concur.** A PSA designation would be appropriate for this area based on several factors including GCWA habitat, limited access and topography not conducive to development.
To conserve the integrity of the areas for their intended uses, TPWD recommends placing PSA shoreline allocations adjacent to master plan ESA areas and WM land uses.	**Concur.** Based on the land designations and intended uses in the 2016 Whitney Lake Master Plan revision all areas with an ESA or Wildlife Management designation will be Protected Shoreline Areas (PSA) in the new draft SMP.
20 Total Commenters	
41 Total Comments	

APPENDIX H: SUMMARY OF SHORELINE MANAGEMENT CHANGES

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PROPOSED CHANGES IN SHORELINE ALLOCATION MILES FROM 1976 TO 2020

1976 Shoreline Allocations	Miles	Proposed New Shoreline Allocations	Miles
Limited Development Areas	7.36	Limited Development Area	5.41
Restricted Limited Development Areas	7.12		
Public Recreation Areas	36.88	Public Recreation Areas	36.88
Protected Lakeshore Areas	173.13	Protected Shoreline Areas	182.2
Prohibited Access Areas	0.51	Prohibited Access Areas	0.51

JUSTIFICATION FOR CHANGES IN SHORELINE ALLOCATION MILES FROM 1976 TO 2020

Shoreline Allocation	Proposed Action Description	Justification
Limited Development Areas (LDAs)	There will be five LDAs listed in the new SMP for Whitney Lake. Those areas are: Steele Creek Harbor, Redwood Cove, King Creek, Little Rocky and Three Fingers Cove.	Although the LDAs encompass an increased amount of areas, the overall mileage of LDAs decreased. This decrease was due to the reallocation of 1.95 miles of previously incorporated LDAs into PSAs.
Prohibited Access Areas (PAAs)	There was no change from the 1976 Shoreline Management Plan to the 2020 Shoreline Management Plan.	No change from the 1976 Shoreline Management Plan was necessary for PAAs.
Protected Shoreline Areas (PSAs)	Protected Lakeshore Areas (PLAs) in the 1976 Whitney Lake Shoreline Management Plan will be converted to PSAs. 7.12 miles of Restricted Limited Development Areas (RLDAs) will be classified as PSAs in the 2020 Shoreline Management Plan. 1.95 miles of LDAs will be classified as PSA's.	Conversion of PLAs to PSAs is a simple name conversion. There are no changes to management or operations in these areas. The 2020 Whitney Lake Shoreline Management Plan will no longer utilize the allocation RLDA. The areas identified as RLDAs will be converted to PSAs.

Shoreline Allocation	Proposed Action Description	Justification
		The LDAs that were not conducive for boathouse use were classified as PSAs. These areas currently have no boathouses and none will be allowed there in the future.
Public Recreation Areas (PRAs)	There was no change from the 1976 Shoreline Management Plan to the 2020 Shoreline Management Plan.	No change from the 1976 Shoreline Management Plan was necessary for the PRAs.

PROPOSED CHANGES TO THE SHORELINE MANAGEMENT PLAN FROM 1976 TO 2020

1976 Shoreline Management Plan	**Proposed 2019 Shoreline Management Plan**	**Justification of the Proposed Action**
<u>Boathouse Deck Landing Area and Shoreline Landing Area</u> The deck landing area is the section of the boathouse to which the walkway/gangway from the shoreline attaches. This structural feature was shown on the typical drawings in the 1976 Shoreline Management Plan but was not fully described.	<u>Boathouse Deck Landing Area</u> This deck landing is the part of the boathouse to which the walkway/gangway from the shoreline attaches. This area may be a minimum of four feet wide and a maximum of six feet wide. <u>Shoreline Deck Landing Area</u> The shoreline deck landing is the area on the shoreline to which the walkway/gangway attaches. This area may be a maximum of six feet by six feet in size.	The boathouse deck landing area maximum size is consistent with the 1976 Shoreline Management Plan. It was shown on the typical drawing in that plan but was not fully described, thus leading to confusion. The shoreline deck landing area was not mentioned in the 1976 Plan, but the purpose of this feature is to provide a place on the shoreline to access the gangway/walkway and in some cases to attach the gangway/walkway. This maximum size for the shoreline deck landing area will minimize the impact to the natural resources in LDAs where boathouses are located.

1976 Shoreline Management Plan	Proposed 2019 Shoreline Management Plan	Justification of the Proposed Action
Boathouse Roof Overhang This structural feature is not addressed in the 1976 Shoreline Management Plan.	Boathouse Roof Overhang This structural feature is common on boathouses and may extend no more than one horizontal foot from the exterior walls of a boathouse.	The purpose of a limitation on the size of the roof overhang on boathouses is to minimize the overall water footprint of the boathouse and to reduce the impact to navigation around boathouses by the general public.
Boathouse Siding Requirements Existing Facilities – Must be reasonably plumb and square with adequate internal bracing to handle 25 pounds per square foot wind loads. Covering, whether wood, sheet metal, fiberglass, or some form of composition board must be free of large holes or major rusted areas, and must present a neat orderly appearance. It is suggested that owners consider replacing solid side sheeting with chain link fence or some similar material as required in the Standards for New Facilities. This is less resistant to wind loads, more aesthetically acceptable and provides reasonable security. New Facilities – Any new structures, which may be permitted in designated limited development areas, must be open sided. Chain link mesh or similar material will be allowed for security. All siding must be maintained in neat uniform condition, free of holes, rust, patched appearance, etc.	Boathouse Siding Requirements Siding material on existing boathouses may be replaced with new material when necessary, as long as the remainder of the existing boathouse is in good condition. If an enclosed boathouse is removed from the lake or damaged beyond repair, and the owner desires to replace it, the replacement structure must be open sided or enclosed with a material such as chain link wire mesh.	This change will allow some of the older boathouses with substructures still in good condition to replace the old siding with new more aesthetically appealing material. This change does not, however, allow any totally replaced boathouses to be enclosed with anything other than chain link wire mesh.
Boathouse Footprint Existing Facilities – No changes in design of structures presently permitted will be allowed without prior written approval. Modifications, except those which provide for storage of boats and marine related equipment, probably will not be approved. New Facilities - Any structure approved for construction in the future must be for the storage of boats only, a boathouse, and shall be only large	Boathouse Footprint Replacement boathouse construction will be limited to the square footage footprint of the existing boat dock.	This requirement has been in effect for many years at Whitney Lake and is the interpretation of the requirements from the 1976 Shoreline Management Plan. This is a clarification of the language used in the 1976 SMP.

1976 Shoreline Management Plan	Proposed 2019 Shoreline Management Plan	Justification of the Proposed Action
enough to store the boat within the outer dimensions of the structure, with enough additional room for walkways and securing of the flotation.		
Flotation Material Existing and New Facilities - Unsinkable, well secured, not likely to sink or separate from structure within one year. Must be Styrofoam or equal. Steel barrels or similar floatation are not acceptable. Coast Guard approved floatation which meets current Coast Guard criteria will be approved if it is in good condition. Use of modified expandable polystyrene is recommended because of the added safety of fire retardant floatation.	Flotation Material Floatation material used for replacement or for new boathouse flotation must be encapsulated.	This requirement is above the requirements listed in ER 1130-2-406 which still allows the use of extruded polystyrene floatation material. The use of plastic encapsulated floatation materials is necessary at Whitney Lake to resist puncture from rocks (when lake levels drop) or from nutria or beaver damage. The use of encapsulated floatation has been mandated for use in boathouses at Whitney Lake for several years.
Personal Watercraft Docks Existing Facilities – No changes in design of structures presently permitted will be allowed without prior written approval. Modifications, except those which provide for storage of boats and marine related equipment, probably will not be approved. New Facilities - Any structure approved for construction in the future must be for the storage of boats only, a boathouse, and shall be only large enough to store the boat within the outer dimensions of the structure, with enough additional room for walkways and securing of the flotation.	Personal Watercraft Docks Personal Watercraft docks cannot be added to a boathouse in a way that increases the original boathouse footprint. Personal Watercraft docks may be incorporated into new designs as long as they meet the square footage requirement of the boat dock they are replacing.	Adding personal watercraft docks to the outside of an existing structure will not be allowed because it will increase the amount of permitted space for that boathouse.
Electrical Cutoff Point Existing Facilities – The bases of all service poles carrying electric meters and line disconnecting devices must be at or above 571 feet MSL. (This provision may be waived if the power company serving the line will agree in writing to disconnect the power supply to the service pole in the event of high	Electrical Disconnect Elevation Cutoff Point All electrical disconnect switches must be at or above 573’ feet NGVD.	This requirement is for Real Estate Licenses for electric lines that serve boathouses. Before any license will be renewed, the disconnect switch must be above the maximum pool elevation of 573’ feet NGVD. The waiver from the power company is no longer an option.

1976 Shoreline Management Plan	Proposed 2019 Shoreline Management Plan	Justification of the Proposed Action
water. The base of the power company's pole on which their line disconnecting device is located must be at or above 571 feet MSL). New Facilities – Not addressed in the 1976 Shoreline Management Plan.		
Gangway and Walkway Size Requirements Existing Facilities – Walkways shall not be less than three feet wide, except between slips where the minimum width shall be two feet. New Facilities - Walkway shall be not less than three feet wide and structurally sound.	Gangway and Walkway Size Requirements The walkways on gangways must be four feet in width and have handrails on both sides. Walkways inside boathouses may be a minimum width of three feet or a maximum width of four feet.	The gangway size increase was due an adjustment to provide additional safety measures for public use on new or rebuilt gangways. The minimum sizes for walkways have been in effect for many years on new and rebuilt boathouses, but will now allow for a greater maximum width to accommodate boathouse owners. This falls into line with the industry safety standard for Marinas and other floating facilities.
Community Docks Community docks will be encouraged in order to reduce the proliferation of individual facilities. Lakeshore permits will be granted for such facilities in 'limited development areas' when the sites are removed from commercial marine services and granting of such permits will not despoil the shoreline nor inhibit the public use of the area. It is the policy to issue only one permit for a community boat mooring facility with one person designated as the permittee and responsible for all moorage spaces of the facility. This type of facility shall be for a minimum of five boats and will be for the storage of boats only. No fuel or other concession privileges will be granted.	Community Docks Community docks will no longer be permitted on Whitney Lake.	According to ER 1130-2-406, group owned mooring facilities may be allowed when public or commercial launching or moorage facilities are not located within a reasonable distance of an LDA. The average distance from all LDA's to a commercial or public launching facility at Whitney Lake is 4.25 miles which is considered a reasonable distance. The longest distance is from Little Rocky LDA to Lofers Bend Day Use boat ramp, which is 6 miles.

1976 Shoreline Management Plan	Proposed 2019 Shoreline Management Plan	Justification of the Proposed Action
Boathouse Consolidation Consolidation of multiple boathouses was not addressed in the 1976 Shoreline Management Plan.	Boathouse Consolidation Consolidation of smaller boathouses to create larger boathouses, even within the allotted square footage of the original boathouses, is not permitted on Whitney Lake.	It is the goal of the revised Shoreline Management Plan to minimize the impact of private shoreline use on the shoreline of Whitney Lake. Creating larger, ever expanding boathouses by combining smaller boathouses is not conducive to the protection of the natural resources or for the enjoyment or use of Whitney Lake by the general public. For owners looking for additional spaces to moor boats, ample space is available in public marinas at Whitney Lake.
Transfer of Boathouse Ownership Transfer of ownership of an existing facility may be done under the following conditions: 1. The facility must be in a limited development area or a restricted limited development-area; or the new owner must have a permit for a space in one of the four limited development areas and must move the facility into the limited development areas when the sale is consummated. 2. The facility must conform to all of the requirements of the standards for existing facilities at the time it is sold. A joint inspection will be arranged by the seller, with the buyer, seller, and project personnel before the sale is consummated to assure all parties are aware of the conditions of the sale.	Transfer of Boathouse Ownership Permits for a boathouse are not transferable and will become null and void upon the date of sale or other legal change of ownership. The new owner of a previously permitted facility must submit a Permit Relinquishment Notice, Bill of Sale, and apply for a Shoreline Use Permit within 14 days. An inspection will be performed and the facility must conform to the Maintenance and Construction Standards for Boathouses (Appendix E of the 2019 Shoreline Management Plan) before a permit is issued to the new owner. If the facility owner does not bring the facility into compliance within a timeframe approved by the Lake Manager, a Shoreline Use Permit will not be issued and the owner will be required to remove the facility from public lands and waters within 30 days.	Oversight of transferred boathouse permits has been difficult to enact insufficient communication between USACE and private boathouse owners. These miscommunications necessitate a more efficient system of recording new boathouse owners by requiring the new owner to apply for a new permit. This process should protect new boathouse owners from inheriting out-of-compliance structures and allow a smoother transition into boathouse purchase and permitting.

1976 Shoreline Management Plan	Proposed 2019 Shoreline Management Plan	Justification of the Proposed Action
Boathouse Commercial Purposes Boathouses used for commercial purposes were not addressed in 1976 Shoreline Management Plan.	Boathouse Commercial Purposes Boathouses may not be used for commercial purposes. Boathouses are for the storage of boats or personal watercraft by the owner of the boathouse. Boathouses may not be leased or rented on a short- or long-term basis, even if connected to an adjacent residence.	According to ER 1130-2-406, no charge may be made for use of any permitted facility by others, nor shall any commercial activity be engaged in thereon. The use of boathouses as amenities included in short term residential rentals is considered commercial use and will not be allowed.
Community Dry Storage This type of operation will be encouraged above all other alternatives in the future as it provides the greatest environmental protection. Developers, subdivisions, or communities desiring to construct dry storage on private lands may obtain a boat launching complex and access road through a Real Estate instrument subject to the following conditions: compensation will be at fair market value, the facility will be open to the general public, and plans for the complex and access along with a centerline description of the area will be submitted for prior approval. Approval for this type of facility will depend on the desired location's impact on aesthetic and environmental conditions and the distance from commercial concessions.	Community Dry Storage USACE will not grant permission for a boat launching complex on Federal land as a means to encourage community dry storage on private land.	USACE, Fort Worth District, implemented a Water-Related Development Policy in 2002 that, in most cases, would require a comprehensive boating capacity study prior to the granting of any permissions for a boat launching complex. The intent of the policy is to ensure that the level of boating traffic on any given lake, or within zones on certain lakes, does not exceed an amount that would become unsafe or detract from an enjoyable boating experience. The 1976 Shoreline Management Plan included language that encouraged community dry storage (with associated public boat ramp on USACE land) only as a means to reduce the spread of private shoreline use. Today, the need to ensure safe boating capacity has overridden this previous rationale.
New Stairways a. New stairway construction requires a Real Estate Instrument. Before new stairs or extensive reconstruction of existing stairs will be allowed, detailed plans will be submitted to the Project Engineer for approval (see Permits 5-03).	New Stairways No new stairways will be authorized. Licenses for existing stairways will continue to be renewed if the facility is being maintained in a safe condition, certified by a licensed structural engineer, and approved by the Lake Manager. Abandoned stairways are	In accordance with ER 1130-2-406, applications for new private stairways may be accepted only in LDAs as zoned in the Shoreline Management Plans or in areas where a disabled person needs access. This ER limits the applicability of new stairway permits outside of LDAs. The 2019 Shoreline Management Plan further restricts new

1976 Shoreline Management Plan	Proposed 2019 Shoreline Management Plan	Justification of the Proposed Action
Plans will be submitted on 8.5 by 14" legal size paper. New stairs must be of metal construction. Concrete or wood stairways will not be permitted. Concrete foundations for metal stairs will be limited to that amount approved by the Project Engineer or Reservoir Manager. c. Movable access to floating facilities such as gangways, short ladders, etc., designed to allow for access to the facility at various lake stages will not be considered as stairways and will be considered a part of the floating facility. d. All fixed structures will be considered as separate structures and require a separate approval.	subject to removal in accordance with Title 36 CFR, Section 327.20 Unauthorized Structures. Existing stairways can be renewed upon owner request. Existing stairways must be maintained in safe condition, certified by a licensed structural engineer, and approved by the Lake Manager.	stairway construction because there is not a public need for newly constructed stairways. All boathouses that may require a staircase have already been permitted and grandfathered. There is sufficient access to Whitney Lake from various USACE parks and commercial vendors to provide adequate access to the lake within LDAs.
<u>Private Mooring Buoys</u> Boat mooring buoys and flotation units of floating facilities shall be constructed of materials which will not become waterlogged or sink when punctured.	<u>Private Mooring Buoys</u> Private mooring buoys will no longer be encouraged or permitted upon Whitney Lake.	Private mooring buoys have not been allowed at Whitney Lake for many years. They create the appearance of additional private shoreline use of cove areas around the lake and create an "attractive nuisance" for boaters or recreational swimmers. With the amount of current boathouses in LDAs, additional mooring buoys would create a density of facilities that would be unsafe and not conducive to the protection of natural resources at Whitney Lake.
<u>External Mooring of Boats</u> External mooring of boats to a permitted boathouse was not addressed in the 1976 Shoreline Management Plan	<u>External Mooring of Boats</u> External mooring of boats or mooring of personal watercraft to a boathouse will not be permitted on a permanent basis. Boats and personal watercraft may be moored externally during normal recreational use for a period not to exceed 24 hours, as governed by Title 36 CFR.	This policy has been in effect for many years at Whitney Lake and is consistent with rules and regulations in Title 36 CFR that govern use of water resource development projects. All boats must be stored within the footprint of the boathouse. Boathouses are intended for the personal use of an individual. Individuals having multiple boats have the option to utilize public marina spaces if they desire to moor additional boats than the boathouse will accommodate in its footprint.

1976 Shoreline Management Plan	Proposed 2019 Shoreline Management Plan	Justification of the Proposed Action
Access Paths The path can be a maximum of three feet in width.	Access Paths May be a maximum of four feet in width, depending on the environmental site characteristics of the proposed pathway location.	The additional one foot width allowed for pathways will provide space to help manage vegetation adjacent to the walkway to allow a path that is wide to enough to comfortably walk to the shoreline.
Underbrushing No size limitation was addressed in the 1976 Shoreline Management Plan.	Underbrushing No vegetation greater than one inch in diameter at breast height (5')(DBH) may be removed.	This has been the maximum size for under brushing at Whitney Lake for many years. This size limit helps to protect the natural landscape and reduce exposure of shoreline to erosion.
Firebreaks/Mowing Site environmental characteristics will dictate the amount to be mowed and it will be defined on the permit.	Firebreaks/Mowing Restricted to a maximum of 35', but can be reduced depending on the environmental site characteristics of the proposed firebreak location.	There was no maximum width mentioned in the 1976 Shoreline Management Plan. The width of 35 feet has been utilized at Whitney Lake for many years as the maximum size for mowing/firebreaks. This is the maximum size and site conditions may not allow for this width at all locations. Each permit will be evaluated independently for suitability and size of allowed firebreak or mowing area. A community and multi-agency team studied this issue extensively in 2010 and determined that a mowed firebreak of 35 feet provides adequate fire protection, while minimizing impacts to the environment.
New Space Allocations a) Structures which meet standards for existing facilities will be given first priority for available spaces in limited development areas or restricted limited development areas for the first year following implementation of this plan. Owners who wish to move their structure into a limited development area or restricted limited development area must notify the Project Engineer in writing of their desire to move.	New Space Allocations If a "grandfathered" boathouse is voluntarily removed by the owner, or is removed for failure to comply with the three conditions specified in paragraph 8.b. (1) (2) (3) of ER 1130-2-406 dated October 31, 1990, the space for that boathouse will be eliminated and will	As described below, no new permits have been issued in many years at Whitney Lake, even though this was allowable pursuant to the 1976 Shoreline Management Plan. The lake level at Whitney Lake can, and frequently has, fluctuated more than 20 feet, making it difficult and costly to maintain a boathouse. Past droughts have required boathouses to move to deeper water, and major flood events have damaged some boathouses beyond repair.

1976 Shoreline Management Plan	Proposed 2019 Shoreline Management Plan	Justification of the Proposed Action
No letters will be accepted by one year after this plan goes into effect. No drawing for permits under "c" below will be carried out until all who are eligible to move have done so. b) Community Governments and/or non-profit coops of boat owners who desire to construct and maintain the aforementioned "community dock" will have second priority for spaces as they become available in the limited development areas. Representatives of these groups must notify, in writing, the project manager of their desire to place a community dock on the lake. A list will be developed with order of priority based on the date of receipt of letter notification, with the first notification received being placed at the top of the list. c) After this list is exhausted and additional spaces become available in limited development areas, permits for these available spaces (limited to private floating facilities only) will be issued by a drawing of names. This drawing will be held on the second Wednesday of the first month of each quarter. If a prospective permittee' s name is drawn, that person will have 60 days to submit detailed plans and specifications of the proposed boathouse for approval. If the plans are not submitted within the allotted time, a new drawing for the space will be held. Names will be placed in the drawing pool based on letter applications. The letter application must be renewed each year. Requests which have been in the pool for more than a year will be withdrawn each month prior to any drawing. All drawings will be announced and will be open to public observation.	no longer be available for private shoreline use. No new additional boathouses will be added in LDAs at Whitney Lake. Existing permits will continue to be honored in accordance with permit conditions and can be renewed. Existing boathouses can be repaired, rebuilt, sold or transferred, but no permits for new boathouses will be issued. If an existing boathouse permit is voluntarily relinquished, or the permit is not renewed for noncompliance, no new permit will be issued for that space in the LDA.	Damaged parts of boathouses have been scattered around the shoreline or sunk in the lake causing navigation hazards and damage to natural resources. Additionally, the topography around Whitney Lake, the presence of sensitive resources, and the need to preserve aesthetically pleasing shorelines, greatly reduces the amount of shoreline that is conducive to placing boathouses. Suitable areas were identified long ago and have already been designated as LDAs. Adding additional LDAs was not feasible for these reasons. Additionally, outdoor recreation trends in Texas point to the scarcity of public lands and the need to keep all public lands (and water surface) available for general public use. The existing LDAs are currently occupied by boathouses to an extent that approaches the allowable limit of 50% density of shoreline within the LDA. Several public comments from the public meeting in May 2019 suggested that no new boathouse permits be granted. Commercial marinas are well-positioned to provide boat mooring services and adding new boathouse permits would create undesirable competition with commercial marinas.

1976 Shoreline Management Plan	Proposed 2019 Shoreline Management Plan	Justification of the Proposed Action
Movement of Boathouses Facilities Having Current Permits: (a) Owners of presently permitted facilities which are not in one of the four limited development areas or in a restricted limited development area will have three options under this plan: 1. Under provisions of the Grandfather Clause they may leave their facility at the present location providing the structure is brought up to the Standard for Existing Facilities within one year after this plan is implemented. Repairs will not be allowed if the cost will exceed 50 percent of the cost of a new structure exactly like the one being repaired. 2. They may request in writing to move their facility into a limited development-area or a restricted limited development area as listed in paragraph 4-02a. within one (1) year after implementation of this plan providing capacity for additional facilities exists at the desired area. 3. After the one year period for moving an existing facility, an owner may still move his facility into one of the four limited development areas if a space is available and he secures a permit through the drawing procedures listed below.	Movement of Boathouses Existing private shoreline use, to include boathouses, that have a valid authorized shoreline use permit in areas allocated as PSA will be allowed to remain provided they meet the criteria and conditions established in this SMP. Boathouses located in PSA areas may not be relocated unless the owner desires to move the boathouse to an LDA as described above. Movement within LDAs will not be permitted in the 2019 Shoreline Management Plan. Once a permitted structure has been relocated to an LDA, no further relocation is allowed.	Noted above, the existing LDAs are currently occupied by boathouses to an extent that approaches the allowable limit of 50% density of shoreline with the LDA. It is not feasible to allow the relocation of a boathouse to a new location within any LDA due to the lack of space and adequate locations.

APPENDIX I: ENVIRONMENTAL ASSESSMENT

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DRAFT

Environmental Assessment for the Whitney Lake Shoreline Management Plan

Brazos River Basin
Bosque, Hill, and Johnson Counties, Texas

January 2020

US Army Corps of Engineers ®
Fort Worth District

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DRAFT FINDING OF NO SIGNIFICANT IMPACT
ENVIRONMENTAL ASSESSMENT FOR THE
WHITNEY LAKE SHORELINE MANAGEMENT PLAN
BOSQUE, HILL, AND JOHNSON COUNTIES, TEXAS

In accordance with the National Environmental Policy Act of 1969, including guidelines in 33 Code of Federal Regulations (CFR) Part 230, the Fort Worth District and the Regional Planning and Environmental Center (RPEC) of the U.S. Army Corps of Engineers (USACE) have assessed the potential impacts that the alternative management scenarios set forth in the Draft 2020 Whitney Lake Shoreline Management Plan (Draft 2020 Shoreline Management Plan) would have on the natural, cultural, and human environments.

The 2020 Shoreline Management Plan is a revision of the 1976 Shoreline Management Plan entitled *Design Memorandum Number 1C, Appendix F, Lakeshore Management Plan, Revised Master Plan, Whitney Lake, Brazos River Basin, Brazos River, Texas.* The 2020 Shoreline Management Plan seeks to balance permitted private uses and resource protection for general public use, providing clear guidance for the effective management of private uses on public lands. The 2020 Shoreline Management Plan complements the 2016 Whitney Lake Master Plan (USACE 2016), honors past written commitments, and encourages the use of public facilities in lieu of expanded private uses. All management actions pursuant to the 2020 Shoreline Management Plan must be balanced with the primary project purposes of flood risk management and hydroelectric production. The 2020 Shoreline Management Plan envisions a management horizon of 25 years.

The Environmental Assessment (EA) evaluated and analyzed two alternatives: the No Action Alternative (continued use of the 1976 Shoreline Management Plan) and the implementation of the 2020 Shoreline Management Plan. Under the No Action Alternative, the USACE would be taking no action, which means the 1976 Shoreline Management Plan would not be revised. With this alternative, no new resources analysis, revised shoreline allocations, or revised permit uses would occur. The management of the lands and associated resources would continue as outlined in the 1976 Shoreline Management Plan.

The Proposed Action includes a revised Shoreline Management Plan, coordination with the public, and updates that make the 2020 Shoreline Management Plan compatible with the 2016 Whitney Lake Master Plan. The 2016 Whitney Lake Master Plan ensures that management of Whitney Lake reflects ecological, socio-demographic, and outdoor recreation trends that are currently impacting the lake, as well as those anticipated to occur within the planning period of 2020 to 2045, a 25-year period. Shoreline allocations were refined to meet authorized project purposes and current resource objectives that address a mix of natural resource and recreation management objectives that are compatible with regional goals. Recommended shoreline allocation changes associated with the Proposed Action include four allocations to balance resource objectives, and include the following (Table 1):

Table 1. Proposed Shoreline Mile Allocations

Shoreline Allocation	Proposed Action Description	Justification
Limited Development Areas	There will be five Limited Development Areas (LDAs) listed in the new SMP for Whitney Lake. Those areas are: Steele Creek Harbor, Redwood Cove, King Creek, Little Rocky and Three Fingers Cove.	Although the number of LDAs increased from four to five, the overall shoreline mileage of LDAs decreased. This decrease was due to the reallocation of 1.95 miles of previously designated LDAs into Protected Shoreline Areas (PSAs).
Prohibited Access Areas	There was no change from the 1976 Shoreline Management Plan to the 2020 Shoreline Management Plan.	No change from the 1976 Shoreline Management Plan was necessary for the Prohibited Access Areas (PAAs).
Protected Shoreline Areas	Protected Lakeshore Areas in the 1976 Whitney Lake Shoreline Management Plan will be converted to PSAs. 7.12 miles of Restricted Limited Development Areas (RLDAs) will be classified as PSAs in the 2020 Shoreline Management Plan. 1.95 miles of LDAs will be classified as PSA's.	Conversion of Protected Lakeshore Areas to PSAs is a simple name conversion. There are no changes to management or operations in these areas. The 2020 Whitney Lake Shoreline Management Plan will no longer utilize the allocation RLDA. The areas identified as RLDAs will be converted to PSAs. The change from RLDA to PSA will not affect the rules and procedures by which these areas have been managed in the past. LDAs that were not conducive for boathouse use were classified as PSAs. These areas currently have no boathouses and none will be allowed there in the future.
Public Recreation Areas	There was no change from the 1976 Shoreline Management Plan to the 2020 Shoreline Management Plan.	No change from the 1976 Shoreline Management Plan was necessary for the Public Recreation Areas (PRAs).

Recommended permit changes associated with the Proposed Action include the following (Table 2):

Table 2. Proposed Permit Changes Between the 1976 Shoreline Management Plan and the 2020 Shoreline Management Plan (Unless stated, other shoreline use permits and regulations will not change).

1976 Shoreline Management Plan	Proposed 2020 Shoreline Management Plan	Justification of the Proposed Action
Boathouse Deck Landing Area and Shoreline Landing Area The deck landing area is the section of the boathouse to which the walkway/gangway from the shoreline attaches. This structural feature was shown on the typical drawings in the 1976 Shoreline Management Plan but was not fully described.	Boathouse Deck Landing Area This deck landing is the part of the boathouse to which the walkway/gangway from the shoreline attaches. This area may be a minimum of four feet wide and a maximum of six feet wide. Shoreline Deck Landing Area The shoreline deck landing is the area on the shoreline to which the walkway/gangway attaches. This area may be a maximum of six feet by six feet in size.	The boathouse deck landing area maximum size is consistent with the 1976 Shoreline Management Plan. It was shown on the typical drawing in that plan but was not fully described, thus leading to confusion. The shoreline deck landing area was not mentioned in the 1976 Plan, but the purpose of this feature is to provide a place on the shoreline to access the gangway/walkway and in some cases to attach the gangway/walkway. This maximum size for the shoreline deck landing area will minimize the impact to the natural resources in LDAs where boathouses are located.
Boathouse Roof Overhang This structural feature is not addressed in the 1976 Shoreline Management Plan.	Boathouse Roof Overhang This structural feature is common on boathouses and may extend no more than one horizontal foot from the exterior walls of a boathouse.	The purpose of a limitation on the size of the roof overhang on boathouses is to minimize the overall water footprint of the boathouse and to reduce the impact to navigation around boathouses by the general public.
Boathouse Siding Requirements Existing Facilities – Must be reasonably plumb and square with adequate internal bracing to handle 25 pounds per square foot wind loads. Covering, whether wood, sheet metal, fiberglass, or some form of composition board must be free of large holes or major rusted areas, and must present a neat orderly appearance. It is suggested that owners consider replacing solid side sheeting with chain link fence or some similar material as required in the Standards for New Facilities. This is less resistant to wind	Boathouse Siding Requirements Siding material on existing boathouses may be replaced with new material when necessary, as long as the remainder of the existing boathouse is in good condition. If an enclosed boathouse is removed from the lake or damaged beyond repair, and the owner desires to replace it, the replacement structure must be open sided or enclosed with a material such as chain link wire mesh.	This change will allow some of the older boathouses with substructures still in good condition to replace the old siding with new more aesthetically appealing material. This change does not, however, allow any totally replaced boathouses to be enclosed with anything other than chain link wire mesh.

loads, more aesthetically acceptable and provides reasonable security. New Facilities – Any new structures, which may be permitted in designated limited development areas, must be open sided. Chain link mesh or similar material will be allowed for security. All siding must be maintained in neat uniform condition, free of holes, rust, patched appearance, etc.		
<u>Boathouse Footprint</u> Existing Facilities – No changes in design of structures presently permitted will be allowed without prior written approval. Modifications, except those which provide for storage of boats and marine related equipment, probably will not be approved. New Facilities - Any structure approved for construction in the future must be for the storage of boats only, a boathouse, and shall be only large enough to store the boat within the outer dimensions of the structure, with enough additional room for walkways and securing of the flotation.	<u>Boathouse Footprint</u> Replacement boathouse construction will be limited to the square footage footprint of the existing boat dock.	This requirement has been in effect for many years at Whitney Lake and is the interpretation of the requirements from the 1976 Shoreline Management Plan. This is a clarification of the language used in the 1976 SMP.
<u>Flotation Material</u> Existing and New Facilities - Unsinkable, well secured, not likely to sink or separate from structure within one year. Must be Styrofoam or equal. Steel barrels or similar floatation are not acceptable. Coast Guard approved floatation which meets current Coast Guard criteria will be approved if it is in good condition. Use of modified expandable polystyrene is recommended because of the added safety of fire retardant floatation.	<u>Flotation Material</u> Floatation material used for replacement or for new boathouse flotation must be encapsulated.	This requirement is above the requirements listed in ER 1130-2-406 which still allows the use of extruded polystyrene floatation material. The use of plastic encapsulated floatation materials is necessary at Whitney Lake to resist puncture from rocks (when lake levels drop) or from nutria or beaver damage. The use of encapsulated floatation has been mandated for use in boathouses at Whitney Lake for several years.
<u>Personal Watercraft Docks</u> Existing Facilities – No changes in design of structures presently permitted will be allowed without prior written approval. Modifications, except those which provide for storage of boats and marine related equipment, probably will not be approved.	<u>Personal Watercraft Docks</u> Personal Watercraft docks cannot be added to a boathouse in a way that increases the original boathouse footprint. Personal Watercraft docks may be incorporated into new designs	Adding personal watercraft docks to the outside of an existing structure will not be allowed because it will increase the amount of permitted space for that boathouse.

New Facilities - Any structure approved for construction in the future must be for the storage of boats only, a boathouse, and shall be only large enough to store the boat within the outer dimensions of the structure, with enough additional room for walkways and securing of the flotation.	as long as they meet the square footage requirement of the boat dock they are replacing.	
<u>Electrical Cutoff Point</u> Existing Facilities – The bases of all service poles carrying electric meters and line disconnecting devices must be at or above 571 feet MSL. (This provision may be waived if the power company serving the line will agree in writing to disconnect the power supply to the service pole in the event of high water. The base of the power company's pole on which their line disconnecting device is located must be at or above 571 feet MSL). New Facilities – Not addressed in the 1976 Shoreline Management Plan.	<u>Electrical Disconnect Elevation Cutoff Point</u> All electrical disconnect switches must be at or above 573' feet NGVD.	This requirement is for Real Estate Licenses for electric lines that serve boathouses. Before any license will be renewed, the disconnect switch must be above the maximum pool elevation of 573' feet NGVD. The waiver from the power company is no longer an option.
<u>Gangway and Walkway Size Requirements</u> Existing Facilities – Walkways shall not be less than three feet wide, except between slips where the minimum width shall be two feet. New Facilities - Walkway shall be not less than three feet wide and structurally sound.	<u>Gangway and Walkway Size Requirements</u> The walkways on gangways must be four feet in width and have handrails on both sides. Walkways inside boathouses may be a minimum width of three feet or a maximum width of four feet.	The gangway size increase was due an adjustment to provide additional safety measures for public use on new or rebuilt gangways. The minimum sizes for walkways have been in effect for many years on new and rebuilt boathouses, but will now allow for a greater maximum width to accommodate boathouse owners. This falls into line with the industry safety standard for Marinas and other floating facilities.
<u>Community Docks</u> Community docks will be encouraged in order to reduce the proliferation of individual facilities. Lakeshore permits will be granted for such facilities in 'limited development areas' when the sites are removed from commercial marine services and granting of such permits will not despoil the shoreline nor inhibit the public use of the area. It is the policy	<u>Community Docks</u> Community docks will no longer be permitted on Whitney Lake.	According to ER 1130-2-406, group owned mooring facilities may be allowed when public or commercial launching or moorage facilities are not located within a reasonable distance of an LDA. The average distance from all LDA's to a commercial or public launching facility at Whitney Lake is 4.25 miles which is considered a reasonable distance. The longest distance is

to issue only one permit for a community boat mooring facility with one person designated as the permittee and responsible for all moorage spaces of the facility. This type of facility shall be for a minimum of five boats and will be for the storage of boats only. No fuel or other concession privileges will be granted.		from Little Rocky LDA to Lofers Bend Day Use boat ramp is 6 miles.
Boathouse Consolidation Consolidation of multiple boathouses was not addressed in the 1976 Shoreline Management Plan.	Boathouse Consolidation Consolidation of smaller boathouses to create larger boathouses, even within the allotted square footage of the original boathouses, is not permitted on Whitney Lake.	It is the goal of the revised Shoreline Management Plan to minimize the impact of private shoreline use on the shoreline of Whitney Lake. Creating larger, ever expanding boathouses by combining smaller boathouses is not conducive to the protection of the natural resources or for the enjoyment or use of Whitney Lake by the general public. For owners looking for additional spaces to moor boats, ample space is available in public marinas at Whitney Lake.
Transfer of Boathouse Ownership Transfer of ownership of an existing facility may be done under the following conditions: 1. The facility must be in a limited development area or a restricted limited development-area; or the new owner must have a permit for a space in one of the four limited development areas and must move the facility into the limited development areas when the sale is consummated. 2. The facility must conform to all of the requirements of the standards for existing facilities at the time it is sold. A joint inspection will be arranged by the seller, with the buyer, seller, and project personnel before the sale is consummated to assure all parties are aware of the conditions of the sale.	Transfer of Boathouse Ownership Permits for a boathouse are not transferable and will become null and void upon the date of sale or other legal change of ownership. The new owner of a previously permitted facility must submit a Permit Relinquishment Notice, Bill of Sale, and apply for a Shoreline Use Permit within 14 days. An inspection will be performed and the facility must conform to the Maintenance and Construction Standards for Boathouses (Appendix E of the 2020 Shoreline Management Plan) before a permit is issued to the new owner. If the facility owner does not bring the facility into compliance within a timeframe approved by the Lake Manager, a Shoreline Use Permit will not be issued and the owner will be	Oversight of transferred boathouse permits has been difficult to enact insufficient communication between USACE and private boathouse owners. These miscommunications necessitate a more efficient system of recording new boathouse owners by requiring the new owner to apply for a new permit. This process should protect new boathouse owners from inheriting out-of-compliance structures and allow a smoother transition into boathouse purchase and permitting.

	required to remove the facility from public lands and waters within 30 days.	
Boathouse Commercial Purposes Boathouses used for commercial purposes were not addressed in 1976 Shoreline Management Plan.	Boathouse Commercial Purposes Boathouses may not be used for commercial purposes. Boathouses are for the storage of boats or personal watercraft by the owner of the boathouse. Boathouses may not be leased or rented on a short- or long-term basis, even if connected to an adjacent residence.	According to ER 1130-2-406, no charge may be made for use of any permitted facility by others, nor shall any commercial activity be engaged in thereon. The use of boathouses as amenities included in short term residential rentals is considered commercial use and will not be allowed.
Community Dry Storage This type of operation will be encouraged above all other alternatives in the future as it provides the greatest environmental protection. Developers, subdivisions, or communities desiring to construct dry storage on private lands may obtain a boat launching complex and access road through a Real Estate instrument subject to the following conditions: compensation will be at fair market value, the facility will be open to the general public, and plans for the complex and access along with a centerline description of the area will be submitted for prior approval. Approval for this type of facility will depend on the desired location's impact on aesthetic and environmental conditions and the distance from commercial concessions.	Community Dry Storage USACE will not grant permission for a boat launching complex on Federal land as a means to encourage community dry storage on private land.	USACE, Fort Worth District, implemented a Water-Related Development Policy in 2002 that, in most cases, would require a comprehensive boating capacity study prior to the granting of any permissions for a boat launching complex. The intent of the policy is to ensure that the level of boating traffic on any given lake, or within zones on certain lakes, does not exceed an amount that would become unsafe or detract from an enjoyable boating experience. The 1976 Shoreline Management Plan included language that encouraged community dry storage (with associated public boat ramp on USACE land) only as a means to reduce the spread of private shoreline use. Today, the need to ensure safe boating capacity has overridden this previous rationale.
New Stairways a. New stairway construction requires a Real Estate Instrument. Before new stairs or extensive reconstruction of existing stairs will be allowed, detailed plans will be submitted to the Project Engineer for approval (see Permits 5-03).	New Stairways No new stairways will be authorized. Licenses for existing stairways will continue to be renewed if the facility is being maintained in a safe condition, certified by a licensed structural engineer, and approved by the Lake Manager. Abandoned stairways are	In accordance with ER 1130-2-406, applications for new private stairways may be accepted only in LDAs as zoned in the Shoreline Management Plans or in areas where a disabled person needs access. This ER limits the applicability of new stairway permits outside of LDAs. The 2020 Shoreline Management Plan further restricts new

Plans will be submitted on 8.5 by 14" legal size paper. New stairs must be of metal construction. Concrete or wood stairways will not be permitted. Concrete foundations for metal stairs will be limited to that amount approved by the Project Engineer or Reservoir Manager. c. Movable access to floating facilities such as gangways, short ladders, etc., designed to allow for access to the facility at various lake stages will not be considered as stairways and will be considered a part of the floating facility. d. All fixed structures will be considered as separate structures and require a separate approval.	subject to removal in accordance with Title 36 CFR, Section 327.20 Unauthorized Structures. Existing stairways can be renewed upon owner request. Existing stairways must be maintained in safe condition, certified by a licensed structural engineer, and approved by the Lake Manager.	stairway construction because there is not a public need for newly constructed stairways. All boathouses that may require a staircase have already been permitted and grandfathered. There is sufficient access to Whitney Lake from various USACE parks and commercial vendors to provide adequate access to the lake within LDAs.
<u>Private Mooring Buoys</u> Boat mooring buoys and flotation units of floating facilities shall be constructed of materials which will not become waterlogged or sink when punctured.	<u>Private Mooring Buoys</u> Private mooring buoys will no longer be encouraged or permitted upon Whitney Lake.	Private mooring buoys have not been allowed at Whitney Lake for many years. They create the appearance of additional private shoreline use of cove areas around the lake and create an "attractive nuisance" for boaters or recreational swimmers. With the amount of current boathouses in LDAs, additional mooring buoys would create a density of facilities that would be unsafe and not conducive to the protection of natural resources at Whitney Lake.
<u>External Mooring of Boats</u> External mooring of boats to a permitted boathouse was not addressed in the 1976 Shoreline Management Plan	<u>External Mooring of Boats</u> External mooring of boats or mooring of personal watercraft to a boathouse will not be permitted on a permanent basis. Boats and personal watercraft may be moored externally during normal recreational use for a period not to exceed 24 hours, as governed by Title 36 CFR.	This policy has been in effect for many years at Whitney Lake and is consistent with rules and regulations in Title 36 CFR that govern use of water resource development projects. All boats must be stored within the footprint of the boathouse. Boathouses are intended for the personal use of an individual. Individuals having multiple boats have the option to utilize public marina spaces if they desire to moor additional boats than the boathouse will accommodate in its footprint.
<u>Access Paths</u>	<u>Access Paths</u>	The additional one foot width allowed for pathways will provide space to help manage

The path can be a maximum of three feet in width.	May be a maximum of four feet in width, depending on the environmental site characteristics of the proposed pathway location.	vegetation adjacent to the walkway to allow a path that is wide to enough to comfortably walk to the shoreline.
Underbrushing No size limitation was addressed in the 1976 Shoreline Management Plan.	Underbrushing No vegetation greater than one inch in diameter at breast height (5')(DBH) may be removed.	This has been the maximum size for under brushing at Whitney Lake for many years. This size limit helps to protect the natural landscape and reduce exposure of shoreline to erosion.
Firebreaks/Mowing Site environmental characteristics will dictate the amount to be mowed and it will be defined on the permit.	Firebreaks/Mowing Restricted to a maximum of 35', but can be reduced depending on the environmental site characteristics of the proposed firebreak location.	There was no maximum width mentioned in the 1976 Shoreline Management Plan. The width of 35 feet has been utilized at Whitney Lake for many years as the maximum size for mowing/firebreaks. This is the maximum size and site conditions may not allow for this width at all locations. Each permit will be evaluated independently for suitability and size of allowed firebreak or mowing area. A community and multi-agency team studied this issue extensively in 2010 and determined that a mowed firebreak of 35 feet provides adequate fire protection, while minimizing impacts to the environment.
New Space Allocations a) Structures which meet standards for existing facilities will be given first priority for available spaces in limited development areas or restricted limited development areas for the first year following implementation of this plan. Owners who wish to move their structure into a limited development area or restricted limited development area must notify the Project Engineer in writing of their desire to move. No letters will be accepted by one year after this plan goes into effect. No drawing for permits under "c"	New Space Allocations If a "grandfathered" boathouse is voluntarily removed by the owner, or is removed for failure to comply with the three conditions specified in paragraph 8.b. (1) (2) (3) of ER 1130-2-406 dated October 31, 1990, the space for that boathouse will be eliminated and will no longer be available for private shoreline use.	As described below, no new permits have been issued in many years at Whitney Lake, even though this was allowable pursuant to the 1976 Shoreline Management Plan. The lake level at Whitney Lake can, and frequently has, fluctuated more than 20 feet, making it difficult and costly to maintain a boathouse. Past droughts have required boathouses to move to deeper water, and major flood events have damaged some boathouses beyond repair. Damaged parts of boathouses have been scattered around the shoreline or sunk in the

below will be carried out until all who are eligible to move have done so. b) Community Governments and/or non-profit coops of boat owners who desire to construct and maintain the aforementioned "community dock" will have second priority for spaces as they become available in the limited development areas. Representatives of these groups must notify, in writing, the project manager of their desire to place a community dock on the lake. A list will be developed with order of priority based on the date of receipt of letter notification, with the first notification received being placed at the top of the list. c) After this list is exhausted and additional spaces become available in limited development areas, permits for these available spaces (limited to private floating facilities only) will be issued by a drawing of names. This drawing will be held on the second Wednesday of the first month of each quarter. If a prospective permittee' s name is drawn, that person will have 60 days to submit detailed plans and specifications of the proposed boathouse for approval. If the plans are not submitted within the allotted time, a new drawing for the space will be held. Names will be placed in the drawing pool based on letter applications. The letter application must be renewed each year. Requests which have been in the pool for more than a year will be withdrawn each month prior to any drawing. All drawings will be announced and will be open to public observation.	No new additional boathouses will be added in LDAs at Whitney Lake. Existing permits will continue to be honored in accordance with permit conditions and can be renewed. Existing boathouses can be repaired, rebuilt, sold or transferred, but no permits for new boathouses will be issued. If an existing boathouse permit is voluntarily relinquished, or the permit is not renewed for noncompliance, no new permit will be issued for that space in the LDA.	lake causing navigation hazards and damage to natural resources. Additionally, the topography around Whitney Lake, the presence of sensitive resources, and the need to preserve aesthetically pleasing shorelines, greatly reduces the amount of shoreline that is conducive to placing boathouses. Suitable areas were identified long ago and have already been designated as LDAs. Adding additional LDAs was not feasible for these reasons. Additionally, outdoor recreation trends in Texas point to the scarcity of public lands and the need to keep all public lands (and water surface) available for general public use. The existing LDAs are currently occupied by boathouses to an extent that approaches the allowable limit of 50 percent density of shoreline within the LDA. Several public comments from the public meeting in May 2019 suggested that no new boathouse permits be granted. Commercial marinas are well-positioned to provide boat mooring services and adding new boathouse permits would create undesirable competition with commercial marinas.
<u>Movement of Boathouses</u> Facilities Having Current Permits: (a) Owners of presently permitted facilities which are not in one of the four limited development areas or in a restricted limited development area will have three options under this plan:	<u>Movement of Boathouses</u> Existing private shoreline use, to include boathouses, that have a valid authorized shoreline use permit in areas allocated as PSA will be allowed to remain provided they meet the criteria and conditions established in	Noted above, the existing LDAs are currently occupied by boathouses to an extent that approaches the allowable limit of 50 percent density of shoreline with the LDA. It is not feasible to allow the relocation of a boathouse to a new location within any LDA due to the lack of space and adequate locations.

1. Under provisions of the Grandfather Clause they may leave their facility at the present location providing the structure is brought up to the Standard for Existing Facilities within one year after this plan is implemented. Repairs will not be allowed if the cost will exceed 50 percent of the cost of a new structure exactly like the one being repaired. 2. They may request in writing to move their facility into a limited development-area or a restricted limited development area as listed in paragraph 4-02a. within one (1) year after implementation of this plan providing capacity for additional facilities exists at the desired area. 3. After the one year period for moving an existing facility, an owner may still move his facility into one of the four limited development areas if a space is available and he secures a permit through the drawing procedures listed below.	this SMP. Boathouses located in PSA areas may not be relocated unless the owner desires to move the boathouse to an LDA as described above. Movement within LDAs will not be permitted in the 2020 Shoreline Management Plan. Once a permitted structure has been relocated to an LDA, no further relocation is allowed.	

Source: USACE 1976 and 2020

The Proposed Action was chosen because it would meet regional goals associated with good stewardship of land and water resources, honors past written commitments to individuals, and would allow for continued use of project lands without violating national policies or public laws.

The EA and comments received from other agencies and the public have been used to determine whether the Proposed Action requires the preparation of an Environmental Impact Statement (EIS). All environmental, social, and economic factors that are relevant to the recommended alternative were considered in this assessment. These include, but are not limited to; land use, water resources, climate, climate change and greenhouse gas, air quality, topography, geology, soils and prime farmlands, natural resources, threatened and endangered species, invasive species, cultural resources, socioeconomics and environmental justice, recreation, hazardous materials, and health and safety.

It is my finding, based on the EA, that the revision of the 1976 Shoreline Management Plan for Whitney Lake will have no significant adverse impact on the environment and will not constitute a major Federal action significantly affecting the quality of the human environment. Therefore, an EIS will not be prepared.

_____ _____

Date

Kenneth N. Reed, PMP
Colonel, U.S. Army
District Commander

ENVIRONMENTAL ASSESSMENT ORGANIZATION

This EA evaluates the potential environmental and socioeconomic impacts of the Whitney Lake Shoreline Management Plan revision. The 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 Proposed 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*
SECTION 10	*LIST OF PREPARERS* identifies persons who prepared the document and their areas of expertise.

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Shoreline Management Plan

Whitney Lake
Brazos River Basin

Bosque, Hill, and Johnson Counties, Texas

SECTION 1: INTRODUCTION

The United States Army Corps of Engineers (USACE) is proposing to adopt and implement the Draft 2020 Whitney Lake Shoreline Management Plan (2020 Shoreline Management Plan). The 2020 Shoreline Management Plan is a revision of the 1976 Shoreline Management Plan entitled *Design Memorandum No 1C, Appendix F Lakeshore Management Plan Revised Master Plan Whitney Lake, Brazos River Basin, Brazos River, Texas* (USACE 1976). The Shoreline Management Plan is the required USACE approval document (Title 36, Section 327.30 and Engineer Regulation [ER] 1130-2-406) that protects and manages shorelines of USACE Civil Works water resource development projects under USACE jurisdiction in a manner that promotes safety and healthful public use of shorelines while maintaining environmental safeguards. The 2020 Shoreline Management Plan seeks to balance permitted private uses and resource protection for general public use while providing clear guidance for the effective management of private uses on public lands. The 2020 Shoreline Management Plan complements the 2016 Whitney Lake Master Plan, honors past written commitments, and encourages the use of public facilities in lieu of expanded private uses. All management actions pursuant to the 2020 Shoreline Management Plan must be in balance with the primary project purposes of flood risk management, water conservation, recreation, and hydroelectric power production. The 2020 Shoreline Management Plan envisions a management horizon of 25 years.

Adoption and implementation of the 2020 Shoreline Management Plan (Proposed Action) would create potential impacts on the natural and human environments, and as such, this Environmental Assessment (EA) was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, (Public Law 91-190), and 33 Code of Federal Regulations (CFR) Part 230.

1.1 PROJECT LOCATION AND SETTING

Whitney Lake is a multipurpose water resources project constructed and operated by the USACE, Fort Worth District. The lake and associated federal lands are located in Bosque, Hill, and Johnson counties, Texas at river mile 442 on the Brazos River. The Whitney Lake dam extends in a southwest-northeast direction for a distance of approximately 1.3 miles and is situated in Hill and Bosque counties approximately 38 miles upstream from Waco, Texas. The dam and associated infrastructure, as well as all lands acquired for the Whitney Lake project, are federally owned and are administered by the USACE. A vicinity map showing the location of Whitney Lake with

respect to neighboring municipalities and major roadways associated with the lake can be found in Appendix A of the 2020 Shoreline Management Plan.

The area surrounding Whitney Lake is a scenic region characterized by a gently sloping valley bordered by steep, stony bluffs. The valley varies in width from approximately one-half mile at the dam to a maximum of two miles, with an average width of one mile. The lake is approximately 42 miles long with a shoreline of 225 miles at the top of the conservation pool elevation of 533.0 National Geodetic Vertical Datum (NGVD). Currently, there are six class A campgrounds, four class C campgrounds, and three day use parks operated by the USACE. These facilities, together with those operated by state, private entities, and local governments, experience approximately 1 - 1.5 million visitors annually.

1.2 PURPOSE OF AND NEED FOR THE ACTION

The purpose of this plan revision is to set forth policy and procedures by which the USACE manages private development and uses of public lands and waters of Whitney Lake. Within the context of the authorizing regulation (Engineering Regulation [ER] 1130-2-406) and this Shoreline Management Plan, private shoreline use is defined 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 primary objective of this plan is to define the policies and regulations pertaining to the shoreline at Whitney Lake that will maintain a balance between authorized private uses, long-term protection of natural and cultural resources, and public recreational opportunities. The USACE is responsible and accountable for managing the shoreline, including adjacent public lands and waters, in a manner that promotes safe and healthful public use and also maintains environmental safeguards. Sustaining quality natural resources for present and future generations while providing public access to project lands and waters is the primary goal.

The USACE prepared the Shoreline Management Plan revision in accordance with numerous Public Laws, Executive Orders, and ER's, which are all listed in Section 1.4 of the 2020 Shoreline Management Plan and to bring the 2020 Shoreline Management Plan into alignment with the 2016 Whitney Lake Master Plan.

1.3 SCOPE OF THE ACTION

This EA addresses the implementation of the 2020 Shoreline Management Plan, with special attention given to revised shoreline allocations, permits, and acceptable uses. The EA analyzes the potential impacts that implementing the 2020 Shoreline Management Plan would have on the natural, cultural, and human environments.

The typical focus of NEPA compliance consists of environmental impact assessments for individual projects, rather than for long-range plans. However, application of NEPA to more strategic decisions not only meets the Council on Environmental Quality (CEQ) implementing regulations (CEQ 2005) and USACE regulations for implementing NEPA (USACE 1988), but also allows the USACE to consider the environmental consequences of its actions long before any physical activity is implemented. Multiple benefits can be derived from such early consideration. Effective and early NEPA integration with the planning process can significantly

increase the usefulness of the 2020 Shoreline Management Plan to the decision maker. NEPA documents prepared concurrently with a revised Shoreline Management Plan can influence and modify strategic shoreline use decisions, whereas environmental impact documents prepared after a Shoreline Management Plan has been revised would have little influence on strategic decisions already included in the plan.

The 2020 Shoreline Management Plan guides and articulates USACE responsibilities pursuant to Federal laws to preserve, conserve, restore, maintain, manage, and develop the land, water, and associated resources. It is not feasible to define the exact nature of potential impacts for all potential actions prior to receiving specific project proposals. Therefore, environmental consequences may be less than or exceed what is described in this EA. To ensure that future environmental consequences are identified and documented as accurately as possible, additional NEPA coordination will be conducted, as appropriate, for future projects that are the result of the implementation of the 2020 Shoreline Management Plan.

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SECTION 2: PROPOSED ACTION AND ALTERNATIVES

The identified need is to revise the 1976 Shoreline Management Plan to maintain compliance with current USACE regulations and guidance, incorporate public needs, and recognize surrounding shoreline use and recreational trends. As part of this process, which includes public outreach and comment, two alternatives were developed for evaluation, including a No Action Alternative. The alternatives were developed using shoreline allocations that describe where private use is allowed and how it will be managed. USACE regulations specify four possible categories of shoreline allocation: Prohibited Access Areas (PAA), Public Recreation Areas (PRA), Protected Shoreline Areas (PSA), and Limited Development Areas (LDA). Each of the shoreline allocations are applicable at Whitney Lake.

USACE guidance recommends the establishment of resource goals and objectives for purposes of development, conservation, and management of natural, cultural, and man-made resources at a project. The goals and objectives described in this paragraph were prepared and included in the 2016 Whitney Lake Master Plan. It is instructive to include them in this EA. The goals and objectives were developed in accordance with 1) authorized project purposes, 2) applicable laws and regulations, 3) resource capabilities and suitabilities, 4) regional needs, 5) other governmental plans and programs, and 6) expressed public desires. USACE management activities are also guided by USACE-wide Environmental Operating Principles as follows:

- Strive to achieve environmental sustainability. An environment maintained in a healthy, diverse and sustainable condition is necessary to support life.
- Recognize the interdependence of life and the physical environment. Proactively consider environmental consequences of USACE programs and act accordingly in all appropriate circumstances.
- Seek balance and synergy among human development activities and natural systems by designing economic and environmental solutions that support and reinforce one another.
- Continue to accept corporate responsibility and accountability under the law for activities and decisions under our control that impact human health and welfare and the continued viability of natural systems.
- Seek ways and means to assess and mitigate cumulative impacts on the environment; bring systems approaches to the full life cycle of our processes and work.
- Build and share an integrated scientific, economic, and social knowledge base that supports a greater understanding of the environment and impacts of our work.
- Respect the views of individuals and groups interested in USACE activities; listen to them actively, and learn from their perspective in the search to find innovative win-win solutions to the nation's problems that also protect and enhance the environment.

2.1 ALTERNATIVE 1: NO ACTION

Under the No Action Alternative, the 1976 Shoreline Management Plan would continue to provide the only source of comprehensive management guidelines and policy. However, the 1976 Shoreline Management Plan is not consistent with the 2016 Whitney Lake Master Plan (2016 Master Plan), and does not reflect the current ecological, socio-political, or socio-demographic conditions of Whitney Lake or those that are anticipated to occur through 2045. The No Action Alternative, while it does not meet the purpose and need for the Proposed Action, serves as a benchmark of existing conditions against which Federal actions can be evaluated, and as such, is included in this EA as prescribed by CEQ regulations.

2.2 ALTERNATIVE 2: PROPOSED ACTION

Under the Proposed Action, the USACE would adopt and implement the 2020 Shoreline Management Plan. The 2020 Shoreline Management Plan would replace the 1976 Shoreline Management Plan and provide an up-to-date management plan that follows current Federal laws and regulations, while sustaining Whitney Lake's natural resources, and providing recreational experiences for the next 25 years.

The Shoreline Management Plan is only one of several plans used to manage Whitney Lake project lands. The primary management plan is the 2016 Master Plan, which established broad resource use objectives and land use classifications that guide future management of natural resources and recreational activities at Whitney Lake. Land use classifications in the Master Plan include High Density Recreation, Environmentally Sensitive Areas (ESAs), Project Operations, and Multiple Resource Management Lands (MRML) which consist of Wildlife and Low Density Recreation. The proposed 2020 Shoreline Management Plan further defines what private shoreline uses would be allowed on the shoreline areas. Shoreline use allocations cannot conflict with 2016 Master Plan land use classifications.

The 2020 Shoreline Management Plan proposes to allocate all shoreline above elevation 533.0 NGVD into management allocation categories. These categories would allow uses of federal property that meet the definition of the assigned allocation category and ensure the protection of natural resources and environmental stewardship, while allowing maximum public enjoyment of the lake's resources. The proposed 2020 shoreline allocation categories are defined as follows:

- Limited Development Area (LDA): LDAs are those areas allocated for mooring of privately owned floating facilities (boathouses). Five LDAs have been established at Whitney Lake. These areas include Steele Creek Harbor, Redwood Cove, King Creek, Three Fingers, and Little Rocky. These areas are adjacent to existing high density private residential developments where coves, or small inlets, provide adequate depth and afford a degree of natural protection from high winds and wave action. Shorelines that do not qualify for an LDA allocation include areas that are too shallow, subject to severe shoreline erosion, where steep bluffs occur, or where environmental sensitive conditions exist. Boathouses located outside of an LDA may, upon written approval of the Lake Manager, be moved into an LDA provided capacity exists at the desired location. Constructing or adding a new

boathouse will not be authorized or permitted in any LDA, and when a boathouse is removed voluntarily or for reasons of non-compliance as set forth in paragraph 5.2.2 of the 2020 Shoreline Management Plan, the space will be eliminated. Existing authorized shoreline use permits, to include boathouses, will be allowed to remain provided all criteria and permit conditions are met. Ownership of existing, permitted boathouses may be transferred and permits issued to new owners. New permit requests for other shoreline use activities, such as vegetation alteration, in areas designated as LDA, required review and written approval from the Lake Manager.

- Prohibited Access Area (PAA): These shoreline areas are allocated for project operation facilities and the physical safety of visitors. The allocation includes hazardous areas that are restricted from public access near the dam embankment and powerhouse. Public and private shoreline use is not permitted in these areas.
- Protected Shoreline Area (PSA): Protected shoreline areas are designated primarily to protect aesthetic, environmental, cultural, and fish and wildlife resources. PSAs may also be allocated for physical protection reasons, such as heavy siltation or exposure to high winds and wave action. Shoreline segments where only scattered or isolated boathouses or vegetation alteration exist under previous permits do not qualify for LDA status and will be classified as PSA. Existing private shoreline use, to include boathouses, that have a valid authorized shoreline use permit in areas allocated as PSA will be allowed to remain provided they meet the criteria and conditions established in this 2020 Shoreline Management Plan. Boathouses located in PSA areas may not be relocated unless the owner desires to move the boathouse to an LDA as described above. However, no new boathouses will be permitted in the areas allocated as PSA. When a boathouse is removed voluntarily or for reasons of non-compliance or relocation to an LDA, the space will be eliminated. New permit requests for other shoreline use activities, such as minor vegetation alteration, requires review and written approval from the Lake Manager.
- Public Recreation Area (PRA): Public recreation areas are those shoreline segments located within or adjacent to developed or proposed public use and commercial concession areas. These areas have controlled access for the protection of park users and resources. An adequate vegetative buffer has been established around each public use area to maintain aesthetic and environmental qualities.

The following tables compare changes between the 1976 shoreline allocations and 2020 proposed shoreline allocations (Table 1), provide justification for the proposed changes (Table 2), and changes to authorized private shoreline uses (Table 3).

Table 1. Proposed Whitney Lake Shoreline Mile Allocations

1976 Shoreline Allocations	Miles	Proposed New Shoreline Allocations	Miles
Limited Development Areas	7.36	Limited Development Area	5.41
Restricted Limited Development Areas	7.12		
Public Recreation Areas	36.88	Public Recreation Areas	36.88
Protected Lakeshore Areas	173.13	Protected Shoreline Areas	182.2
Prohibited Access Areas	0.51	Prohibited Access Areas	0.51

*Shoreline miles were derived using geographic information system technology and may not match figures derived by other means. Source: USACE 1976 and 2020

Table 2. Justification for the Proposed Shoreline Mile Allocations

Shoreline Allocation	Proposed Action Description	Justification
Limited Development Areas (LDAs)	There will be five LDAs listed in the new SMP for Whitney Lake. Those areas are: Steele Creek Harbor, Redwood Cove, King Creek, Little Rocky and Three Fingers Cove.	Although the LDAs encompass an increased amount of areas, the overall mileage of LDAs decreased. This decrease was due to the reallocation of 1.95 miles of previously incorporated LDAs into PSAs.
Prohibited Access Areas (PAAs)	There was no change from the 1976 Shoreline Management Plan to the 2020 Shoreline Management Plan.	No change from the 1976 Shoreline Management Plan was necessary for PAAs.
Protected Shoreline Areas (PSAs)	Protected Lakeshore Areas (PLAs) in the 1976 Whitney Lake Shoreline Management Plan will be converted to PSAs. 7.12 miles of Restricted Limited Development Areas (RLDAs) will be classified as PSAs in the 2020 Shoreline Management Plan. 1.95 miles of LDAs will be classified as PSA's.	Conversion of PLAs to PSAs is a simple name conversion. There are no changes to management or operations in these areas. The 2020 Whitney Lake Shoreline Management Plan will no longer utilize the allocation RLDA. The areas identified as RLDAs will be converted to PSAs. The LDAs that were not conducive for boathouse use were classified as PSAs. These areas currently have no boathouses and none will be allowed there in the future.
Public Recreation Areas (PRAs)	There was no change from the 1976 Shoreline Management Plan to the 2020 Shoreline Management Plan.	No change from the 1976 Shoreline Management Plan was necessary for the PRAs.

Source: USACE 1976 and 2020

Table 3. Proposed Permit Changes Between the 1976 Shoreline Management Plan and the 2020 Shoreline Management Plan (Unless stated, other shoreline use permits and regulations will not change).

1976 Shoreline Management Plan	Proposed 2020 Shoreline Management Plan	Justification of the Proposed Action
Boathouse Deck Landing Area and Shoreline Landing Area The deck landing area is the section of the boathouse to which the walkway/gangway from the shoreline attaches. This structural feature was shown on the typical drawings in the 1976 Shoreline Management Plan but was not fully described.	Boathouse Deck Landing Area This deck landing is the part of the boathouse to which the walkway/gangway from the shoreline attaches. This area may be a minimum of four feet wide and a maximum of six feet wide. Shoreline Deck Landing Area The shoreline deck landing is the area on the shoreline to which the walkway/gangway attaches. This area may be a maximum of six feet by six feet in size.	The boathouse deck landing area maximum size is consistent with the 1976 Shoreline Management Plan. It was shown on the typical drawing in that plan but was not fully described, thus leading to confusion. The shoreline deck landing area was not mentioned in the 1976 Plan, but the purpose of this feature is to provide a place on the shoreline to access the gangway/walkway and in some cases to attach the gangway/walkway. This maximum size for the shoreline deck landing area will minimize the impact to the natural resources in LDAs where boathouses are located.
Boathouse Roof Overhang This structural feature is not addressed in the 1976 Shoreline Management Plan.	Boathouse Roof Overhang This structural feature is common on boathouses and may extend no more than one horizontal foot from the exterior walls of a boathouse.	The purpose of a limitation on the size of the roof overhang on boathouses is to minimize the overall water footprint of the boathouse and to reduce the impact to navigation around boathouses by the general public.
Boathouse Siding Requirements Existing Facilities – Must be reasonably plumb and square with adequate internal bracing to handle 25 pounds per square foot wind loads. Covering, whether wood, sheet metal, fiberglass, or some form of composition board must be free of large holes or major rusted areas, and must present a neat orderly appearance. It is suggested that owners consider replacing solid side sheeting with chain link fence or some similar material as required in the Standards	Boathouse Siding Requirements Siding material on existing boathouses may be replaced with new material when necessary, as long as the remainder of the existing boathouse is in good condition. If an enclosed boathouse is removed from the lake or damaged beyond repair, and the owner desires to replace it, the replacement structure must be open	This change will allow some of the older boathouses with substructures still in good condition to replace the old siding with new more aesthetically appealing material. This change does not, however, allow any totally replaced boathouses to be enclosed with anything other than chain link wire mesh.

for New Facilities. This is less resistant to wind loads, more aesthetically acceptable and provides reasonable security. New Facilities – Any new structures, which may be permitted in designated limited development areas, must be open sided. Chain link mesh or similar material will be allowed for security. All siding must be maintained in neat uniform condition, free of holes, rust, patched appearance, etc.	sided or enclosed with a material such as chain link wire mesh.	
<u>Boathouse Footprint</u> Existing Facilities – No changes in design of structures presently permitted will be allowed without prior written approval. Modifications, except those which provide for storage of boats and marine related equipment, probably will not be approved. New Facilities - Any structure approved for construction in the future must be for the storage of boats only, a boathouse, and shall be only large enough to store the boat within the outer dimensions of the structure, with enough additional room for walkways and securing of the flotation.	<u>Boathouse Footprint</u> Replacement boathouse construction will be limited to the square footage footprint of the existing boat dock.	This requirement has been in effect for many years at Whitney Lake and is the interpretation of the requirements from the 1976 Shoreline Management Plan. This is a clarification of the language used in the 1976 SMP.
<u>Flotation Material</u> Existing and New Facilities - Unsinkable, well secured, not likely to sink or separate from structure within one year. Must be Styrofoam or equal. Steel barrels or similar floatation are not acceptable. Coast Guard approved floatation which meets current Coast Guard criteria will be approved if it is in good condition. Use of modified expandable polystyrene is recommended because of the added safety of fire retardant floatation.	<u>Flotation Material</u> Floatation material used for replacement or for new boathouse flotation must be encapsulated.	This requirement is above the requirements listed in ER 1130-2-406 which still allows the use of extruded polystyrene floatation material. The use of plastic encapsulated floatation materials is necessary at Whitney Lake to resist puncture from rocks (when lake levels drop) or from nutria or beaver damage. The use of encapsulated floatation has been mandated for use in boathouses at Whitney Lake for several years.
<u>Personal Watercraft Docks</u> Existing Facilities – No changes in design of structures presently permitted will be allowed without prior written approval. Modifications, except those	<u>Personal Watercraft Docks</u> Personal Watercraft docks cannot be added to a boathouse in a way that increases the original boathouse footprint. Personal Watercraft docks	Adding personal watercraft docks to the outside of an existing structure will not be allowed because it will increase the amount of permitted space for that boathouse.

which provide for storage of boats and marine related equipment, probably will not be approved. New Facilities - Any structure approved for construction in the future must be for the storage of boats only, a boathouse, and shall be only large enough to store the boat within the outer dimensions of the structure, with enough additional room for walkways and securing of the flotation.	may be incorporated into new designs as long as they meet the square footage requirement of the boat dock they are replacing.	
<u>Electrical Cutoff Point</u> Existing Facilities – The bases of all service poles carrying electric meters and line disconnecting devices must be at or above 571 feet MSL. (This provision may be waived if the power company serving the line will agree in writing to disconnect the power supply to the service pole in the event of high water. The base of the power company's pole on which their line disconnecting device is located must be at or above 571 feet MSL). New Facilities – Not addressed in the 1976 Shoreline Management Plan.	<u>Electrical Disconnect Elevation Cutoff Point</u> All electrical disconnect switches must be at or above 573' feet NGVD.	This requirement is for Real Estate Licenses for electric lines that serve boathouses. Before any license will be renewed, the disconnect switch must be above the maximum pool elevation of 573' feet NGVD. The waiver from the power company is no longer an option.
<u>Gangway and Walkway Size Requirements</u> Existing Facilities – Walkways shall not be less than three feet wide, except between slips where the minimum width shall be two feet. New Facilities - Walkway shall be not less than three feet wide and structurally sound.	<u>Gangway and Walkway Size Requirements</u> The walkways on gangways must be four feet in width and have handrails on both sides. Walkways inside boathouses may be a minimum width of three feet or a maximum width of four feet.	The gangway size increase was due an adjustment to provide additional safety measures for public use on new or rebuilt gangways. The minimum sizes for walkways have been in effect for many years on new and rebuilt boathouses, but will now allow for a greater maximum width to accommodate boathouse owners. This falls into line with the industry safety standard for Marinas and other floating facilities.
<u>Community Docks</u> Community docks will be encouraged in order to reduce the proliferation of individual facilities. Lakeshore permits will be granted for such facilities in 'limited development areas' when the sites are removed from commercial marine services and	<u>Community Docks</u> Community docks will no longer be permitted on Whitney Lake.	According to ER 1130-2-406, group owned mooring facilities may be allowed when public or commercial launching or moorage facilities are not located within a reasonable distance of an LDA. The average distance from all LDA's to a commercial or public launching facility at Whitney Lake is 4.25 miles which is considered

granting of such permits will not despoil the shoreline nor inhibit the public use of the area. It is the policy to issue only one permit for a community boat mooring facility with one person designated as the permittee and responsible for all moorage spaces of the facility. This type of facility shall be for a minimum of five boats and will be for the storage of boats only. No fuel or other concession privileges will be granted.		a reasonable distance. The longest distance is from Little Rocky LDA to Lofers Bend Day Use boat ramp is 6 miles.
<u>Boathouse Consolidation</u> Consolidation of multiple boathouses was not addressed in the 1976 Shoreline Management Plan.	<u>Boathouse Consolidation</u> Consolidation of smaller boathouses to create larger boathouses, even within the allotted square footage of the original boathouses, is not permitted on Whitney Lake.	It is the goal of the revised Shoreline Management Plan to minimize the impact of private shoreline use on the shoreline of Whitney Lake. Creating larger, ever expanding boathouses by combining smaller boathouses is not conducive to the protection of the natural resources or for the enjoyment or use of Whitney Lake by the general public. For owners looking for additional spaces to moor boats, ample space is available in public marinas at Whitney Lake.
<u>Transfer of Boathouse Ownership</u> Transfer of ownership of an existing facility may be done under the following conditions: 1. The facility must be in a limited development area or a restricted limited development-area; or the new owner must have a permit for a space in one of the four limited development areas and must move the facility into the limited development areas when the sale is consummated. 2. The facility must conform to all of the requirements of the standards for existing facilities at the time it is sold. A joint inspection will be arranged by the seller, with the buyer, seller, and project personnel before the sale is consummated to assure all parties are aware of the conditions of the sale.	<u>Transfer of Boathouse Ownership</u> Permits for a boathouse are not transferable and will become null and void upon the date of sale or other legal change of ownership. The new owner of a previously permitted facility must submit a Permit Relinquishment Notice, Bill of Sale, and apply for a Shoreline Use Permit within 14 days. An inspection will be performed and the facility must conform to the Maintenance and Construction Standards for Boathouses (Appendix E of the 2020 Shoreline Management Plan) before a permit is issued to the new owner. If the facility owner does not bring the facility into compliance within a timeframe approved by the	Oversight of transferred boathouse permits has been difficult to enact insufficient communication between USACE and private boathouse owners. These miscommunications necessitate a more efficient system of recording new boathouse owners by requiring the new owner to apply for a new permit. This process should protect new boathouse owners from inheriting out-of-compliance structures and allow a smoother transition into boathouse purchase and permitting.

	Lake Manager, a Shoreline Use Permit will not be issued and the owner will be required to remove the facility from public lands and waters within 30 days.	
Boathouse Commercial Purposes Boathouses used for commercial purposes were not addressed in 1976 Shoreline Management Plan.	Boathouse Commercial Purposes Boathouses may not be used for commercial purposes. Boathouses are for the storage of boats or personal watercraft by the owner of the boathouse. Boathouses may not be leased or rented on a short- or long-term basis, even if connected to an adjacent residence.	According to ER 1130-2-406, no charge may be made for use of any permitted facility by others, nor shall any commercial activity be engaged in thereon. The use of boathouses as amenities included in short term residential rentals is considered commercial use and will not be allowed.
Community Dry Storage This type of operation will be encouraged above all other alternatives in the future as it provides the greatest environmental protection. Developers, subdivisions, or communities desiring to construct dry storage on private lands may obtain a boat launching complex and access road through a Real Estate instrument subject to the following conditions: compensation will be at fair market value, the facility will be open to the general public, and plans for the complex and access along with a centerline description of the area will be submitted for prior approval. Approval for this type of facility will depend on the desired location's impact on aesthetic and environmental conditions and the distance from commercial concessions.	Community Dry Storage USACE will not grant permission for a boat launching complex on Federal land as a means to encourage community dry storage on private land.	USACE, Fort Worth District, implemented a Water-Related Development Policy in 2002 that, in most cases, would require a comprehensive boating capacity study prior to the granting of any permissions for a boat launching complex. The intent of the policy is to ensure that the level of boating traffic on any given lake, or within zones on certain lakes, does not exceed an amount that would become unsafe or detract from an enjoyable boating experience. The 1976 Shoreline Management Plan included language that encouraged community dry storage (with associated public boat ramp on USACE land) only as a means to reduce the spread of private shoreline use. Today, the need to ensure safe boating capacity has overridden this previous rationale.
New Stairways a. New stairway construction requires a Real Estate Instrument. Before new stairs or extensive reconstruction of existing stairs will be allowed, detailed plans will be submitted to the Project Engineer for approval (see Permits 5-03).	New Stairways No new stairways will be authorized. Licenses for existing stairways will continue to be renewed if the facility is being maintained in a safe condition, certified by a licensed structural	In accordance with ER 1130-2-406, applications for new private stairways may be accepted only in LDAs as zoned in the Shoreline Management Plans or in areas where a disabled person needs access. This ER limits the applicability of new stairway permits outside of LDAs. The 2020 Shoreline

Plans will be submitted on 8.5 by 14" legal size paper. New stairs must be of metal construction. Concrete or wood stairways will not be permitted. Concrete foundations for metal stairs will be limited to that amount approved by the Project Engineer or Reservoir Manager. c. Movable access to floating facilities such as gangways, short ladders, etc., designed to allow for access to the facility at various lake stages will not be considered as stairways and will be considered a part of the floating facility. d. All fixed structures will be considered as separate structures and require a separate approval.	engineer, and approved by the Lake Manager. Abandoned stairways are subject to removal in accordance with Title 36 CFR, Section 327.20 Unauthorized Structures. Existing stairways can be renewed upon owner request. Existing stairways must be maintained in safe condition, certified by a licensed structural engineer, and approved by the Lake Manager.	Management Plan further restricts new stairway construction because there is not a public need for newly constructed stairways. All boathouses that may require a staircase have already been permitted and grandfathered. There is sufficient access to Whitney Lake from various USACE parks and commercial vendors to provide adequate access to the lake within LDAs.
<u>Private Mooring Buoys</u> Boat mooring buoys and flotation units of floating facilities shall be constructed of materials which will not become waterlogged or sink when punctured.	<u>Private Mooring Buoys</u> Private mooring buoys will no longer be encouraged or permitted upon Whitney Lake.	Private mooring buoys have not been allowed at Whitney Lake for many years. They create the appearance of additional private shoreline use of cove areas around the lake and create an "attractive nuisance" for boaters or recreational swimmers. With the amount of current boathouses in LDAs, additional mooring buoys would create a density of facilities that would be unsafe and not conducive to the protection of natural resources at Whitney Lake.
<u>External Mooring of Boats</u> External mooring of boats to a permitted boathouse was not addressed in the 1976 Shoreline Management Plan	<u>External Mooring of Boats</u> External mooring of boats or mooring of personal watercraft to a boathouse will not be permitted on a permanent basis. Boats and personal watercraft may be moored externally during normal recreational use for a period not to exceed 24 hours, as governed by Title 36 CFR.	This policy has been in effect for many years at Whitney Lake and is consistent with rules and regulations in Title 36 CFR that govern use of water resource development projects. All boats must be stored within the footprint of the boathouse. Boathouses are intended for the personal use of an individual. Individuals having multiple boats have the option to utilize public marina spaces if they desire to moor additional boats than the boathouse will accommodate in its footprint.
<u>Access Paths</u>	<u>Access Paths</u>	The additional one foot width allowed for pathways will provide space to help manage

The path can be a maximum of three feet in width.	May be a maximum of four feet in width, depending on the environmental site characteristics of the proposed pathway location.	vegetation adjacent to the walkway to allow a path that is wide to enough to comfortably walk to the shoreline.
Underbrushing No size limitation was addressed in the 1976 Shoreline Management Plan.	Underbrushing No vegetation greater than one inch in diameter at breast height (5')(DBH) may be removed.	This has been the maximum size for under brushing at Whitney Lake for many years. This size limit helps to protect the natural landscape and reduce exposure of shoreline to erosion.
Firebreaks/Mowing Site environmental characteristics will dictate the amount to be mowed and it will be defined on the permit.	Firebreaks/Mowing Restricted to a maximum of 35', but can be reduced depending on the environmental site characteristics of the proposed firebreak location.	There was no maximum width mentioned in the 1976 Shoreline Management Plan. The width of 35 feet has been utilized at Whitney Lake for many years as the maximum size for mowing/firebreaks. This is the maximum size and site conditions may not allow for this width at all locations. Each permit will be evaluated independently for suitability and size of allowed firebreak or mowing area. A community and multi-agency team studied this issue extensively in 2010 and determined that a mowed firebreak of 35 feet provides adequate fire protection, while minimizing impacts to the environment.
New Space Allocations a) Structures which meet standards for existing facilities will be given first priority for available spaces in limited development areas or restricted limited development areas for the first year following implementation of this plan. Owners who wish to move their structure into a limited development area or restricted limited development area must notify the Project Engineer in writing of their desire to move. No letters will be accepted by one year after this plan goes into effect. No drawing for permits under "c"	New Space Allocations If a "grandfathered" boathouse is voluntarily removed by the owner, or is removed for failure to comply with the three conditions specified in paragraph 8.b. (1) (2) (3) of ER 1130-2-406 dated October 31, 1990, the space for that boathouse will be eliminated and will no longer be available for private shoreline use.	As described below, no new permits have been issued in many years at Whitney Lake, even though this was allowable pursuant to the 1976 Shoreline Management Plan. The lake level at Whitney Lake can, and frequently has, fluctuated more than 20 feet, making it difficult and costly to maintain a boathouse. Past droughts have required boathouses to move to deeper water, and major flood events have damaged some boathouses beyond repair. Damaged parts of boathouses have been scattered around the shoreline or sunk in the

below will be carried out until all who are eligible to move have done so. b) Community Governments and/or non-profit coops of boat owners who desire to construct and maintain the aforementioned "community dock" will have second priority for spaces as they become available in the limited development areas. Representatives of these groups must notify, in writing, the project manager of their desire to place a community dock on the lake. A list will be developed with order of priority based on the date of receipt of letter notification, with the first notification received being placed at the top of the list. c) After this list is exhausted and additional spaces become available in limited development areas, permits for these available spaces (limited to private floating facilities only) will be issued by a drawing of names. This drawing will be held on the second Wednesday of the first month of each quarter. If a prospective permittee' s name is drawn, that person will have 60 days to submit detailed plans and specifications of the proposed boathouse for approval. If the plans are not submitted within the allotted time, a new drawing for the space will be held. Names will be placed in the drawing pool based on letter applications. The letter application must be renewed each year. Requests which have been in the pool for more than a year will be withdrawn each month prior to any drawing. All drawings will be announced and will be open to public observation.	No new additional boathouses will be added in LDAs at Whitney Lake. Existing permits will continue to be honored in accordance with permit conditions and can be renewed. Existing boathouses can be repaired, rebuilt, sold or transferred, but no permits for new boathouses will be issued. If an existing boathouse permit is voluntarily relinquished, or the permit is not renewed for noncompliance, no new permit will be issued for that space in the LDA.	lake causing navigation hazards and damage to natural resources. Additionally, the topography around Whitney Lake, the presence of sensitive resources, and the need to preserve aesthetically pleasing shorelines, greatly reduces the amount of shoreline that is conducive to placing boathouses. Suitable areas were identified long ago and have already been designated as LDAs. Adding additional LDAs was not feasible for these reasons. Additionally, outdoor recreation trends in Texas point to the scarcity of public lands and the need to keep all public lands (and water surface) available for general public use. The existing LDAs are currently occupied by boathouses to an extent that approaches the allowable limit of 50 percent density of shoreline within the LDA. Several public comments from the public meeting in May 2019 suggested that no new boathouse permits be granted. Commercial marinas are well-positioned to provide boat mooring services and adding new boathouse permits would create undesirable competition with commercial marinas.
<u>Movement of Boathouses</u> Facilities Having Current Permits: (a) Owners of presently permitted facilities which are not in one of the four limited development areas or in a restricted limited development area will have three options under this plan:	<u>Movement of Boathouses</u> Existing private shoreline use, to include boathouses, that have a valid authorized shoreline use permit in areas allocated as PSA will be allowed to remain provided they meet the criteria and conditions established in	Noted above, the existing LDAs are currently occupied by boathouses to an extent that approaches the allowable limit of 50 percent density of shoreline with the LDA. It is not feasible to allow the relocation of a boathouse to a new location within any LDA due to the lack of space and adequate locations.

1. Under provisions of the Grandfather Clause they may leave their facility at the present location providing the structure is brought up to the Standard for Existing Facilities within one year after this plan is implemented. Repairs will not be allowed if the cost will exceed 50 percent of the cost of a new structure exactly like the one being repaired. 2. They may request in writing to move their facility into a limited development-area or a restricted limited development area as listed in paragraph 4-02a. within one (1) year after implementation of this plan providing capacity for additional facilities exists at the desired area. 3. After the one year period for moving an existing facility, an owner may still move his facility into one of the four limited development areas if a space is available and he secures a permit through the drawing procedures listed below.	this SMP. Boathouses located in PSA areas may not be relocated unless the owner desires to move the boathouse to an LDA as described above. Movement within LDAs will not be permitted in the 2020 Shoreline Management Plan. Once a permitted structure has been relocated to an LDA, no further relocation is allowed.	

Source: USACE 1976 and 2020

2.3 ALTERNATIVES CONSIDERED, BUT ELIMINATED FROM FURTHER CONSIDERATION

The USACE eliminated alternatives including any combination of the following measures as not satisfying the proposed action's purpose and need:

- Boathouse Measures:
  - No New Permits, No Renewals
  - No New Permits, Renewals Allowed, No Shoreline Management Plan Boathouse Criteria Required
  - New Permits, Renewals Allowed, No Shoreline Management Plan Boathouse Criteria Required
- Vegetation Modification Measures:
  - No New Permits, No Renewals
  - No New Permits, Renewals Allowed, No Vegetation Modification Criteria Required
  - New Permits, Renewals Allowed, No Vegetation Modification Criteria Required

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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 the Proposed Action (Alternative 2), outlined in Section 2 of this document. Only those issues that have the potential to be affected by any of the alternatives are described, per CEQ guidance (40 CFR § 1501.7 [3]). Some topics are limited in scope due to the lack of direct effect from the Proposed Action on the resource or because that particular resource is not located within the project area. For example, no body of water in the Whitney Lake watershed is designated as a Federal Wild or Scenic River, so this resource will not be discussed.

Impacts (consequence or effect) can be either beneficial or adverse and can be either directly related to the action or indirectly caused by the action. Direct effects are caused by the action and occur at the same time and place (40 CFR § 1508.8 [a]). Indirect effects are caused by the action and are later in time or further removed in distance, but are still reasonably foreseeable (40 CFR § 1508.8 [b]). As discussed in this section, the alternatives may create temporary (less than one year), short-term (up to three years), long-term (three to ten years) or permanent effects, following the shoreline management plan implementation.

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

USACE lands above elevation 533.0 NGVD associated with Whitney Lake are allocated in the 2016 Master Plan as follows:

- 460 acres of Project Operations
- 3,608 acres of High Density Recreation
- 2,268 acres of Environmentally Sensitive Areas
- 1,170 acres of Multiple Resource Management – Low Density Recreation
- 16,278 acres of Multiple Resource Management – Wildlife Management

Within these Master Plan classifications, the 2020 Shoreline Management Plan proposes the following allocations for shoreline use.

Prohibited Access Areas – Whitney Lake has 0.51 miles of PAAs in the 2020 Shoreline Management Plan, only 0.2 percent of the total shoreline. This area exists only in the direct vicinity of the Whitney Lake Dam.

Limited Development Areas – Whitney Lake has 5.41 miles of LDAs designated in the 2020 Shoreline Management Plan, resulting in 2.4 percent coverage of the shoreline. These areas are restricted to locations that already have existing boathouses along the shoreline and currently have public access to USACE land. USACE has noted in the 2020 Shoreline Management Plan that continued vehicular access to LDAs cannot be guaranteed. Current LDAs are located in Steele Creek Harbor, Redwood Cove, King Creek, Little Rocky, and Three Fingers Cove.

Protected Shoreline Areas – Whitney Lake has 182.2 miles of PSAs in the 2020 Shoreline Management Plan, dominating the Whitney Lake shoreline with 81.0 percent of the total area. The PSA designation complements the 2016 Master Plan land classifications of Environmentally Sensitive Areas, Multiple Resource Management Lands - Low Density Recreation, and Multiple Resource Management Lands - Wildlife Management. Shorelines to be allocated as a PSA, include important wildlife habitat and scenic areas but may also have limitations on public access and private development due to increased river flows, wind and wave exposure, shallow water depths, and navigation hazards.

Public Recreation Areas – Whitney Lake has 36.88 miles of PRAs in the 1976 and 2020 Shoreline Management Plans, which is 16.4 percent of the shoreline. Public Recreation Areas are limited to sections of shoreline classified as High Density Recreation in the 2016 Master Plan and generally include campgrounds and day use facilities. The USACE operates and manages numerous areas designated as high density recreation. These areas are grouped into two types: Class A (highly developed) and Class C (basic facilities). The following is a description of each park and the facilities they contain.

<u>Class A Parks</u>

Lofers Bend Park – Lofers Bend is a 455-acre park, divided into four distinct areas; East Lofers Bend Park, West Lofers Bend Park, Lofers Bend Day Use Area, and Harbor Master Marina. It is located off of State Highway 22 on the east side of the Whitney Lake Dam. The day use area is located adjacent to the dam and is physically

separated from the camping areas and the marina. Harbor Master Marina is a leased area (non-USACE operated), located between the two camping areas. Park facilities include 24 non-electric campsites, five screened shelters, 105 electrical campsites, 29 picnic sites, eight restrooms, two group camp areas, one group shelter, two dump stations, three boat ramps with 107 parking spots, three entrance gate complexes, a playground, three swim beaches, and a hike and bike trail.

McCown Valley Park – Encompassing 357 acres, McCown Valley Park is located on the eastern shore of Whitney Lake, 4 miles west of Farm-to-Market (FM) 933 and adjacent to the FM 1713 bridge. It is divided into three separate areas: the campground, Day Use, and the Equestrian areas. Park facilities include 48 electrical campsites, five screen shelters, 17 picnic sites, 39 equestrian campsites, five restrooms, a three-lane boat ramp with parking for 64 vehicles, two entrance gate complexes, two playgrounds, a swimming beach, dump station, group shelter, and 18 covered horse pens.

Cedron Creek Park – Cedron Creek Park is located on the west side of Whitney Lake in Bosque County at the midpoint of the lake on FM 1713 (just west of Katy Bridge). The park contains 299 acres of land within its boundaries. Park facilities include 57 campsites, two restrooms, two-lane boat ramp with parking for 20 vehicles, dump station, entrance gate complex, two playgrounds, and a group camp area.

Plowman Creek Park – Plowman Creek Park is a 231-acre multi-use area located off FM 56, adjacent to the community of Kopperl, in Bosque County. Park facilities include 44 campsites, two restrooms, entrance gate complex, playground, two-lane boat ramp, dump station, and four covered horse pens.

Kimball Bend Park – This 185-acre park is situated on the south side of the Brazos River in the northeast corner of Bosque County. It is located approximately 30 miles south of Cleburne, and 20 miles north of Meridian on State Highway 174. Located within the park are remains of buildings from the Old Kimball Bend Town Site, at one time a cattle crossing on the Chisholm Trail. Park facilities include 36 campsites, restroom, two-lane boat ramp with parking for 44 vehicles, gate complex, and composed dump station.

Class C Parks

Riverside Park – The park is comprised of two areas, located on either side of the Brazos River, below the dam and embankment. West Riverside Park contains 24 acres, while East Riverside Park encompasses two acres. The park is open 24 hours, year-round, and provides free camping and river access for fishing and boating. The park is adjacent to the dam and may be temporarily closed during periods of elevated security risk. The east area provides canoe and small boat access to the Brazos River. Park facilities include two restrooms, fishing platform, and five multiple-use sites.

Cedar Creek Park – This park is located halfway up the lake on the north bank of Cedar Creek in Hill County. The park contains 43 acres of land within its boundaries. Park facilities include a restroom, a two-lane boat ramp, group shelter, and 21 multiple-use sites.

Steele Creek Park – Steele Creek is a 277-acre multi-use park located approximately 2 miles northeast of FM 56, adjacent to the community of Lakeside Village. Park facilities include 21 multiple use sites, two restrooms, and two boat ramps with parking for 20 vehicles.

Walling Bend Park – Walling Bend Park is located on the west side of Whitney Lake, approximately 2.5 miles upstream from the dam on FM 2841. The park contains 262 acres of land within its boundaries. Texas Parks and Wildlife Department (TPWD) has leased 16 acres of the park on the north end for a boat ramp, parking lot, and access road. Park facilities include two restrooms, five picnic sites, two-lane boat ramp with parking for 30 vehicles, and a group shelter.

Soldiers Bluff Park – Soldiers Bluff Park is a 50-acre park located on the southwest end of Whitney Dam, adjacent to State Highway 22. Park facilities include a restroom, 16 multiple use sites, entrance complex, and a group shelter.

Nolan River Park – Nolan River Park is a 10-acre access area located on the Nolan River near the City of Blum, off FM 933. Park facilities include an access point, small parking lot, and a boat ramp that provides access to the Nolan River area of Whitney Lake.

The majority of the USACE park operations and maintenance activities, including mowing, cleaning, building repairs, road repairs, utility repairs, trash removal, and related tasks are accomplished through service contracts.

In addition to the USACE-operated parks, the USACE leases four areas to non-federal partners, referred to as grantees. Each grantee is responsible for the operation and maintenance of their leased area; USACE does not provide direct maintenance within any of the leased locations, but it may occasionally lend support where appropriate. The USACE reviews requests and ensures compliance with applicable laws and regulations for proposed activities in all leased and USACE-operated High Density Recreation areas. The leased parks at Whitney Lake are Hamm Creek Park, Chisholm Trail Park, Lake Whitney State Park, and Whitney City Park.

Hamm Creek - Hamm Creek is leased to Johnson County and is situated in the extreme southwest corner of Johnson County, at the confluence of Hamm Creek and the Brazos River. The park is eight miles southwest of Rio Vista on FM 916 and encompasses 191 acres. It is approximately 45 road miles from the Whitney Project Office. The park contains 51 day use and camping sites, boat ramp, four group picnic shelters, five restrooms, two playgrounds, four horse stalls, dump station and entrance complex. The boat ramp is popular, when usable, because of trees lining the bank that serve as effective windbreaks, providing the smooth water surface preferred by skiers. Fishing pressure is heavy during the white bass "run" in the spring. During winter, the area is popular with hunters, fishermen, and on warmer weekends, a few skiers.

Chisholm Trail Park – Chisholm Trail Park is leased to Hill County and is located on the banks of the Brazos River, approximately 21 miles south of Cleburne and encompasses 142 acres. Access is via a paved county road off State Highway 174. The park contains 14 day use and camping sites, a boat ramp, group picnic shelter, volleyball pit, horseshoe pits and restroom. The park is used mainly by families, with

camping, skiing, swimming and fishing being the most common uses. The park receives heavy usage during summer weekends, and relatively little usage at other times. There is no potable water in the park during winter months.

Lake Whitney State Park – Lake Whitney State Park and Recreation Area is located on the east side of the lake in Hill County, approximately two miles west of the City of Whitney and encompasses 775 acres. Access is from FM 1244. The recreation area is leased to the State of Texas and is operated by the TPWD. All development and construction in the lease area was performed by the State. The park contains 152 day use and camping sites, 21 screened shelters, a group campsite area, a group picnic area, recreation hall, boat ramp, five restrooms and three playgrounds. The visitors at the recreation area are typical of those at the other fee parks on the project. Visitation is primarily from campers, but the day use area is heavily occupied on weekends during the peak visitation months. Limited deer hunting, using black powder rifles began several years ago. An annual drawing is held for prospective hunters.

Whitney City Park - The Whitney City Park is located immediately west of the city limits of Whitney. This 34 acre park is leased to and operated by the City of Whitney. Individuals in the immediate area of the City of Whitney primarily use the area. The park's main use comes from activities associated with baseball games and practice. The park contains five baseball fields, batting cages, playground equipment, concession stand and restroom.

3.1.1 Alternative 1: No Action

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

3.1.2 Alternative 2: Proposed Action

The objective for revising the Whitney Lake Shoreline Management Plan is to protect and manage shorelines in a manner that promotes safety and healthy public use of the shoreline. The USACE intends to continue to operate the Class A Campgrounds and Day Use Areas, as well as Class C Day Use Areas and Access Points. These campgrounds fall into the PRA shoreline allocation, which protect them from private shoreline uses such as vegetation modification and boathouse permits. The allocations proposed for the 2020 Shoreline Management Plan will operate in accordance with the 2016 Master Plan, which was developed to fulfill regional goals associated with good stewardship of land and water resources that would allow for continued use and development of project lands.

There will be 7.12 miles of RLDA and 1.95 miles of LDA converted into PSA, which will assist in good land stewardship by limiting the amount of permitted private exlusive use along the shoreline. It will also provide further limitations on vegetation modification permits and allow lake staff to evaluate the quality of habitat adjacent to

privately owned lands before issuing a permit. The conversion of the Whitney Lake shoreline to more accurately reflect current land use will result in minor beneficial impacts.

Although not specifically addressed in the 1976 Shoreline Management Plan, commercial uses of boathouses are not permitted in accordance with ER 1130-2-406. The prohibition will be clearly set forth in the 2020 Shoreline Management Plan for Whitney Lake. Chapter III, Title 36 CFR 327.18, states that the "engaging in or solicitation of business on project land or waters without the express written permission of the District Commander is prohibited." Condition 13 of every Shoreline Use Permit also prohibits use of private floating facilities for commercial purposes. Prohibiting the use of boathouses as commercial entities adheres to the regulations set forth by the USACE and will not have impact on Whitney Lake land use. Implementation of the Proposed Action would not result in significant impacts on land use along the Whitney Lake shoreline.

3.2 WATER RESOURCES

Surface Water

The Brazos River watershed extends from eastern New Mexico in a southeasterly direction diagonally across the state of Texas to the Gulf of Mexico, with a watershed encompassing approximately 44,670 square miles. Approximately 8,950 square miles of the area, located in the northwest portion of the watershed, is classified as non-contributing drainage area. The total contributing drainage area is 35,720 square miles of which 17,656 square miles is controlled by Whitney Dam.

Whitney Lake and Dam is a unit of river improvement works in the Brazos River Basin. The project was initially authorized by the Flood Control Acts of 1941 and later in 1944. Authorized project purposes include hydroelectric power, flood control, water conservation, and recreation. In the design of the project, it was recognized that less flood control storage might be required at a later date when additional flood control reservoirs were constructed in the watershed and experience was gained in the operation of the lake. Accordingly, provisions were made in the design of the powerhouse and all electrical equipment for operation of the project at elevation 533.0 NGVD. The raising of the power pool from elevation 520.0 NGVD to elevation 533.0 NGVD began on June 15, 1972.

Whitney Lake has 2,100,400 acre-feet of storage that is utilized for flood control, water supply, recreation, fish and wildlife management, and generation of hydroelectric power. The conservation pool with top of elevation 533.00 NGVD, is fully allocated. Allocations include 248,100 acre-feet for water supply, 387,000 acre-feet for power drawdown storage, and 255,300 acre-feet of dead storage. The pool of record was reached on May 29, 1957 at an elevation of 570.25 NGVD and the record low was 509.26 NGVD on November 1, 1956.

Hydrology and Groundwater

Groundwater in the immediate Whitney Lake area and throughout Bosque, Hill, and Johnson counties is present in one major aquifer, the Trinity (subcrop) Aquifer. Johnson and Hill counties also have two minor aquifers, Woodbine (outcrop) and Woodbine

(subcrop) (Texas Water Development Board [TWDB] 2019). Administratively, these aquifers are included in Groundwater Management Area (GMA) 8 as designated by the TWDB. There are 11 Groundwater Management Districts within GMA 8, including the Prairielands Groundwater Conservation District (GCD), which takes in Hill and Johnson counties, and the Middle Trinity GCD which covers Bosque County (TWDB 2015).

The Trinity and the Woodbine aquifers serve a very densely populated area and have been heavily used over the past several decades by numerous municipalities and other public water supply providers. Some of the largest aquifer level declines in Texas have occurred in the Trinity Aquifer in a broad corridor that encompasses and parallels Interstate Highway 35. These declines have ranged from 350 feet to more than 1,000 feet. The decline has slowed in recent years due to increasing reliance on surface water for municipal purposes. All recreational areas operated by the USACE and others at Whitney Lake are connected to municipal water supply providers.

Wetlands

Waters of the United States are defined within the Clean Water Act (CWA), and jurisdiction is addressed by the USACE and United States Environmental Protection Agency (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.

Due to steep topography around Whitney Lake, wetlands generally occur near the rivers and flatter areas on the eastern side of the lake. Table 4 summarizes the acreages of various types of wetlands present at Whitney Lake. Wetland classifications presented are derived from the U.S. Fish and Wildlife Service (USFWS) Trust Resource List generated using the Information, Planning, and Conservation System decision support system (USFWS 2019). A complete list of wetland types and National Wetland Inventory classifications are located in Attachment A and B of this document.

Table 4. Wetland Resources (USFWS 2019)

Wetland Types	Total Acres
Freshwater Emergent Wetland	2,337.0
Freshwater Forested/ Shrub Wetland	2,436.9
Freshwater Pond	42.8
Lake	23,809.6
Riverine	1,595.6

Note: Acreages from the USFWS website do not match exactly with the USACE digitized acreages.

Water Quality

Whitney Lake is identified as segment 1203 within the Brazos River Basin. According to the Texas Commission on Environmental Quality (TCEQ) Draft 2020 Texas Integrated Report of Surface Water Quality, no water quality parameters measured were considered impaired at Whitney Lake (TCEQ 2020). All other parameters measured show Whitney Lake as fully supported, no concern, or not assessed for aquatic life, recreation, general, and domestic water supply uses (Table 5).

Table 5. Level of Support for Water Quality Parameters for Aquatic Life Use, Recreation Use, General Use, and Domestic Water Supply Use (TCEQ 2020).

Parameter	Use	Level of Support
Dissolved Oxygen	Aquatic Life	Fully Support
E. Coli	Recreation	Fully Support
Chloride	General	Fully Support
Sulfate	General	Fully Support
Total Dissolved Solids	General	Fully Support
pH	General	Fully Support
Nutrients	General	No Concern
Ammonia	General	Not Assessed
Chlorphyll-a	General	Not Assessed
Nitrate	General	Not Assessed
Total Phosphorus	General	Not Assessed
Water Temperature	General	Fully Support
Fluoride	Domestic Water Supply	Fully Support
Nitrate	Domestic Water Supply	Fully Support
Selenium	Domestic Water Supply	Not Assessed

Deep reservoirs such as Whitney Lake can exhibit a slow response to climatic factors that induce in-reservoir circulation. Such variables as temperature and temperature-induced circulation ("turnovers") impact water quality, including salinity, algal productivity, and overall reservoir ecology. One unique physical feature of Whitney Lake is that the linear nature of the reservoir lines up with the dominant wind directions for the region – from the southeast in the summer and northwest in the winter. Thus, wind driven circulation mechanics likely play a significant role in the circulation of the reservoir.

The main issue regarding utilization of Whitney Lake as a water supply resource is its salinity. Past work by the United States Geological Survey (USGS), USACE, and the State of Texas, have pointed to the elevated salinity levels in Whitney Lake, which have been traced to specific geologic units within the watershed itself. Specifically, the geology of the Salt Fork of the Brazos River is partially made up of high-salinity sandstone, which results in increased salinity of return flow into main tributaries. These higher-salinity waters eventually find their way into the lake. Even though the drainage area of the watershed is nearly 35,000 square miles, the proximity of Whitney Lake to the high-salinity inflow waters does not allow sufficient stream dilution distance to affect the elevated levels. Within the reservoir itself, initial data gathered by the Brazos River Authority shows concentrations of salinity during much of the year exceed the USEPA 300 part per million standards for drinking water by 20 to 30 percent.

One additional issue that has been identified as a critical component of water quality in Whitney Lake is the presence of the toxin-producing golden algae *(Prymnesium parvum).* Whitney Lake has been subject to fish kills caused by large blooms of the algae. The last algae-related fish kill on Whitney Lake occurred in 2010 (TPWD 2010). TPWD, along with the TCEQ and the Baylor University Center for Reservoir and Aquatic Systems Research (2009), monitors levels of golden algae and other microbial organisms in Whitney Lake. While it is not believed that golden algae is harmful to humans or other wildlife, the cost associated with managing such fish kills can be extensive. Monitoring of Whitney Lake, along with several other aquatic systems in Texas, is ongoing.

3.2.1 Alternative 1: No Action

There would be no impacts on water resources as a result of implementing the No Action Alternative, since there would be no change to the existing Shoreline Management Plan.

3.2.2 Alternative 2: Proposed Action

The shoreline allocations recommended for the Proposed Action would allow shoreline management and shoreline uses to be compatible with the goals of good stewardship of water resources by converting 7.12 miles of RLDA and 1.95 LDA into PSAs (e.g., conservation of emergent wetlands, erosion control, and maintaining good water quality); therefore, there would be no significant adverse impacts on water resources. The conversion of RLDAs and LDAs into PSAs will improve upon water resources by decreasing the amount of hazardous or toxic wastes entering the water through decreased boat storage in the water. The updates to shoreline regulations and standards for boathouses will have an overall minor beneficial impact on water

resources at Whitney Lake. The prohibition on new boathouses entering the waters of Whitney Lake and the gradual "phasing out" of abandoned structures and outstanding expired permits will reduce the environmental footprint of structures that have the potential to leak chemicals and other toxic substances or materials into Whitney Lake and also promote the increase of surface water. Updating requirements for replacement or new flotation material will also have a minor beneficial impact. The decision by USACE to require use of plastic encapsulated flotation material reduces the impacts to water quality. The amount of polystyrene flotation material that is likely to enter Whitney Lake waters will decrease should major damage to the materials be sustained from drought, flooding, or collisions.

3.3 CLIMATE

Whitney Lake lies in a region characterized by moderate winters and comparatively long summers. In spring, summer, and fall, prevailing winds are from the southeast. The mean annual temperature in the vicinity of the dam site is 65.95 degrees (°) Fahrenheit (F) (U.S. Climate Data 2019). The annual low temperature is 54ºF, while the annual high temperature is 77.9ºF. The growing season, between killing frosts, is normally from the latter part of March to the middle of November. The mean annual precipitation for Whitney Lake is 36.2 inches.

3.3.1 Alternative 1: No Action

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

3.3.2 Alternative 2: Proposed Action

Revision of the Whitney Lake Shoreline Management Plan would have no impact on climate.

3.4 CLIMATE CHANGE AND GREENHOUSE GASES

The CEQ drafted guidelines for determining meaningful greenhouse gas (GHG) decision-making analysis. The CEQ guidance states that if a project would be reasonably anticipated to cause direct emissions of 25,000 metric tons or more of carbon dioxide (CO_2)-equivalent (CO_2e) GHG emissions per year, the project should be considered in a qualitative and quantitative manner in NEPA reporting (CEQ 2015). CEQ proposes this as an indicator of a minimum level of GHG emissions that may warrant some description in the appropriate NEPA analysis for agency actions involving direct emissions of GHG (CEQ 2015).

According to the most recent estimating tools from the USEPA, there are 29 GHG contributors within Bosque, Hill, and Johnson counties. Of these, only the Bosque County Power Plant is located adjacent to Whitney Lake (USEPA 2018). The general operations and recreation facilities associated with Whitney Lake do not approach the proposed reportable limits. Whitney Lake Project Office does have management plans in place such as routine equipment maintenance, holistic vegetative management plans, natural resource management plans, and public education and outreach programs to protect regional natural resources. In addition, the Whitney Lake Project Office will continue monitoring programs, as required, to meet applicable laws and policies.

3.4.1 Alternative 1: No Action

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

3.4.2 Alternative 2: Proposed Action

Under the Proposed Action, current Whitney Lake project management plans and monitoring programs would not be changed. There would be no measurable impacts on climate change or contributions to GHG emissions as a result of the updated 2020 Shoreline Management Plan. In the event that GHG emission issues become significant enough to impact the current operations at Whitney Lake, the 2020 Shoreline Management Plan and all associated documents would be reviewed and revised as necessary.

3.5 AIR QUALITY

The USEPA established nationwide air quality standards to protect public health and welfare in 1971. The State of Texas has adopted the National Ambient Air Quality Standards (NAAQS) as the state's air quality criteria. NAAQS standards specify maximum permissible short- and long-term concentrations of various air contaminants, including primary and secondary standards for six criteria pollutants: Ozone (O_3), Carbon Monoxide (CO), Sulfur Dioxide (SO_2), Nitrogen Oxide (NO), particulate matter (PM_{10} and $PM_{2.5}$), and Lead (Pb). Based on both Federal and state air quality standards, an area can be classified as either an "attainment," "maintenance," or "non-attainment" area for each pollutant. According to TCEQ current State Implementation Plan (TCEQ 2015), the Whitney Lake area (Bosque and Hill counties) is in an attainment area and does not require a pollutant control strategy. The closest state air quality monitoring station located in the Waco-Killeen area, southeast of Whitney Lake, describes the air quality as good. However, neighboring Johnson County, as well as several counties within the Dallas-Fort Worth (DFW) area are currently in nonattainment status for O_3 air pollution.

3.5.1 Alternative 1: No Action

There would be no measurable impacts on air quality as a result of implementing the No Action Alternative, since there would be no change to the existing Shoreline Management Plan.

3.5.2 Alternative 2: Proposed Action

Existing operation and management of Whitney Lake is compliant with the Clean Air Act and would not change with implementation of the 2020 Shoreline Management Plan. Because the area is in attainment for all air pollutants, a General Air Conformity Determination is not required. No measurable impacts on air quality would occur as a result of implementing the proposed revisions to the Whitney Lake Shoreline Management Plan.

3.6 TOPOGRAPHY, GEOLOGY, SOILS AND PRIME FARMLANDS

Topography

The topography of the lands surrounding Whitney Lake is controlled, for the most part, by the underlying and surface geology and soils. The predominant limestone subsurface geology (bedrock), where exposed, results in steep cliffs and bluffs due to the resistance of the limestone to erosion. Soils developed from thousands of years of slow erosion by major streams and tributaries cover most of the relatively flat areas of limestone surface, resulting in a rolling topography of hills bisected by steep bluffs where streams are located. Meandering stream beds and floodplains cut into the limestone are filled with relatively flat alluvial deposits in the stream valleys.

Geology

The underlying geology (bedrock) of the Whitney Lake area consists of Upper Cretaceous limestones, marls, and shales of the Fredericksburg Group. The Brazos River and larger tributaries have cut through these formations, exposing the bedrock in cliff outcrops, particularly along the shores of Whitney Lake. Quaternary alluvium and Pleistocene fluvial deposits of clay, silt, and sandy loams are formed in floodplains and on terraced hillsides (USGS 2019). Seismic hazard probability in the vicinity of Whitney Lake is very low, on the order of 2 to 4 percent in 50 years (USGS 2014).

Soils

Whitney Lake is situated at the juncture of two major soil complexes. The eastern side in Hill County falls in the East Cross Timbers Land Resource Area (Texas Almanac 2010). This resource area contains sandy soils and Brazos River terrace soils of two major associations. The Bastrop-Travis Association is made up of deep, sandy soils located on level to gently sloping, old and high terraces. The Purves-Brackett-Bolar Association is comprised of moderately deep clayey soils on limestone slopes that range from gentle to steep in grade.

The western, or Bosque County side, is located in the Grand Prairie Land Resource Area. The three major soil associations are: Bastrop-Travis fine sandy loams; Tarrant-Brackett clays; and Denton-Tarrant clays. Physically, Bosque County soils are arranged much like those in Hill County, except for frequent barren limestone outcroppings that are characteristic of the Grand Prairie Blacklands.

Factors imposing the most serious limitations on the use of project lands include the following: severe rocky texture, limited permeability, depth of bedrock, and high shrink/swell potential. In general, the soils of Whitney Lake are in good condition, with the possible exception of some eroded areas in the upper regions of the project watershed. Complete information regarding the specific soil types making up the Whitney Lake Project is found within the Soil Survey of Bosque, Hill, and Johnson counties, published by the United States Department of Agriculture, Natural Resources Conservation Service. A full map of the soil survey list of the Prime Farmland soils can be found in Attachment C.

The lake inflow carries a minimum amount of sediment because of the stony soils upstream of the project. Much of the shoreline of Whitney Lake consists of limestone cliffs with very little erosion.

3.6.1 Alternative 1: No Action

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

3.6.2 Alternative 2: Proposed Action

Topography, geology, soils and prime farmland were considered during the refining process of shoreline allocations for the 2020 Shoreline Management Plan. The conversion of 7.12 miles of RLDA and 1.95 miles of LDA into PSA would have minor beneficial effects on topography, geology, soils and prime farmland due to the restrictions on further development around Whitney Lake. Permanent limitations on new boathouse and stairway installation, and movement of existing boathouses within LDAs and all other allocations will have negligible beneficial impacts to soils within the Whitney Lake fee boundary. The constraints on new boathouse, new stairways, and movement of boathouses will prevent drilling into the bluffs and cliffs of the lake for placement of these structures. Therefore, under the Proposed Action, there would be no significant adverse impacts on topography, geology, or soils and prime farmland as a result of implementing the 2020 Shoreline Management Plan.

3.7 NATURAL RESOURCES

Inventory of natural resources was conducted for the 2016 Whitney Lake Master Plan was in accordance with USACE regulations (ER and Engineering Pamphlet [EP] 1130-2-540). The 2020 Shoreline Management Plan will not require an additional natural resources inventory.

<u>Vegetation</u>

Whitney Lake is located within the Cross Timbers ecological region in north-central Texas. This region is a transitional area between tall grass prairies and oak savannas and is characterized by areas with high densities of trees and irregular plains and prairies.

Dominant tree species include live oak (*Quercus virginiana*), post oak *(Q. stellata)*, American elm *(Ulmus americana)*, cedar elm *(U. crassifolia)*, eastern cottonwood *(Populus deltoides)*, black willow *(Salix nigra)*, pecan *(Carya illinoinensis)*, Ashe juniper *(Juniperus ashei)*, sugarberry *(Celtis laevigata)*, and honey mesquite *(Prosopis glandulosa)*. Ashe juniper and honey mesquite have become more prevalent over time due to the absence of fire from the system. While not desirable in the plains and prairie areas of the project, Ashe juniper is a valuable species on the limestone slopes of the surrounding hills and canyons, providing nesting habitat for the federally endangered Golden-cheeked Warbler (GCWA). Other common woody species include shrubs such as sumac *(Rhus spp.)*, sand plum *(Prunus angustifolia)*, rough-leaf dogwood *(Cornus drummondii)*, deciduous yaupon *(Ilex decidua)*, elbowbush *(Forestiera angustifolia)*, and coralberry *(Symphoricarpos orbiculatus),* as well as vines including mustang grapes *(Vitis mustangensis)*, Virginia creeper *(Parthenocissus quinquefolia),* green briar *(Smilax sp.),* and poison ivy *(Toxicodendron radicans)*.

Predominate herbaceous species include various grasses and forbs. The dominate forbs found on Whitney Lake lands include Illinois bundleflower *(Desmanthus illinoensis)*, Engelmann's daisy *(Engelmannia peristenia*, Texas Indian paintbrush *(Castilleja indivisa)*, Texas bluebonnet *(Lupinus texensis)*, and Indian blanket *(Gaillardia pulchella)*. Common native grasses include little bluestem *(Schizachyrium scoparium)*, silver bluestem *(Bothriochloa saccharoides)*, bushy bluestem *(Andropogon glomeratus)*, switchgrass *(Panicum virgatum)*, Texas wintergrass *(Nassella leucotricha)*, and Virginia wildrye *(Elymus virginicus)*. Common non-native grasses include Johnsongrass *(Sorghum halepense)* and bermudagrass *(Cynodon dactylon)*.

Fish and Wildlife Resources

Whitney Lake provides habitat for an abundance of fish and wildlife species. The lake provides a quality fishery, as well as quality wildlife habitat on public land associated with the project.

Whitney Lake provides fishing opportunities for boaters and bank anglers. Common sport fish species present in Whitney Lake include striped bass *(Morone saxatilis)*, white bass *(Morone chrysops)*, largemouth bass *(Micropterus salmoides)*, smallmouth bass *(M. dolomieu)*, spotted bass *(M. punctulatus)*, white crappie *(Pomoxis annularis)*, black crappie *(P. nigromaculatus)*, channel catfish *(Ictalurus punctatus)*, blue catfish *(I. furcatus)*, and flathead catfish *(Pylodictis olivaris)*. Other species include a variety of sunfish (*Lepomis* spp.), carp (*Cyprinus carpio)*, gar (*Lepisosteus spp.*), freshwater drum (*Aplodinotus grunniens*), buffalo (*Ictiobus spp*), and shad (*Dorosoma spp*). Annual stocking of Whitney Lake is conducted by TPWD. Species vary by year, but previous stockings have included striped bass, largemouth bass, smallmouth bass, and bluegill. Golden algae blooms can occur in the reservoir, creating blooms that are, at times, toxic to fish and may affect the quality of fishing. Since impoundment in 1951, the native forests that were submerged by the reservoir have provided structure and forage habitat for fish.

There are 23,784 acres of Federal land managed by USACE at Whitney Lake. There are 22 designated wildlife management areas, with approximately 16,278 acres designated as Multiple Resource Management- Wildlife Management. These management areas are popular with hunters and individuals wishing to observe wildlife in their natural habitat. Species often observed in these areas include white-tailed deer *(Odocoileus virginiana)*, eastern wild turkey (*Meleagris gallopavo*), feral hogs *(Sus scrofa)*, waterfowl (ducks and geese), bobwhite quail *(Colinus virginianus)*, mourning dove *(Zenaida macroura)*, fox squirrel (*Sciurus niger*), cottontail rabbit *(Sylvilagus floridanus)*, bobcat (*Lynx rufus*), coyote *(Canis latrans)*, gray fox *(Urocyon cinereoargenteus)*, raccoon *(Procyon lotor)*, opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), and various raptors, shore birds and song birds. These wildlife management areas provide a great benefit to the public in a region with a limited amount of public land.

3.7.1 Alternative 1: No Action

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

3.7.2 Alternative 2: Proposed Action

There are several changes to vegetation modification permits in the Proposed Action. The Access Path permit will increase from 3' in width to 4' to assist permittees in safety hazard avoidance. All vegetation modification permits must follow original permit conditions and requirements. New mowing and underbrushing permits for adjacent landowners will be restricted to a 35' strip on USACE property along the boundary line. A community and multi-agency team studied firebreaks extensively in 2010 and determined that a 35' wide firebreak was adequate for protection, while still minimizing impacts to the environment. Underbrushing permits were not specifically addressed in the 1976 Shoreline Management Plan, but have been issued by lake staff in the past. Underbrushing allows adjacent landowners to remove vegetation such as vines and brambles that are no greater than 1" in diameter at breast height (DBH). Vegetation modification permits are limited to PSAs, and are not issued in areas classified as Environmental Sensitive Areas, High Density Recreation Areas, and Project Operations areas in the 2016 Master Plan. Although the area for potential vegetation modification permits covers a large expanse of Whitney Lake, lake staff will continue to review site conditions before allowing modifications. Permits can be revoked upon violation of the terms and conditions of the approved permit. There would be minor permanent adverse impacts on natural resources with the inclusion of expanded vegetation modification permits.

Authorized private shoreline uses will also be revised in the 2020 Shoreline Management Plan that will cause minor beneficial benefits to natural resources. Boat launching ramps that would be located near community dry boat storage facilities, while included in the 1976 Shoreline Management Plan will be removed from the 2020 Shoreline Management Plan due to the adverse impacts on natural resources, the large investment required to construct and maintain a boat ramp to current standards, the economic impact on existing marinas, and the difficulty involved with maintaining a boat ramp in a safe condition for use by the public. The potential approval of a public boat ramp to serve a community dry storage facility was included in the 1976 Shoreline Management Plan as a means to reduce the need for individual boathouses, but construction of such ramps has not occurred over the past 40 plus years at Whitney Lake.

Reallocation of the Whitney Lake shoreline and changes to authorized private shoreline uses will create minor beneficial impacts to natural resources. There are long-term minor beneficial impacts with the conversion of 7.12 miles RLDAs and 1.95 miles of LDAs into PSAs. By converting these lands to PSAs, it will allow for better scrutiny by lake staff on quality of lands adjacent to privately-owned property before issuing a shoreline use permit. The conversion allows for better protection of natural resources on USACE property from high intensity recreation, including boathouses.

3.8 THREATENED AND ENDANGERED SPECIES

The Endangered Species Act (ESA) was enacted to provide a program for the preservation of threatened and endangered species and to provide protection for the ecosystems upon which these species depend for their survival. All Federal agencies are required to implement protective measures for designated species, and to use their

authorities to further the purposes of the ESA. The Secretary of the Interior (birds and other terrestrial and freshwater species) and the Secretary of Commerce (marine species) are responsible for the identification of threatened or endangered species and development of any potential recovery plan.

USFWS is the primary agency responsible for implementing the ESAUSFWS responsibilities under the ESA include (1) the identification of threatened and endangered species; (2) the identification of critical habitats for listed species; (3) implementation of research on, and recovery efforts for, these species; and (4) consultation with other Federal agencies concerning measures to avoid harm to listed species.

Species may be considered eligible for listing as endangered or threatened when any of the five following criteria occur: (1) current/imminent destruction, modification, or curtailment of their habitat or range; (2) overuse of the species for commercial, recreational, scientific, or educational purposes; (3) disease or predation; (4) inadequacy of existing regulatory mechanisms; and (5) other natural or human-induced factors affecting their continued existence. An endangered species is a species officially recognized by USFWS as being 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. USFWS also identifies species that are candidates for listing as a result of identified threats to their continued existence. The Candidate designation includes those species for which USFWS has sufficient information to support proposals to list as endangered or threatened under the Endangered Species Act; however, proposed rules have not yet been issued because such actions are precluded at present by other listing activity.

Proposed species are those candidate species that are found to warrant listing as either threatened or endangered, after completion of a scientific review including biology, ecology, abundance and population trends, and threats. Official listing occurs after considering public comments and any new data that may become available, and publication in the Federal Register. Although not afforded protection by the Endangered Species Act, candidate and proposed species may be protected under other Federal or state laws.

There are five federally listed and two candidate species that could be found at Whitney Lake (USFWS 2019). A list of these species is presented in Table 6 and Attachment D. No Critical Habitat has been designated within or near Whitney Lake.

Table 6. Federally Listed Endangered and Threatened Species with Potential to Occur at Whitney Lake

Common Name	Scientific Name	Federal Status	State Status
Piping Plover	*Charadrius melodus*	Threatened	Threatened
Whooping Crane	*Grus americana*	Endangered	Endangered
Least Tern	*Sterna antillarum*	Endangered	Endangered
Red Knot	*Calidris canutus rufa*	Threatened	Not Listed
Golden-cheeked Warbler	*Setophaga chrysoparia*	Endangered	Endangered
Smooth Pimpleback	*Quadrula houstonensis*	Candidate	Threatened
Texas Fawnsfoot	*Truncilla macrodon*	Candidate	Threatened

Source: USFWS 2019

The GCWA is of unique interest and importance at Whitney Lake. Surveys for GCWA at Whitney Lake were performed in 1996, 1997, and 1998 by private consulting firms, revealing their presence at several locations. The USACE Engineering Research and Development Center conducted a study in 2005, which indicated continued presence at two previously surveyed locations. USFWS conducted an investigation in 2008 and observed 61 positive GCWA detections. A subsequent survey in 2009 recorded 29 positive GCWA detections. USFWS also conducted investigations in 2011 (15 positive GCWA detections) and 2015 (22 positive GCWA detections) (USFWS 2015).

USACE property at Whitney Lake is of unique importance to the recovery efforts for the species. The habitat at Whitney Lake occurs within GCWA Recovery Region 2, where less than 50 birds have been documented in years prior to 2008. Due to the limited amount of public land and GCWA breeding habitat in Recovery Region 2, coupled with the updated survey observations, Whitney Lake may represent the most realistic opportunity to pursue substantial GCWA recovery efforts within the region. Figure 1 represents typical GCWA habitat located at Whitney Lake, which consists of mature Ashe juniper interspersed with oaks.

Figure 1. Typical GCWA Habitat

Texas Listed Rare, Threatened, and Endangered Species

Chapters 67 and 68 of the TPWD Code and Sections 65.171-65.176 of Title 31 of the Texas Administrative Code gives TPWD the authority to develop a list of state-listed threatened and endangered species, and to manage, regulate, and protect listed species in Texas. The state-listed species and species of greatest conservation need (SGCN) for Hill, Bosque, and Johnson counties are provided in Attachment E. SGCN are species that are declining or rare and in need of attention to recover or to prevent the need to list under state or federal regulation. TPWD has identified 62 SGCN in Hill, Bosque, and Johnson Counties while three SGCN occur on USACE property at Whitney Lake.

Along with the state lists, TPWD also operates the Texas Natural Diversity Database (TXNDD). TXNDD is a GIS-based inventory of known locations of state-listed threatened, endangered, and SGCN species. The TXNDD is limited to elements of occurrence that are located on public lands and private lands where the landowner has given written consent to include in the database. Therefore, TXNDD data are not a comprehensive representation of the range of the species, but a tool to identify potential listed species in a specific area. A search of the TXNDD resulted in the identification of two SGCN known to occur within the USACE boundary of Whitney Lake within the last twenty-five years: the black-capped vireo (*Vireo atricapilla*) and GCWA.

3.8.1 Alternative 1: No Action

The No Action Alternative does not involve any activities that would contribute to changes in existing conditions; therefore, no measurable impacts on threatened and endangered species would be anticipated as a result of implementing the No Action Alternative.

3.8.2 Alternative 2: Proposed Action

Under the Proposed Action, the USACE would continue cooperative management plans with the USFWS and TPWD to preserve, enhance, and protect wildlife habitat resources. The allocations proposed in the 2020 Shoreline Management Plan do not contradict the 2016 Whitney Lake Master Plan. The addition of 7.12 miles of RLDA and 1.95 miles of LDA into the PSA allocation will have minor beneficial effects on federally threatened and endangered species. Because, the allocation of 182.2 miles of PSAs also includes the 2016 Whitney Lake Master Plan Environmentally Sensitive Areas (ESAs) within its boundaries, shoreline use permits will not be authorized in ESAs to avoid adverse impacts to federally threatened or endangered species. This will be ensured by continuous review of Shoreline Use Permits by lake staff before issuance to an adjacent landowner. There are no measurable impacts on federally threatened and endangered species anticipated as a result of implementing the Proposed Action Alternative. Any future activities that could potentially result in impacts on federally listed species will be coordinated with USFWS through Section 7 of the Endangered Species Act. Therefore, USACE has determined that the proposed 2020 Whitney Lake Shoreline Management Plan will have no effect on all federally threatened and endangered species within the study area.

3.9 INVASIVE SPECIES

Invasive species are any kind of living organism which, if uncontrolled, causes harm to the environment, economy, or human health. Invasive species generally grow and reproduce quickly and spread aggressively. Non-native, or exotic, species are those that have been introduced, either intentionally or unintentionally, and can out-compete native species for resources or otherwise alter the ecosystem. Native invasive species are those species that spread aggressively due to an alteration in the ecosystem, such as lack of fire or the removal of a predator from the food chain. **Error! eference source not found.**7 lists invasive and exotic species that occur at Whitney Lake.

Table 7. Invasive Species Found at Whitney Lake

Common Name	Scientific Name	Native/Non-native	Prevalence
Birds			
Brown-headed Cowbird	*Molothrus ater*	Native	Moderate
European Starling	*Sturnus vulgaris*	Non-native	Moderate
Eurasian Collared-dove	*Streptopelia decaocto*	Non-native	Minor
Mammals			
Feral Hog	*Sus scrofa*	Non-native	Major
Nutria	*Myocastor coypus*	Non-native	Minor
Reptiles			
Mediterranean House Gecko	*Hemidactylus turcicus*	Non-native	Minor

Common Name	Scientific Name	Native/Non-native	Prevalence
Mollusks			
Asian Clam	*Corbicula fluminea*	Non-native	Moderate
Insects			
Red Imported Fire Ant	*Solenopsis invicta*	Non-native	Major
Plants			
Ashe Juniper	*Juniperus ashei*	Native	Major
Bermudagrass	*Cynodon dactylon*	Non-native	Moderate
Blueweed	*Echium vulgare*	Non-native	Unknown
Bull Thistle	*Cirsium vulgare*	Non-native	Minor
Cheatgrass	*Bromus tectorum*	Non-native	Major
Chinaberry Tree	*Melia azedarach*	Non-native	Minor
Chinese Privet	*Ligustrum sinense*	Non-native	Minor
Chinese Tallow Tree	*Triadica sebifera*	Non-native	Major
Common Chickweed	*Stellaria media*	Non-native	Moderate
Common Dandelion	*Taraxacum officinale*	Non-native	Minor
Common Periwinkle	*Vinca minor*	Non-native	Minor
Dallisgrass	*Paspalum dilatatum*	Non-native	Minor
Deep-rooted sedge	*Cyperus entrerianus*	Non-native	Minor
Dotted Duckmeat	*Landoltia punctata*	Native	Moderate
Field Bindweed	*Convolvulus arvensis*	Non-native	Minor
Field Brome	*Bromus arvensis*	Non-native	Moderate
Giant Reed	*Arundo donax*	Non-native	Moderate
Glossy Privet	*Ligustrum lucidum*	Non-native	Moderate
Heavenly Bamboo	*Nandina domestica*	Non-native	Minor
Honey Mesquite	*Prosopis glandulosa*	Native	Moderate
Horehound	*Marrubium vulgare*	Non-native	Minor
Japanese Honeysuckle	*Lonicera japonica*	Non-native	Minor
Johnson Grass	*Sorghum halepense*	Non-native	Major
King Ranch Bluestem	*Bothriochloa ishaemum var. songarcia*	Non-native	Major
Lehman's Love Grass	*Eragrostis lehmanniana*	Non-native	Moderate
Mimosa	*Albizia julibrissin*	Non-native	Minor
Nodding Plumeless Thistle	*Carduus Nutans*	Non-native	Minor
Purple Nutsedge	*Cyperus rotundus*	Non-native	Minor

Common Name	Scientific Name	Native/Non-native	Prevalence
Popinac	*Leucaena leucocephala*	Non-native	Moderate
Purple Crown-vetch	*Coronilla varia*	Non-native	Minor
Rescuegrass	*Bromus catharticus*	Non-native	Moderate
Scotch Thistle	*Onopordum acanthium*	Non-native	Minor
Spiny Cocklebur	*Xanthium spinosum*	Non-native	Moderate
Spreading Hedgeparsley	*Torilis arvensis*	Non-native	Minor
Tall Fescue	*Lolium arundinaceum*	Non-native	Minor
Willow Baccharis	*Baccharis salicina*	Native	Moderate
Yellow Toadflax	*Linaria vulgaris*	Non-native	Minor

3.9.1 Alternative 1: No Action

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

3.9.2 Alternative 2: Proposed Action

Revisions to shoreline allocations and authorized private shoreline uses for the Whitney Lake Shoreline Management Plan are compatible with the lake's invasive species management practices. Vegetation modification permits allow for the removal of invasive species within an adjacent landowner's permit area and are considered on a case-by-case basis. Therefore, invasive species would continue to be managed, and no significant impacts on resources would occur as a result of implementing the 2020 Shoreline Management Plan.

3.10 CULTURAL, HISTORICAL, AND ARCHAEOLOGICAL RESOURCES

Cultural History Sequence

Prehistoric

The earliest well-documented evidence of human occupation in the middle Brazos River valley dates to about 12,000 years before present (B.P.). Prehistory is divided generally into three broad time periods: Paleo-Indian (12,000 to 8,500 B.P.), Archaic (8,500 to 1,250 B.P.), and Late Prehistoric (1,250 to 300 B.P.).

Evidence for Paleo-Indian period occupation is relatively rare in the Whitney Lake area, and is known primarily from distinctive projectile point styles dating to this time period found in surface collections or in mixed multi-component sites. It is likely that intact Paleo-Indian camp sites may be buried deeply beneath Holocene floodplain alluvium. On private land downstream from the Whitney Lake Dam, Paleo-Indian materials have been documented in deeply stratified rock shelter deposits at Horn Shelter No. 2 (41BQ46). Evidence suggests that the region was occupied by small groups of highly mobile hunter-gatherers that traveled over very large territories.

Traditionally thought of as big-game hunters of mammoth and bison, more recent evidence indicates that Paleo-Indians exploited a much broader range of animal and plant resources.

The Archaic period is divided into Early (8,500 to 6,000 B.P.), Middle (6,000 to 3,500 B.P.), and Late (3,500 to 1,250 B.P.) sub-periods. During this long time period, a generalized hunting and gathering subsistence strategy is indicated. Trends through time suggest increasing population density and decreasing group mobility within smaller territories. Sites with Late Archaic components are well represented in the Whitney Lake area and in north-central Texas generally. Archaic period sites at Whitney Lake include open campsites, burned rock midden features, and rockshelter occupations.

The Late Prehistoric period (1,250 to 300 B.P.) is marked by the presence of the bow and arrow and pottery. During the early portion of this time span, subsistence strategies remained similar to those of the preceding Late Archaic. Division of the Late Prehistoric period into early Austin phase (1,250 to 650 B.P.) and late Toyah phase (650 to 300 B.P.) sub-periods was based primarily on the results of excavations at two Whitney Lake sites (the Kyle and Blum Rockshelter Sites). The Toyah phase differs from the preceding Austin phase in terms of technology and subsistence strategies. Bison became an important economic resource. Evidence of horticulture also appears, but was of only minor importance to overall Toyah phase subsistence.

Historic

In the late 1700s, tribes of the southern Wichita Indians had established villages along the middle Brazos River, including a Towakoni village in the Whitney Lake area. In the early 1840s, Caddo Indians (displaced from east Texas) occupied at least two villages in the Whitney Lake area. Also in the 1840s, limited numbers of Anglo settlers were beginning to occupy the area.

Following the annexation of Texas by the United States in 1845, the U.S. Army established a series of forts along the western frontier. Fort Graham (1849 to 1853) was established in the present location of Whitney Lake, and the Native Americans were forced to relocate farther upstream along the Brazos River. The presence of Fort Graham attracted settlers to the area as the frontier advanced westward. In the 1850s, the town sites of Kimball, Towash, and Fort Graham were established in the Whitney Lake area. During the 1870s, the Chisolm Trail and its cattle drives passed through the Whitney Lake area. A major trail crossing of the Brazos River was located at the town of Kimball.

Population growth in the area accelerated following the arrival of the railroads in 1881. This improved access to major markets and led to a dramatic increase in the number of local farms and ranches. Most of the historic period resources at Whitney Lake are expected to be the archeological remains of house sites and outbuildings associated with farms and ranches dating from the late nineteenth century through the middle of the twentieth century.

Previous Investigations

The initial archeological investigations at Whitney Lake were conducted between 1947 and 1951 by the River Basin Surveys. During that period, 61 sites were recorded,

five of which were excavated. Plans to enlarge the lake in the 1970s led to additional investigations by Southern Methodist University, during which 29 new sites were recorded. This was followed by excavations at the Bear Creek Shelter by Southern Methodist University and the Fort Graham site by Wake Forest University. Limited survey work since then has added to the number of known archeological sites.

Recorded Cultural Resources

Currently, 121 archeological sites have been recorded at Whitney Lake. Only 26 of these sites have been evaluated to determine their eligibility for the National Register of Historic Places (NRHP) (6 listed, 7 eligible, 13 ineligible). Also, the Whitney Dam and Powerhouse were determined eligible for the NRHP in 2003. The remaining 95 archeological sites have not yet been evaluated for NRHP eligibility. Only about 1,100 acres of Whitney Lake property have been inventoried to current survey standards.

Cultural Resources Management at Whitney Lake

The cultural resources surveys of the 1970s and earlier were not systematic and are not considered adequate by current standards. As such, and dependent on funding, a Cultural Resources Management Plan for Federal property at Whitney Lake would be developed and incorporated into the Operational Management Plan in accordance with EP 1130-2-540. The purpose of the Cultural Resources Management Plan would be to provide a comprehensive program to direct the historic preservation activities and objectives at Whitney Lake. Completion of a full inventory of cultural resources at Whitney Lake is a long-term objective that is needed for compliance with Section 110 of the NHPA. All currently known and newly recorded sites would be evaluated to determine their eligibility for the NRHP.

In accordance with Section 106 of the NHPA, any proposed ground-disturbing activities or projects, such as those described in the 2020 Shoreline Management Plan or as may be proposed in the future by others for right-of-way easements, would require cultural resource surveys to locate and evaluate historic and prehistoric resources. Resources determined eligible for the NRHP must be protected from proposed project impacts or the impacts must be mitigated. All future cultural resource investigations at Whitney Lake would be coordinated with the State Historic Preservation Officer and federally recognized Tribes to ensure compliance with the NHPA, the Archaeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act.

3.10.1 Alternative 1: No Action

There would be no measurable impacts on cultural, historical, or archaeological resources as a result of implementing the No Action Alternative, as there would be no changes to the existing Shoreline Management Plan.

3.10.2 Alternative 2: Proposed Action

Impacts on cultural, historical, and archaeological resources were considered during the refinement processes of shoreline allocations and the revision of authorized private shoreline uses. Based on previous surveys at Whitney Lake, the recommended updates would not change current cultural resource management plans or alter areas where these resources exist. All future activities would be coordinated with the State

Historic Preservation Officer and federally recognized Tribes to ensure compliance with Section 106 of the NHPA, the Archaeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act. The conversion of 7.12 miles of RLDA and 1.95 miles of LDA to PSA will have minor beneficial impacts on cultural resources. PSAs are promoted along the boundaries of ESAs. Shoreline use permits on PSAs will be more heavily evaluated and are restricted on ESAs, so any cultural resources identified during the 2016 Whitney Lake Master Plan would be completely avoided. Therefore, no significant impacts on cultural, historical, or archaeological resources would occur as a result of implementing the 2020 Shoreline Management Plan.

3.11 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

The zone of interest for this socioeconomic analysis includes Bosque, Hill, and Johnson counties. This three-county region, where the most impacts would be expected, has been utilized as the basis in summarizing the population characteristics of Whitney Lake.

Demographic Characteristics

The total estimated 2019 population for the zone of influence is 223,012 as shown in Table 8. Approximately 74 percent of the population is in Johnson County, 17 percent is in Hill County, and 9 percent is in Bosque County. The average annual growth rate for the zone of interest over the 2010 to 2019 time period was 1.3 percent, which was lower than the 1.8 percent average annual growth rate for the same time period for the State of Texas.

Table 8. Population Estimates for the Zone of Interest

Geographical Area	2010 Population Estimate	2019 Population Estimate	Average Annual Growth Rate 2010 to 2019	2044 Population Projection	Projected Average Annual Growth Rate 2019 to 2044
Texas	25,145,561	29,193,268	1.8	43,209,911	2.0
Bosque County	18,212	17,793	-0.3	15,094	-0.6
Hill County	35,089	35,644	0.2	32,826	-0.3
Johnson County	150,934	169,575	1.4	224,160	1.8
Zone of Interest Total	**204,235**	**223,012**	**1.3**	**272,080**	**0.9**

Sources: Texas Demographic Center 2018

The population in the zone of interest makes up approximately 0.8 percent of the total population of the State of Texas. From 2019 to 2044, the population in the zone of interest is projected to increase by 49,068, an average annual growth rate of 0.9 percent. By comparison, the population of the State of Texas is projected to increase at an average annual rate of 2.0 percent per year during the same time period. The distribution of the population among gender is approximately 49.7 percent male and 50.3 percent female in the zone of interest, as shown in Table 9.

Table 9. 2018 Population Estimates by Gender

Geographical Area	Male (Percent)	Female (Percent)
Texas	49.7	50.3
Bosque County	49.5	50.5
Hill County	49.8	50.2
Johnson County	49.9	50.1
Zone of Interest Average	49.7	50.3

Source: U.S. Bureau of the Census 2018

The distribution of the population by age group is shown in Table 10. The largest age group in the zone of interest is the Less than 10 (13.06 percent), followed by the 60 to 69 age group (13.02 percent). Bosque and Hill counties have older populations, as indicated by much higher percentages of the population over the age of 60 (33.31 and 28.16 percent, respectively) than Texas (18.24 percent) and Johnson County (21.12).

Table 10. 2019 Percent of Population by Age Group

Geographic Area	Age Group (Percent)									
	Less than 10	11 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 and Over
Texas	14.12	14.24	14.71	14.06	12.76	11.87	9.75	5.64	2.33	0.52
Bosque County	11.74	11.14	10.28	10.14	10.21	13.18	15.15	11.93	5.14	1.09
Hill County	13.38	12.65	11.30	11.19	10.40	12.91	13.07	9.91	4.20	0.98
Johnson County	14.06	13.86	12.95	12.97	12.26	12.78	10.84	6.92	2.82	0.54
Zone of Interest Average	13.06	12.55	11.51	11.44	10.96	12.96	13.02	9.58	4.06	0.87

Source: Texas Demographic Center 2018

Race and ethnicity for the zone of interest are shown in Table 11. The Texas Demographics Center estimates show that the region is heavily White, Not Hispanic or Latino (72.3 percent). Black or African American account for an estimated 3.9 percent of the population and Hispanic or Latino accounts for 21.1 percent. The minority population in the zone of interest is estimated to be 27.7 percent.

Table 11. Race and Ethnicity

Geographic Area	White, Not Hispanic or Latino	Black or African American	Hispanic	Asian	Not Hispanic, Other
Texas	41.3	11.9	39.6	5.0	2.2
Bosque County	76.8	1.8	19.3	0.3	1.9
Hill County	69.0	6.6	22.0	0.4	2.0
Johnson County	71.2	3.2	22.1	0.7	2.8
Zone of Interest Average	72.3	3.9	21.1	0.5	2.2

Source: Texas Demographics Center 2018

Table 12 displays the highest level of education attained by the population age 25 and over in both Texas and the zone of interest. In the zone of interest, 23.4 percent of the population are less than high school graduates; 12.4 percent are high school graduates; 9.0 percent have some college or Associate's Degree; and 3.9 percent have a Bachelor's degree or higher. Data show that the zone of interest has lower percentages of the population in all categories, as compared to the State of Texas.

Table 12. Educational Attainment for the Population 25 Years and Older for Whom Poverty Status is Determined by Educational Attainment Level

Geographic Area	Less than High School Graduate	High School Graduate	Some College or Associate's Degree	Bachelor's Degree or Higher
Texas	26.7	14.4	9.6	4.2
Bosque County	27.2	11.6	8.7	4.7
Hill County	25.7	15.2	11.4	3.9
Johnson County	17.4	10.4	7.0	3.1
Zone of Interest Total	23.4	12.4	9.0	3.9

Source: U.S. Census Bureau 2017

Labor Force and Unemployment

Labor force and unemployment data for the zone of interest are presented in Table 13. The unemployment rate for the zone of interest (6.1 percent) is higher than the unemployment rate for the State of Texas (5.8 percent).

Table 13. Labor Force and Unemployment (2013-2017 Estimates)

Geographic Area	Labor Force	Unemployment Rate (Percent)
Texas	13,473,957	5.8
Bosque County	7,881	5.2
Hill County	15,872	8.1
Johnson County	76,009	4.9
Zone of Interest Total	99,762	6.1

Sources: U.S. Census Bureau 2013-2017

Income and Poverty

Data showing income and poverty in the zone of interest are presented in Table 14. Per capita personal incomes (PCPI) for the counties in the zone of interest are below the PCPI for Texas ($28,985), and the U.S. PCPI ($31,166). Of the counties in the zone of interest, Johnson County has the highest PCPI, at 85.2 percent of the U.S. PCPI.

The percentage of the population living below the poverty rate in the zone of interest (14.7 percent) is slightly below the poverty rate for the State of Texas (16.0 percent). Johnson County has by far the lowest poverty rate of the zone of interest counties (11.0 percent), and Hill County has the highest poverty rate, with 17.5 percent of the population living below the poverty level.

Table 14. Income and Poverty

Geographic Area	Per Capita Personal Income	Per Capita Personal Income Percent of U.S.	Median Household Income	Poverty (Percent)
Texas	28,985	93.0	57,051	16.0
Bosque County	25,763	82.6	48,677	15.6
Hill County	23,342	74.9	45,970	17.5
Johnson County	26,574	85.2	60,458	11.0
Zone of Interest Average	**25,226**	**80.9**	**51,668**	**14.7**

Source: U.S. Census Bureau 2013-2017

Environmental Justice

Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was issued by President Clinton on February 11, 1994. It is 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, 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 $25,900 for a family of four in 2018, according to the U.S. Census Bureau. 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.

Counties in the zone of interest have substantially lower minority populations than the State of Texas, as shown in Table 15, and all counties in the zone of interest have minority populations that are below 50 percent.

Table 15. Minority and Poverty

	Minority Population (Percent)	All Ages in Poverty (Percent)
Texas	58.7	16.0
Bosque County	23.3	15.6
Hill County	31.0	17.5
Johnson County	28.8	11.0
Zone of Interest Average	**27.7**	**14.7**

Sources: Texas Demographic Center 2018 and U.S. Census Bureau 2013-2017

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

Under the No Action Alternative, there would be no changes to the existing Shoreline Management Plan, with the USACE continuing to manage Whitney Lake's natural resources as set forth in the 1976 Shoreline Management Plan. There would be no measurable impacts on socioeconomic resources. Beneficial socioeconomic impacts existing as a result of the implementation of the current Shoreline Management Plan would continue, as visitors would continue to come to the lake from surrounding areas. In addition to camping in USACE-operated campgrounds, many visitors purchase goods such as groceries, fuel, and camping supplies locally, eat in local restaurants, stay in local hotels and resorts, play golf at local golf courses, and shop in local retail establishments. These activities would continue to bring revenues to local companies, provide jobs for local residents, and generate local and state tax revenues. There would be no disproportionately high or adverse impacts on minority or low-income populations or children with the implementation of the No Action Alternative.

3.11.2 Alternative 2: Proposed Action

Under the Proposed Action, the shoreline allocations and revised authorized private shoreline uses reflect changes in shoreline management and shoreline uses that have occurred since 1976. Whitney Lake offers a variety of free recreational opportunities for visitors. It is beneficial to the local economy through direct and indirect job creation and local spending by visitors. Beneficial impacts would be similar to the No Action Alternative. There would be no adverse impacts on economy in the area and no disproportionately high or adverse impacts on minority or low-income populations or children as a result of the Proposed Action. The 2020 Shoreline Management Plan would discontinue the issuance of Shoreline Use Permits for new private floating facilities, but will honor past written commitments. This will gradually decrease private shoreline use and increase the amount of lands and water surface available for the general public. Limiting the availability of private floating facilities will have a minor beneficial impact on marina and boat storage owners on and adjacent to Whitney Lake property. The general public will be more likely to utilize marina boat slips or boat storage facilities if new boathouse spaces are not available.

3.12 RECREATION

The majority of visitors to Whitney Lake come from within a 100-mile radius of the lake. Whitney Lake visitors are a diverse group ranging from campers who utilize the campgrounds around the lake, full-time and part-time residents of the private housing developments that border the lake, individuals utilizing boats and personal watercraft to navigate the water, day users who picnic in the state and federally-operated parks, marina customers, and many other user groups.

The peak visitation months on Whitney Lake are April through September. June is the highest visitation month and accounts for 17 to 21 percent of the annual total. A large percentage of visits to recreation areas occur in USACE-managed recreation areas. The remaining visitation takes place on USACE lands that have been leased to marina

operators and to TPWD, Johnson County, Hill County, and the City of Whitney for recreational purposes.

The USACE operates the following parks on Whitney Lake where user fees are charged: East Lofers Bend Park, West Lofers Bend Park, Lofers Bend Day Use Park, McCown Valley Park, Cedron Creek Park, Plowman Creek Park, and Kimball Bend Park. These parks, three of which are seasonal, have controlled access with 24-hour presence provided by contract gate attendants. All fee parks combined provide 343 campsites, eight boat ramps, three group camping areas with pavilions, nine playgrounds, 47 day use picnic sites, four swim beaches, and 19 restrooms (USACE 2018).

The USACE operates the following no-fee or “free” parks on Whitney Lake: Riverside Park, Cedar Creek Park, Steele Creek Park, Nolan River Park, Walling Bend Park, and Soldiers Bluff Park. These parks provide limited multi-use facilities (can be used for either camping or picnicking) and very basic amenities. All free parks combined provide 67 multiple use sites, eight restrooms, seven boat ramps, and three group-use shelters. In addition to the above-mentioned USACE-operated parks, there are four other parks not operated by the USACE that are located at Whitney Lake. The parks are Hamm Creek in Johnson County, Chisholm Trail Park in Hill County, Lake Whitney State Park in Hill County, and the Whitney City Park in Hill County.

Hamm Creek is leased to Johnson County and is situated in the extreme southwest corner of Johnson County, at the confluence of Hamm Creek and the Brazos River. The park is 8 miles southwest of Rio Vista on FM 916 and encompasses 220 acres. It is approximately 45 road miles from the Whitney Lake Project Office. The park contains 50 camping sites, 30 day-use picnic shelters, and five bathrooms. The boat ramp is popular, when usable, because of trees lining the bank that serve as effective windbreaks, providing the smooth water surface preferred by skiers. Fishing pressure is heavy during the white bass "run" in the spring. During winter, the area is popular with hunters, fishermen, and, on warmer weekends, a few skiers.

Chisholm Trail Park is leased to Hill County and is located on the banks of the Brazos River, approximately 21 miles south of Cleburne, and encompasses 108 acres. Access is via a paved county road off State Highway 174. The park contains 30 day use and camping sites, a boat ramp, horseshoe pits, a restroom, and a playground. The park is used mainly by families, with camping, skiing, swimming, and fishing being the most common uses. The park receives heavy usage during summer weekends, and relatively little usage at other times. There is no potable water in the park during winter months.

Lake Whitney State Park and Recreation Area is located on the east side of the lake in Hill County, approximately 2 miles west of the City of Whitney, and encompasses 725 acres. Access is from FM 1244. The recreation area is leased to the State of Texas and is operated by the TPWD. All development and construction in the lease area was performed by the state. The park contains 156 day use and camping sites, a group picnic area, a recreation hall, a boat ramp, six restrooms, and three playgrounds. Visitation is primarily from campers, but the day use area is heavily occupied on weekends during the peak visitation months.

The Whitney City Park is located immediately west of the city limits of Whitney. This 22-acre park is leased to and operated by the City of Whitney. Individuals in the immediate area of the City of Whitney primarily use the area. The park's main use comes from activities associated with baseball and softball games and practices. The park contains five baseball fields, playground equipment, and a concession stand with restrooms.

There are four marinas located at Whitney Lake which include Lake Whitney Marina at Juniper Cove, Uncle Gus', Harbor Master, and White Bluff. Harbor Master Marina is located between East and West Lofers Park in Hill County and provides 75 wet slips, dry storage slips, campsites, a restroom, a boat ramp, boat rental, gas, and a store. Lake Whitney Marina at Juniper Cove is located in Hill County off FM 1713 and provides 125 wet slips, dry storage slips, cabins, campsites, restrooms, boat ramps, boat rental, gas, a store, and a fish cleaning station. Uncle Gus Marina is located in Bosque County off State Highway 22 near Laguna Park and provides 181 wet slips, a boat ramp, boat rental, gas, a store, a courtesy dock, and a fish cleaning station. The White Bluff Marina is located in the White Bluff Subdivision off FM 933 in Hill County and provides 104 wet slips, a boat ramp, and gas.

While visitation in USACE-managed recreational areas remains strong, there is demand for recreational opportunities not offered in these parks. The 2018 Texas Outdoor Recreation Plan (TORP) published by TPWD lists the top 10 areas of participation for outdoor recreation activities. Whitney Lake lands currently offer 8 out of the 10 activities, which include: walking for pleasure, picnicking, cookouts, and other gatherings, sightseeing, viewing/photographing wildlife/nature, viewing historical/cultural sites, fishing, running/jogging, and swimming in lakes, streams, and rivers. While the other two activities are not likely to occur on Whitney Lake, recreational use of the area continues to evolve.

Water-Use Recreation

Management of the water surface for recreational purposes at Whitney Lake rests primarily with the USACE, but close coordination is maintained with TPWD and Bosque, Hill, and Johnson counties Sheriff Offices with respect to enforcement of rules and regulations that apply to boating. Marina concessionaires are also important stakeholders in water-based recreation management. Water-based outdoor recreation includes, but is not limited to, fishing, boating, swimming, water skiing, scuba diving, and kayaking.

Recreational Carrying Capacity

Recreational carrying capacity is considered by the USACE to ensure that visitors have a high-quality and safe recreational experience, and that natural resources are not irreparably damaged. An example of a carrying capacity consideration at Whitney Lake is the management of public hunting on USACE lands, wherein hunting activity may be restricted by species or by area, depending on population or habitat conditions.

No recreation carrying capacity studies have been conducted at Whitney Lake. Presently, the USACE manages recreation areas at Whitney Lake using historic

visitation data combined with best professional judgment to address recreation areas considered to be overcrowded, overused, underused, or well balanced. The USACE will continue to identify possible causes and effects of overcrowding and overuse, and apply appropriate Best Management Practices and site management using up-to-date data.

Whitney Lake's six Class A parks (parks offering modern restrooms, potable water, and electrical and water hookups at campsites) are full on major summer holiday weekends, but are not being over-utilized by the public. Occupancy rates for these parks averaged 22 percent from 2010 to 2014, with the highest yearly average being 34 percent in Lofers Bend West in 2012, and the lowest being 16 percent in Kimball Bend in 2011. In June of FY 2014, the average occupancy rate ranged from 19 percent on weekdays to 43 percent on weekends, with an overall occupancy of 29 percent. June is Whitney Lake's peak month for visitation. While some summer weekends find these parks completely full, there is additional capacity in these areas at other times, thus no need for additional campsites.

There have been no water-related recreation development studies on Whitney Lake to determine the carrying capacity with regard to the number of boats that could safely operate on the lake surface. However, using data and findings from a 1999 comprehensive Water-Related Recreation Use Study at Lewisville Lake, the USACE, Fort Worth District established a target carrying capacity of no less than 22 acres of water per boat on its lakes during peak use times a standard for resource protection and user enjoyment. Based on findings from the Lewisville Lake study, the current Potential Lake Surface Boat Load for Whitney Lake is estimated to be 38.2 acres of water per boat on peak use days if the entire conservation pool of 23,560 acres is considered boatable (USACE 2016). This is a potential level of use that assumes the lake level is at the conservation pool elevation of 533.0 NGVD and that every wet slip is leased and every boat in a leased wet slip is on the water. It also assumes all boat ramp parking spaces are occupied. This potential level of use is well above the Fort Worth District target of 22 acres of water per boat. Actual use levels can only be determined through careful on-the-water boat counts, coupled with counts of empty wet slips at marinas and occupied boat ramp parking spaces on peak use days. Furthermore, since the physiography of Whitney Lake creates distinct open-water segments, the lake has very definable use zones, which has been taken into account while considering future water-related recreation development on the lake.

Boathouses

A major component of the shoreline management plan is to update regulations and plans that manage boathouses on Whitney Lake property. Boathouses, also referred to as private floating facilities, provide adjacent landowners direct access to the water and are considered an enhancement to adjacent private property. While these facilities are advantageous for owners, they deter and limit general public use.

3.12.1 Alternative 1: No Action

Under the No Action Alternative, there would be no measurable impacts on recreational resources, as there would be no changes to the existing Shoreline Management Plan.

3.12.2 Alternative 2: Proposed Action

Whitney Lake is beneficial to local visitors and offers a variety of free recreation opportunities. The proposed revisions to shoreline allocations and authorized private shoreline uses will have minor beneficial impacts to recreation. The conversion of 1.95 miles of LDAs and 7.12 miles of RLDAs into PSAs will have minor benefits by increasing opportunities for low density recreation along the shoreline.

There are several permitting and regulation updates that will have an impact on recreation at Whitney Lake. While personal watercraft and external boat mooring to boathouses were not addressed in the 1976 Shoreline Management Plan, it was necessary to clarify this activity within the 2020 Shoreline Management Plan due to increasing public interest in these topics. Personal watercraft docks can be incorporated into new designs of a boathouse as long as they meet the square footage requirement of the existing space. This addition to the 2020 Shoreline Management Plan is attributed to the growing diversity of water recreationists and activities performed on USACE lakes. While external mooring of personal watercraft and boats will not be permitted on a permanent basis, based on Title 36 CFR 327.3(h), they may be moored externally for a period not to exceed 24 hours. This will cause a negligible benefit for recreation on Whitney Lake.

Vegetation modification permit expansion will have negligible benefits for recreation. The additional one foot width allowed for pathways will provide additional space for adjacent landowners and communities wishing to establish a pedestrian path to the shoreline.

Consolidation of multiple facilities allows one individual to own multiple spaces. Consolidation further promotes private shoreline use. Limiting boathouse consolidation will allow more citizens to own boathouses.

Denial of new community docks and the possibility of constructing a boat ramp associated with private community dry boat storage facilities will have negligible impacts on recreation. New community docks are not necessary at Whitney Lake. According to ER 1130-2-406, group owned mooring facilities may be allowed when public or commercial launching or moorage facilities are not located within a reasonable distance of an LDA. The average distance from all LDA’s to a commercial or public launching facility at Whitney Lake is 4.25 miles, which is considered a reasonable distance. The potential authorization of public boat ramps that would be associated with private community dry boat storage facilities has been removed from the 2020 Shoreline Management Plan for reasons described in Section 3.7.2 of this EA.

New space allocations for boathouses was a permitted action in the 1976 Shoreline Management Plan, but has never been implemented and is not necessary for continued public access. The anticipated slow removal of boathouses by attrition or through non-compliance permit conditions, will have a minor beneficial impact on recreation at Whitney Lake. Although beneficial for private owners, boathouses reduce the capacity for general public use on the lake. Existing permits will continue to be honored and can be renewed, and existing boathouses can be repaired, rebuilt, or sold, but no permits for new boathouses will be issued. Transfer of boathouse permits was authorized in the 1976 Shoreline Management Plan, but oversight of transferred permits

has been difficult to implement and is an unnecessary action. New boathouse owners may apply for a new permit upon purchase, so there are no measurable impacts to boathouse ownership due to the lack of transferring privileges. Due to increasing lake level fluctuations, multiple flood events, topography, undesirable competition with commercial marinas, and boathouse owner neglect, it is not feasible to continue adding boathouse spaces to the current LDAs.

Denial of new stairways for general public use and for boathouse access will have no measurable impacts on recreation. Any boathouses that would require a stairway, already have them in place. Existing stairways will continue to be permitted, as long as they follow the regulations found in ER 1130-2-406.

Under the Proposed Action, there will be no measurable impacts on recreation at Whitney Lake.

3.13 AESTHETIC RESOURCES

Whitney Lake is known for its beautiful limestone cliffs and abundant wildlife viewing opportunities, making it a popular destination for boating and camping. While Whitney Lake does not have a Visitor Center, the Lofers Bend Park Walking Trail can be used for interpretation, including nature walks and plant identification. Programs promoting natural resources are also conducted at local schools and libraries.

3.13.1 Alternative 1: No Action

There would be no impacts on visual resources as a result of implementing the No Action Alternative, as there would be no changes to the existing Shoreline Management Plan.

3.13.2 Alternative 2: Proposed Action

Whitney Lake currently plays a pivotal role in availability of parks and open space in Bosque, Hill, and Johnson counties. Reallocation of 7.12 miles of RLDA and 1.95 miles of LDA into PSA and the discontinuance of new boathouses, addition of existing boathouses to LDAs, new staircases, mooring buoys, and the potential for public boat ramps associated with private community dry boat storage would have a minor beneficial effect on current and/or projected public use and visual aesthetics because there will be less personal equipment within the general public's view. Decreasing the amount of permitted private shoreline use will allow for a more natural aesthetics while recreating on Whitney Lake. The increased footprint of vegetation modifications such as access paths and firebreak/mowing permits may have minor adverse impacts to visual aesthetics by decreasing the quantity of vegetation on USACE property. However, these permits will be regulated by lake staff on a site-by-site basis.

Proper implementation of the Shoreline Use Permit issued by USACE to adjacent landowners should result in negligible visual impacts from the shoreline due to the proximity of adjacent properties to the USACE fee boundary. Modification and clarification of boathouse structural features; such as boathouse siding, footprint, roof overhang, and flotation requirements will have minor beneficial impacts to aesthetic resources because they will, over time, result in a more consistent appearance throughout the LDAs. Therefore, no significant adverse impacts on visual resources would result from implementation of the 2020 Shoreline Management Plan.

3.14 HAZARDOUS MATERIALS AND SOLID WASTE

This section describes existing conditions within the Whitney Lake area with regard to potential environmental contamination and the sources of releases to the environment. Contaminants could enter the Whitney Lake environment via air or water pathways. The highways and roads, marinas, and private residences in the vicinity of the lake could also provide sources of contaminants. There are a number of private marinas and residential boat docks around Whitney Lake, many of which provide boat fueling services. These fuel docks are regulated by the U.S. Coast Guard with regard to spill containment and cleanup requirements. There are also numerous public campgrounds/resorts and recreation areas/parks around the lake that could contribute small amounts of hazardous materials and waste to the watershed. Several golf courses and numerous private residences and commercial facilities surround the lake shores, and fertilizer and pesticide/herbicide use at those locations could contribute minor amounts of hazardous materials to the lake. Illegal trash dumping on project lands by individuals and businesses is a persistent problem. USACE and area law enforcement officials work cooperatively to apprehend those responsible for illegal trash dumping. Public trash and garbage pickup and disposal is provided for all properties around Whitney Lake by commercial solid waste removal contractors (USACE 2016).

3.14.1 Alternative 1: No Action

There would be no measurable 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 Shoreline Management Plan.

3.14.2 Alternative 2: Proposed Action

Updates to the shoreline allocations and authorized private shoreline uses proposed for the 2020 Shoreline Management Plan would be compatible with Whitney Lake hazardous, toxic, and solid waste management practices. A negligible benefit will occur by enforcing a new standard requirement calling for the use of plastic encapsulated floatation material for boathouses. As boathouses require replacement or new flotation, this regulation will assist in the gradual removal of extruded or compressed beaded polystyrene flotation, which has been known to break free and pollute the waters of Whitney Lake.

No measurable impacts due to hazardous, toxic, radioactive, or solid wastes would occur as a result of implementing the 2020 Shoreline Management Plan.

3.15 HEALTH AND SAFETY

As mentioned earlier in this document, Whitney Lake's authorized purposes include hydroelectric power, flood risk management, water conservation, and recreation. Compatible uses incorporated in project operation management plans include conservation and fish and wildlife habitat management components. The USACE, with assistance from the TPWD and USFWS, has established public outreach programs to educate the public on water safety and conservation of natural resources. In addition to the water safety outreach programs, the project has established recreation management practices to protect the public. These include safe boating and swimming regulations, safe hunting regulations, and speed limit and pedestrian signs for park

roads. Whitney Lake also has solid waste management plans in place for camping and day use areas. Whitney Lake has personnel to enforce these policies, rules, and regulations during normal park hours.

There are several safety requirements pertaining to boathouse structures proposed for the 2020 Shoreline Management Plan. The requirement for electrical disconnection line is mandatory for all Real Estate Licenses that serve boathouses. While some electrical lines in the past were permitted to be lower than 573' NGVD, this is no longer the case for Whitney Lake. All electric lines will be installed underground. This requirement promotes the health and safety of not only the boathouse permittee, but also the general public. Requirements in the 1976 Shoreline Management Plan for walkways in existing facilities are not to be less than three feet wide, and gangways must be a minimum width of two feet. New facilities, which have not been permitted since the 1976 Shoreline Management Plan, walkways are permitted to be a minimum of three feet wide or a maximum of four feet wide and must be structurally sound.

3.15.1 Alternative 1: No Action

Under the No Action Alternative, the 1976 Shoreline Management Plan would not be revised. No significant adverse impacts on human health or safety would be anticipated.

3.15.2 Alternative 2: Proposed Action

Under the Proposed Action, the revisions to the Whitney Lake Shoreline Management Plan 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. Although originally stated at 571' NGVD in the 1976 Shoreline Management Plan, electrical cutoff at 573' NGVD is a necessary requirement to be updated to protect life and safety of individuals recreating on Whitney Lake. Updates to authorized private shoreline uses, such as prohibiting individuals to place private mooring buoys in the lake and denial of new stairway permits, will decrease the likelihood of accidents and damage to property. Low light conditions or lack of familiarity with the lake could pose a dangerous effect if the general public is participating in water-related recreation in these areas. USACE does not have the capability to monitor buoys placed in the water by private individuals and the impacts on life and safety are not worth the risk of permitting this action. Gangways must be four feet wide in the 2020 Shoreline Management Plan, with handrails on both sides. This requirement will go into effect for new or rebuilt boathouses to ensure the safety of public and allow for ADA access. Existing regulations and safety programs throughout the Whitney Lake Project area would continue to be enforced to ensure public safety. There would be long-term beneficial impacts due to the safety features proposed for implementation.

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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 (CEQ Regulations), 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 PAST IMPACTS WITHIN THE ZONE OF INTEREST

Whitney Lake was originally authorized by the Flood Control Acts of 1941 and late in 1944. Construction of the Whitney Lake Dam began in 1947 and was completed in 1950; it was later modified to include the powerhouse for hydroelectric power. This modification included the construction of two 15,000-kilowatt generator powerhouses and was completed in 1953. The total project area at Whitney Lake encompasses 52,693 acres. Of this total area, 43,571 acres were acquired in fee simple title by USACE, and perpetual Flowage Easements were acquired on an approximately additional 9,122 acres up to elevation 573 NGVD.

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

Future management of the 9,122 acres of Flowage Easement Lands at Whitney Lake includes routine inspection of these areas to ensure that the Government's rights specified in the easement deeds are protected. In almost all cases, the Government acquired the right to prevent placement of fill material or habitable structures on the easement area. Placement of any structure that may interfere with the USACE flood risk management and water conservation missions may also be prohibited.

Within Bosque, Hill, and Johnson counties, there is no Regional Mobility Authority. However, Johnson County is included in the North Central Texas Council of Governments, which is a Metropolitan Planning Organization with regional transportation planning responsibilities. The Heart of Texas Council of Governments (HOTCOG) includes Hill and Bosque counties, but does not perform mobility or transportation planning. In general, the primary planning responsibilities for the road network serving the three counties surrounding Whitney Lake is a function of the Texas Department of Transportation (TXDOT). The Waco Region TXDOT office performs

most of the highway planning for the three counties of immediate concern. There are currently no significant highway projects planned for the three-county region that would have a major effect on the actions set forth in the 2020 Shoreline Management Plan. Relatively minor highway projects that are in the pre-construction or planning stages include improvements to SH 174, maintenance to IH 35W, and resurfacing of State Highway 171 in Johnson County (TXDOT 2019).

4.3 ANALYSIS OF CUMULATIVE IMPACTS

Impacts on each resource were analyzed according to how other actions and projects within the zone of interest might be affected by the No Action Alternative and Proposed Action. Impacts can vary in degree or magnitude from a slightly noticeable change to a total change in the environment. For the purpose of this analysis, the intensity of impacts will be classified as negligible, minor, moderate, or major. These intensity thresholds were previously defined in Section 3. The following resources have been analyzed for cumulative effects in regards to the No Action Alternative and the Proposed Action Alternative, and none were found: Land Use, Water Resources, Climate, Climate Change and GHG, Air Quality, Topography, Geology, and Soils and Prime Farmland, Threatened and Endangered Species, Invasive Species, Cultural, Historical, and Archaeological Resources, Socioeconomics and Environmental Justice, Hazardous Materials and Solid Waste, and Health and Safety. A summary of the anticipated cumulative impacts on each resource is presented below.

4.3.1 Natural Resources

The No Action Alternative will have no measurable cumulative impacts on natural resources in the Whitney Lake area. Implementing the proposed revision of shoreline allocations and changes to permit actions recommended in the 2020 Shoreline Management Plan would ensure that shoreline uses would be compatible with the goals of good stewardship of natural resources. The Proposed Action would continue supporting USFWS and TPWD missions associated with implementation of operational practices to protect and enhance wildlife and fish populations, and habitats, on Whitney Lake fee property. In addition, the Proposed Action would be compatible with conservation principles and measures to protect migratory birds as mandated by EO 13186. Therefore, implementation of the 2020 Shoreline Management Plan, when combined with other existing and proposed projects in the region, would result in minor beneficial cumulative impacts on natural resources in the Whitney Lake area.

4.3.2 Recreation

Whitney Lake provides regionally significant public outdoor recreation benefits, including a variety of free recreation opportunities. Although the 2020 Shoreline Management Plan's proposed allocations of the shoreline slightly diminish the amount of LDAs and puts restrictions on boathouse structure and availability, and other previously permitted actions addressed in Section 2, the changes reflect current land management and historic recreation use patterns that have occurred since 1976 at Whitney Lake. The changes in shoreline allocation as well as updates and clarifications to authorized private shoreline uses, will have a minor positive effect on current and projected public use. Therefore, the No Action Alternative and the Proposed Action Alternative, when combined with other existing and proposed projects in the region,

would result in minor negligible beneficial cumulative impacts on area recreational resources.

4.3.3 Aesthetic Resources

Whitney Lake federal lands offer public, open space values and scenic vistas that are unique to the region. The No Action Alternative will have no measurable cumulative impacts. The 2020 Shoreline Management Plan will continue to minimize activities to disturb the scenic beauty and aesthetics of the lake. Therefore, the Proposed Action would result in minor long-term beneficial cumulative impacts to the aesthetic resources of Whitney 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 2020 Shoreline Management Plan 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 2020 Shoreline Management Plan revision process, as well as identify reallocation proposals, and identify significant issues related to the Proposed Action. Information provided by USFWS and TPWD on fish and wildlife resources has been utilized in the development of the 2020 Shoreline Management Plan.

Endangered Species Act of 1973, as amended – Current lists of threatened or endangered species were compiled for the revision of the 2020 Shoreline Management Plan. There would be no adverse impacts on threatened or endangered species resulting from the revision of the 2020 Shoreline Management Plan. However, beneficial impacts from an increase in PSAs could occur as a result of the revision of the 2020 Shoreline Management Plan. As such, USACE has determined that the proposed revisions to the 1976 Shoreline Management Plan will have no effect on federally threatened or endangered species listed within the study area.

Executive Order 13186 (Migratory Bird Habitat Protection) – Sections 3a and 3e of EO 13186 direct Federal agencies to evaluate the impacts of their actions on migratory birds, with emphasis on species of concern, and inform the USFWS of potential adverse impacts on migratory birds. Implementation of the 2020 Shoreline Management Plan would not result in adverse impacts on migratory birds or their habitat. Beneficial impacts could occur through an increase in PSAs, which could provide protection of important habitats.

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 TCEQ for water quality. A state water quality certification pursuant to Section 401 of the CWA is not required for the 2020 Shoreline Management Plan revision. There would be no change in the existing management of the reservoir that would impact water quality.

National Historic Preservation Act (NHPA) of 1966, as amended – Compliance with the NHPA of 1966, as amended, requires identification of all properties in the project area listed in, or eligible for listing in, the NRHP. All previous surveys and site salvages were coordinated with the Texas State Historic Preservation Officer. Known sites are mapped and avoided by maintenance activities. Areas that have not undergone cultural resources surveys or evaluations would 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 2020 Shoreline Management Plan 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. There is Prime Farmland on Whitney Lake Project Office Lands. The 2020 Shoreline Management would not impact Prime Farmland on Whitney 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 Proposed Action 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, and would continue to do so under the Proposed Action.

CEQ Memorandum dated August 11, 1980, Prime or Unique Farmlands – Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. The Proposed Action would not impact Prime Farmland present on Whitney 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. Implementation of the 2020 Shoreline Management Plan would not result in a disproportionate adverse impact on minority or low-income population groups.

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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 Shoreline Management Plan revisions could result in some lands being classified to a prior, similar shoreline allocation.

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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 2020 Shoreline Management Plan revision process, as well as identify allocation 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. This public scoping meeting was held on 15 May 2019 at the TGCC Event Center, 1009 East Jefferson, Whitney, Texas 76692. The USACE, Fort Worth District, placed advertisements on the USACE webpage, social media, and print publications prior to the public scoping meeting (see Attachment F). Agency and stakeholder coordination is on-going throughout this process.

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SECTION 9: ACRONYMS/ABBREVIATIONS

°	Degrees
BP	Before Present
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO2e	CO2-equivalent
CWA	Clean Water Act
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EP	Engineer Pamphlet
ER	Engineer Regulation
ESA	Environmentally Sensitive Area
F	Fahrenheit
FONSI	Finding of No Significant Impact
GHG	Greenhouse Gas
GCWA	Golden-cheeked Warbler
LDA	Limited Development Area
MRML	Multiple Resource Management Lands
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NGVD	National Geodetic Vertical Datum
NHPA	National Historic Preservation Act
NO	Nitrogen Oxide
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O_3	Ozone
PAA	Prohibited Access Area
Pb	Lead
PCPI	Per Capita Personal Incomes
$PM_{2.5}$	Particulate Matter Less than 2.5 Microns

PM_{10}	Particulate Matter Less than 10 Microns
PRA	Public Recreation Area
PSA	Protected Shoreline Area
ROD	Record of Decision
RPEC	Regional Planning and Environmental Center
SGCN	Species of Greatest Conservation Need
SO_2	Sulfur Dioxide
TCEQ	Texas Commission on Environmental Quality
TPWD	Texas Parks and Wildlife Department
U.S.	United States
U.S.C.	U.S. Code
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service

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SECTION 10: LIST OF PREPARERS

Justyss Watson – Biologist, Regional Planning and Environmental Center; 5 years of USACE experience.

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ATTACHMENT A

ATTACHMENT G – Full List of Whitney Lake Wetlands

Wetland Types	NWI Classification Code	Total Acres
Lake	L1UBHh	15,929.75
Lake	L2EM2Fh	405.84
Lake	L2USAh	6,624.79
Lake	L2USCh	849.17
Freshwater Emergent Wetland	PEM1A	48.40
Freshwater Emergent Wetland	PEM1Ah	2,280.19
Freshwater Emergent Wetland	PEM1Ax	2.27
Freshwater Emergent Wetland	PEM1C	1.34
Freshwater Emergent Wetland	PEM1Ch	2.30
Freshwater Emergent Wetland	PEM1Cx	0.28
Freshwater Emergent Wetland	PEM1Fh	2.17
Freshwater Forested/Shrub Wetland	PFO1/EM1Ah	16.21
Freshwater Forested/Shrub Wetland	PFO1/SS1A	4.05
Freshwater Forested/Shrub Wetland	PFO1/SS1Ah	57.20
Freshwater Forested/Shrub Wetland	PFO1/SS1Ch	22.04
Freshwater Forested/Shrub Wetland	PFO1A	84.00
Freshwater Forested/Shrub Wetland	PFO1Ah	806.06

Wetland Types	NWI Classification Code	Total Acres
Freshwater Forested/Shrub Wetland	PFO1C	20.37
Freshwater Forested/Shrub Wetland	PFO1Ch	242.49
Freshwater Forested/Shrub Wetland	PFO5Fh	10.61
Freshwater Forested/Shrub Wetland	PSS1/EM1Ah	221.07
Freshwater Forested/Shrub Wetland	PSS1/EM1Ch	172.38
Freshwater Forested/Shrub Wetland	PSS1A	0.85
Freshwater Forested/Shrub Wetland	PSS1Ah	18.40
Freshwater Forested/Shrub Wetland	PSS1Cd	5.15
Freshwater Forested/Shrub Wetland	PSS1Ch	755.98
Freshwater Pond	PUBF	3.41
Freshwater Pond	PUBFh	1.96
Freshwater Pond	PUBFx	0.15
Freshwater Pond	PUBHh	14.62
Freshwater Pond	PUBHx	9.64
Freshwater Pond	PUSAh	5.002
Freshwater Pond	PUSAx	0.42
Freshwater Pond	PUSC	0.11
Freshwater Pond	PUSCh	3.56

Wetland Types	NWI Classification Code	Total Acres
Freshwater Pond	PUSCx	3.95
Riverine	R2UBH	1,102.55
Riverine	R2USA	18.30
Riverine	R2USC	34.69
Riverine	R4SBA	23.73
Riverine	R4SBC	411.04
Riverine	R5UBH	5.32

ATTACHMENT B

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

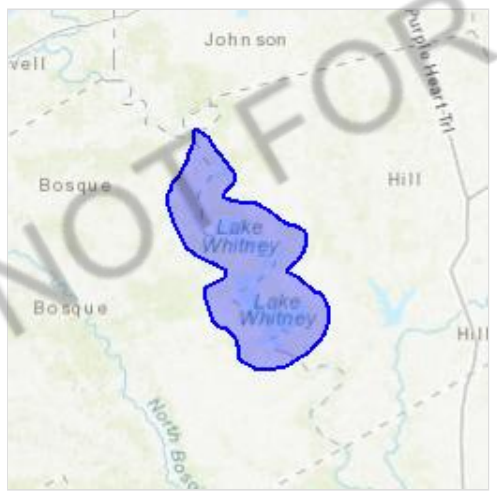
Project information

NAME

Whitney Lake SMP

LOCATION

Bosque and Hill counties, Texas



DESCRIPTION

Fee boundary of Whitney Lake. Whitney Lake Shoreline Management Plan development.

Local office

Arlington Ecological Services Field Office

(817) 277-1100
(817) 277-1129

2005 Ne Green Oaks Blvd
Suite 140
Arlington, TX 76006-6247

http://www.fws.gov/southwest/es/arlingtontexas/
http://www.fws.gov/southwest/es/EndangeredSpecies/lists/

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. 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.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS

Golden-cheeked Warbler (=wood) Dendroica chrysoparia — Endangered

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/33

Least Tern Sterna antillarum — Endangered

This species only needs to be considered if the following condition applies:

- Wind Energy Projects

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8505

Piping Plover Charadrius melodus — Threatened

This species only needs to be considered if the following condition applies:

- Wind Energy Projects

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6039

Red Knot Calidris canutus rufa — Threatened

This species only needs to be considered if the following condition applies:

- Wind Energy Projects

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/1864

Whooping Crane Grus americana — Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/758

Clams

NAME	STATUS
Texas Fawnsfoot Truncilla macrodon No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8965	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

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.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

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

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 (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS

	ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Buff-breasted Sandpiper Calidris subruficollis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9488	Breeds elsewhere
Harris's Sparrow Zonotrichia querula This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
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
Semipalmated Sandpiper Calidris pusilla This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere

Probability of Presence Summary

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

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

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

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For

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

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

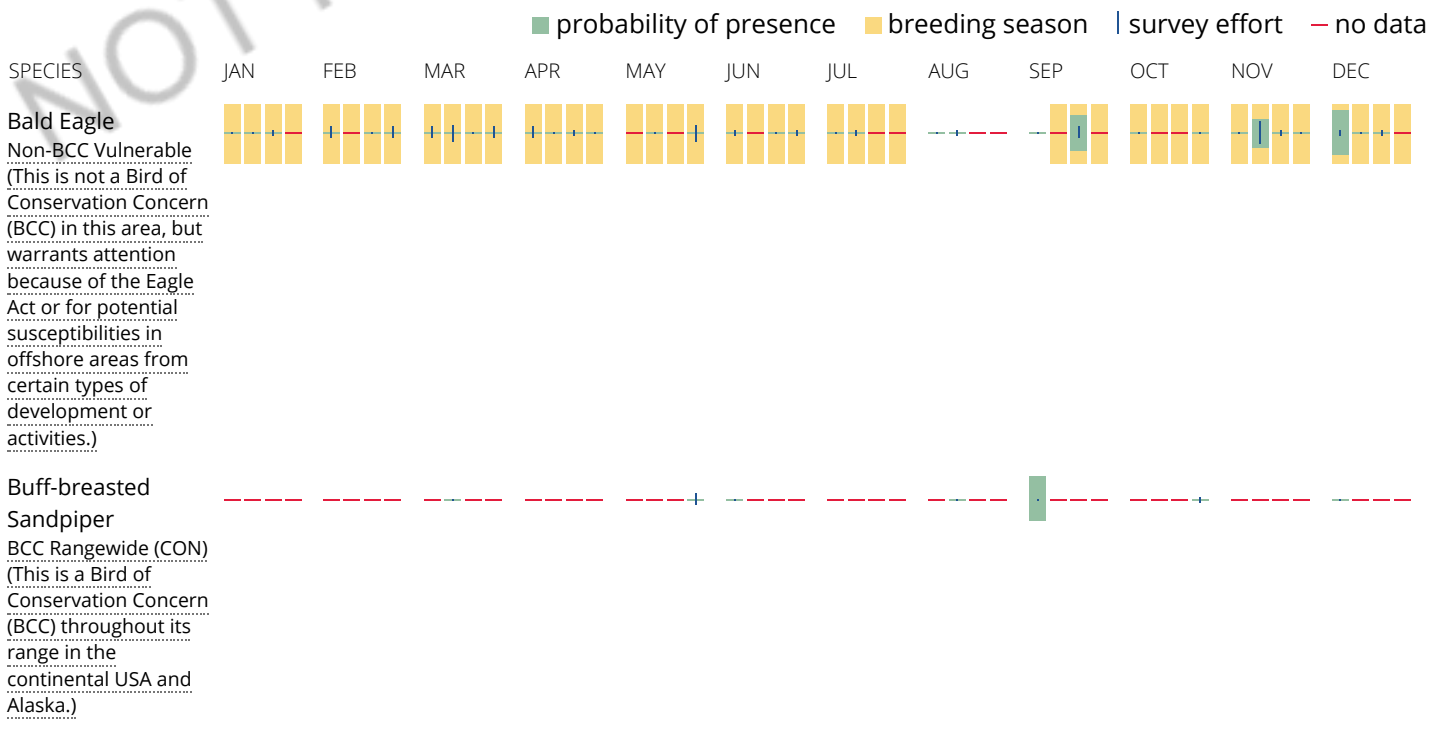
Breeding Season (▬)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

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.



Harris's Sparrow
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Lesser Yellowlegs
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Semipalmated Sandpiper
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

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

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

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

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

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

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

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

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

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

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at

the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

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 AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

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.

This location overlaps the following wetlands:

The area of this project is too large for IPaC to load all NWI wetlands in the area. The list below may be incomplete. Please contact the local U.S. Fish and Wildlife Service office or visit the NWI map for a full list.

FRESHWATER EMERGENT WETLAND

- PEM1Ah
- PEM1A
- PEM1Fh
- PEM1Ch
- PEM1C
- PEM1Ax
- PEM1Cx

FRESHWATER FORESTED/SHRUB WETLAND

- PSS1Ch
- PFO1Ah
- PFO1Ch
- PSS1/EM1Ah
- PSS1/EM1Ch
- PFO1A
- PFO1/SS1Ah
- PFO1C
- PSS1Ah
- PFO1/EM1Ah
- PFO5Fh
- PSS1Cd
- PFO1/SS1A
- PSS1A
- PSS1F

FRESHWATER POND

- PUBHh
- PUBFh
- PUBHx
- PUSCh
- PUBFx
- PUSAh
- PUSAx
- PUBH
- PUBF

LAKE

- L1UBHh
- L2USAh
- L2USCh
- L2EM2Fh
- L1UBHx

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

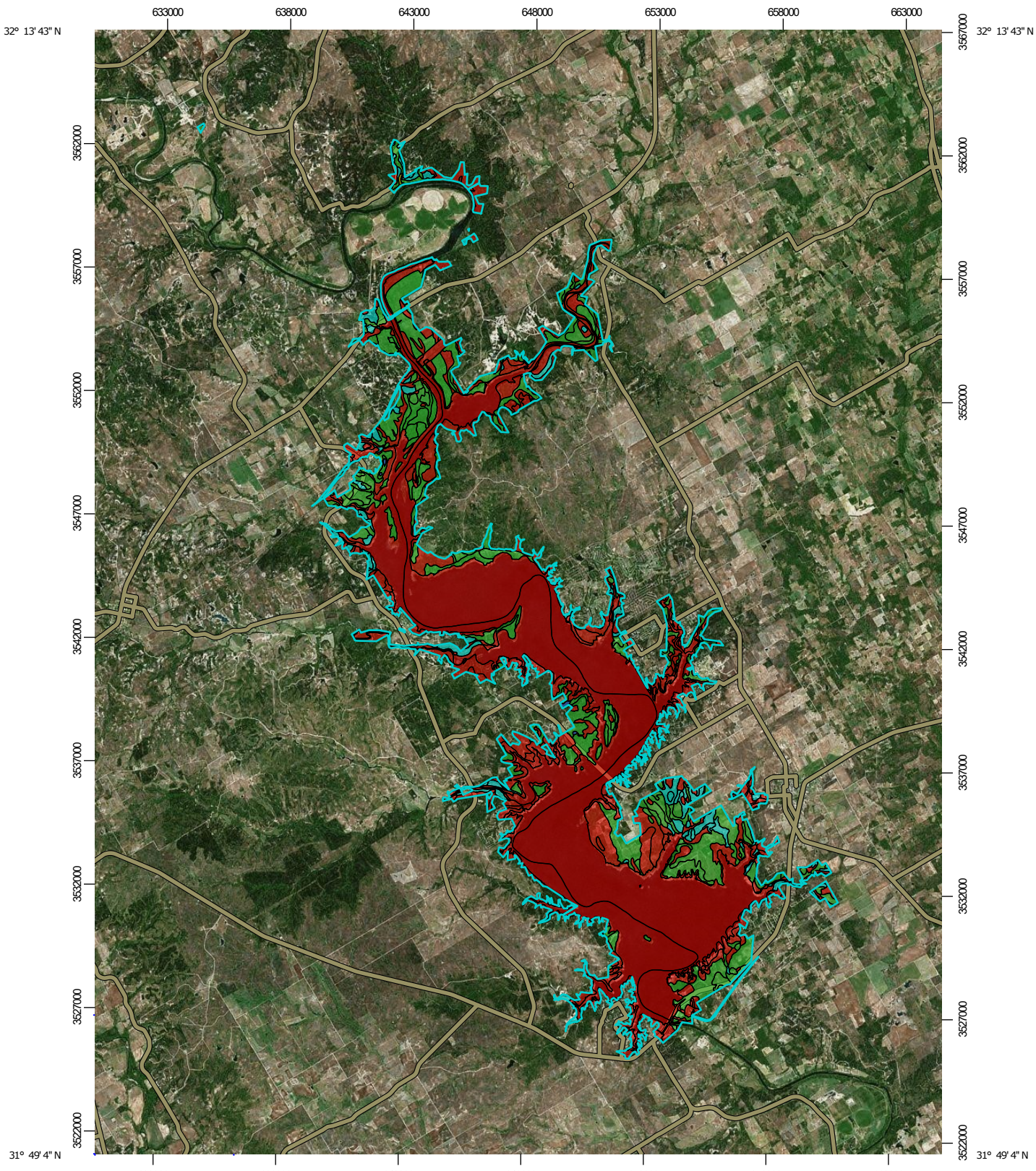
Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

ATTACHMENT C

Farmland Classification—Bosque County, Texas, Hill County, Texas, and Johnson County, Texas
(Whitney Lake Prime Farmland Soils)



Map Scale: 1:222,000 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 3000 6000 12000 18000

Feet
0 10000 20000 40000 60000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

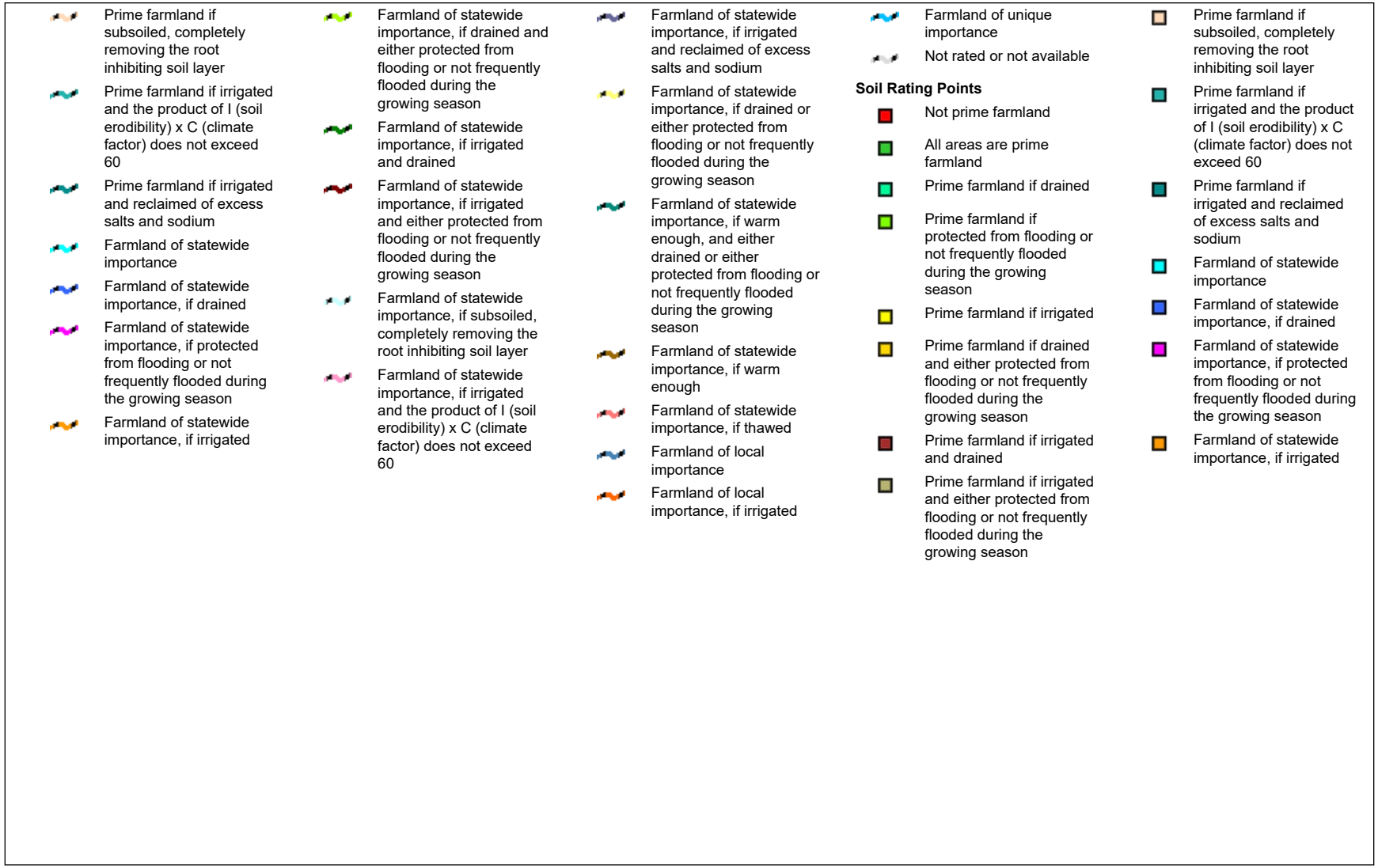
Soils

Soil Rating Polygons

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated
- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Soil Rating Lines

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season


Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated
Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated and drained
Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough
Farmland of statewide importance, if thawed
Farmland of local importance
Farmland of local importance, if irrigated
Farmland of unique importance
Not rated or not available
Soil Rating Points
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated

- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

The soil surveys that comprise your AOI were mapped at scales ranging from 1:20,000 to 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bosque County, Texas
Survey Area Data: Version 17, Sep 12, 2019

Soil Survey Area: Hill County, Texas
Survey Area Data: Version 17, Sep 12, 2019

Soil Survey Area: Johnson County, Texas
Survey Area Data: Version 16, Sep 12, 2019

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 1, 1999—Dec 31, 2003

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1	Bastrop loamy fine sand, 1 to 5 percent slopes	All areas are prime farmland	41.6	0.1%
2	Bastrop fine sandy loam, 0 to 1 percent slopes	All areas are prime farmland	172.6	0.4%
3	Bastrop fine sandy loam, 1 to 3 percent slopes	All areas are prime farmland	1,272.5	2.8%
4	Bastrop fine sandy loam, 3 to 5 percent slopes	All areas are prime farmland	42.2	0.1%
5	Bastrop fine sandy loam, 1 to 5 percent slopes, moderately eroded	Not prime farmland	0.1	0.0%
7	Bolar clay loam, 3 to 5 percent slopes	Farmland of statewide importance	0.1	0.0%
8	Bosque loam, occasionally flooded	Not prime farmland	7.0	0.0%
10	Brackett-Eckrant association, hilly	Not prime farmland	2,071.9	4.6%
11	Cranfill gravelly clay loam, 3 to 5 percent slopes	Not prime farmland	514.5	1.1%
12	Cranfill gravelly clay loam, 3 to 5 percent slopes, eroded	Not prime farmland	23.5	0.1%
13	Cranfill gravelly clay loam, 5 to 8 percent slopes	Not prime farmland	37.2	0.1%
15	Cranfill gravelly clay loam, 3 to 8 percent slopes, severely eroded	Not prime farmland	5.4	0.0%
16	Crawford silty clay, 1 to 3 percent slopes	All areas are prime farmland	1.3	0.0%
17	Denton silty clay, 1 to 3 percent slopes	Farmland of statewide importance	61.5	0.1%
18	Denton silty clay, 3 to 5 percent slopes	All areas are prime farmland	12.5	0.0%
22	Eckrant very cobbly silty clay, 1 to 5 percent slopes, very stony	Not prime farmland	145.7	0.3%
23	Frio silty clay loam, occasionally flooded	Not prime farmland	327.2	0.7%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
24	Hassee fine sandy loam, 0 to 2 percent slopes	Farmland of statewide importance, if drained	34.8	0.1%
25	Krum clay, 0 to 1 percent slopes	All areas are prime farmland	26.1	0.1%
26	Krum clay, 1 to 3 percent slopes	All areas are prime farmland	127.4	0.3%
27	Maloterre-Tarrant complex, 1 to 8 percent slopes	Not prime farmland	222.8	0.5%
28	Minwells fine sandy loam, warm, 1 to 3 percent slopes	All areas are prime farmland	775.2	1.7%
29	Minwells fine sandy loam, 3 to 5 percent slopes	All areas are prime farmland	181.2	0.4%
30	Minwells fine sandy loam, 2 to 5 percent slopes, eroded	Not prime farmland	418.9	0.9%
32	Paluxy very fine sandy loam, 0 to 1 percent slopes	All areas are prime farmland	164.2	0.4%
33	Paluxy very fine sandy loam, 1 to 3 percent slopes	All areas are prime farmland	118.5	0.3%
34	Paluxy very fine sandy loam, 5 to 8 percent slopes	Not prime farmland	46.2	0.1%
35	Pits, 0 to 45 percent slopes	Not prime farmland	49.8	0.1%
36	Purves clay, 1 to 3 percent slopes	Not prime farmland	34.5	0.1%
37	Purves clay, 3 to 5 percent slopes	Not prime farmland	18.3	0.0%
38	Purves gravelly silty clay, 1 to 5 percent slopes	Not prime farmland	8.0	0.0%
39	Purves-Maloterre association, undulating	Not prime farmland	94.5	0.2%
43	Seawillow variant clay loam, 1 to 5 percent slopes	Farmland of statewide importance	87.1	0.2%
46	Slidell clay, 1 to 3 percent slopes	All areas are prime farmland	177.3	0.4%
47	Sunev clay loam, 0 to 1 percent slopes	Farmland of statewide importance	67.4	0.1%
48	Sunev clay loam, cool, 1 to 3 percent slopes	Farmland of statewide importance	524.5	1.2%
50	Tarrant association, undulating	Not prime farmland	81.8	0.2%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
55	Yahola-Gaddy complex, frequently flooded	Not prime farmland	2.6	0.0%
DAM	Dams, 0 to 45 percent slopes	Not prime farmland	7.5	0.0%
W	Water	Not prime farmland	8,946.1	19.9%
Subtotals for Soil Survey Area			**16,951.6**	**37.6%**
Totals for Area of Interest			**45,030.4**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1	Aledo-Somervell gravelly clay loams, 2 to 8 percent slopes	Not prime farmland	596.6	1.3%
2	Aledo-Somervell gravelly clay loams, 8 to 20 percent slopes	Not prime farmland	763.3	1.7%
3	Altoga silty clay, 1 to 3 percent slopes	Farmland of statewide importance	7.6	0.0%
6	Aquilla fine sand, 1 to 3 percent slopes	Not prime farmland	799.2	1.8%
9	Axtell fine sandy loam, 0 to 1 percent slopes	Farmland of statewide importance	82.1	0.2%
10	Axtell fine sandy loam, 1 to 3 percent slopes	Farmland of statewide importance	7.4	0.0%
12	Bastrop fine sandy loam, 1 to 5 percent slopes, moderately eroded	Not prime farmland	766.3	1.7%
13	Bastsil loamy fine sand, 0 to 3 percent slopes	All areas are prime farmland	1,889.7	4.2%
14	Bastsil fine sandy loam, 1 to 3 percent slopes	All areas are prime farmland	1,228.9	2.7%
16	Blum loam, 0 to 2 percent slopes	All areas are prime farmland	51.5	0.1%
17	Bolar clay loam, 1 to 3 percent slopes	Farmland of statewide importance	20.1	0.0%
18	Bolar clay loam, 3 to 8 percent slopes	Farmland of statewide importance	211.9	0.5%
19	Bolar-Sunev complex, 3 to 5 percent slopes	All areas are prime farmland	735.8	1.6%
20	Brackett-Rock outcrop complex, 5 to 30 percent slopes	Not prime farmland	921.4	2.0%
22	Burleson clay, 0 to 1 percent slopes	All areas are prime farmland	51.2	0.1%
23	Burleson clay, 1 to 3 percent slopes	All areas are prime farmland	15.7	0.0%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
24	Chatt clay, 1 to 3 percent slopes	All areas are prime farmland	215.3	0.5%
27	Coving rarely flooded-Vaughan occasionally flooded complex, 0 to 2 percent slopes	All areas are prime farmland	348.2	0.8%
28	Crockett fine sandy loam, 0 to 1 percent slopes	Farmland of statewide importance	41.7	0.1%
29	Crockett fine sandy loam, 1 to 3 percent slopes	Farmland of statewide importance	65.1	0.1%
30	Crockett-Wilson complex, 0 to 2 percent slopes	Farmland of statewide importance	21.4	0.0%
32	Culp clay loam, 1 to 3 percent slopes	All areas are prime farmland	28.1	0.1%
33	Denton clay, 1 to 3 percent slopes	All areas are prime farmland	19.6	0.0%
39	Ferris-Heiden complex, 2 to 5 percent slopes	All areas are prime farmland	13.5	0.0%
40	Gasil fine sandy loam, 1 to 3 percent slopes	All areas are prime farmland	16.7	0.0%
42	Gowen clay loam, frequently flooded	Not prime farmland	122.4	0.3%
46	Hensley loam, 1 to 3 percent slopes	Not prime farmland	13.7	0.0%
47	Hillco clay loam, 1 to 3 percent slopes	All areas are prime farmland	196.6	0.4%
48	Houston Black clay, 0 to 1 percent slopes	All areas are prime farmland	20.5	0.0%
51	Kemp loam, occasionally flooded	Not prime farmland	114.7	0.3%
52	Konsil fine sandy loam, 3 to 5 percent slopes	All areas are prime farmland	384.7	0.9%
53	Kopperl gravelly sandy loam, 1 to 3 percent slopes	Not prime farmland	299.3	0.7%
54	Krum silty clay, 0 to 1 percent slopes	All areas are prime farmland	545.7	1.2%
55	Lamar clay loam, 1 to 5 percent slopes	All areas are prime farmland	7.8	0.0%
56	Lamar clay loam, 3 to 5 percent slopes, eroded	Not prime farmland	7.6	0.0%
58	Lindy clay loam, 1 to 3 percent slopes	All areas are prime farmland	46.8	0.1%
59	Mabank fine sandy loam, 0 to 2 percent slopes	Farmland of statewide importance	135.0	0.3%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
60	Normangee clay loam, 0 to 2 percent slopes	Not prime farmland	23.1	0.1%
61	Normangee clay loam, 1 to 3 percent slopes	Not prime farmland	27.4	0.1%
62	Normangee clay loam, 3 to 5 percent slopes	Not prime farmland	56.0	0.1%
63	Pits	Not prime farmland	428.6	1.0%
64	Pulexas loamy fine sand, 0 to 2 percent slopes, occasionally flooded	Not prime farmland	128.8	0.3%
66	Pursley clay loam, frequently flooded	Not prime farmland	777.5	1.7%
67	Purves clay loam, 1 to 3 percent slopes	Not prime farmland	106.7	0.2%
68	Silstid loamy fine sand, 1 to 3 percent slopes	Not prime farmland	311.0	0.7%
73	Tinn clay, 0 to 1 percent slopes, occasionally flooded	Not prime farmland	520.2	1.2%
74	Tinn clay, 0 to 1 percent slopes, frequently flooded	Not prime farmland	52.5	0.1%
75	Travis fine sandy loam, 1 to 3 percent slopes	Not prime farmland	275.9	0.6%
76	Ustifluvents, 5 to 20 percent slopes, rarely flooded	Not prime farmland	63.8	0.1%
77	Venus loam, 1 to 3 percent slopes	All areas are prime farmland	5.5	0.0%
78	Venus loam, 3 to 5 percent slopes	All areas are prime farmland	3.5	0.0%
79	Wilson clay loam, 0 to 1 percent slopes	Farmland of statewide importance	335.0	0.7%
80	Wilson clay loam, 1 to 3 percent slopes	Farmland of statewide importance	18.0	0.0%
DAM	Dams	Not prime farmland	19.8	0.0%
W	Water	Not prime farmland	13,765.3	30.6%
Subtotals for Soil Survey Area			**27,731.8**	**61.6%**
Totals for Area of Interest			**45,030.4**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AbC	Aledo-Bolar association, 1 to 8 percent slopes	Not prime farmland	9.1	0.0%
BpE	Bolar-Aledo complex, 3 to 20 percent slopes	Not prime farmland	42.8	0.1%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BrE	Brackett-Rock outcrop complex, steep	Not prime farmland	30.0	0.1%
Fr	Frio silty clay, 0 to 1 percent slopes, occasionally flooded	All areas are prime farmland	71.6	0.2%
LuB	Luckenbach clay loam, moist, 1 to 3 percent slopes	All areas are prime farmland	12.2	0.0%
PaB	Paluxy very fine sandy loam, 1 to 3 percent slopes	All areas are prime farmland	46.1	0.1%
SeC	Seawillow clay loam, 1 to 5 percent slopes	Farmland of statewide importance	3.2	0.0%
SuB	Sunev clay loam, cool, 1 to 3 percent slopes	Farmland of statewide importance	77.3	0.2%
SuC	Sunev clay loam, cool, 3 to 5 percent slopes	Farmland of statewide importance	29.9	0.1%
W	Water	Not prime farmland	6.8	0.0%
Ya	Yahola-Gaddy complex, occasionally flooded	Prime farmland if irrigated	18.0	0.0%
Subtotals for Soil Survey Area			**347.0**	**0.8%**
Totals for Area of Interest			**45,030.4**	**100.0%**

Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

ATTACHMENT D

United States Department of the Interior

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

In Reply Refer To: January 23, 2020
Consultation Code: 02ETAR00-2019-SLI-1822
Event Code: 02ETAR00-2020-E-01665
Project Name: Whitney Lake SMP

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

To Whom It May Concern:

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

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

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

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

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

The Service recommends that candidate species, proposed species, and proposed critical habitat be addressed should consultation be necessary. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 02ETAR00-2019-SLI-1822

Event Code: 02ETAR00-2020-E-01665

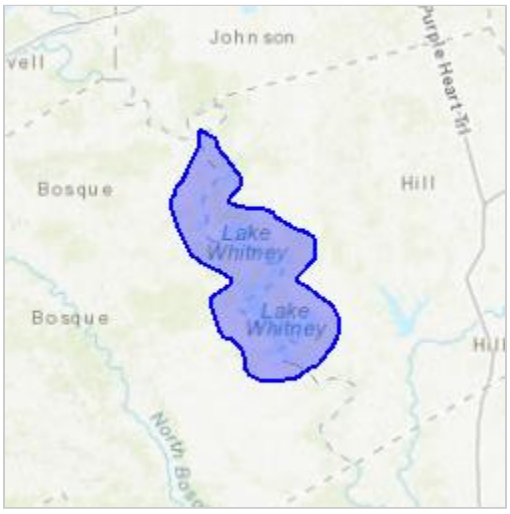
Project Name: Whitney Lake SMP

Project Type: ** OTHER **

Project Description: Fee boundary of Whitney Lake. Whitney Lake Shoreline Management Plan development.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/31.99397860961213N97.4184051492322W



Counties: Bosque, TX | Hill, TX

Endangered Species Act Species

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 3 of these species should be considered only under certain conditions.

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

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

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

Birds

NAME	STATUS
Golden-cheeked Warbler (=wood) *Dendroica chrysoparia*	Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/33	
Least Tern *Sterna antillarum*	Endangered
Population: interior pop. No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/8505	
Piping Plover *Charadrius melodus*	Threatened
Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. Your location is outside the critical habitat. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/6039	
Red Knot *Calidris canutus rufa*	Threatened
No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/1864	
Whooping Crane *Grus americana*	Endangered
Population: Wherever found, except where listed as an experimental population There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/758	

Clams

NAME	STATUS
Texas Fawnsfoot *Truncilla macrodon*	Candidate
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8965	

Critical habitats

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

ATTACHMENT E

Taxon	SName	CName	USESA	SPROT	Endemic	GRank	SRank	SGCN	Description	# Counties
Amphibians	Anaxyrus woodhousii	Woodhouse's toad			N	G5	SU	Y	Extremely catholic up to 5000 feet, does very well (except for traffic) in association with man.	231
Amphibians	Pseudacris streckeri	Strecker's chorus frog			N	G5	S3	Y	Wooded floodplains and flats, prairies, cultivated fields and marshes. Likes sandy substrates.	143
Birds	Plegadis chihi	white-faced ibis		T	N	G5	S4B	Y	Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.	254
Birds	Haliaeetus leucocephalus	bald eagle		T	N	G5	S3B,S3N	Y	Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds	238
Birds	Laterallus jamaicensis	black rail	PT		N	G3G4	S2	Y	Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia	135
Birds	Grus americana	whooping crane	LE	E	N	G1	S1N	Y	Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.	118
Birds	Charadrius melodus	piping plover	LT	T	N	G3	S2N	Y	Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low-very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast. However, beaches are probably a vital habitat along the central and northern coast (i.e. north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated,	123
Birds	Charadrius montanus	mountain plover			N	G3	S2	Y	Breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous	183

Birds	Calidris canutus rufa	red knot	LT		N	G4T2	SNRN	Y	Red knots migrate long distances in flocks northward through the contiguous United States mainly April-June, southward July-October. A small plump-bodied, short-necked shorebird that in breeding plumage, typically held from May through August, is a distinctive and unique pottery orange color. Its bill is dark, straight and, relative to other shorebirds, short-to-medium in length. After molting in late summer, this species is in a drab gray-and-white non-breeding plumage, typically held from September through April. In the non-breeding plumage, the knot might be confused with the omnipresent Sanderling. During this plumage, look for the knotâ€™s prominent pale eyebrow and whitish flanks with dark barring. The Red Knot prefers the shoreline of coast and bays and also uses mudflats during rare inland encounters. Primary prey items include coquina clam (Donax spp.) on beaches and dwarf surf clam (Mulinia lateralis) in bays, at least in the Laguna Madre. Wintering Range includes- Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Jefferson, Kennedy, Kleberg, Matagorda, Nueces, San Patricio, and Willacy. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore.	75
Birds	Leucophaeus pipixcan	Franklin's gull			N	G4G5	S2N	Y	Habitat description is not available at this time.	254
Birds	Sternula antillarum athalassos	interior least tern	LE	E	N	G4T2Q	S1B	Y	Sand beaches, flats, bays, inlets, lagoons, islands. Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony	136
Birds	Athene cunicularia hypugaea	western burrowing owl			N	G4T4	S2	Y	Open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows	221
Birds	Vireo atricapilla	black-capped vireo		E	N	G3	S2B	Y	Oak-juniper woodlands with distinctive patchy, two-layered aspect; shrub and tree layer with open, grassy spaces; requires foliage reaching to ground level for nesting cover; return to same territory, or one nearby, year after year; deciduous and broad-leaved shrubs and trees provide insects for feeding; species composition less important than presence of adequate broad-leaved shrubs, foliage to ground level, and required structure; nesting season March-late summer	63
Birds	Setophaga chrysoparia	golden-cheeked warbler	LE	E	N	G2	S2B	Y	Ashe juniper in mixed stands with various oaks (Quercus spp.). Edges of cedar brakes. Dependent on Ashe juniper (also known as cedar) for long fine bark strips, only available from mature trees, used in nest construction; nests are placed in various trees other than Ashe juniper; only a few mature junipers or nearby cedar brakes can provide the necessary nest material; forage for insects in broad-leaved trees and shrubs; nesting late March-early summer.	45
Fish	Anguilla rostrata	american eel			N	G4	S4	Y	Originally found in all river systems from the Red River to the Rio Grande. Aquatic habtiats include large rivers, streams, tributaries, coastal watersheds, estuaries, bays, and oceans. Spawns in Sargasso Sea, larva move to coastal waters, metamorphose, and begin upstream movements. Females tend to move further upstream than males (who are often found in brackish estuaries). American Eel are habitat generalists and may be found in a broad range of habitat conditions including slow- and fast-flowing waters over many substrate types. Extirpation in upstream drainages attributed to reservoirs that impede upstream migration.	29
Fish	Notropis buccula	smalleye shiner	LE		Y	G2	S2	Y	Restricted to the Rio Grande basin in Texas including the lower Pecos River. Typically found in large rivers and creeks associated with a variety of flowng-water habitats such as runs and riffles over gravel, cobble, and sand.	20

Fish	Notropis oxyrhynchus	sharpnose shiner	LE	Y	G3	S3	Y	Range is now restricted to upper Brazos River upstream of Possum Kingdom Lake. May be native to Red River and Colorado River basins. Typically found in turbid water over mostly silt and shifting sand substrates.	29
Fish	Notropis potteri	chub shiner		N	G4	S4	Y	Brazos, Colorado, San Jacinto, and Trinity river basins. Flowing water with silt or sand substrate	31
Fish	Notropis shumardi	silverband shiner		N	G5	S4	Y	In Texas, found from Red River to Lavaca River; Main channel with moderate to swift current velocities and moderate to deep depths; associated with turbid water over silt, sand, and gravel.	39
Fish	Micropterus treculii	Guadalupe bass		Y	G3	S3	Y	Endemic to the streams of the northern and eastern Edwards Plateau including portions of the Brazos, Colorado, Guadalupe, and San Antonio basins; species also found outside of the Edwards Plateau streams in decreased abundance, primarily in the lower Colorado River; two introduced populations have been established in the Nueces River system. A pure population was re-established in a portion of the Blanco River in 2014. Species prefers lentic environments but commonly taken in flowing water; numerous smaller fish occur in rapids, many times near eddies; large individuals found mainly in riffle tail races; usually found in spring-fed streams having clear water and relatively consistent temperatures.	47
Mammals	Myotis velifer	cave myotis bat		N	G4G5	S4	Y	Colonial and cave-dwelling; also roosts in rock crevices, old buildings, carports, under bridges, and even in abandoned Cliff Swallow (Hirundo pyrrhonota) nests; roosts in clusters of up to thousands of individuals; hibernates in limestone caves of Edwards Plateau and gypsum cave of Panhandle during winter; opportunistic insectivore.	155
Mammals	Perimyotis subflavus	tricolored bat		N	G2G3	S3S4	Y	Forest, woodland and riparian areas are important. Caves are very important to this species.	230
Mammals	Eptesicus fuscus	big brown bat		N	G5	S5	Y	Any wooded areas or woodlands except south Texas. Riparian areas in west Texas.	178
Mammals	Lasiurus borealis	eastern red bat		N	G3G4	S4	Y	Found in a variety of habitats in Texas. Usually associated with wooded areas. Found in towns especially during migration.	254
Mammals	Lasiurus cinereus	hoary bat		N	G3G4	S4	Y	Known from montane and riparian woodland in Trans-Pecos, forests and woods in east and central Texas.	254
Mammals	Tadarida brasiliensis	Mexican free-tailed bat		N	G5	S5	Y	Roosts in buildings in east Texas. Largest maternity roosts are in limestone caves on the Edwards Plateau. Found in all habitats, forest to desert.	254
Mammals	Sylvilagus aquaticus	swamp rabbit		N	G5	S5	Y	Habitat description is not available at this time.	143
Mammals	Ictidomys tridecemlineatus	thirteen-lined ground squirrel		N	G5	S5	Y	Habitat description is not available at this time.	136
Mammals	Cynomys ludovicianus	black-tailed prairie dog		N	G4	S3	Y	Dry, flat, short grasslands with low, relatively sparse vegetation, including areas overgrazed by cattle; live in large family groups	133
Mammals	Microtus pinetorum	woodland vole		N	G5	S3	Y	Include grassy marshes, swamp edges, old-field/pine woodland ecotones, tallgrass fields; generally sandy soils.	105
Mammals	Mustela frenata	long-tailed weasel		N	G5	S5	Y	Includes brushlands, fence rows, upland woods and bottomland hardwoods, forest edges & rocky desert scrub. Usually live close to water.	234
Mammals	Neovison vison	mink		N	G5	S4	Y	Intimately associated with water; coastal swamps & marshes, wooded riparian zones, edges of lakes. Prefer floodplains.	155
Mammals	Taxidea taxus	American badger		N	G5	S5	Y	Habitat description is not available at this time.	225
Mammals	Spilogale putorius	eastern spotted skunk		N	G4	S1S3	Y	Catholic; open fields prairies, croplands, fence rows, farmyards, forest edges & woodlands. Prefer wooded, brushy areas & tallgrass prairies. S.p. ssp. interrupta found in wooded areas and tallgrass prairies, preferring rocky canyons and outcrops when such sites are available.	218
Mammals	Spilogale putorius interrupta	plains spotted skunk		N	G4T4	S1S3	N	Catholic; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie	217

Mammals	Conepatus leuconotus	western hog-nosed skunk		N	G4	S4	Y	Habitats include woodlands, grasslands & deserts, to 7200 feet, most common in rugged, rocky canyon country; little is known about the habitat of the ssp. telmalestes	148
Mammals	Puma concolor	mountain lion		N	G5	S2S3	Y	Rugged mountains & riparian zones.	253
Reptiles	Terrapene carolina	eastern box turtle		N	G5	S3	Y	Eastern box turtles inhabit forests, fields, forest-brush, and forest-field ecotones. In some areas they move seasonally from fields in spring to forest in summer. They commonly enters pools of shallow water in summer. For shelter, they burrow into loose soil, debris, mud, old stump holes, or under leaf litter. They can successfully hibernate in sites that may experience subfreezing temperatures. In Maryland bottomland forest, some hibernated in pits or depressions in forest floor (usually about 30 cm deep) usually within summer range; individuals tended to hibernate in same area in different years (Stickel 1989). Also attracted to farms, old fields and cut-over woodlands, as well as creek bottoms and dense woodlands. Egg laying sites often are sandy or loamy soils in open areas; females may move from bottomlands to warmer and drier sites to nest. In Maryland, females used the same nesting area in different years (Stickel 1989).	117
Reptiles	Terrapene ornata	western box turtle		N	G5	S3	Y	Ornate or western box trutles inhabit prairie grassland, pasture, fields, sandhills, and open woodland. They are essentially terrestrial but sometimes enter slow, shallow streams and creek pools. For shelter, they burrow into soil (e.g., under plants such as yucca) (Converse et al. 2002) or enter burrows made by other species; winter burrow depth was 0.5-1.8 meters in Wisconsin (Doroff and Keith 1990), 7-120 cm (average depth 54 cm) in Nebraska (Converse et al. 2002). Eggs are laid in nests dug in soft well-drained soil in open area (Legler 1960, Converse et al. 2002). Very partial to sandy soil.	249
Reptiles	Apalone mutica	smooth softshell		N	G5	S3	Y	Any permanent body of water.Large rivers and streams; in some areas also found in lakes, impoundments, and shallow bogs (Ernst and Barbour 1972). Usually in water with sandy or mud bottom and few aquatic plants. Often basks on sand bars and mudflats at edge of water. Eggs are laid in nests dug in high open sandbars and banks close to water, usually within 90 m of water (Fitch and Plummer 1975).	84
Reptiles	Alligator mississippiensis	American alligator		N	G5	S4	N	Coastal marshes; inland natural rivers, swamps and marshes; manmade impoundments.	130
Reptiles	Ophisaurus attenuatus	slender glass lizard		N	G5	S3	Y	Prefers relatively dry microhabitats, usually associated with grassy areas. Habitats include open grassland, prairie, woodland edge, open woodland, oak savannas, longleaf pine flatwoods, scrubby areas, fallow fields, and areas near streams and ponds, often in habitats with sandy soil. This species often appears on roads in spring. During inactivity, it occurs in underground burrows. In Kansas, slender glass lizards were scarce in heavily grazed pastures, increased as grass increased with removal of grazing, and declined as brush and trees replaced grass (Fitch 1989). Eggs are laid underground, under cover, or under grass clumps (Ashton and Ashton 1985); in cavities beneath flat rocks or in abandoned tunnels of small mammals (Scalopus, Microtus) (Fitch 1989).	157
Reptiles	Phrynosoma cornutum	Texas horned lizard	T	N	G4G5	S3	Y	Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area. Open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September.	246

Reptiles	Heterodon nasicus	western hognose snake			N	G5	S4	Y	Habitat consists of areas with sandy or gravelly soils, including prairies, sandhills, wide valleys, river floodplains, bajadas, semiagricultural areas (but not intensively cultivated land), and margins of irrigation ditches (Degenhardt et al. 1996, Hammerson 1999, Werler and Dixon 2000, Stebbins 2003). Also thornscrub woodlands and chaparral thickets. Seems to prefer sandy and loamy soils, not necessarily flat. Periods of inactivity are spent burrowed in the soil or in existing burrows. Eggs are laid in nests a few inches below the ground surface (Platt 1969).	142
Reptiles	Nerodia harteri	Brazos water snake		T	Y	G2	S1	Y	Shallow, fast-flowing water with a rocky or gravelly substrate preferred. Adults can be found in deep water with mud bottoms. Upper Brazos River drainage; riffle specialist, in shallow water with rocky bottom and on rocky portions of banks.	25
Reptiles	Thamnophis sirtalis	common garter snake				G5	S2	N	Irrigation canals and riparian-corridor farmlands in west; marshy, flooded pastureland, grassy or brushy borders of permanent bodies of water; coastal salt marshes.	76
Reptiles	Thamnophis sirtalis annectens	Texas garter snake			Y	G5T4	S1	Y	Irrigation canals and riparian-corridor farmlands in west; marshy, flooded pastureland, grassy or brushy borders of permanent bodies of water; coastal salt marshes. Wet or moist microhabitats are conducive to the species occurrence, but is not necessarily restricted to them; hibernates underground or in or under surface cover; breeds March-August.	48
Reptiles	Crotalus horridus	timber (canebrake) rattlesnake		T	N	G4	S4	Y	Swamps, floodplains, upland pine and deciduous woodland, riparian zones, abandoned farmland. Limestone bluffs, sandy soil or black clay. Prefers dense ground cover, i.e. grapevines, palmetto.	77
Reptiles	Sistrurus tergeminus	massasauga			N	G3G4	S3S4	Y	Quite common in gently rolling prairie occasionally broken by creek valley or rocky hillside.	107
Insects	Tortopus circumfluus	a mayfly			Y	G1G3	S2?	Y	Mayflies distinguished by aquatic larval stage; adult stage generally found in shoreline vegetation	3
Insects	Bombus pensylvanicus	American bumblebee				G3G4	SNR	Y	Habitat description is not available at this time.	161
Insects	Amblycorypha uhleri	a katydid				G2G3	SNA	Y	Habitat description is not available at this time.	5
Insects	Neotrichia juani	No accepted common name				G1	S1	Y	Habitat description is not available at this time.	5
Mollusks	Quadrula houstonensis	smooth pimpleback	C	T	Y	G2	S1S2	Y	Small to moderate streams and rivers as well as moderate size reservoirs; mixed mud, sand, and fine gravel, tolerates very slow to moderate flow rates, appears not to tolerate dramatic water level fluctuations, scoured bedrock substrates, or shifting sand bottoms, lower Trinity (questionable), Brazos, and Colorado River basins	43
Mollusks	Truncilla macrodon	Texas fawnsfoot	C	T	Y	G2Q	S1	Y	Little known; possibly rivers and larger streams, and intolerant of impoundment; flowing rice irrigation canals, possibly sand, gravel, and perhaps sandy-mud bottoms in moderate flows; Brazos and Colorado River basins	52
Plants	Matelea edwardsensis	plateau milkvine			Y	G3	S3	Y	Occurs in various types of juniper-oak and oak-juniper woodlands; Perennial; Flowering March-Oct; Fruiting May-June	24
Plants	Liatris glandulosa	glandular gay-feather			Y	G3	S3	Y	Occurs in herbaceous vegetation on limestone outcrops (Carr 2015)	5
Plants	Cuscuta exaltata	tree dodder			N	G3	S3	Y	Parasitic on various Quercus, Juglans, Rhus, Vitis, Ulmus, and Diospyros species as well as Acacia berlandieri and other woody plants; Annual; Flowering May-Oct; Fruiting July-Oct	24
Plants	Astragalus reflexus	Texas milk vetch			Y	G3	S3	Y	Grasslands, prairies, and roadsides on calcareous and clay substrates; Annual; Flowering Feb-June; Fruiting April-June	15
Plants	Dalea hallii	Hall's prairie clover			Y	G3	S3	Y	In grasslands on eroded limestone or chalk and in oak scrub on rocky hillsides; Perennial; Flowering May-Sept; Fruiting June-Sept	21
Plants	Pediomelum reverchonii	Reverchon's scurfpea			N	G3	S2	Y	Mostly in prairies on shallow rocky calcareous substrates and limestone outcrops; Perennial; Flowering Jun-Sept; Fruiting June-July	8
Plants	Clematis texensis	scarlet leather-flower			Y	G3G4	S3S4	Y	Usually in oak-juniper woodlands in mesic rocky limestone canyons or along perennial streams; Perennial; Flowering March-July; Fruiting May-July	17

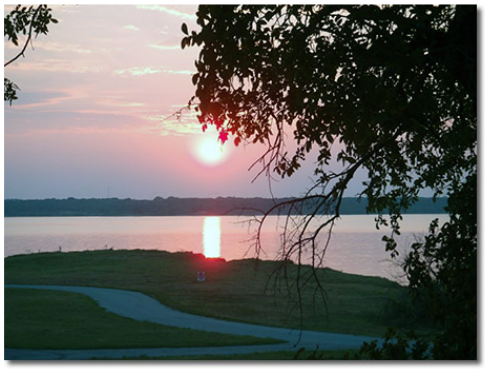
Plants	Agalinis densiflora	Osage Plains false foxglove	N	G3	S2	Y	Most records are from grasslands on shallow, gravelly, well drained, calcareous soils; Prairies, dry limestone soils; Annual; Flowering Aug-Oct	19
Plants	Hexalectris nitida	Glass Mountains coral-root	N	G3	S3	Y	Apparently rare in mixed woodlands in canyons in the mountains of the Brewster County, but encountered with regularity, albeit in small numbers, under Juniperus ashei in woodlands over limestone on the Edwards Plateau, Callahan Divide and Lampasas Cutplain; Perennial; Flowering June-Sept; Fruiting July-Sept	19

ATTACHMENT F

Whitney Lake Shoreline Management Plan Revision

General Information

The US Army Corps of Engineers (USACE), Fort Worth District, is revising the Whitney Lake Shoreline Management Plan (SMP). The purpose of the SMP is to establish policies and provide guidelines for managing the shoreline (lakeshore) and open water areas of Whitney Lake, Texas, for the protection of desirable environmental characteristics and for the restoration of shorelines where degradation has occurred. The SMP establishes rules and guidelines for managing private uses of shoreline areas such as private boat docks and vegetation modification. The SMP must be compatible with the Whitney Lake Master Plan, which was revised in 2016.



About Whitney Lake

Whitney Lake was constructed by USACE in 1951 for the congressionally authorized purposes of flood control and hydroelectric power generation. After a record-breaking drought in Texas in the 1950's, most USACE reservoirs, including Whitney Lake, were congressionally authorized to serve a water conservation purpose. Whitney Lake is currently a multipurpose water resources project operated and maintained by USACE. Comprehensive management of Whitney Lake and surrounding Federal lands requires balancing the needs of the surrounding population, visitors, and the ecological system. While the primary purposes of the project are flood risk management, hydroelectric power generation and water conservation, the lake is also managed for public recreation and environmental stewardship, including fish and wildlife conservation. From 2004-2012, Whitney Lake had over 555,000 visitors each year on average who enjoyed camping, fishing, boating, water skiing, hunting, sight-seeing, and much more.

What is a Shoreline Management Plan?

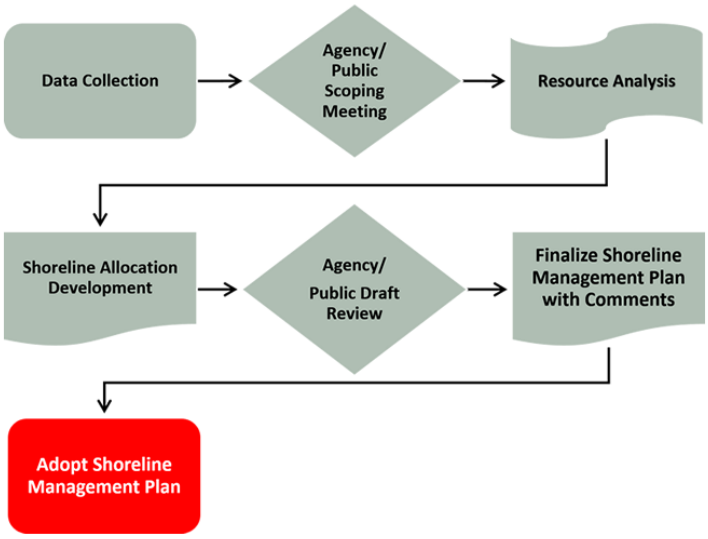
The Shoreline Management Plan addresses the rules and guidelines which govern private shoreline uses such as private boat docks, vegetation modification, and similar private uses of government property. The SMP establishes shoreline allocations, which specify where certain private uses are allowable. Shoreline allocations are dictated by Engineer Regulation ER 1130-2-406 and include: Limited Development Areas, Protected Shoreline Areas, Public Recreation Areas, and Prohibited Access Areas. Each of these allocations are defined in ER 1130-2-406, a copy of which is posted below. The Shoreline Management Plan complements the Whitney Lake Master Plan.

Why Revise the Whitney Lake Shoreline Management Plan?

The current Shoreline Management Plan (SMP) for Whitney Lake was prepared in 1976 and is posted below. The SMP is in need of revision to address changes in land use and policies since the current SMP was published. Key topics to be addressed in the revised SMP include revising shoreline allocations, and updating the plan to incorporate changes in public law and national policies related to shoreline management. The objective of the revision and related management actions will be to achieve a balance between permitted private uses and resource protection for general public use. Public participation is critical to the successful revision of the Shoreline Management Plan.

SHORELINE MANAGEMENT PLAN REVISION PROCESS

SHORELINE MANAGEMENT PLAN REVISION PROCESS



Related Files

May 2019

- Lakeshore Management Plan - August 1976 with required update notes (924 KB)
- ER 1130-2-406 - Shoreline Management at Civil Works Projects (335 KB)
- Floating Dock Standards - Drawing (751 KB)

- Public Meeting Presentation - Revision of the 1976 Whitney Lake Shoreline Management Plan (1.36 MB)
- Flyer for Public Scoping Meeting (884 KB)
- Public Comment Form with Instructions (187 KB)

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, FORT WORTH DISTRICT
P.O. BOX 17300
FORT WORTH, TX 76102-0300

April 26, 2019

Public Notice

Whitney Lake Shoreline Management Plan Revision, Public Meeting, and 30 Day Public Comment Period

The Fort Worth District, U.S. Army Corps of Engineers, hereby informs the public of the initiation of the Whitney Lake Shoreline Management Plan revision, public meeting, and 30 day public comment period. The Shoreline Management Plan addresses the rules and guidelines that govern private shoreline uses, such as private boat docks, vegetation modification, and similar uses of U.S. Army Corps of Engineers federally owned fee property. Shoreline allocations include: Limited Development Areas, Protected Shoreline Areas, Public Recreation Areas, and Prohibited Access Areas. Each of these allocations are defined in Engineering Regulation 1130-2-406. The Shoreline Management Plan compliments the 2016 Whitney Lake Master Plan. The 2016 Whitney Lake Master Plan can be found at:

https://www.swf.usace.army.mil/About/Lakes-and-Recreation-Information/Master-Plan-Updates/Whitney-Lake/

The current Shoreline Management Plan for Whitney Lake was completed in 1976. Key topics to be addressed in this effort include revising shoreline allocations and updating the plan to incorporate changes in public law and national policies related to shoreline management. The objective of the revision and related management actions is to achieve a balance between permitted private uses and resource protection for general public use on U.S. Army Corps of Engineers federally owned fee property.

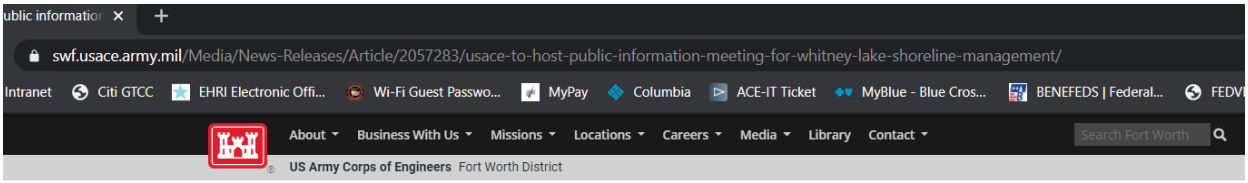
A public meeting will be held on Wednesday, May 15, 2019 at the Texas Great Country Café (TGCC) Event Center, 1009 East Jefferson, Whitney, Texas 76692. A brief overview outlining the purpose and scope of the Shoreline Management Plan will be presented at 6 p.m., followed by a chance to ask questions, view maps, and provide written comments about the project. Written comments will be accepted for 30 days starting May 15, 2019. Comment instructions and public meeting presentation information will also be posted at the link below starting May 15, 2019. Information about the Shoreline Management Plan can be found at:

https://www.swf.usace.army.mil/About/Lakes-and-Recreation-Information/Shoreline-Management-Plan/Whitney-Lake.

Comments and questions pertaining to the proposed revision can be addressed by mail to Billy Haferkamp, CESWF-OD-R, U.S. Army Corps of Engineers, Fort Worth District, 285 CR 3602, Clifton, Texas, by email at ceswf-per-whitney@usace.army.mil, or by telephone at (254) 622-3332.

Sincerely,

FOR Douglas C. Sims, PMP, RPA
Chief, Environmental Branch
Regional Planning and Environmental Center



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USACE to host public information meeting for Whitney Lake Shoreline Management Plan Revision

SWF USACE

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Whitney Lake, TX --*FORT WORTH, Texas* – Officials with the Fort Worth District, U.S. Army Corps of Engineers will host a public meeting on February 11 at the TGCC Event Center, 1009 East Jefferson, Whitney, TX 76692 to receive public input on the draft revision of the Shoreline Management Plan for Whitney Lake.

The meeting will begin with a brief presentation at 6:00 p.m. followed by an open house where attendees can view land allocation maps, ask questions, and provide comments about the draft Whitney Lake Shoreline Management Plan. Comments will be accepted for 30 days following the public meeting.

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 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 Shoreline Management Plan compliments the 2016 Whitney Lake Master Plan.

The current Shoreline Management Plan for Whitney Lake was completed in 1976. This new draft Shoreline Management Plan address changes in land use and policies since the 1976 Shoreline Management Plan was published. Key topics addressed in the revised Shoreline Management Plan include revising shoreline allocations and updating the plan to incorporate changes in public law and national policies related to shoreline management. The objective of the revision and related management actions was to achieve a balance between permitted private uses and resource protection for general public use.

The new draft Shoreline Management Plan will be available at the following website beginning on January 27 for review prior to the public meeting: https://www.swf.usace.army.mil/About/Lakes-and-Recreation-Information/Shoreline-Management-Plan.

Questions pertaining to the proposed revision can be addressed to: Billy Haferkamp, CESWF-OD-R, U.S. Army Corps of Engineers, Fort Worth District, 285 CR 3602, Clifton, Texas 76634, Phone: (254) 622-3332 or email: CESWF-PER-Whitney@usace.army.mil.

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, FORT WORTH DISTRICT
P.O. BOX 17300
FORT WORTH, TX 76102-0300

January 21, 2020

NOTICE OF AVAILABILITY

DRAFT WHITNEY LAKE SHORELINE MANAGEMENT PLAN, FINDING OF NO SIGNIFICANT IMPACT, AND ENVIRONMENTAL ASSESSMENT, BRAZOS RIVER BOSQUE, HILL, AND JOHNSON COUNTIES, TEXAS

The public is hereby notified of the availability of the Draft Whitney Lake Shoreline Management Plan (Shoreline Management Plan), Finding of No Significant Impact (FONSI), and Environmental Assessment (EA). The Shoreline Management Plan addresses the rules and guidelines that govern private shoreline uses, such as private boat docks, vegetation modification, and similar uses of U.S. Army Corps of Engineers (USACE) federally owned fee property. Shoreline allocations include: Limited Development Areas, Protected Shoreline Areas, Public Recreation Areas, and Prohibited Access Areas. Each of the allocations are defined in the Engineering Regulation 1130-2-406. The Shoreline Management Plan compliments the 2016 Whitney Lake Master Plan.

The current Shoreline Management Plan for Whitney Lake was completed in 1976. Key topics to be addressed under this revision include revising shoreline allocations and updating the plan to incorporate changes in public use and input, public law, and national polices related to shoreline management. The objective of the revision and related management actions is to achieve a balance between permitted private uses and resource protection for general public use on USACE federally owned fee property.

The Draft Shoreline Management Plan, FONSI, EA, and comment sheet and instructions will be posted at the link below starting Monday, January 27, 2020. Written comments will be accepted for 45 days beginning Monday, January 27, 2020 and ending Wednesday, March 11, 2020.

https://www.swf.usace.army.mil/About/Lakes-and-Recreation-Information/Shoreline-Management-Plan/Whitney-Lake

A printed copy of the Draft Shoreline Management Plan, FONSI, and EA will also be available for review beginning January 27, 2020 at U.S. Army Corps of Engineers, Whitney Lake Office, 285 CR 3602, Clifton, Texas 76634.

An open house public meeting will be held on Tuesday, February 11, 2020 at the Texas Great Country Café Event Center, 1009 East Jefferson, Whitney, Texas 76692. A brief overview outlining the role, schedule, and proposed changes to the Shoreline

Management Plan will be presented at 6 p.m., followed by an opportunity to ask questions, view maps, and provide written comments about the Shoreline Management Plan.

Comments may be submitted in writing during the public meeting, mailed to Mr. Billy Haferkamp, CESWF-OD-R, U.S. Army Corps of Engineers, Fort Worth District, 285 CR 3602, Clifton, TX, 76634, or emailed to ceswf-per-whitney@usace.army.mil.

Amanda M. McGuire

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