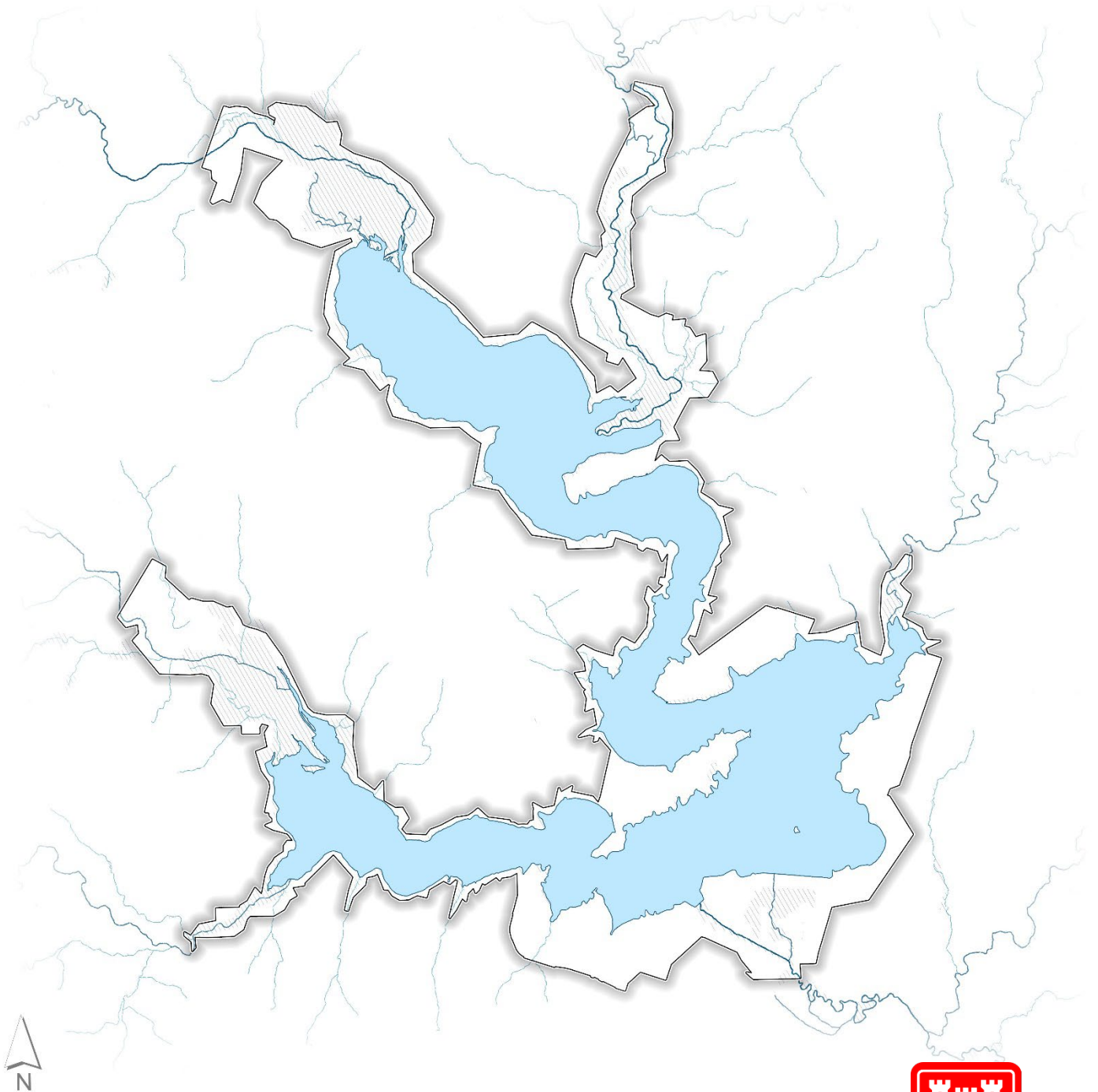


Draft Proctor Lake Master Plan

Brazos River Basin: Leon River Watershed, Comanche County, Texas

March 2024



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of Engineers®**

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EXECUTIVE SUMMARY

Final Proctor Lake Master Plan
U.S. Army Corps of Engineers
Prepared by the Southwestern Division
Regional Planning and Environmental Center (RPEC)
March 2024

ES.1 PURPOSE

The revision of the 1971 Proctor Lake Master Plan (hereafter Plan or Master Plan) is a framework built collaboratively to guide appropriate stewardship of U.S. Army Corps of Engineers (USACE) administered resources at Proctor Lake over the next 25 years. The 1971 Plan has served well past its intended 25-year planning horizon and does not reflect the rapidly changing demographics of users around the lake, include current land and water surface classifications, or designate environmentally sensitive areas.

Proctor Dam and Lake (hereafter referred to collectively as Proctor Lake) is a multi-purpose project on the Leon River within Comanche County, TX used for flood control, water supply, fish and wildlife, and recreation. The project is a unit of the Brazos River Basin System, which consists of nine USACE dams and lakes and various channel improvements and levees operated to provide flood protection along the Brazos River. Proctor Lake's primary role of flood mitigation helps to control the Leon River protecting Comanche, Hamilton, and Gustine counties while providing water supply to DeLeon, Dublin, and Comanche counties. Proctor Dam operates in conjunction with four other USACE dams (Belton Dam, Stillhouse Hollow Dam, Granger Dam, and North San Gabriel Dam) on the Little River System and San Gabriel River to provide flood control to the Little River at Cameron, Texas, and to supply water to the Brazos River Authority (BRA) and the Fort Cavazos, Killen, Belton, and Temple, Texas areas. In addition to these primary missions, USACE has an inherent mission for environmental stewardship of project lands as reflected in ER-1130-2-540 change 2 dated July 2005, while working closely with stakeholders and partners to provide regionally important outdoor recreation opportunities. The Master Plan is primarily a land use and outdoor recreation strategic plan that does not address the specific authorized purposes of flood risk management or water supply.

Proctor Lake is located at river mile (RM) 238.9 on Leon River within the larger Brazos River Watershed. The dam, lake, and entire project area are located in Comanche County, Texas. The dam is located about eight miles northeast of the city of Comanche, Texas and is remote from larger cities with Fort Worth, Texas located approximately 85 miles to the northeast; Waco, Texas located approximately 85 miles to the southeast; and Abilene, Texas located about 80 miles to the northwest. Comanche County is located in the West Central Texas Council of Governments as shown in Figure ES.1.

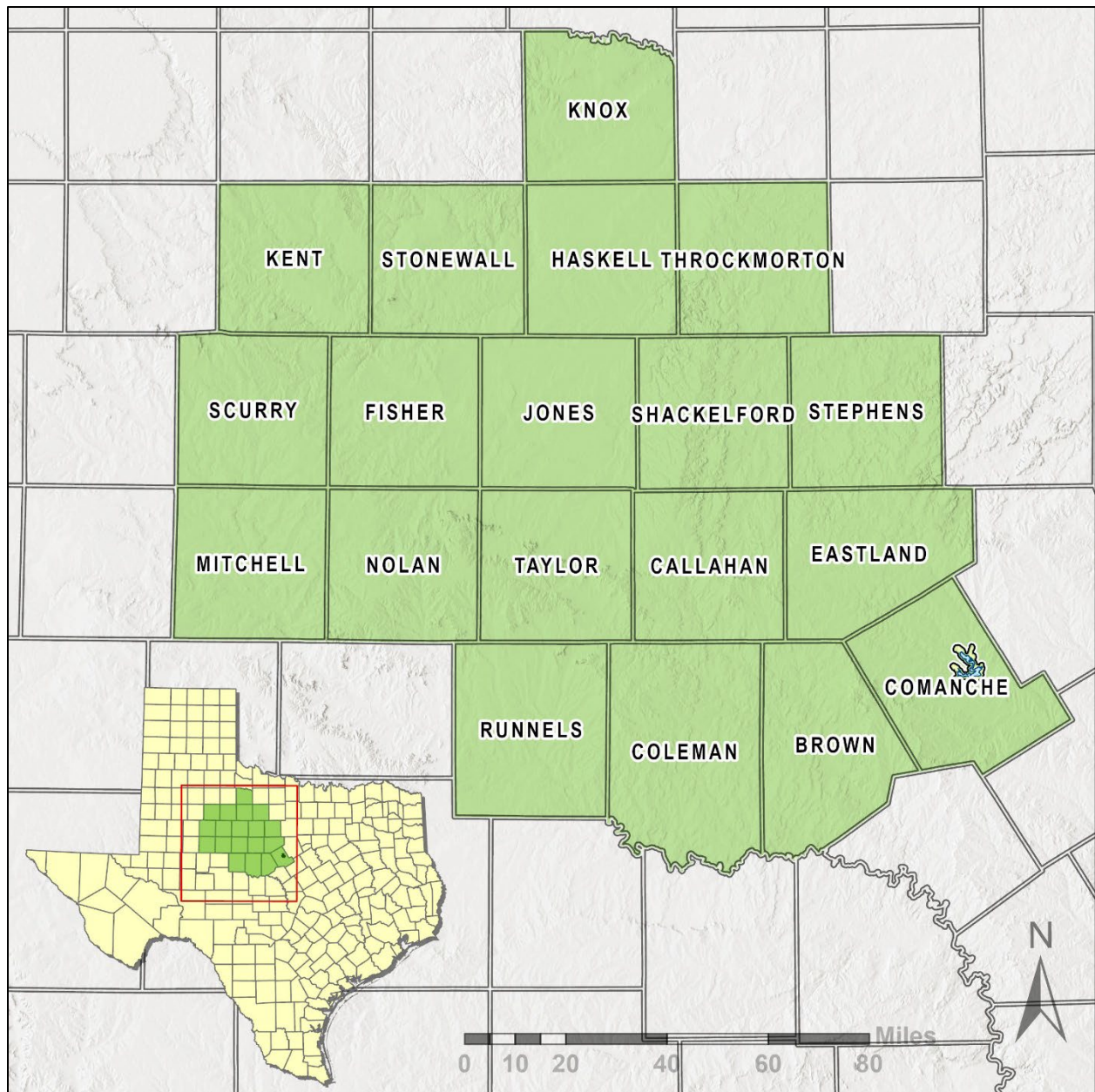


Figure ES.1 Vicinity Map of Proctor Lake and Dam within the North Central Texas Council of Governments

The 1971 Master Plan included a total of 9,021 acres in fee lands, including 4,411 acres of land and 4,610 acres of water at the normal or conservation pool elevation of 1162.0 feet National Geodetic Vertical Datum of 1929 (NGVD29) and 38 miles of shoreline at the top of the conservation pool. Due to improved mapping technology used for this Master Plan revision, including modern satellite imagery, Lidar (3-dimensional laser scanning) and Geographic Information System (GIS) mapping, acreage calculations differ from that found in the 1971 Master Plan. Current mapping includes 9,109 acres of total fee area, with 4,535 acres of land and 4,520 acres of water at conservation pool.

ES.2 PUBLIC INPUT

To ensure a balance between operational, environmental, and recreational outcomes, the USACE obtained both public and agency input toward the Master Plan revision. An Environmental Assessment (EA) was completed in conjunction with the Master Plan to evaluate the impacts of alternatives and can be found in Appendix B.

Approximately 19 individuals, not including USACE personnel, attended the initial public scoping meeting held at the onset of the process on January 19, 2023 in Jasper, TX for the Proctor Lake Master Plan and Shoreline Management Plan Revisions. During the 30-day public comment period, comments were received from 5 individuals and one agency. The comments and USACE responses can be found in Chapter 7 of this Master Plan.

The public meeting to release the Draft Master Plan will begin an additional comment period where stakeholders and members of the public can provide comments on the proposed Draft Master Plan. After the comment period and careful consideration of all comments received, the USACE will further revise the Draft Master Plan and develop the Final Master Plan. Stakeholders and members of the public who signed into the earlier public meetings or submitted comments will be notified of the Final Master Plan.

ES.3 RECOMMENDATIONS

The land and water classification changes recorded in Table ES.1 and detailed in Chapter 8 were the result of the inventory, analysis, synthesis of data, documents, and public and agency input. In general, all USACE land at Proctor Lake were reclassified either by a change in nomenclature required by regulation or changes needed to identify actual and projected use. Areas used for project operations and maintenance were classified as Operations and Maintenance in the 1971 Master Plan, which is similar to the current Project Operations classification. The 1971 Master Plan classified most acres within designated parks as Public Access Area Recreation, which in the current nomenclature where intensive recreation can occur is classified as High Density Recreation. Some areas in High Point Park that were classified as Public Access Area Recreation were reclassified as Multiple Resource Management Lands with Future or Inactive Recreation subclassification, since the park was closed for intensive recreation. However, this classification could also allow the area to change back to High Density Recreation in a future update if demand changes and resources become available to re-open the park. The 1971 Master Plan had a classification called Wildlife and Nature Study Area, which is similar to the current nomenclature of Multiple Resource Management Lands with subclassification of Wildlife Management. The 1971 Master Plan also had a land classification called Esthetics which is similar to the current general category of Multiple Resource Management Lands as well as Environmentally Sensitive Areas. Lastly, the 1971 Master Plan classified the water surface as Water Surface, while the current nomenclature is Conservation Pool and is broken down into sub-classification of Open Recreation and Restricted within the Master Plan Revision.

Table ES.1 Changes from Prior Classification (1971) to Classification (2024)

Prior Land Classifications (1971 Plan)	Acres	New Land Classifications (2024)	Acres
Esthetics	804	Environmentally Sensitive Areas	20
Public Access Area Recreation	1,181	High Density Recreation	930
Operations and Maintenance	302	Project Operations	522
Wildlife and Nature Study Area	2,248	Multiple Resource Management – Wildlife Management	2,248
--	--	Multiple Resource Management – Low Density Recreation	549
--	--	Multiple Resource Management – Future or Inactive Recreation	522
TOTAL Land Acres	4,535	TOTAL Land Acres	4,520
Prior Water Surface Classifications (1971 Plan)	Acres	New Water Surface Classifications (2024)	Acres
Water Surface	4,574	Permanent Pool	4,589
--	--	– Restricted	11
--	--	– Open Recreation	4,579
TOTAL Water Surface	4,574	TOTAL Water Surface	4,589

NOTE: Some acreage differences are due to improvements in mapping and measurement technology, deposition/siltation, and erosion. Other minor differences in totals are due to rounding.

There are several major differences in the acres between the 1971 Master Plan and the 2024 Master Plan which are not accounted for in Table ES.1 or the maps in Appendix A. These differences are due to the following:

- Current mapping and measuring technology have improved since the 1971 Master Plan, providing more precise measurements. The proposed Master Plan uses GIS computer software, LiDAR spatial mapping, and updated boundary surveys.
- Since the 1971 Master Plan, erosion and deposition/siltation have led to changes in the water surface acres and land acres, with some areas increasing and other areas decreasing the total acres.
- The prior land classification Public Access Recreation is similar to the current HDR classification.
- The prior land classification Esthetics is not similar to any current classification, but is most comparable to Multiple Resource Management Lands, in general.
- The prior land classification Operations and Maintenance is similar to the current Project Operations classification.

- The prior land classification Wildlife and Nature Study Area is similar to the current MRML–Wildlife Management Area classification.
- The prior water classification Water Surface is similar to the current classifications for Water Surface Open Recreation.

ES.4 PLAN ORGANIZATION

Chapter 1 of the Master Plan presents an overall introduction to Proctor Lake. Chapter 2 consists of an inventory and analysis of Proctor Lake and associated land resources. Chapters 3 and 4 lay out management goals, resource objectives, and land classifications. Chapter 5 is the resource management plan that identifies how project lands will be managed for each land use classification. This includes current and projected overall park facility needs, an analysis of existing and anticipated resource use, and anticipated influences on overall project operation and management. Chapter 6 details special topics that are unique to Proctor Lake. Chapter 7 identifies the public involvement efforts and stakeholder input gathered for the development of the Master Plan, and Chapter 8 gives a summary of the changes in land classification from the previous Master Plan to the present one. Finally, the appendices include information and supporting documents for this Master Plan revision, including Land Classification and Park Plate Maps (Appendix A).

An Environmental Assessment was developed with the Master Plan, which analyzed alternative management scenarios for Proctor Lake, in accordance with federal regulations including the National Environmental Policy Act of 1969, as amended (NEPA); regulations of the Council on Environmental Quality; and USACE regulations, including Engineer Regulation 200-2-2: Procedures for Implementing NEPA. The EA is a separate document that informs this Master Plan and can be found in its entirety in Appendix B.

The EA evaluated two alternatives as follows: 1) No Action Alternative, which would continue the use of the 1971 Master Plan, and 2) Proposed Action within the Master Plan. The EA analyzed the potential impact these alternatives would have on the natural, cultural, and human environments. The Master Plan is conceptual and broad in nature, and any action proposed in the plan that would result in significant disturbance to natural resources or result in significant public interest would require additional NEPA documentation at the time the action takes place.

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CHAPTER 1 – INTRODUCTION

1.1. GENERAL OVERVIEW

The Proctor Lake Master Plan (hereafter Plan or Master Plan) is intended to serve as a comprehensive land and recreation management guide built collaboratively to guide appropriate stewardship of U.S. Army Corps of Engineers (USACE) administered resources at Proctor Lake. The most recent 1971 Master Plan revision has served well past its intended 25-year planning horizon and does not reflect the demographics of users around the lake, include current land and water surface classifications, or designate environmentally sensitive areas. The focus of the Plan is to guide the stewardship of natural and cultural resources and make provision for outdoor recreation facilities and opportunities on federal land associated with Proctor Lake. The Master Plan identifies conceptual types and levels of activities, but does not include designs, project sites, or estimated costs. All actions carried out by the USACE, other agencies, and individuals granted leases to USACE lands must be consistent with the Master Plan. The Plan does not address the flood risk management or water supply purposes of Proctor Lake (the USACE Water Control Manual for Proctor Lake provides a description of these project purposes).

Proctor Dam and Lake (hereafter Proctor Lake) is located at river mile (RM) 238.9 on Leon River within the larger Brazos River Watershed. The dam, lake, and entire project area are located in Comanche County, Texas. The dam is located about eight miles northeast of the city of Comanche, Texas and is remote from larger cities with Fort Worth, Texas located approximately 85 miles to the northeast; Waco, Texas located approximately 85 miles to the southeast; and Abilene, Texas located about 80 miles to the northwest. Comanche County is located in the West Central Texas Council of Governments as shown in Figure 1.1.

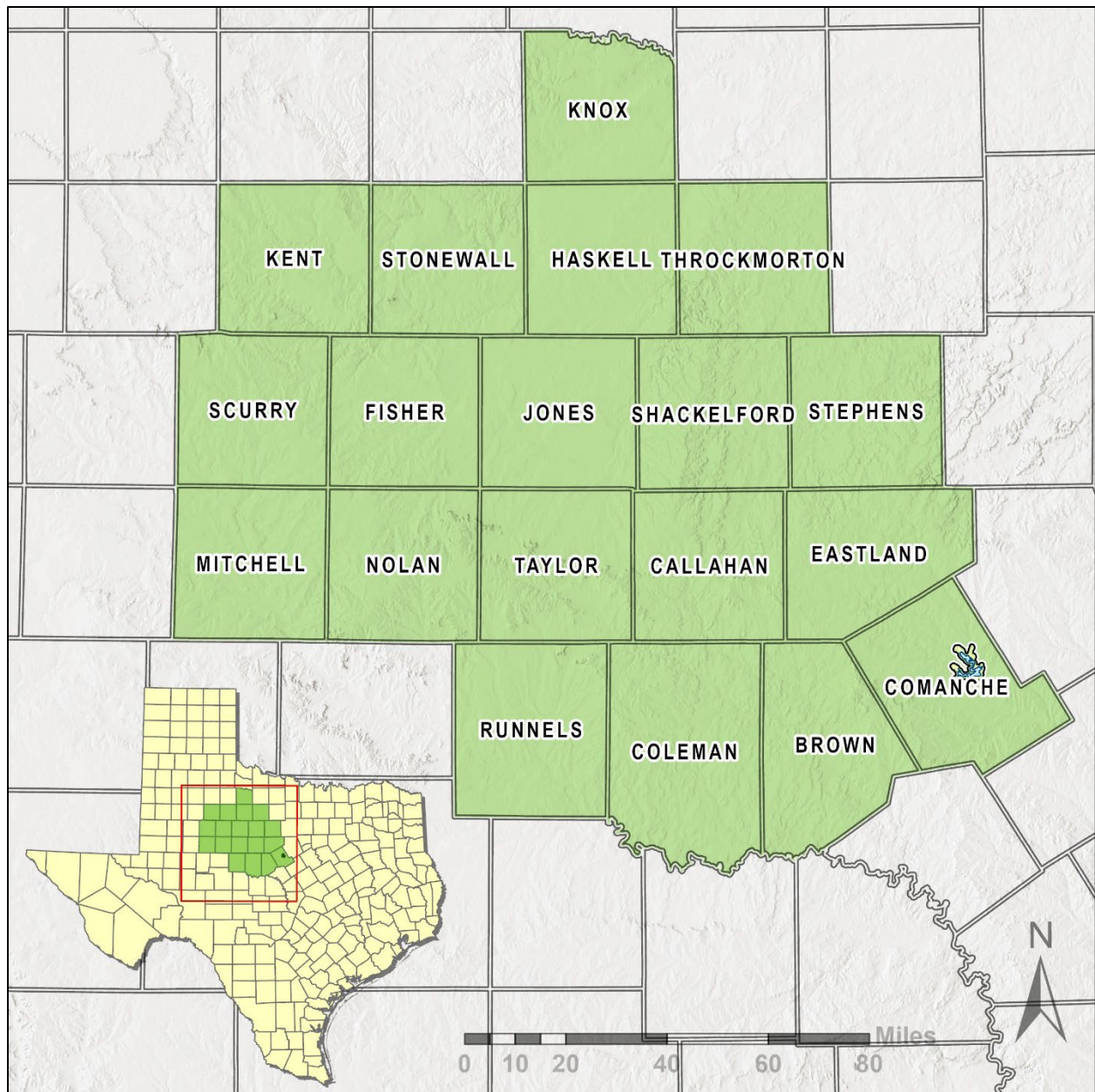


Figure 1.1 Vicinity Map of Proctor Lake and Dam within the North Central Texas Council of Governments

National USACE missions associated with water resource development projects may include flood risk management, water conservation, navigation, recreation, fish and wildlife conservation, and hydroelectric power generation. Most of these missions serve to protect the built environment and natural resources of a region from the climate extremes of drought and floods. This helps to create a more resilient and sustainable region for the health, welfare, and energy security of its citizens. Mitigation, while not a formal mission at USACE lakes, may be implemented to achieve the fish and wildlife and recreation missions. Maintaining a healthy vegetative cover and including a native prairie or tree cover where ecologically appropriate on Federal lands within the

constraints imposed by primary project purposes helps reduce stormwater runoff and soil erosion, mitigates air pollution, and moderates temperatures. To this end, USACE has developed the following statements.

The USACE Sustainability Policy and Strategic Plan states:

The U.S. Army Corps of Engineers strives to protect, sustain, and improve the natural and man-made environment of our Nation, and is committed to compliance with applicable environmental and energy statutes, regulations, and Executive Orders. Sustainability is not only a natural part of the Corps' decision processes, it is part of the culture.

Sustainability is an umbrella concept that encompasses energy, climate change and the environment to ensure today's actions do not negatively impact tomorrow. The Corps of Engineers is a steward for some of the Nation's most valuable natural resources, and must ensure customers receive products and services that provide sustainable solutions that address short and long-term environmental, social, and economic considerations.

The USACE mission for the Responses to Climate Change Program is:

To develop, implement, and assess adjustments or changes in operations and decision environments to enhance resilience or reduce vulnerability of USACE projects, systems, and programs to observed or expected changes in climate.

1.2. PROJECT AUTHORIZATION

Congressional authorization for the construction of Proctor Dam and Lake on the Leon River was contained in the Flood Control Act approved 3 September 1954 (Public Law 780, 83rd Congress, 2nd Session) in accordance with the recommendations made by the Chief of Engineers contained in House Document No. 535 (81st Congress, 2nd Session) entitled "Report on Survey of Brazos River and Tributaries, Texas, Oyster Creek, Texas, and Jones Creek, Texas". The construction of Proctor Dam access road began on July 11, 1960 and on the embankment on January 16, 1961; deliberate impoundment began September 30, 1963; and the dam was completed on January 2, 1964.

1.3. PROJECT PURPOSE

Proctor Lake is a multi-purpose project used for flood risk mitigation, water supply, fish and wildlife, and recreation. The project is a unit of the Brazos River Basin System, which consists of nine USACE dams and lakes and various channel improvements and levees operated to provide flood protection along the Brazos River. Proctor Dam and Lake operates in conjunction with four other USACE dams (Belton Dam, Stillhouse Hollow Dam, Granger Dam, and North San Gabriel Dam) on the Little

River System to provide flood control to the Little River at Cameron, Texas, and to supply water to the Brazos River Authority (BRA) and the Fort Cavazos, Killeen, Belton, and Temple, Texas areas. Within the Little River System, the Leon River is controlled by Proctor and Belton Dams; Lampasas River is controlled by Stillhouse Hollow Dam; North San Gabriel River is controlled by the North San Gabriel Dam at Georgetown; and Granger Lake controls the San Gabriel River after the confluence of the North and South arms of the San Gabriel River. In addition to these primary missions, USACE has an inherent mission for environmental stewardship of project lands, working closely with the Texas Parks and Wildlife Department and local cities to provide regionally important outdoor recreation opportunities. The Master Plan is primarily a land use and outdoor recreation strategic plan that does not address the specific authorized purposes of flood risk management or water supply. The conservation pool elevation is 1,162.0 feet NGVD 1929 (NGVD29; all elevations listed are in feet NGVD29 unless otherwise stated), and the flood pool is at elevation 1,197.0 feet. Section 1.9 describes other pertinent data for Proctor Dam and Lake.

1.4. MASTER PLAN PURPOSE AND SCOPE

The Proctor Lake Master Plan is the living, flexible, long-term strategic land-use management document that guides the comprehensive management and development of all the project's recreational, natural, and cultural resources. Under the guidance published in Engineering Regulation (ER) 1130-2-550 Change 7, and the accompanying Engineer Pamphlet (EP) 1130-2-550 Change 5, the Master Plan guides the efficient and cost-effective development, management, and use of project lands. It is a dynamic tool that provides for the responsible stewardship and sustainability of the project's resources for the benefit of present and future generations. The Master Plan works in tandem with the Operational Management Plan (OMP), which is the task-oriented implementation tool for the resource objectives and development needs identified in the Master Plan. The Master Plan guides and articulates the USACE responsibilities pursuant to federal laws. The USACE vision for the future management of the natural resources and recreation program at Proctor Lake is set forth as follows:

The land, water, and recreational resources of Proctor Lake will be 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.

It is important to note what the Master Plan does not address. Details of design, management and administration, and implementation are not addressed here; but are managed through the Proctor Lake OMP. In addition, the Master Plan does not address the specifics of regional water quality, shoreline management (a term used to describe primarily vegetation modification or permits by neighboring landowners), or water level management, nor does it address the operation and maintenance of prime project operations facilities such as the dam embankment, gate control outlet, and spillway. Additionally, the Plan does not address the flood risk management or water

conservation purposes of Proctor Lake with respect to management of the water level in the lake.

The master planning process encompasses the examination and analysis of past, present, and future environmental, recreational, and socioeconomic conditions and trends. Within a generalized conceptual framework, the process focuses on the following four primary components:

- Regional and ecosystem needs;
- Project resource capabilities and suitabilities;
- Expressed public interests that are compatible with Proctor Lake's authorized purposes; and
- Environmental sustainability elements.

1.5. BRIEF WATERSHED AND PROJECT DESCRIPTION

Proctor Lake is located at river mile (RM) 238.9 on Leon River within the larger Brazos River Watershed. The Leon River originates in Eastland County, approximately 2 miles southeast of the town of Eastland Texas, and flows in a southeasterly direction for approximately 299 miles to a point about 6 miles southeast of the city of Belton, Texas, where it joins the Lampasas River to form the Little River. The watershed of the Leon River has a total drainage area of 3,570 square miles with 1,259 square miles being located above the dam making up the entire drainage area. The shoreline at the top of conservation pool is approximately 38 miles.

The Leon River basin is crossed by a network of railroads and highways as well as numerous rural roads. The Leon River Watershed includes portions of the Western Cross Timbers, Limestone Cut Plain, and Northern Blackland Prairies natural ecoregions, while the entire Proctor Lake project area is located in the Western Cross Timbers ecoregion. About two-thirds of the watershed is either in pasture or rangeland, with a considerable number of concentrated animal feeding operations. Agricultural cropland comprises about 10% of the watershed and forestland makes up about 15%. Manufacturing, trade, healthcare, and education are the major industries in the area which are discussed in more detail in Section 2.5.

1.6. DESCRIPTION OF RESERVOIR

Proctor Dam consists of a compacted impervious earthfill embankment, an ogee type controlled spillway, and controlled outlet works. The total length of the dam is 13,460 feet. The upstream slope is protected with riprap, while the downstream contains a drainage blanket and is covered in grass. The maximum height of the embankment is about 86 feet, and the top is located at elevation 1206.0 feet. The spillway consists of a 520 feet long ogee type weir controlled by eleven 40 feet by 30 feet tainter gates. The outlet works consist of two 36-inch diameter conduits through the base of the dam, controlled by two 36-inch slide gates and are located in the two center spillway gate piers. The stilling basin is 176 feet long and 520 feet wide and contains two row of baffle

blocks and an end sill to help dissipate kinetic energy and reduce erosion velocities in the downstream channel.

The depth of the lake is approximately 42.0 feet deep just upstream of the dam at conservation pool at elevation 1162.0 feet, but depths decrease further upstream of the dam, while in the upper reaches of the project land is often exposed while the water level drops below conservation pool. The top of the flood control pool is at elevation 1197.0 feet.

The Texas Development Water Board (TDWB) conducts reservoir volumetric surveys and sediment surveys for major reservoirs in Texas. The most recent TDWB survey for Proctor Lake was in 2012 which indicated the lake surface encompasses 4,615 surface acres containing a total volume of 54,762 acre-feet at the conservation pool. The lake also holds an estimated 32,700 acre-feet of sediment reserve.

The Natural Resource Conservation Service (NRCS), Department of Agriculture, has been authorized by Congress to undertake a program of runoff and waterflow retardation and soil erosion prevention on the Leon River watershed. Field examinations have been made on South Fork Leon River, Sabana River, Alexander, Pecan, and Rush Creeks, and a plan has been made for Resley and Armstrong Creeks. Ultimately there will be 55 structures above Proctor Lake with a total drainage area of 357.8 square miles and detention storage of 99,940 acre-feet which includes 21,913 acre-feet for sediment storage. Below Proctor Lake there are 24 structures planned having a total drainage area of 1,037 square miles and detention storage of 21,575 acre-feet. The detention includes 2,685 acre-feet for sediment storage. The structures upstream of Proctor Lake should significantly reduce the sediment flow into the lake, prolonging the sediment reserve that remains.

This Master Plan uses GIS and satellite imagery to make adjustments to the acres, which results in the land and water surface acres being different than the 1971 Master Plan or the 2012 TDWB survey.

1.7. PROJECT ACCESS

Proctor Lake is accessed by U.S. Highway 377/U.S. Route 67 to the southeast of the project which connects Comanche to the southwest, Proctor to the east of the project, and Dublin to the northeast. Texas State Highway (SH) 16 is the major route to the west of the project, connecting Comanche southwest of the project to De Leon north of the project. SH16 briefly crosses USACE property at the north end of the project, with a bridge crossing the Sabana River. SH 2861 crosses USACE property at the south end of the property between the country club golf course to the west and the water treatment center to the east. County Road (CR) 420 briefly crosses USACE property along a narrow riparian area to the east of Duncan Creek. SH 2318 connects US 16 into Promontory Park. Farm to Market Road (FM) 1476 goes from US 377 to the east, briefly crossing USACE property with a bridge at Sowell Creek Cove before turning northward. Several additional county roads and farm to market roads surround the project.

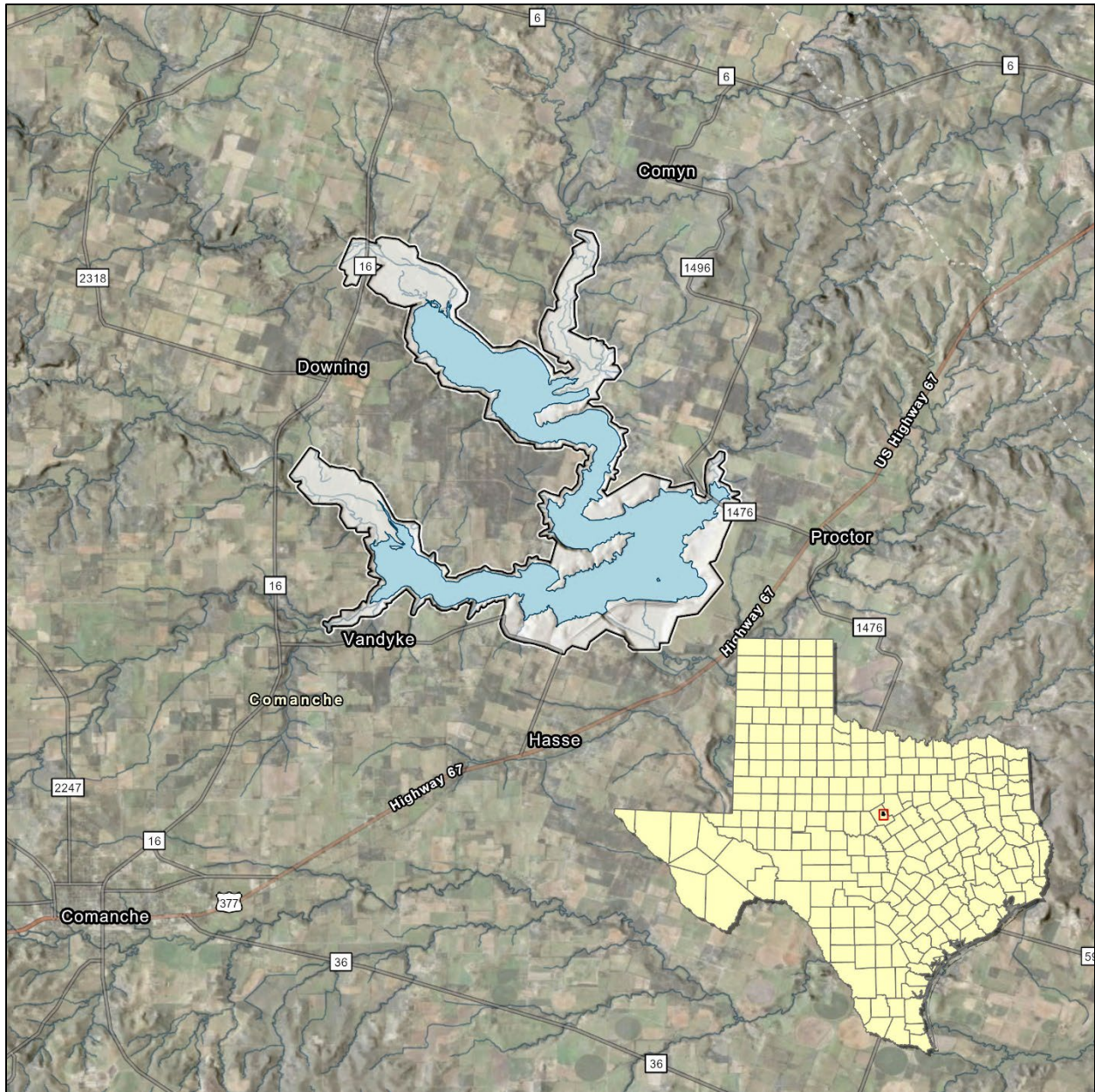


Figure 1.2 Local Project Access

The West Central Texas Council of Governments does not have a transportation plans showing major transportation projects in the vicinity of Proctor Lake. Texas Department of Transportation has the following projects planned which could affect access to Proctor Lake:

- On FM 1476 at the east end of the lake, TXDoT plans to widen the road and add shoulders within the next 5 years. This project would restrict the lanes of traffic and add congestion during construction. The plan does not include details on the bridge that crosses Sowell Creek across USACE fee property.

- Along US 377 there are plans to widen the roadway southeast of Proctor Lake between 5-10 years which is likely to increase traffic congestion during construction.

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

1.8. PRIOR DESIGN MEMORANDA

Design Memorandums were prepared from 1945 thru 2015 setting forth design criteria for all aspects of the project including the prime flood risk management facilities, real estate acquisition, road and utility relocations, reservoir clearing, and the master plan for recreation development and land management. Table 1.1 lists the Design Memoranda and other relevant manuals and reports for Proctor Lake.

Table 1.1 Design Memoranda (DM), Manuals, and Reports – Proctor Lake

No.	Title	Approved
1.	Interim Report on Brazos River	Dec 1945
2.	Report on Survey of Brazos River and Tributaries, Texas, Oyster Creek, Texas, and Jones Creek, Texas	Aug 1947
3.	Design Memorandum No. 2, Site Selection	Dec 1958
4.	Design Memorandum No. 1, Hydrology – Supplement No. 1	May 1959 May 1960
5.	Design Memorandum No. 7, Availability of Materials	Sep 1959
6.	Design Memorandum No. 3, Real Estate, Part I – Land for Construction Area	Nov 1959
7.	Design Memorandum No. 5, General – Supplement No. 1	Dec 1959 Aug 1960
8.	Design Memorandum No. 9, Part I – Project Building and Access Road – Supplement No. 1	Jan 1960 Aug 1960
9.	Design Memorandum No. 4, Relocations, Part I – State Highway No. 16 and State Highway No. 6	Feb 1960
10.	Design Memorandum No. 11, Part I – Preliminary Master Plan	Mar 1960
11.	Design Memorandum No. 8, Earthen Dam and Excavation for Spillway	Mar 1960
12.	Design Memorandum No. 3, Real Estate, Part II-A – Land for Reservoir Area	Apr 1960
13.	Design Memorandum No. 10, Spillway	May 1960

No.	Title	Approved
14.	Report on Vane Shear Studies, Proctor Reservoir, Leon River, Texas	May 1960
15.	Design Memorandum No. 3, Real Estate, Part II-B – Land for Reservoir Area	Jun 1960
16.	Design Memorandum No. 3, Lands for State Highway	Jul 1960
17.	Design Memorandum No. 4, Relocations, Part II-A – Humble Pipeline	Nov 1960
18.	Design Memorandum No. 4, Relocations, Part II-B – Southwest Natural Gas Lines	Nov 1960
19.	Design Memorandum No. 8, Earthen Dam and Excavation for Spillway, Supplement No. 1	Dec 1960
20.	Design Memorandum No. 4, Relocations, Part IV – Missouri-Kansas-Texas Lines	Jan 1961
21.	Design Memorandum No. 12, Reservoir Clearing	Mar 1961
22.	Design Memorandum No. 4, Relocation, Part III – Comanche Country Roads	Mar 1961
23.	Design Memorandum No. 4, Relocation, Part V, Section A – Brazos Electric Co-op	May 1961
24.	Report on Field Shear Test, Proctor Reservoir, Leon River, Texas	Aug 1961
25.	Design Memorandum No. 9, Part II – Visitors' Overlook	Sep 1961
26.	Design Memorandum No. 13, Shelter for Fallout Protection	Jan 1962
27.	Design Memorandum No. 4, Part VI, Comanche Telephone, De Leon Telephone, and Southwestern Bell Telephone	Mar 1962
28.	Design Memorandum No. 4, Relocation, Part V, Section B – Comanche County Co-op	Apr 1962
29.	Design Memorandum No. 4, Relocation, Part V, Section C – Texas Electric Service	Apr 1962
30.	Design Memorandum No. 14, Channel Improvement	Nov 1963
31.	Regulation Manual, Proctor Reservoir, Leon River, Brazos River Basin, Texas	Mar 1964
32.	Survey Data, Horizontal and Vertical Control for Dam Site Work Areas and Reservoir Area	Jul 1964
33.	Seepage Investigation Report, Proctor Dam and Reservoir, Leon River, Texas	Sep 1969
34.	Design Memorandum No. 11B, Master Plan for Proctor Dam and Reservoir on the Leon River, Texas	Feb 1962
35.	Design Memorandum No. 11C, Updated Master Plan	Feb 1972
36.	Operation and Maintenance Manual, Proctor Lake, Leon River, Texas	Jun 1975
37.	National Dam Safety Assurance Study, Proctor Lake, Hydrology	Aug 1982
38.	Proctor Dam Flood Emergency Plan	Sep 1984

No.	Title	Approved
39.	Proctor Lake, Leon River, Texas, Embankment, Spillway, and Low-flow Outlet Works Periodic Inspection No. 5	1985
40.	Proctor Dam Flood Emergency Plan (updated)	Dec 1986
41.	Proctor Lake, Leon River, Texas, Embankment, Spillway, and Low-flow Outlet Works Periodic Inspection No. 6	1990
42.	Proctor Lake, Leon River, Texas, Embankment, Spillway, and Outlet Works Periodic Inspection No. 7	1995
43.	Evaluation Report, Dam Safety Assurance Program, Proctor Lake, Texas	Aug 1999
44.	Proctor Lake, Leon River, Texas, Embankment and Spillway Periodic Inspection No. 8	2000
45.	Proctor Lake, Leon River, Texas, Embankment and Spillway Periodic Inspection No. 9	2005
46.	Dam Safety Assurance Program Evaluation Report	Jul 2006
47.	Proctor Lake, Leon River, Texas, Embankment and Spillway Periodic Inspection No. 10	2010
48.	Proctor Lake, Leon River, Texas, Embankment and Spillway Periodic Inspection No. 11	May 2015
49.	Proctor Dam Emergency Action Plan (EAP)	Aug 2015

Source: USACE

1.9. PERTINENT PROJECT INFORMATION

The following table provides pertinent information regarding key reservoir elevations and storage capacity at Proctor Lake.

Table 1.2 Elevations and Water Storage Capacity

Feature	Elevation (Feet NGVD)	Lake Area (Acres)	Storage (Acre-Feet)	Runoff (inches)
Top of Dam	1,206.0	—	—	—
PMF Design Water Surface (1982 Study)	1,207.4	18,118	539,700	8.0
Design Water Surface (1959 Study)	1,201.0	15,410	433,000	6.5
Top of Flood Control Pool and Top of Gates	1,197.0	14,010	374,200	5.6
Spillway Crest & Top of Conservation Pool (2012 Survey)	1,162.0	4,615	54,762	0.8
Invert at Lowest Intake (2012 Survey)	1,128.0	—	—	—
Sediment Reserve	—	—	32,700*	—
Streambed (1959 Study)	1,120.0	—	—	—

Source: USACE 2018 Proctor Lake Water Control Manual

* Estimated 50 years of sediment storage distributed as follows: 28,000 ac-ft below elevation 1162.0 feet, 4,700 ac-ft between elevations 1162.0 feet and 1197.0 feet NGVD29, however more than 50 years has elapsed since impoundment.

CHAPTER 2 – PROJECT SETTING AND FACTORS INFLUENCING MANAGEMENT AND DEVELOPMENT

2.1. PHYSIOGRAPHIC SETTING

2.1.1 Ecoregion Overview

Ecoregions denote areas of general similarity in ecosystems and in the type, quality, and quantity of environmental resources. The Environmental Protection Agency (EPA) has developed a series of maps that categorizes these regions across the United States. Levels I and II divide the North American continent into 15 and 52 regions, respectively, while Level III ecoregions represent a subdivision of those into 104 unique regions and Level IV a finer sub-classification of those. Proctor Lake and its watershed is located in the Level III Cross Timbers Level III ecoregions as seen in Figure 2.1. Within the finer Level IV ecoregions, Proctor Lake is located in the Western Cross Timbers.

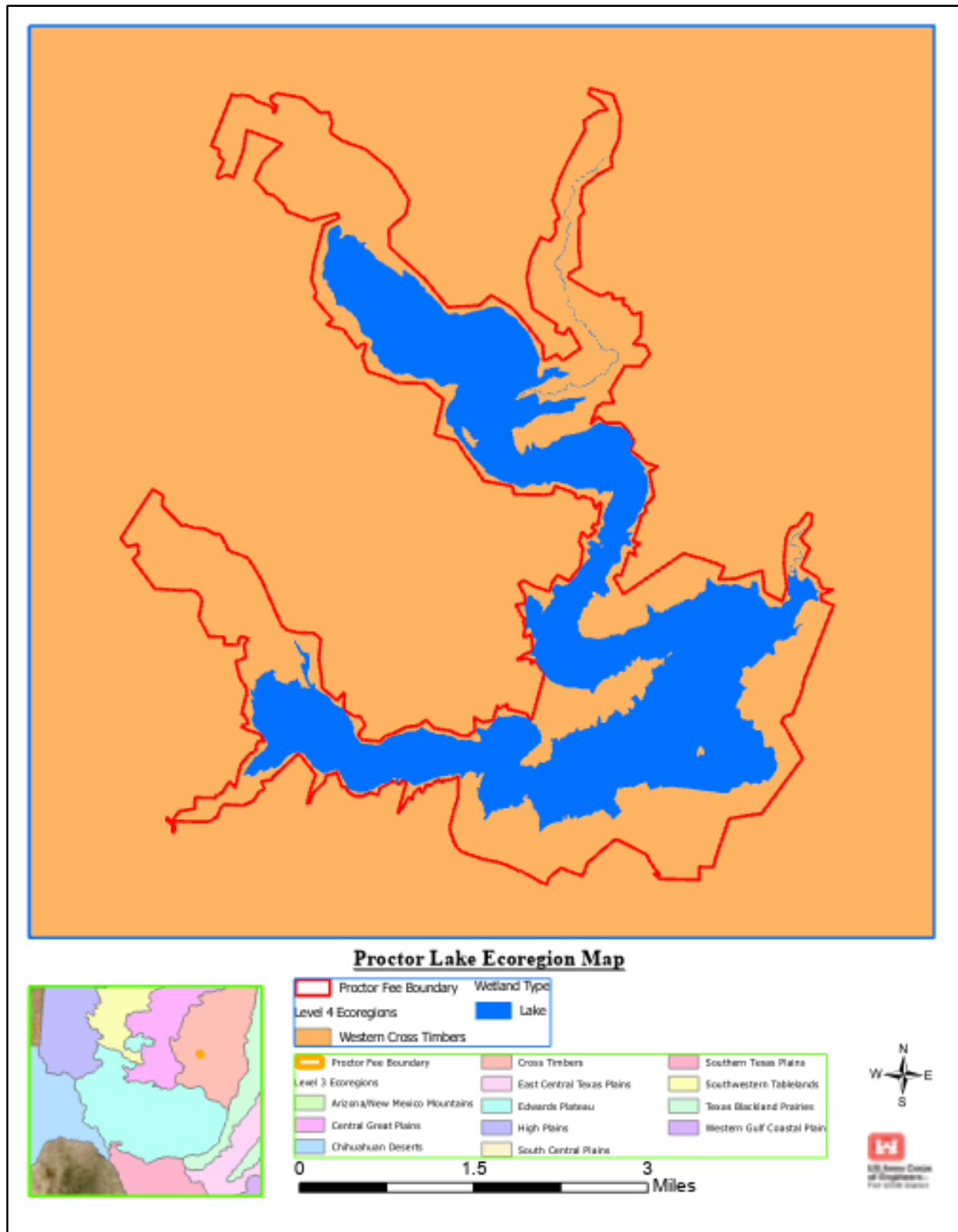


Figure 2.1 Proctor Lake within Texas Ecoregions

Source: EPA, 2023.

2.1.2 Climate

Proctor Lake lies in north central Texas which has a warm, temperate, continental climate with cool winters and hot, humid summers. Tropical maritime air masses from the Gulf of Mexico play a dominant role in the climate from late spring through early fall, while polar air masses determine the winter climate. The mean annual temperature for the lake is about 66.3 degrees Fahrenheit (°F) (NOAA, 2022A). January, the coldest month, has an average temperature of 46.5°F and average minimum daily temperature of about 34.0°F. July and August are the warmest months, with an average daily temperature of 72.4°F and have an average maximum daily temperature of 84.5°F. The average length of the growing season is 216 days (NOAA, 2022B). Proctor Lake lies within the USDA Plant Hardiness Zone 8A, which is determined by the winter extreme low temperatures, with 8A having normal winter lows between 10°F and 15°F (USDA, 2020).

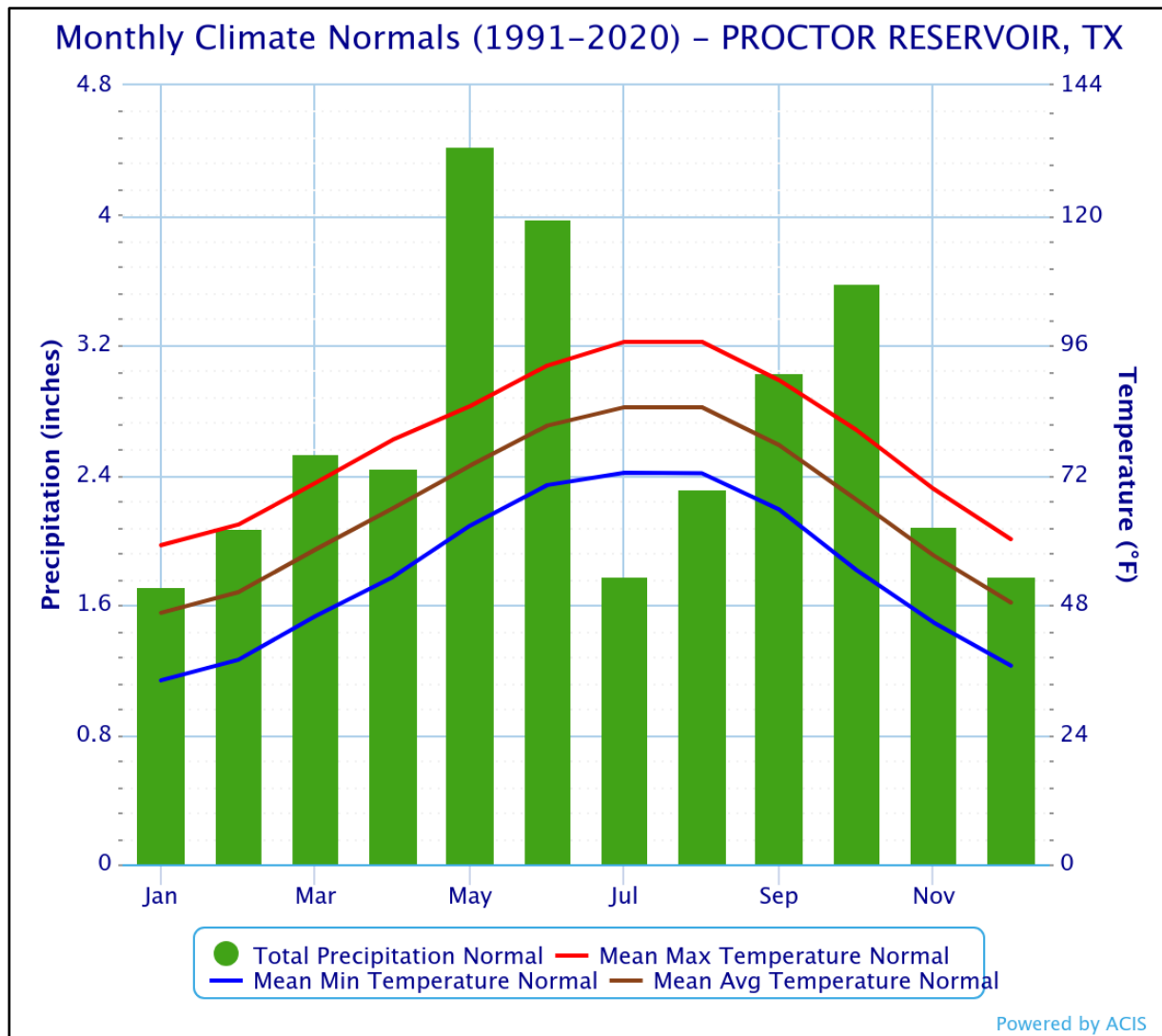


Figure 2.2 Average Monthly Climate near Proctor Lake, 1991 – 2020

Source: NOAA, 2022A.

The Leon River watershed is subject to three general types of flood-producing rainfall: thunderstorms, frontal rainfall, and tropical cyclones. Generally, the highest 24-hour and monthly precipitation periods have occurred during major thunderstorms. However, there are some instances of heavy precipitation resulting from local thunderstorms. The maximum 24-hour rainfall recorded in or adjacent to the basin was 9.62 inches, which occurred at Temple, Texas on 17 Oct 1998. The maximum monthly rainfall reported was 14.76 inches, which occurred at the Lampasas River near Belton gage in September 1936

The normal annual precipitation is 38.44 inches with greater precipitation during spring and fall, and less precipitation during summer and winter. Because of the preponderance of tropical maritime air, heavy showers of short duration may occur at any time during the year.

The average annual evaporation rate at Proctor Lake, as calculated using the measured pan evaporation multiplied by the monthly pan coefficient, is about 65 inches with the lowest evaporations rates occurring during the winter and greatest evaporation occurring during the summer (USACE, 2017).

2.1.3 Climate Change and Green House Gas Emissions

The U.S. Global Change Research Program (USGCRP) looks at potential impacts of climate change globally, nationally, regionally, and by resource (e.g., water resources, ecosystems, human health). Proctor Lake area lies within the Southern Great Plains region of analysis. The Southern Great Plains region has already seen evidence of climate change in the form of rising temperatures that are leading to increased demand for water and energy and impacts on agricultural practices. Over the last few decades, the Southern Great Plains has seen fewer cold days in winter and more hot days in summer, as well as changes to precipitation patterns. The decrease in the cold days has resulted in an overall increase of the frost-free season. Within this region, there has been an increase in average temperatures 1° – 2° Fahrenheit (F) since 1901 (Kloesel et al., 2018). The changing precipitation patterns in the region has led to more frequent extreme droughts, storms, and flood events. If the current rate of greenhouse gas (GHG) emissions continues, the potential increase will be much higher by 2100. The USACE mission for the Responses to Climate Change Program is “to develop, implement, and assess adjustments or changes in operations and decision environments to enhance resilience or reduce vulnerability of USACE projects, systems, and programs to observed or expected changes in climate.” The effects of climate change and mitigation efforts are evolving, and Proctor Lake and all federally owned property will be managed to comply with laws and executive orders to respond to the growing threat of climate change.

2.1.4 Air Quality

The U.S. Environmental Protection Agency (EPA) 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 (O₃), Carbon Monoxide (CO), Sulfur Dioxide (SO₂), Nitrous Oxides (NO_x), particulate matter (PM₁₀ and PM_{2.5}), and Lead (Pb). If the concentrations of one or more criteria pollutants in a geographic area is found to exceed the regulated “threshold” level for one or more of the NAAQS, the area may be classified as a non-attainment area. Areas with concentrations that are below the established NAAQS levels are considered either attainment or unclassifiable areas. In the case of Proctor Lake, it is in attainment for all criteria air pollutants (TCEQ, 2023).

2.1.5 Geology, Topography, and Soils

Geology

Proctor Lake lies mostly along a strip of Holocene Alluvium soil that flanks the Sabana and Leon Rivers and Rush Creek. This alluvial band crosses the broad Twin Mountains Formation with stretches of the older Pre-Brazos River Sandstone having eroded along the upper reaches of Sabana River and Rush Creek and pockets of Terrace Deposits where early erosive deposits accumulated. The Twin Mountains geologic formation is primarily composed of sandstone, claystone, and conglomerate, approximately 150 feet deep in this area and is underlain by the Glen Rose Limestone, which is an Early Cretaceous layer of limestone, clay, and mud, outcropping a mile from either side of the lake. The Glen Rose Limestone has stairstep topography, the limestone is aphanitic to fine grained, argillaceous and silty, the sand is thin bedded, the clay and claystone is partly sandy, marly and recessive. The formations are shown in Figure 2.3 and described below.

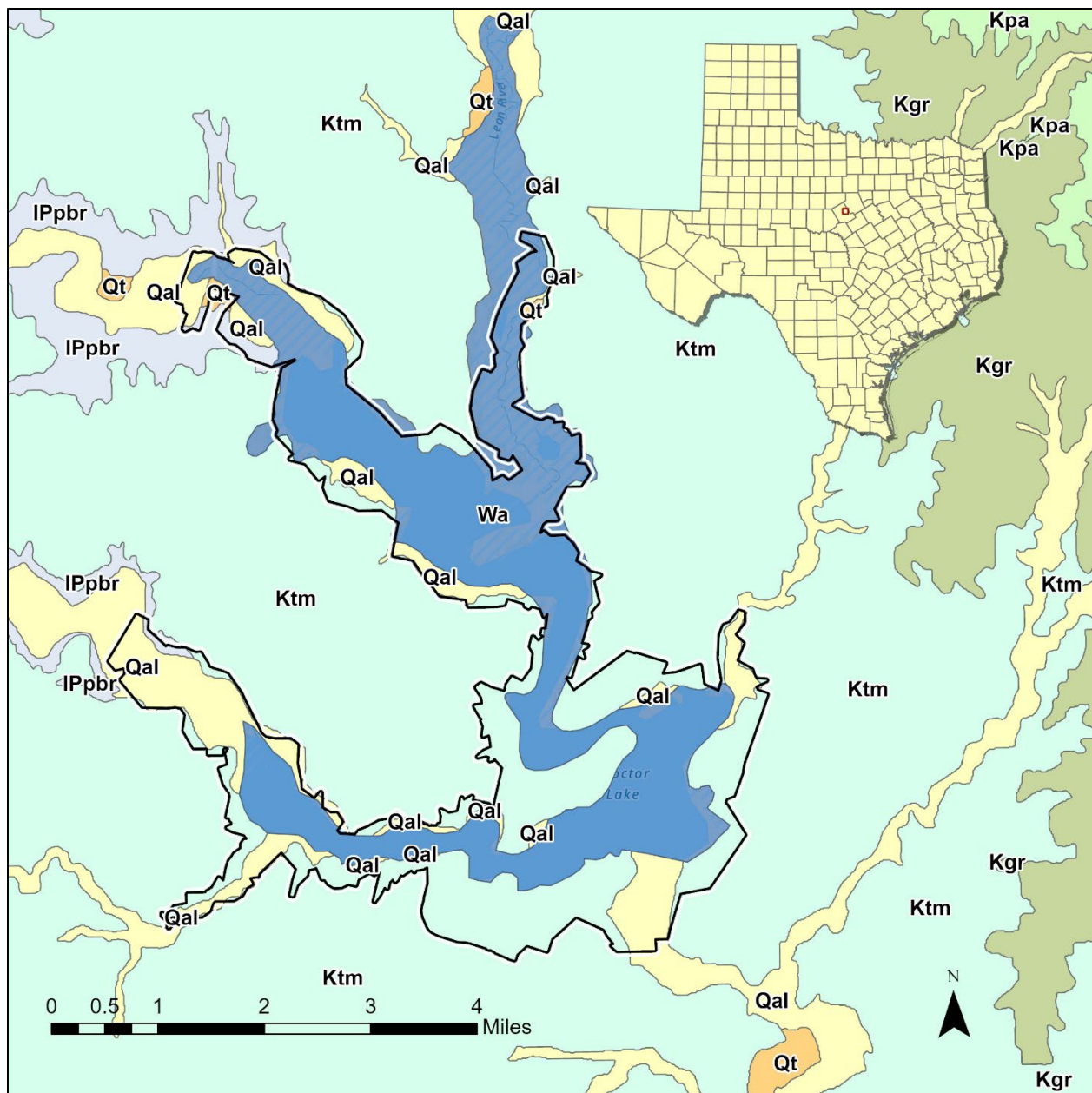


Figure 2.3 Geologic Formations around Proctor Lake

- Qal: Alluvium; Holocene Age; Clay, silt, sand (mostly quartz), gravel, and organic matter. Gravel along Rio Grande consists of Cretaceous and Tertiary sedimentary and igneous rock clasts; also includes sidestream alluvial gravels consisting of Tertiary rock clasts and chert derived from the Uvalde gravel.
- Qt: Terrace Deposits; Pleistocene Age; Terrace deposits; Rio Grande river terraces consisting of gravel, sand, silt, and clay; exposed on north side of Rio Grande from Falcon Reservoir to Los Ebanos.
- Ktm: Twin Mountains Formation; Aptian/Early Cretaceous Age; dominant geological formation across the watershed, primarily composed of sandstone,

claystone, and conglomerate, approximately 150 feet deep in the Proctor Lake area.

- IPpbr: Pre-Brazos River Sandstone undivided; Mid-Pennsylvanian Age; mostly sandstones, with some limestones and mudstone lentils. The sandstones form thin discontinuous sheets and small channel fills with fewer beds near the top.
- Wa: Water surface, unclassified floodplains, and unclassified wetlands

Topography

The topography of Proctor Lake is typical of Comanche County with gentle rolling hills and various soils and geology influenced by ancient shorelines, sea beds, and modern alluvial patterns. The Leon River, the principal tributary of the Little River and a secondary tributary of the Brazos River, rises from an elevation at about 1,800 feet at the headwaters and flows southeasterly to its mouth, just downstream of Belton Dam, where the elevation is approximately 440 feet. The Leon River crosses through limestone, sandstone, and scattered ancient gravel beds. The mouth of the Leon River is the confluence of where the Lampasas River joins the Leon River and officially where the Little River begins. Its source begins in a moderately cultivated narrow valley with shallow limestone and sandstone soils in Eastland County. The watershed lies within the Palo Pinto Section, West Cross Timbers, and Lampasas Cut Plain physiographic ecoregions. The About three-quarters of the watershed area is classified as agricultural range land and one-sixth is forest. The remaining area is a combination of residential, industrial, transportation, and military land.

Soils

The main soil series within Proctor Lake Project lands is the Deleon clay, frequently flooded. This soil makes up 23.55% of soils found within Proctor Lake project lands. The soil occurs in more than 80 inches thick surface layers, normally found in floodplains, is moderately well drained, is a clay derived from clay alluvium, and is not a prime farmland soil.

A number of soil groups lay within the Leon River watershed. Proctor Lake lies in the Western Cross Timbers subregion of the Cross Timbers ecoregion, and the lower portion of the basin lies in the Limestone Cut Plain subregion. The basin also lies on the border of the Blackland Prairie and Edwards Plateau ecoregions. The Western Cross Timbers subregion is characterized by fine sandy loams with clay subsoils that retain water. The Limestone Cut Plain subregion is characterized by alternating layers of limestone, chert, and marl that erode differentially. In the Blackland Prairie, both upland and bottomland soils are deep, dark-gray to black alkaline clays. Some soils in the western part of the watershed are shallow to moderately deep overlying a chalk foundation. Blackland soils are known as “cracking clays” because of the large, deep cracks that form in dry weather. This high shrink-swell property can cause serious damage to foundations, highways, and other structures and is a safety hazard in pits and trenches. In the Edwards Plateau area, Upland soils are mostly shallow, stony, or gravelly, dark alkaline clays, and clay loams underlain by limestone. Lighter-colored

soils are on steep side slopes and deep, less-stony soils are in the valleys. Bottomland soils are mostly deep, dark-gray or brown, alkaline loams and clays.

The NRCS Web Soil Survey (2022) reports 31 soil types occurring within Proctor Lake project lands. Table 2.1 shows the acreage and farmland status associated with each soil & surface type in the detention area while Figures 2.4-2.7 show the location of the soils.

Table 2.1 Acres of Surface Soil Types within Proctor Lake Project Lands

Soil Type	Number of Acres	Percent Total	Farmland Status
Bastrop loamy fine sand, 1 to 5 percent slopes	4.1	0.1%	Prime farmland if irrigated
Brackett soils, 8 to 30 percent slopes	175.0	4.0%	Not prime farmland
Brackett-Karnes complex, 1 to 12 percent slopes	22.5	0.5%	Not prime farmland
Chaney loamy sand, 1 to 5 percent slopes	528.1	12.0%	Prime farmland if irrigated
Chaney loamy sand, 1 to 5 percent slopes, eroded	208.7	4.8%	Not prime farmland
Chaney loamy sand, 1 to 8 percent slopes, severely eroded	11.5	0.3%	Not prime farmland
Chaney loamy sand, 5 to 8 percent slopes	109.2	2.5%	Not prime farmland
Chaney stony loamy sand, 1 to 8 percent slopes, extremely stony	0.7	0.0%	Not prime farmland
Cisco loamy fine sand, 1 to 5 percent slopes	71.6	1.6%	All areas are prime farmland
Clairette loam, 3 to 5 percent slopes	1.6	0.0%	All areas are prime farmland
Deleon clay, frequently flooded	1,033.1	23.6%	Not prime farmland
Demonia loamy sand, 0 to 5 percent slopes	115.8	2.6%	Farmland of statewide importance, if irrigated
Energy fine sandy loam, occasionally flooded	39.4	0.9%	Not prime farmland
Energy soils, frequently flooded	838.2	19.1%	Not prime farmland
Fairy-Hico complex, 1 to 5 percent slopes, moderately eroded	11.1	0.3%	Farmland of statewide importance
Heaton loamy fine sand, 0 to 5 percent slopes	207.4	4.7%	Prime farmland if irrigated

Soil Type	Number of Acres	Percent Total	Farmland Status
Hico and Windthorst sandy clay loams, 1 to 8 percent slopes, severely eroded	107.5	2.5%	Not prime farmland
Hico-Fairy complex, 3 to 8 percent slopes, moderately eroded	55.7	1.3%	Farmland of statewide importance
Karnes loam, 1 to 5 percent slopes	6.8	0.2%	Farmland of statewide importance, if irrigated
Karnes loam, 5 to 8 percent slopes	22.8	0.5%	Not prime farmland
Menard fine sandy loam, 3 to 5 percent slopes	9.4	0.2%	All areas are prime farmland
Menard fine sandy loam, 5 to 8 percent slopes	0.7	0.0%	Not prime farmland
Menard soils, 1 to 5 percent slopes, eroded	0.1	0.0%	Not prime farmland
Nimrod fine sand, 0 to 5 percent slopes	28.9	0.7%	Not prime farmland
Owens clay, 5 to 30 percent slopes, extremely stony	10.3	0.2%	Not prime farmland
Patilo-Arenosa-Nimrod complex, 0 to 5 percent slopes	88.8	2.0%	Not prime farmland
Pedernales fine sandy loam, 1 to 5 percent slopes, moderately eroded	50.8	1.2%	Not prime farmland
Pedernales fine sandy loam, 3 to 5 percent slopes	129.8	3.0%	All areas are prime farmland
Pedernales fine sandy loam, 5 to 8 percent slopes	247.9	5.7%	Not prime farmland
Pedernales loamy fine sand, 1 to 5 percent slopes	229.9	5.2%	Prime farmland if irrigated
Pedernales soils and Gullied land, 1 to 8 percent slopes, severely eroded	20.3	0.5%	Not prime farmland
Total Acres	4,387.7		

NRCS 2022. Please note that there is a difference between total acreages listed by the NRCS and USACE due to the difference of mapping techniques and water surface elevations used to map out those acreages. Acres are rounded to the nearest tenth of an acre, and percents rounded to the tenth of a percent.

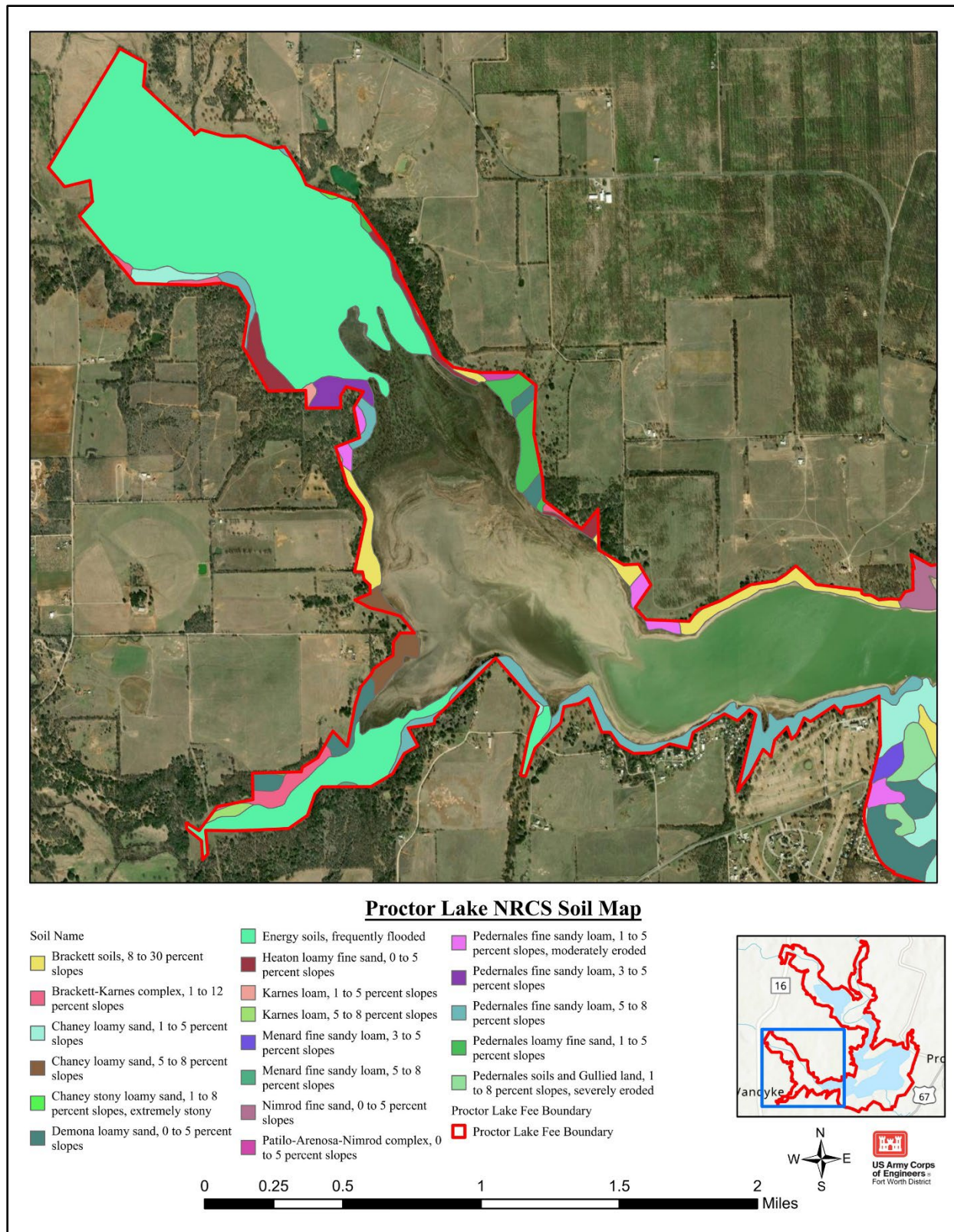


Figure 2.4 Proctor Lake NRCS Soil Map 1 of 4

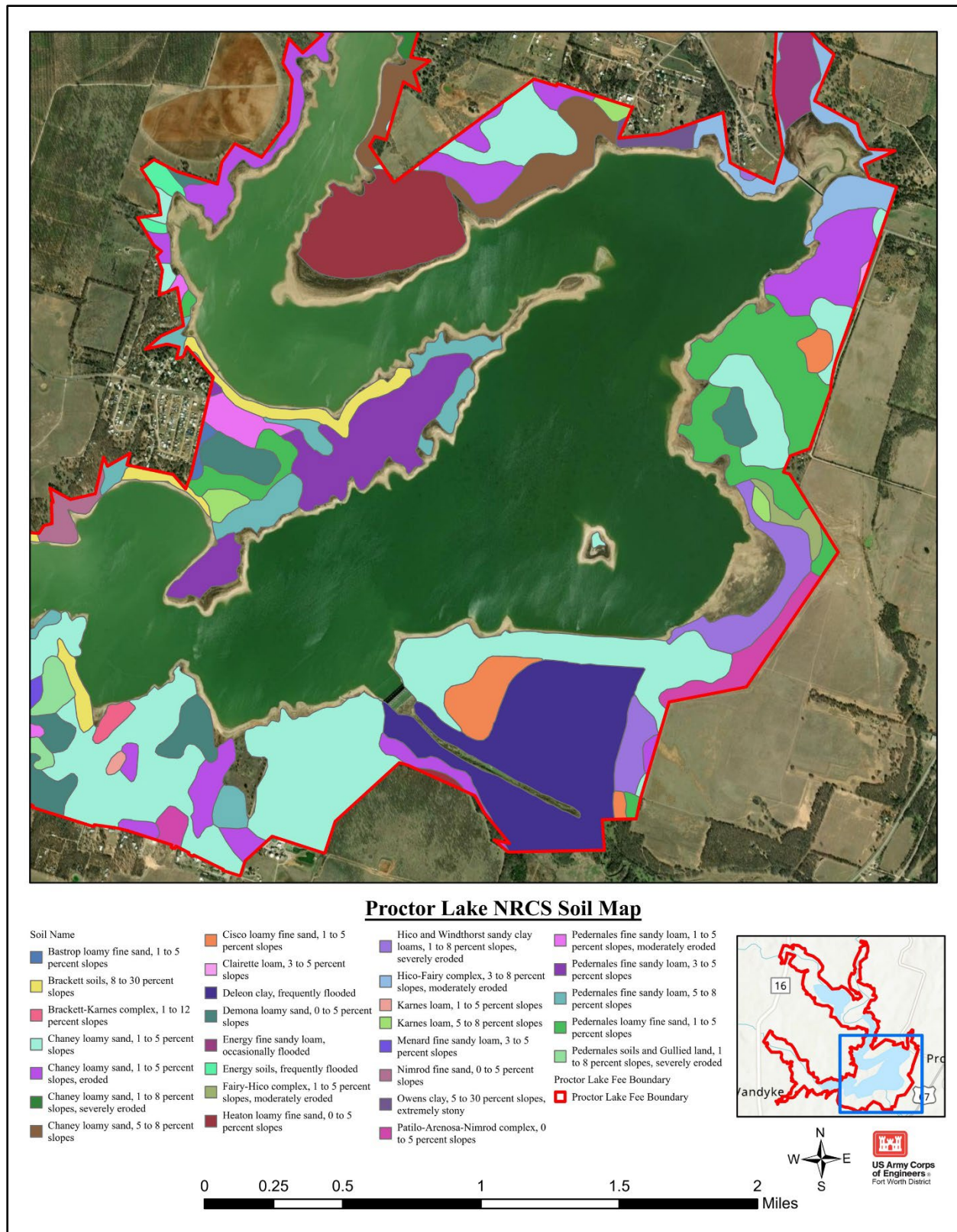


Figure 2.5 Proctor Lake NRCS Soil Map 2 of 4

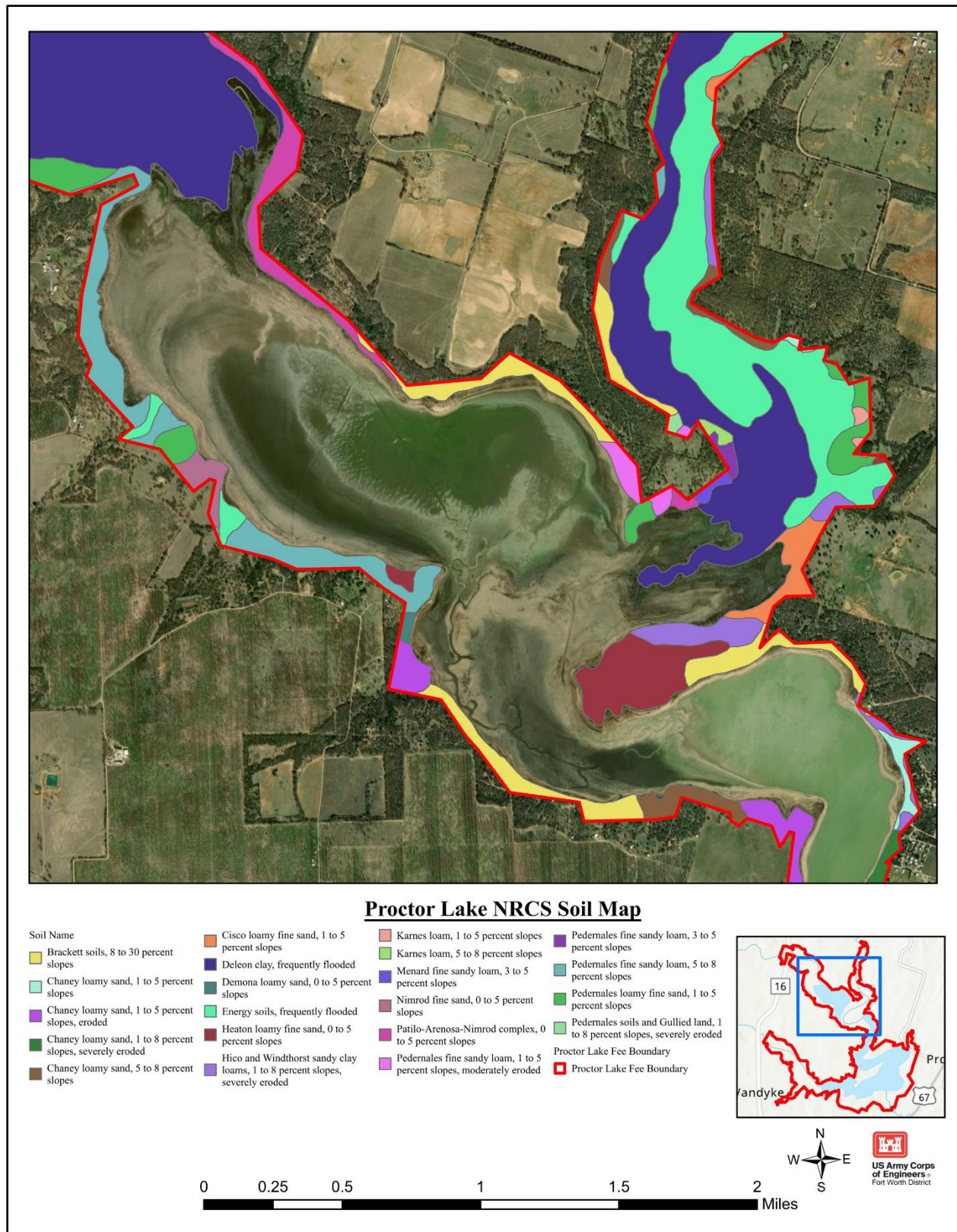


Figure 2.6 Proctor Lake NRCS Soil Map 3 of 4

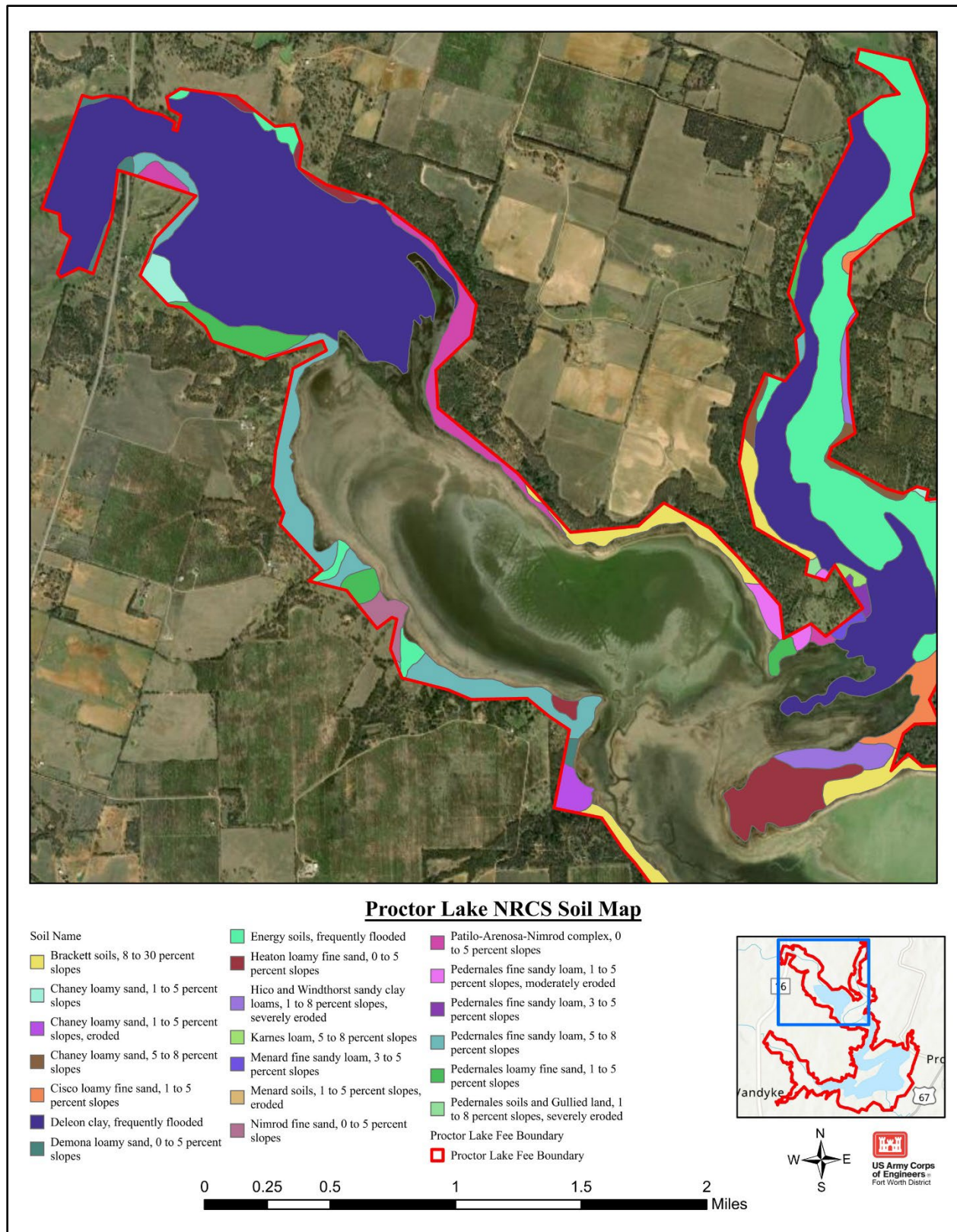


Figure 2.7 Proctor Lake NRCS Soil Map 4 of 4

Prime Farmland

As required by Section 1541(b) of the Farmland Protection Policy Act (FPPA) of 1980 and 1995, 7 U.S.C. 4202(b), federal and state agencies, as well as projects funded with federal funds, are required to (a) use the criteria to identify and take into account the adverse effects of their programs on the preservation of farmland, (b) consider alternative actions, as appropriate, that could lessen adverse effects, and (c) ensure that their programs, to the extent practicable, are compatible with state and units of local government and private programs and policies to protect farmland.

There are several soil types in the study area that are considered prime farmland soils or soils associated with farmlands of state importance. However, the lands represented by these soil types have not been used for farming since the lands were acquired prior to the initiation of construction of Proctor Lake in 1960.

2.1.6 Water Resources

Surface Water

The Leon River originates in Eastland County approximately 2 miles southeast of the town of Eastland, Texas, and flows in a southeasterly direction for approximately 299 miles to a point about 6 miles southeast of the city of Belton, Texas, where it joins the Lampasas River to form the Little River. The watershed lies in the central portion of Texas, between north latitudes 31°00' and 32°31' and west longitudes 97°21' and 99°10'. The watershed of the Leon River has a total drainage area of 3,570 square miles.

Proctor Dam is located on the Leon River at river mile 238.9. Proctor Lake is formed by flows from the mainstem Leon River and right bank tributaries of Sabana River and Copperas Creek. The slope of the Leon River in the vicinity of Proctor Dam is about 3.0 feet per mile.

The Leon River has three fairly large tributaries that flow into its river system. Cowhouse Creek, the largest tributary, has a drainage area of 692 square miles and enters the Leon River at river mile 20.8 (within Belton Lake). Sabana River and Copperas Creek, which are the next two largest tributaries of the Leon River, enter the Leon River above Proctor Dam. Sabana River enters the Leon River at river mile 247.5 and has a drainage area of 299 square miles. Copperas Creek enters the Leon River at river mile 239.5 and has a drainage area of 284 square miles. The entire Proctor Lake project area encompasses approximately 3.6% of the entire Leon River watershed.

The Leon River was authorized by Congress for navigation as far as the City of Belton. However, a navigation system was never built due to it not being economically feasible.

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.

Wetland classifications presented are derived from the National Wetlands Inventory, which was established by USFWS to aid in conservation efforts by collecting nationwide wetland distribution and type information (USFWS, 2022). The inventory is based on a single “snapshot” at the time of their survey and may not reflect conditions at conservation pool. Within the Proctor Lake project lands, wetlands generally occur near the rivers and flatter areas of the lake. Table 2.2 lists the acreages of various types of wetlands present at Proctor Lake and Figure 2.8 displays the distribution of wetland types at Proctor Lake.

Table 2.2 Total Acres of Wetland at Proctor Lake

Wetland Type	Acres
Freshwater Emergent Wetland	789
Freshwater Forested/Shrub Wetland	773
Freshwater Pond	13
Lake	4,326
Riverine	1,117
TOTAL ACRES of Water Resources	7,017

NOTE: Acreages differ from land and water surface calculations due to USFWS using a single snapshot of the water surface that may not reflect the actual conservation pool. Source: USFWS. 2023.

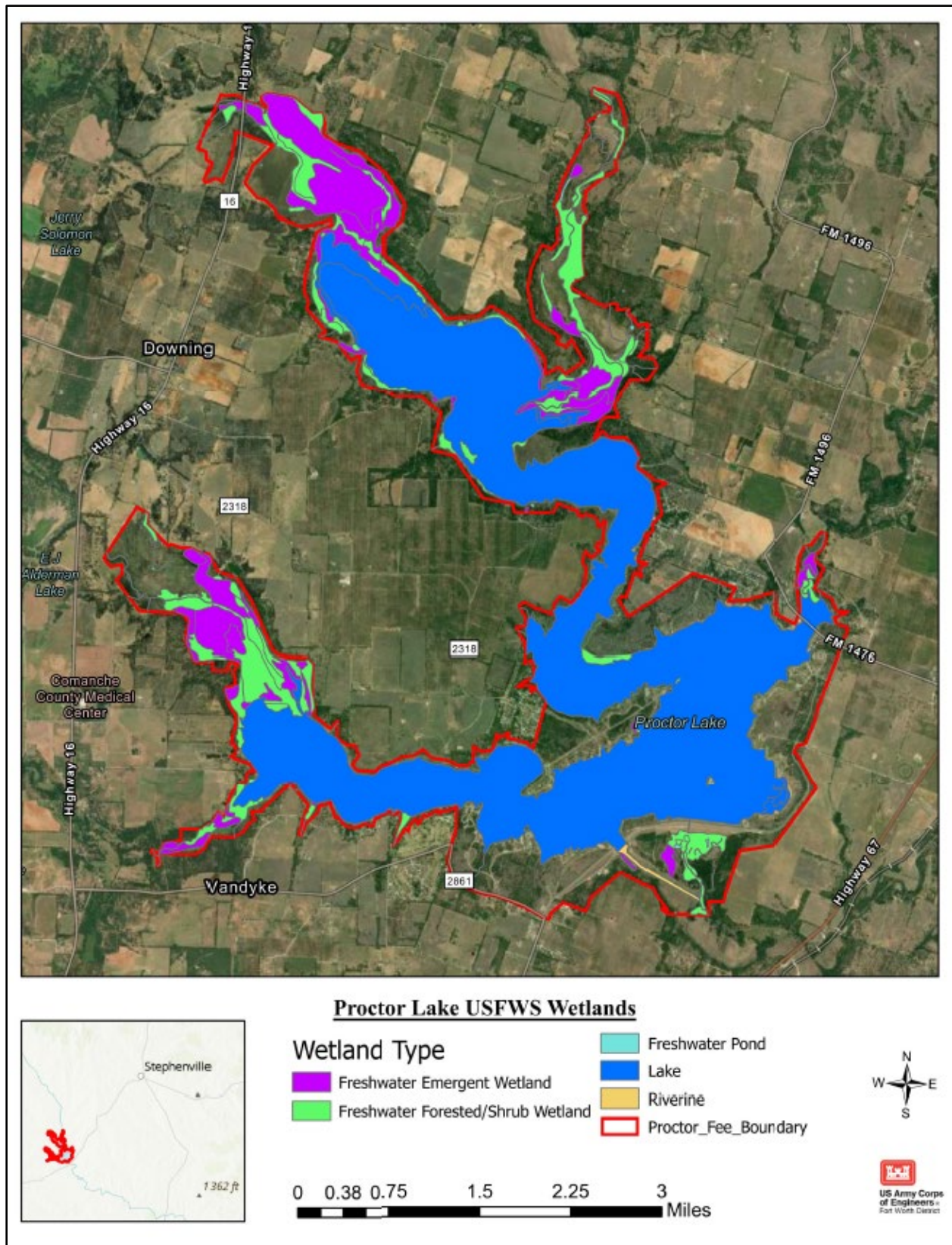


Figure 2.8 Wetland Types at Proctor Lake

Source: USFWS 2023

Groundwater

Deep below Proctor Lake lies the Trinity aquifers, specifically the Northern Portion. The Trinity Aquifer extends across much of the central and northeastern portion of Texas. This major aquifer is composed of several smaller aquifers contained within the Trinity Group including the Antlers, Glen Rose, Paluxy, Twin Mountains, Travis Peak, Hensell, and Hosston. However, none of these minor aquifers are located beneath Proctor Lake.

The Trinity Aquifer is one of the most extensive and highly used groundwater resources in Texas. Although its primary use is for municipalities, it is also used for irrigation, livestock, industry, and other domestic purposes. Some of the state's largest water level declines, ranging from 350 to more than 1,000 feet, have occurred in counties along the Interstate 35 corridor from McLennan County to Grayson County. These declines are primarily attributed to municipal pumping, but they have slowed over the past decade as a result of increasing reliance on surface water.

In general, groundwater quality in the Trinity Aquifer is fresh but very hard in the outcrop. Total dissolved solids (TDS) increase from less than 1,000 milligrams per liter in the east and southeast to between 1,000 and 5,000 milligrams per liter, or slightly to moderately saline, as the depth of the aquifer increases. Sulfate and chloride concentrations also tend to increase with depth.

Hydrology

Surface waters are categorized to hydrologic units. Hydrologic units are classified by the United States Geologic Survey (USGS) using a Hydrologic Units Code system, also referred to as HUC's. The units are classified from largest HUC with a two-digit region (e.g., Texas-Gulf Region) encompassing the largest area to a twelve-digit sub-watershed HUC. Proctor Lake Project is classified into sub-watersheds as follows and as illustrated in Figure 2.9.

- 12: Texas-Gulf (HUC 2: Region)
- 1207: Lower Brazos (HUC 4: Sub-Region)
 - 120702: Little Basin (HUC 6: Basin)
 - 12070201: Leon (HUC 8: Sub-Basin)
 - 1207020102: Armstrong Creek-Leon River (HUC 10: Watershed)
 - 120702010209: Walker Creek-Leon River (HUC 12: Sub-Watershed)
 - 1207020103: Copperas Creek (HUC 10: Watershed)
 - 120702010307: Duncan Creek-Proctor Lake (HUC 12: Sub-Watershed)
 - 1207020104: Sabana River (HUC 10: Watershed)
 - 120702010408: Sowell Creek (HUC 12: Sub-Watershed)
 - 120702010409: Sabana River-Proctor Lake (HUC 12: Sub-Watershed)
 - 1207020105: South Leon River-Leon River (HUC 10: Watershed)
 - 120702010501: Town of Proctor-Walnut Creek (HUC 12: Sub-Watershed)
 - 120702010503: Mustang Creek-Leon River (HUC 12: Sub-Watershed)

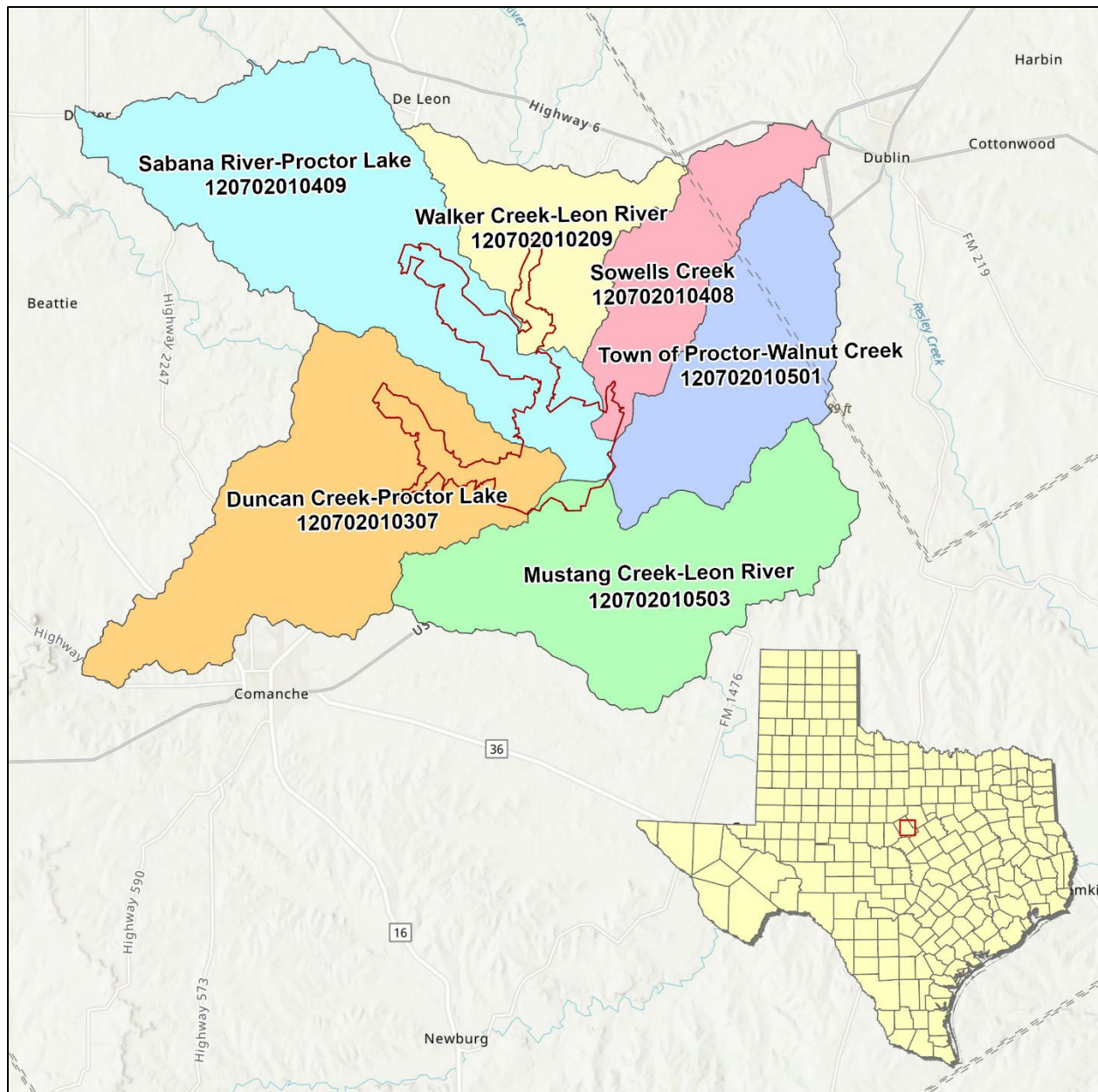


Figure 2.9 Hydrologic Classification for the Proctor Lake Project Area

Water Quality

Texas Commission on Environmental Quality (TCEQ) sets and implements standards for surface water quality to improve and maintain the quality of water in the state, based on various beneficial use categories for the water body. The Texas Integrated Report of Surface Water Quality, which is a requirement of the Federal Clean Water Act Sections 305(b) and 303(d), evaluates the quality of surface waters in Texas and identifies those that do not meet uses and criteria defined in the Texas Surface Water Quality Standards (TSWQS). The Texas Integrated Report describes the status of Texas' natural waters based on historical data and assigns waterways to various categories depending on the extent to which they attain the TSWQS.

Existing water quality within Proctor Lake is affected by rainfall and associated stormwater flows originating from residential, commercial, agricultural, and industrial point and nonpoint sources from properties upstream of the dam and reservoir. These stormwater flows have increased over time as a result of increased development, increasing the risk for pollution from runoff. Sedimentation from within the watershed tends to increase turbidity and decrease dissolved oxygen levels, as will lower rainfall especially during summer months. Both turbidity and low oxygen levels can negatively affect aquatic life due to reduced photosynthesis at lower depths and decreased oxygen, greatly affecting animal life.

The 2022 Texas Integrated Report - Texas 303(d) List (TCEQ, 2023) does identify a segment within Proctor Lake fee boundary as to exceeding TSWQS for bacteria in water (recreation use) within the Leon River below Proctor Lake Dam.

The Texas Department of State Health Services (DSHS) Seafood and Aquatic Life Group purpose is to address and prevent/reduce any disease-causing agent from occurring that can be transferred from aquatic life to humans within the State of Texas. As of November 2023, the DSHS has not issued any fish consumption advisories for Proctor Lake, as well as the Leon River below Proctor Dam within USACE Fee Owned Property.

Water Supply

For the purpose of water supply, a water supply contract with the Brazos River Authority (BRA) was approved on July 1, 1960 for 100% (31,400 acre-feet [ac-ft]) of the conservation storage below elevation 1,162.0 feet. A supplemental agreement to this contract was approved May 9, 1966 to divide the water supply storage space into 20% (6,280 ac-ft) for present supply and 80% (25,120 ac-ft) for future supply. Per the contract, BRA is paying a share of the annual Operations and Maintenance (O&M) cost for this water supply storage space. A water supply intake facility is located within the stilling basin; a water intake pipeline occupies the right side of the gate; and a pump and pipeline are located downstream of the embankment.

2.1.7 Hazardous Materials and Solid Waste

There are no hazardous or solid waste advisories for the within Proctor federal fee boundary.

As a part of USACE Fort Worth District (SWF) lake annual environmental compliance assessment, members of USACE inspect various areas (leases, easements, and parks) at Proctor that are known to potentially emit or store hazardous materials on an annual basis as part of USACE efforts to be in compliance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This assessment is completed through a USACE formal process known as the Environmental Review Guide for Operations (ERGO). Upon completion of the assessment if any compliance findings occur then formal remedial actions will take place.

2.1.8 Health and Safety

Proctor Lake's authorized purposes include flood risk management and water supply. Compatible uses incorporated in project operation management plans include conservation and fish and wildlife habitat management components. The USACE and Texas Parks and Wildlife Department (TPWD) have 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, swimming regulations, and speed limit and pedestrian signs for park roads. Proctor Lake also has solid waste management plans in place for camping and day use areas that are maintained by contract.

2.2. ECOREGION AND NATURAL RESOURCE ANALYSIS

2.2.1 Natural Resources

Operational civil works projects administered by USACE are required, with few exceptions, to prepare an inventory of natural resources. The basic inventory required is referred to within USACE regulations (ER and EP 1130-2-540) as a Level One Inventory. This inventory includes the following: vegetation in accordance with the National Vegetation Classification System through the sub-class level; assessment of the potential presence of special status species including but not limited to Federal and state listed endangered and threatened species, migratory species, and birds of conservation concern listed by the USFWS; land (soils) capability classes in accordance with NRCS soil surveys; and wetlands, which are previously discussed in Section 3.2. In addition to the data from the Level One Inventories, a Wildlife Habitat Appraisal Procedure (WHAP) was conducted.

TPWD's Wildlife Habitat Appraisal Procedure (WHAP) was used to assist in the preparation of the 2024 MP and SMP. The assessment was conducted from May 1 to May 3, 2023 at Proctor Lake by a multi-agency team from TPWD, SWF Operations, and the Regional Planning and Environmental Center (RPEC). A total of 101 data collection sites were selected using aerial photography and knowledge of the Proctor Lake staff. The three major habitat types that were selected and assessed were riparian/bottomland hardwood forests (BHF), upland forests, and grasslands. The WHAP assessment report can be found in Appendix C of this Plan.

The WHAP assessment revealed that the two most abundant habitat types surveyed were upland forests and grasslands. These two habitat types also scored the highest on average scores. From this assessment, no one area of the lake was determined to having greatest site potential but rather these areas were scattered throughout the lake.

2.2.2 Vegetation

Proctor Lake is located within the Cross Timbers Ecological Region (Ecoregion). The Cross Timbers Ecoregion encompasses approximately 26,000 square miles in north and central Texas and is the largest ecoregion of north-central Texas. It can be further divided into four vegetative sub-regions: Eastern Cross Timbers, Fort Worth Prairie, Lampasas Cut Plain, and Western Cross Timbers. The entire Proctor Lake project area is located completely within the Western Cross Timbers vegetative sub-region of the Cross Timbers Ecoregion.

The common grass and forb species for the Cross Timber Ecoregion include little bluestem (*Schizachyrium scoparium*), big bluestem (*Andropogon gerardi*), buffalograss (*Bouteloua dactyloides*), big muhly (*Muhlenbergia lindheimeri*), eastern gamagrass (*Tripsacum dactyloides*), and sideoats grama (*Bouteloua curtipendula*). Slopes and upland forests support honey mesquites (*Prosopis glandulosa*) and several cedars and junipers (*Juniperus* spp.), and have become more prevalent due to the absence of regular fires. What areas that are not prairies are dominated by junipers, post oaks (*Quercus stellata*) and blackjack oaks (*Quercus marilandica*). These oak forests are incredibly dense in tree count and are diversified with other tree species like pecan (*Carya illinoensis*), black walnut (*Juglans nigra*), little walnut (*Juglans microcarpa*), American sycamore (*Platanus occidentalis*), eastern cottonwood (*Populus deltoides*), plateau liveoak (*Quercus fusiformis*), bur oak (*Quercus macrocarpa*), American elm (*Ulmus americana*), Texas persimmon (*Diospyros texana*), honey mesquite (*Prosopis glandulosa*), lance-leaf sumac (*Rhus lanceolata*), and Mexican plum (*Prunus mexicana*).

This region like so many other ecological regions in Texas have undergone significant changes in the past 150 years. Although habitat for wildlife is present throughout the ecological regions as a whole, populations vary considerably within sub-regions. The diversity and configuration of the plant communities on the landscape influence wildlife populations. Other factors include fragmentation of once continuous habitat into smaller land holdings; competition for food and cover with livestock; conversion of woodland habitat to improved pastures, or urban and rural developments; and lack of proper wildlife and habitat management.

While the above plants and vegetive communities are typical for the Cross Timbers Ecoregion as a whole, many are not common at Proctor Lake. Specifically, common tree and shrub species at Proctor Lake include western soapberry (*Sapinus drummondii*), gum bumelia (*Sideroxylon lanuginosum*), buttonbush (*Cephalanthus occidentalis*), black willow (*Salix nigra*), cottonwood (*Populus deltoides*), cedar elm (*Ulmus crassifolia*), pecan (*Carya illinoensis*), post oak (*Quercus stellata*), bastard oak (*Quercus sinuate*), honey mesquite (*Prosopis glandulosa*), and hackberries (*Celtis* spp.). Common herbaceous species include Texas bluebonnet (*Lupinus texensis*), Indian blanket (*Gaillardia pulchella*), upright prairie coneflower (*Ratibida columnifera*), Texas paintbrush (*Castilleja indivisa*), American germander (*Teucrium canadense*), giant ragweed (*Ambrosia trifida*), Texas thistle (*Cirsium texanum*), Venus looking glass (*Triodanis coloradoensis*), and milkweeds (*Asclepias* spp.). Many of these

species were documented through the WHAP assessment, while these and many others have been documented through citizen science observations (iNaturalist 2024).

Two of the most populous metropolitan areas of Texas are located in part of the Cross Timbers Ecoregions. Within the ecoregion, common landscape plants which are aggressive colonizers and commonly escape cultivation include privet (*Ligustrum spp.*), Chinaberry (*Melia azedarach*), Heavenly bamboo (*Nandina domestica*), Pincushions (*Scabiosa atropurpurea*), Chinese Tallow (*Triadica sebifera*), and Tree of Heaven (*Ailanthus altissima*). Several grasses have also been identified as aggressive and/or invasive including Bermuda grass (*Cynodon dactylon*), Bahiagrass (*Paspalum notatum*), and Johnsongrass (*Sorghum halepense*). Giant Salvinia (*Salvinia molesta*) and water hyacinth (*Eichhornia crassipes*) are invasive aquatic plants and have been spreading aggressively in many USACE reservoirs. Several native plants have also become problematic due to human activities including honey mesquite (*Prosopis glandulosa*) (TPWD 2012).

2.2.3 Fisheries and Wildlife Resources

Proctor Lake provides habitat for an abundance of fish and wildlife species. Predominant game fish species in the lake include white crappie (*Pomoxis annularis*), black crappie (*Pomoxis nigromaculatus*), largemouth bass (*Micropterus salmoides*), channel catfish (*Ictalurus punctatus*), blue catfish (*Ictalurus furcatus*), yellow (flathead) catfish (*Pylodictis olivaris*), white bass (*Morone chrysops*), and hybrid bass (*Morone chrysops x Morone saxatilis*). Nongame fish species include longnose gar (*Lepisosteus osseus*), spotted gar (*Lepisosteus oculatus*), smallmouth buffalo (*Ictiobus bubalus*), freshwater drum (*Aplodinotus grunniens*), gizzard shad (*Dorosoma cepedianum*), and various sunfishes (*Centrarchidae spp.*). Nonnative fish species include common carp (*Cyprinus carpio*) and grass carp (*Ctenopharyngodon Idella*).

Many of the undeveloped areas provide habitat for mammals including white-tailed deer (*Odocoileus virginianus*), coyotes (*Canis latrans*), gray foxes (*Urocyon cinereoargenteus*), bobcats (*Lynx rufus*), eastern cottontail rabbit (*Sylvilagus floridanus*), fox squirrel (*Sciurus niger*), nine-banded armadillo (*Dasypus novemcinctus*), striped skunks (*Mephitis mephitis*), hog-nosed skunks (*Conepatus leuconotus*), raccoons (*Procyon lotor*), and American beaver (*Castor canadensis*). Feral hogs (*Sus scrofa*) are incredibly common on federal property as well.

The area also provides habitat for a diverse range of birds and acts as a stopover for migratory birds, including bald eagles (*Haliaeetus leucocephalus*) and a wide array of waterfowl. Rio Grande wild turkey (*Meleagris gallopavo intermedia*) and bobwhite quail (*Colinus virginianus*) utilize federal land. Over 215 species of birds have been identified at Proctor Lake.

Common reptiles include red-eared sliders (*Trachemys scripta elegans*), common snapping turtles (*Chelydra serpentina*), spiny softshell turtles (*Apalone spinifera*), Texas spiny lizards (*Sceloporus olivaceus*), eastern copperheads (*Agkistrodon contortrix*), western diamondback rattlesnakes (*Crotalus atrox*),

diamondback water snakes (*Nerodia rhombifer*), plain-bellied water snakes (*Nerodia erythrogaster*), western ratsnakes (*Pantherophis obsoletus*), and coachwhips (*Masticophis flagellum*). Proctor Lake also supports amphibians like Blanchard's cricket frogs (*Acris blanchardi*), gray treefrogs (*Hyla versicolor*), Rio Grande leopard frogs (*Lithobates berlandieri*), and Woodhouse's toad (*Anaxyrus woodhousii*).

2.2.4 Threatened and Endangered Species

The Endangered Species Act was enacted to provide a program for the preservation of endangered and threatened species and to provide protection for the ecosystems upon which these species depend for their survival. USFWS is the primary agency responsible for implementing the Endangered Species Act and is responsible for birds and other terrestrial and freshwater species. USFWS responsibilities under the Endangered Species Act include (1) the identification of threatened and endangered species; (2) the identification of critical habitats for listed species; (3) implementation of research and recovery efforts for these species; and (4) consultation with other Federal agencies concerning measures to avoid harm to listed species.

An endangered species is officially recognized by USFWS as being in danger of extinction throughout all or a significant portion of its range. A threatened species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Proposed species are any species of fish, wildlife, or plant that is proposed in the Federal Register to be listed under Section 4 of the Endangered Species Act. 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.

In addition, USFWS has identified species that are candidates for listing as a result of identified threats to their continued existence. The candidate designation includes those species for which 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. Although not afforded protection by the Endangered Species Act, candidate species may be protected under other federal or state laws.

By protecting a specific species, the USFWS and National Marine Fisheries Service (NMFS) may list them as endangered, threatened, listed, migratory, and or protected. A species can have more than one protection measure with the exclusion of endangered, threatened, and listed. A species cannot be both endangered and threatened; however, a species can be endangered, migratory and protected. A candidate species is any species whose status is currently under review to determine whether it warrants listing under the Endangered Species Act.

- Endangered is officially recognized by USFWS as being in danger of extinction throughout all or a significant portion of its range. Under this protection measure, a species cannot be taken, essential habitat altered and destroyed, nor transported without a permit. Take means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct” (USFWS, 2020B).
- The USFWS defines a species as threatened if it is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Under this protection measure, a species cannot be taken, essential habitat altered and destroyed, nor transported without a permit.
- Candidate is a species in which the USFWS has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposal to list, but issuance of a proposed rule is currently precluded by higher priority listing actions.
- Protected means that there are other Federal laws and regulations protecting the species than the Endangered Species Act. Examples include Bald and Golden Eagle Protection Act, Lacey Act, and Migratory Bird Treaty Act. Just because a species is listed as migratory doesn’t automatically qualify it as protected, it must be protected by more than one law.
- Migratory means it applies specifically to migratory birds. The law that governs these species is the Migratory Bird Treaty Act. Under this law “it is illegal to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid Federal permit” (16 U.S.C. 703-712; USFWS, 2020A).

The USFWS may list a species under “Similarity of Appearance (Threatened)” because of the species similarity of appearance to another species that is currently listed as threatened. Under this classification these species will not have to go through Section 7 Consultation of the Endangered Species Act because they are not biologically endangered. However, under this listing category, the species may be protected by Section 9 of the Endangered Species Act, which primarily prohibits the “taking” of endangered species of fish and wildlife. To “Take” means to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct” (USFWS, 2020B).

The USFWS’s Information for Planning and Consultation (IPaC) database (USFWS, 2024C) lists the threatened and endangered species, and trust resources that may occur within the Proctor Lake Federal Fee Boundary (see USFWS Species List and the IPaC Report in Appendix C). Based on the IPaC report, there are 4 federally listed, proposed, or candidate species that could be found within Proctor Lake (USFWS, 2024C). A list of these species is presented in Table 2.3. There is no Critical Habitat designated within Proctor Lake fee boundary. The species identified as Threatened,

Endangered or Candidate Species by TPWD that are not federally listed are included in Appendix C of the Master Plan as well as a list of Species of Greatest Conservation Need (SGCN). Appendix C also has the list of rare plant communities for the Cross Timbers Ecoregion.

Table 2.3 Federally Listed Threatened & Endangered Species with Potential to Occur at Proctor Lake

Common Name	Scientific Name	Federal Status	State Status
Monarch Butterfly	<i>Danaus plexippus</i>	Candidate	Not Listed
Piping Plover	<i>Charadrius Melodus</i>	Threatened	Threatened
Rufa Red Knot	<i>Calidris canutus rufa</i>	Threatened	Threatened
Tricolored Bat	<i>Perimyotis subflavus</i>	Proposed Endangered	Not Listed
Whooping Crane	<i>Grus Americana</i>	Endangered	Endangered

The Master Plan revision does not entail wind energy aspects; therefore the red knot (*Calidris canutus rufa*) and piping plover (*Charadrius melodus*) were intentionally not addressed in detail below concerning possible impacts to the species.



Photo 2.1 Monarch Butterfly

Source: USFWS, 2023

The USFWS lists the monarch butterfly (*Danaus plexippus*) as a candidate species wherever it is found (USFWS, 2021). The monarch butterfly is orange with black stripes and white dots on its wings that span up to 10 cm across, while the caterpillars are around 5 cm long (NatureServe, 2021). Its breeding habitat consists primarily of milkweed species (*Asclepias* spp.) and closely related species, which its larvae feed exclusively on. During North American migration, the monarch butterfly can be found anywhere flowers are blooming. The Proctor Lake fee boundary contains an

abundance of blooming flowers, including milkweed, which is critical to egg laying. The combination of habitat and numerous recent sightings confirms that this species is common to the area while it is migrating. Monarch butterfly and other native pollinator habitat is discussed as a special topic in Chapter 6.



Photo 2.2 A Group of Tricolored Bats

Source: USFWS, 2023

The USFWS lists the tricolored bat (*Perimyotis subflavus*) as proposed endangered (USFWS, 2024D), and the Proctor Lake fee boundary as a location where the species may occur. Tricolored bats seasonally migrate between winter hibernacula and summer nursery sites. Roosting may take place in tree cavities, caves, mines, rock crevices, piles of dead leaves, among live vegetation, and buildings. Tricolored bats forage along the edge of forests and across waterways near roosting and hibernating sites. They emerge at dusk and feed on various insect species over water and tops of trees (NatureServe, 2022). Tricolored bats are facing threats of extinction due mainly to the growing threat of white-nose syndrome, a deadly fungal disease affecting cave-dwelling bats across North America. White-nose syndrome has already caused an estimated decline of more than 90% of affected tricolored bat colonies across the majority of the species' range (USFWS, 2024D). The species occurrence is expected to be rare within the project area due to lack of recent sightings.



Photo 2.3 Whooping Crane

Source: USFWS, 2023

The whooping crane (*Grus americana*) is listed as endangered wherever it is found (USFWS, 2024B). Habitat for the species consists of marshes, shallow lakes, lagoons, salt flats, grain and stubble fields, and barrier islands (AOU 1983, Matthews and Moseley 1990 and NatureServe 2016). Pockets of habitat for this species are present on Proctor Lake project land but these areas are used as a stopover during their annual migrations. When the species is migrating, sighting for the species is rare at the lake and therefore they are considered a rare occurrence at Proctor Lake.

Texas Natural Diversity Database

The Texas Natural Diversity Database (TXNDD) (2023), administered by TPWD, manages and disseminates information on occurrence of rare species, unique native plant communities, and animal aggregations in Texas to help guide project planning efforts. TXNDD provided information for the following U.S. Geological Survey (USGS) quadrangle that encompass Proctor Lake lands, Brownwood, Eastland, Hamilton, and Stephenville. Upon request from the USACE, TPWD provided this information for Proctor Lake, which there is none found within the fee boundary.

Unique Species to Proctor

The Guadalupe penstemon (*Penstemon guadalupensis*) also known as Guadalupe beardtongue, white penstemon, and white beardtongue is a flowering perennial plant within the figwort family that can only be found in Texas and northern Mexico. TPWD lists it as a Species of Greatest Conservation Need (SGCN) but it is not listed on either Texas or U.S. list of Threatened and Endangered Species List. Nor is the species mentioned in the TXNDD Report provided from TPWD to the USACE.

NatureServe 2024 lists the species under the conservation status as G3 (vulnerable) which is between the statuses of G2 (imperiled) and G4 (apparently secure). The species is rare to the U.S but uncommon to Texas. Furthermore, the species tends to be found only on unique geological formations within its range and whose habitat is often degraded due to agricultural practices. The few documented observations within the Proctor Lake fee boundary makes the species worth including in this report. The species is characterized by its flowers that can grow over 1 inch in length and whose primary color is white, but can often have streaks of purple and pink. The plant can grow up to 20 inches in height and prefers prairies that are underlie with sandy to clayey soils that can be mixed with loam and gravel (Lady Bird Johnson Wildflower Center, 2024).



Photo 2.4 Guadalupe Penstemon at Proctor Lake

Source: USACE

2.2.5 Invasive and Noxious Native Species

An invasive species is defined as a plant or animal that is not native to an ecosystem and whose introduction causes, or is likely to cause, economic and/or environmental harm, or harm to human health. Invasive species can thrive in areas beyond their normal range of dispersal. Sometimes native noxious species are included with invasive species when human-caused actions or practices cause similar negative impacts as invasive species. Invasive and noxious native species are characteristically adaptable, aggressive, and have high reproductive capacity. Their vigor, along with a lack of natural enemies or controls, often leads to outbreak populations with some level of negative effects on native plants, animals, and ecosystem functions and are often associated with disturbed ecosystems and human activities. One example of native noxious species is Common Cattail (*Typha latifolia*) taking over a cleared marsh and inhibiting other native marsh species from taking root. Another example would be Pine

Trees (*Pinus* spp.) or Cedars (*Juniperus* spp.) becoming so dense in an area that their dead needles will change the acidity of the soil or cover the soil to such an extent that few other trees can germinate.

Table 2.4 lists many of the invasive and exotic species found at Proctor Lake. Other species are currently being researched for their invasive characteristics. Most of the problematic native species are disruptive to human developments, habitations, or projects or are problematic in response to human behavior and require active management to prevent damage or encroachment.

Table 2.4 Problematic Noxious Native and Invasive Non-Native Species Found at Proctor Lake

Common Name	Scientific Name	Native/ Non-Native
BIRDS		
Black Vulture	<i>Coragyps atratus</i>	Native
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	Native
FISH		
European Carp	<i>Cyprinus carpio</i>	Non-native
Grass Carp	<i>Ctenopharyngodon idella</i>	Non-native
MAMMALS		
Feral Cat	<i>Felis catus</i>	Non-native
Feral Swine/Wild Boar	<i>Sus scrofa</i>	Non-native
INVERTEBRATES		
Asian Clam	<i>Corbicula fluminea</i>	Non-native
Desert Termite	<i>Gnathamitermes tubiformans</i>	Native
Red Imported Ant (Fire Ant)	<i>Solenopsis invicta</i>	Non-native
Yellow-legged Mud-dauber Wasp	<i>Sceliphron caementarium</i>	Native
Zimmerman's Mud-dauber Wasp	<i>Chalybion zimmermanni</i>	Native
Southern Black Widow Spider	<i>Latrodectus mactans</i>	Native
PLANTS		
Bastard Cabbage	<i>Rapistrum rugosum</i>	Non-native
Bermuda Grasses	<i>Cynodon</i> spp.	Non-native
Bigpod Sesbania	<i>Sesbania herbacea</i>	Native
Black Willow	<i>Salix nigra</i>	Native
Bull Thistle	<i>Cirsium vulgare</i>	Non-native
Callery Pear	<i>Pyrus calleryana</i>	Non-native
Cheatgrass	<i>Bromus tectorum</i>	Non-native
Chinaberry	<i>Melia azedarach</i>	Non-native
Coastal Sandbur	<i>Cenchrus spinifex</i>	Native
Docks	<i>Rumex</i> spp.	Non-native

Common Name	Scientific Name	Native/ Non-Native
Field Bindweed	<i>Convolvulus arvensis</i>	Non-native
Giant Ragweed	<i>Ambrosia trifida</i>	Native
Honey Mesquite	<i>Prosopis glandulosa</i>	Native
Japanese Brome	<i>Bromus japonicus</i>	Non-native
Johnson Grass	<i>Sorghum halepense</i>	Non-native
King Ranch Bluestem	<i>Bothriochloa ischaemum</i> var. <i>songarica</i>	Non-native
Kleingrass	<i>Panicum coloratum</i>	Non-native
Lesser Balloon Vine	<i>Cardiospermum halicacabum</i>	Native
Poison Ivy	<i>Toxicodendron radicans</i>	Native
Poverty Weed	<i>Baccharis neglecta</i>	Native
Prickly Lettuce	<i>Lactuca serriola</i>	Non-native
Prickly Sowthistle	<i>Sonchus asper</i>	Non-native
Rescue Brome	<i>Bromus catharticus</i>	Non-native
Rough Cocklebur	<i>Xanthium stumarium</i>	Native
Saltcedar	<i>Tamarix ramosissima</i>	Non-native
Saw Greenbriar	<i>Smilax bona-nox</i>	Native
Willow baccharis	<i>Baccharis salicina</i>	Native

While currently not present at the Proctor Lake, invasive mollusks including zebra mussels (*Dreissena polymorpha*) are an ongoing threat to native aquatic species and communities due to their ability to infest and expand rapidly. Numerous USACE lakes in SWF have extant populations of zebra mussels. Funding and efforts are currently underway to manage for this species in the region. The USACE continues to monitor for zebra mussels and has a campaign to educate the public on methods to prevent the spread of zebra mussels.

Emerald ash borer (*Agilus planipennis*) infestations have killed millions of acres of ash trees (*Fraxinus* spp.) across North America, but they have not been reported at Proctor Lake or Comanche County. Texas observations were initially isolated to Harrison County; but have been spreading rapidly to other eastern, northern, and central Texas counties. As of 2023, emerald ash borers have been detected and confirmed across the state, and Texas has issued quarantines in the following Texas counties in Texas: Bowie, Camp, Cass, Cooke, Dallas, Denton, Harrison, Hopkins, Marion, Morris, Parker, Rusk, Tarrant, Titus and Wise. Emerald ash borers are expected to move into more counties in coming years, especially those with large stands of ash trees. Project and District staff are continuing to monitor for nearby infestations and follow guidance of the U.S. Department of Agriculture and the Texas Department of Agriculture.

Because of the lake's relative isolation from metropolitan areas, it does not have as many invasive landscape plant species compared to those within or directly adjacent

to major metropolitan areas. This remoteness further protects the lake from the inadvertent release and spread of common landscape plants that could become aggressive colonizers from nearby residential developments.

2.2.6 Aesthetic Resources

Proctor Lake includes many acres of scenic shorelines, lake views, and wildlife viewing areas providing high visual and scenic qualities. Some areas are admired for their scenic attractiveness (intrinsic scenic beauty that evokes a positive response), scenic integrity (wholeness of landscape character), and landscape visibility (how many people view the landscape and for what reasons and how long). Some areas have been designated as Wildlife Management to preserve specific animal, plant, or environmental features that also add to the scenic qualities at the lake. Nearby parks have been designed to access the lake, allow access to hiking trails, and take advantage of scenic qualities at the lake and surrounding areas.

Adjacent landowners are informed that removing trees to obtain a view of the lake not only destroys wildlife habitat but also lowers the scenic quality of the shoreline when viewed by the general public from the water surface. Unauthorized removal of trees and other vegetation could result in a fine. Additionally, reasonable measures must be taken to ensure that damage to the natural landscape from invasive species and catastrophic wildfire are minimized. Vegetative management, mowing permits, debris removal, and other shoreline issues are addressed in the shoreline policy.

2.3. CULTURAL RESOURCES

2.3.1 Brief History of the Area

In the area around Proctor Lake, the earliest known evidence for human settlement dates to at least 13,000 before present (B.P.). Broadly speaking, Comanche County lies within what is considered the Central Texas archeological area. Prehistory, considered the time before European contact with the indigenous population, is divided into three periods, the Paleoindian, Archaic, and Late Prehistoric.

Archeologists term the earliest of these periods as the Paleoindian Period. Defined by comparatively small and mobile populations that subsisted primarily by hunting and gathering over large geographic areas, evidence for Paleoindian populations is relatively rare at Proctor Lake and elsewhere. These populations are generally known for distinctive projectile points and little else. Recent excavations in Central Texas have contributed vastly to our knowledge of this time period in North America and in some instances, overturned long-held beliefs. The Gault site, in nearby Williamson County, dates to at least 13,500 B.P. This site, located on Buttermilk Creek, was one of the first to provide firm data to suggest an occupation of North America predating even the ancient Clovis Culture. Intact sites from this period would likely be buried under many feet of alluvial deposits.

The Archaic Period spans the largest temporal period of Central Texas prehistory, given this fact, it is divided into the Early (8,500-6,000 B.P.), Middle (6,000-3,500 B.P.), and Late (3,500-1,200 B.P.) sub periods. Like the Paleoindian, archeological sites dating to the Archaic are differentiated by their projectile point types. Over this large timespan, populations increased in general. Climatic fluctuations influenced settlement and subsistence of these populations. The warmest parts of the Archaic saw vegetation changes and migrations of some animals away from the area. Though, like the Paleoindian, many Archaic Period archeological site can be sparse, archeologists have dated many campsites replete with burned rock middens to this time period.

The Late Prehistoric Period (1,250-300 years B.P.) can be divided into two sub periods, the Austin (1,250-800 B.P.) and the Toyah (800-300 B.P.), with some variation. This Late Prehistoric Period is demarcated by two technological innovations, the bow and arrow and pottery. Evidence exists for a decline in populations at the beginning of this period, recovering later. Archeological sites from the period show an increased reliance on the American bison for subsistence.

Archeologists term the period of and just after initial European contact and exploration the Protohistoric Period. Overlapping with the Toyah phase in some instances, this period began with the arrival of Cabez de Vaca in 1528. It can be noted by the presence of European-sourced artifacts in the archeological record. In Comanche County, evidence exists of the presence the Kiowa, Apache, and notably the Comanche.

The Historic Period is considered to have begun during the period of sustained European (namely Spanish Colonial) presence in Texas roughly 300 years ago, on through the present day. In Comanche County, as in much of the surrounding area, the presence of the Comanche prevented large-scale European settlement. The first well-documented settlement of the area dates to 1854, when the Jesse Mercer Colony was founded in what would become Comanche County two years later. The American Civil War disrupted settlement. With the withdrawal of the U.S. Army from the area, the Mercer Colony fell victim to Comanche raids. After the war ended, settlement recommenced as the Comanche were gradually pushed out of the area.

The late 19th century was a time of growth in Comanche County, and a diverse farming and ranching economy developed, with cotton becoming a predominant cash crop. The coming of the railroad only accelerated this trend. During this time, the Leon River Valley became an important locale for the development of pecan orchards. Early in the 20th century, boll weevil-induced crop losses saw the county adopt peanut farming and other nut tree orchards, an activity that continues to the present day. As with elsewhere in Texas, the 20th century also saw the development of the petroleum industry in the county. Like many rural counties, the recent past has evinced a migration from the rural to urban areas. The post-World War II period saw population decline through the 1960s, and then gradually, if only partially, recover through the end of the century. Tourism and recreation, enhanced by the creation of Proctor Lake, have added to the diversity of the economy into the present day.

2.3.2 Previous Investigations

Archeologists first investigated the area around Proctor Lake in advance of the Lake's construction in the 1950s. Since the initial investigations by Curtis Tunnell and Edward Jelks in 1959, only one archeological investigation of any size has been conducted at the lake, a phase I cultural resource inventory of Copperas Creek Park performed by Ecological Communications Corporation in 2009. These efforts have resulted in the recording of forty archeological sites around Proctor Lake.

2.3.3 Long-term Cultural Resources Objectives

A Historic Properties Management Plan (HPMP) will be developed for Proctor Lake in the near future, as funding allows. Such plans establish standard operating procedures pertaining to both USACE and external activities that might impact cultural resources. Completion of a full inventory and National Register of Historic Places eligibility evaluation of cultural resources at Proctor Lake is a long-term objective that is needed for compliance with Section 110 of the NHPA. Ultimately, all currently known sites, as well as those found in future inventories should be evaluated to determine their eligibility for the NRHP. Sites of currently unknown NRHP eligibility and those found in the future to be eligible for the NRHP must be protected from impacts caused by USACE or those having easements on fee lands. All future cultural resource activities will be coordinated with the State Historic Preservation Officer at the Texas Historical Commission and with the federally-recognized Native American governments who recognize the area as part of their historic homeland, in order to insure compliance with the National Historic Preservation Act, the Archaeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act.

2.4. PALEONTOLOGICAL RESOURCES

2.4.1 Introduction

Proctor Lake boasts interesting and unique paleontological resources that have contributed significantly to the scientific understanding of the area during the Early Cretaceous Period, about 115 million years ago. The paleontological research that Southern Methodist University (SMU), the Witte Museum, and others have conducted at Proctor Lake has resulted in hundreds of specimens, the naming of at least two new species, a greater understanding of dinosaur evolution and behavior, and more insight into the Twin Mountains Formation and the rise of the Western Interior Seaway. Paleontological resources provide an interesting management and protection challenge for the USACE staff at Proctor Lake. Paleontological materials do not receive the same protection and regulation under federal law and USACE policy as cultural and archaeological resources. Understanding the value and nature of the paleontological resources at Proctor Lake will better inform management decisions.

2.4.2 Site Description

Significant discoveries at Proctor Lake were found at a location paleontologists have named “Proctor Lake Dinosaur Locality”, and research publications refer to the site as such. Paleontologists discovered specimens in two quarries, referred to in the literature as Camp Quarry and North Quarry. These sites occur on the shoreline above conservation pool and have experienced erosion from wind, rain, and floods. Floods continue to impact the topography of the sites. While the USACE has not technically closed this area to the public, human impacts remain low due to rugged terrain, difficult access, and being undesirable to anglers. Overall, the general public’s ignorance of the paleontological resources present stand as the sites’ greatest protection from intention or unintentional degradation.

The site occurs in the Twin Mountains Formation, a formation well-known to central Texas. Soil characteristics indicate this area was once an arid flood basin. Paleontologists at the site discovered fossils in red mudstones soils between fifteen and twenty meters above the Pennsylvanian-Cretaceous Unconformity, a diagnostic soil boundary. Paleontologists mapped sixty concentrations of bone which contained either significant portions of a dinosaur or many dinosaurs. The SMU scientists initially excavated and removed eight of these sixty blocks, and including material removed by subsequent excavations, resulted in four hundred eighty-eight specimens from forty-eight localities in the two quarries. Many more unexcavated specimens remain in the area, but SMU and other researchers have elected not to remove these to preserve provenience and reduce the storage burden of additional specimens. The Proctor site is unique because it represents an abundance of individuals and specimens representing very few species. The overwhelming majority of specimens identified belonged to *Convolosaurus marri*, an ornithopod known only from the Proctor site. Paleontologists also found a single tooth from a dromaeosaur, the only representation of another dinosaur in the material. Scientists also discovered crocodilian remains identified as *Wannchampsus kirpachi*, a crocodilian-like neosuchian and a crocodilian belonging to a new species, *Tarsomordeo winkleri*.

2.4.3 History and Discovery of Resources

The initial discovery of the Proctor Lake Dinosaur Locality and its paleontological resources occurred in 1985. Tarleton State University (TSU) geology student Rusty Branch discovered the site while looking for fossils in the ancient flood plain. At the time, the USACE had not developed much of the, and the USACE allowed visitors to use offroad vehicles in the area. Following Mr. Branch’s discovery, Dr. Phillip Murray of TSU and Dr. Louis Jacobs of SMU began a joint excavation of the North Quarry and Camp Quarry sites. They removed many specimens but left hundreds in the area. Since these remains occurred on USACE property, they remained property of the Department of the Army. The USACE allowed SMU to take the collected specimens to the university for curation and storage. The 1985 excavations received local, regional, and national attention. Newspapers in Comanche, Dublin, and Clifton reported on the discovery and its progress. The New York Times also reported on the discovery and excavation. Thankfully, this interest did not cause looting or damage to the sites.

Two other smaller excavations followed the 1985 project. In 2009, Dr. Jacobs requested and received permission from the USACE to excavate newly discovered fossils in the area. The number of specimens SMU excavated is unknown. In 2016, Dr. Kate Andrzejewski of SMU conducted an excavation of recently revealed remains at Proctor Lake as well. This excavation resulted in the collection of at least one specimen. Recently, erosion has revealed more dinosaur bones. Dr. Thomas Adams from the Witte Museum in San Antonio have begun excavating at least one specimen. Given what previous excavations have reported regarding the Proctor Lake Dinosaur Locality, numerous specimens remain in the area that will likely continue to emerge from the soil as it erodes.

Dr. Dale Winkler of SMU studied the Proctor specimens extensively and published most scientific articles regarding them. Dr. Winkler greatly advanced the scientific understanding of the Proctor Lake Dinosaur Locality and its faunal remains, describing the areas geological context, prehistoric habitat and climate, the specimens collected from the site, and the behavior of the dinosaurs that once lived there. Dr. Winkler used the specimens Drs. Murray and Jacobs collected and SMU curated for his research on the Proctor Lake Dinosaur Locality. He also assisted Dr. Andrzejewski's work naming the dinosaur and prepared specimens that Dr. Thomas Adams used to identify the crocodilian he named in Dr. Winkler's honor. Dr. Winkler's work provided much of the information for this summary. His contributions, along with those of his colleagues, provided essential information regarding the paleontological resources at Proctor Lake.



Photo 2.5 Dinosaur Skeleton on Display at Proctor Lake Project Office

Source: USACE

Proctor Lake staff have incorporated the lake's unique paleontological heritage in interpretive presentations and programming. These presentations focused what scientists knew about the Proctor Lake dinosaurs at the time and other dinosaurs found in Texas. The Proctor Lake dinosaurs have also been featured in books like Lone Star Dinosaurs and coloring books. Three *C. marri* specimens are currently on public display. One is the Perot Museum in Dallas, another at the Museum of Science and History in Fort Worth. The Proctor Lake project office displays the third and final specimen in its lobby shown in Photo 2.4, free to see with some interpretive information explaining Proctor Lake's unique paleontological resources. In the future, Proctor staff should continue to place emphasis on this history through interpretive programs, signage, and materials.

2.4.4 Significant Discoveries

Proctor Lake Dinosaur Locality produced numerous ornithopod specimens. Dr. Winkler initially described the species represented by these remains at the "Proctor Lake hypsilophodont" pending identification. Hypsilophodonts were herbivorous dinosaurs that ranged in size from the small Proctor Lake specimens to larger species later in the Cretaceous. Hypsilophodont fossils are rare in Early Cretaceous sites, except at sites on the Isle of Wight in Great Britain. The "Proctor Lake hypsilophodont" initially appeared most similar to the species found on the Isle of Wight, *Hypsilophodon foxii*. Using specimens obtained from Proctor Lake and curated by SMU, Dr. Andrzejewski determined the species formed sister clades with *Hypsilophodon foxii* and the iguanodontids but was not a direct descendant or predecessor for either group. Dr. Andrzejewski named the species *Convolosaurus marri*, meaning "Marr's flocking lizard". Ray H. Marr was a SMU alumnus, trustee and donor for SMU's Institute for the Study of Earth and Man, and president of Marr Oil & Gas LTD. Dr. Andrzejewski used the wide array of specimens recovered from Proctor Lake and identified the largest individual as the optimum holotype for this species. However, this is still a subadult skeleton, meaning the true adult size of this new species is still unknown.

The abundance of *C. marri* fossils of various subadult sizes suggests the animals either used the area as a nesting ground or nursery for young individuals. Paleontologists have discovered sites similar to other ornithopod nests but have not found any eggs or eggshells at the site. None of the *C. marri* bones show evidence of predation and predators are only represented in the site by the single dromaeosaur tooth and the crocodilian remains. This supports the theory that *C. marri* subadults used the area as a refuge from predation by large theropod dinosaurs and competition with other herbivorous dinosaurs. According to Dr. Winkler, the range in subadult skeleton sizes indicates both rapid growth and parental care. Skeletal remains appear to represent repeated use of the area, as well as natural attrition and fossilization of individuals rather than catastrophic clutch losses or mass-burial events. The presence of small crocodilians suggests that these species may have also practiced age-class partitioning, with younger, smaller crocodilians using this same area as a refuge like the *C. marri* subadults that they likely preyed upon.

Paleontologists identified at least one specimen of these crocodilians as a new species. Dr. Adams of the Witte Museum in San Antonio, Texas, named this cat-sized crocodile *Tarsomordeo winkleri*, or “Dr. Winkler’s ankle-biter” based on skull, vertebrae, and leg bones recovered at Proctor Lake by SMU researchers in previous excavations. *T. winkleri* possessed long limbs and a stance similar to mammals and birds than the splayed stance of modern crocodilians. This suggests that *T. winkleri* was adapted to running or galloping and pursuing prey. According to Dr. Adams, this small species may have filled a niche actively predating *C. marri* eggs and hatchlings. This discovery better attests to the diversity of crocodilians in the Early Cretaceous and filling in the phylogenetic tree of related species.

2.4.5 Management Implications

Since the Proctor Lake Dinosaur Locality sites occur within or near areas with high visitor usage, project staff must make certain management considerations to protect this resource. Paleontological resources do not enjoy the same strict protections under federal law and USACE policy as cultural resources. The best protection for this area rests in anonymity. The public largely does not know where these sites are located, protecting them from looting. Their location and the local terrain likely will protect the site from inadvertent human impacts. Designating this area as restricted or sensitive could generate curiosity that might lead to unwanted exploration or looting. Maintaining fencing and thick natural vegetation should further discourage or limit public access to the area. USACE park rangers should also monitor the area for any potential disturbances. The USACE also should pursue beneficial partnerships to survey, excavate, and curate these resources as needed to ensure these unique and important paleontological resources are available to the scientific community for generations to come.

2.5. DEMOGRAPHIC AND ECONOMIC ANALYSIS

2.5.1 Overview

The following information covers the current demographic and economic data of the communities surrounding Proctor Lake (Zone of Interest). This basic information gives a snapshot of the current population and looks at growth trends for the area.

2.5.2 Zone of Interest (Region Served)

Proctor Lake lies completely within Comanche County in Central Texas. The Zone of Interest for the socio-economic analysis of Proctor Lake is defined as the county which the lake lies, Comanche County, as well as the five surrounding counties, which are Brown, Erath, Eastland, Hamilton, and Mills counties as illustrated in Figure 2.10.

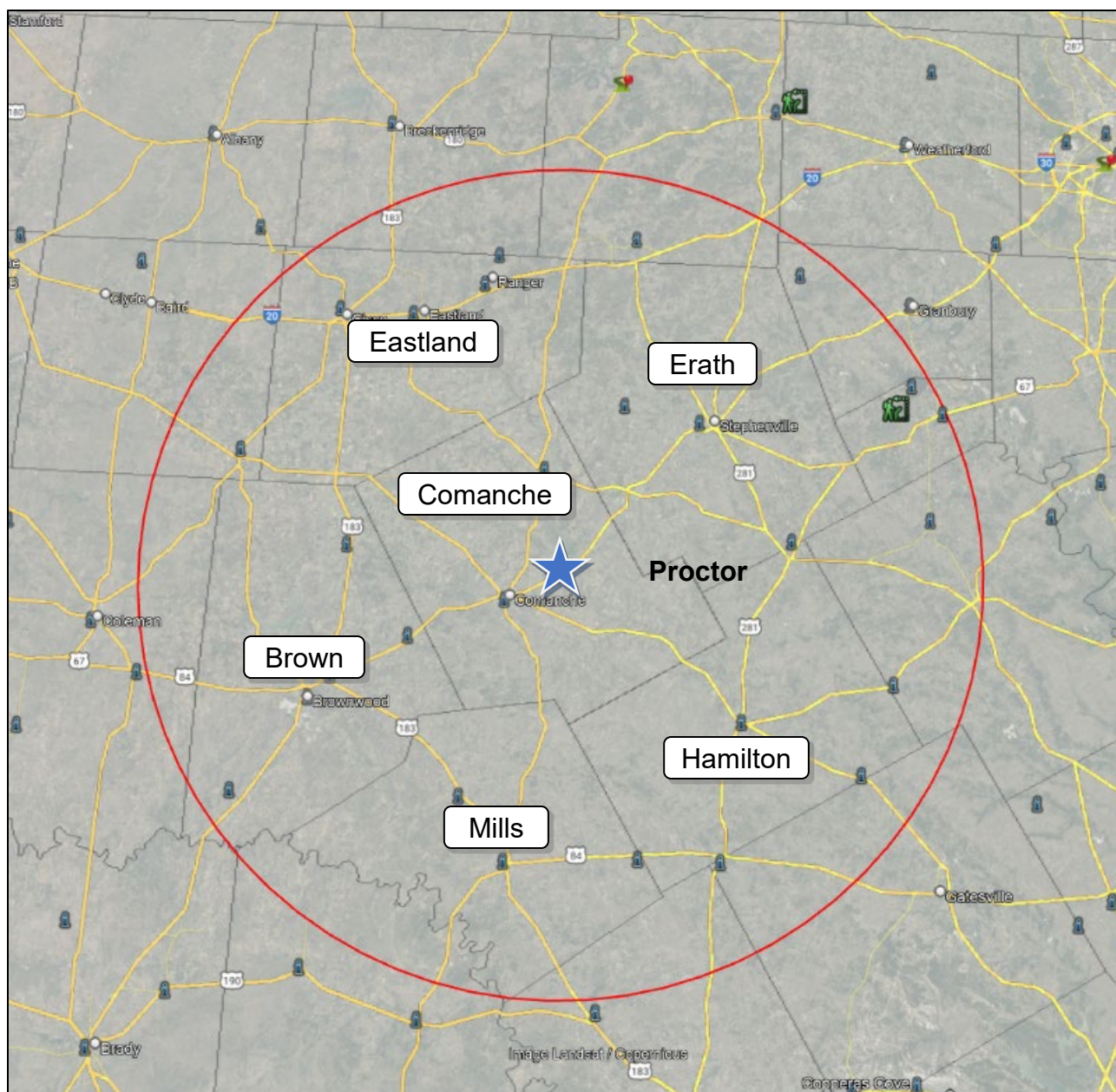


Figure 2.10 Counties within the Zone of Interest for Proctor Lake

2.5.3 Population

The total 2020 population of the Zone of Interest was 124,637 as shown on Table 2.5. Most of the Zone of Interest's population resides in Erath (34%) and Brown (31%) counties. The remaining population lives in Eastland (14%), Comanche (11%), Hamilton (7%) and Mills (4%) Counties.

The Zone of Interest's population makes up approximately 0.42% of total population the State of Texas. From 2010 to 2020, the Zone of Interest experienced an average decline in population of 1.37% despite Erath County's 12.3% growth. Mills

County had the worst decline with - 9.7% growth. From 2020 to 2050, the population of the Zone of Interest is expected to increase by 23,484 with an annual rate of growth of 1.6% with Erath and Brown Counties growing the most at 3.2 percent and 2.1 percent, respectively. By comparison, the population of Texas is projected to increase at a rate of 3.0% per year.

Table 2.5 2020 Population, 2021 Population Estimate and 2050 Projections

Geographical Area	2010 Population	2020 Population	July 1, 2022, Estimates	2050 Projection
Comanche County	13,974	13,594	13,878	15,078
Erath County	37,890	42,545	43,895	58,474
Brown County	38,106	38,095	38,373	40,717
Eastland County	18,583	17,725	17,944	19,732
Mills County	4,936	4,456	4,500	5,417
Hamilton County	8,517	8,222	8,298	8,703
Zone of Influence Total	122,006	124,637	126,888	148,121

Sources: U.S. Census Bureau -2020 Decennial Census. United States Census Bureau. 2021 American Community Survey 5-Year Estimates. U.S. Census Bureau, Annual Estimates of the Resident Population for Counties: April 1, 2020, to July 1, 2022. Texas Water Development Board - County Population Projections.

The distribution of the population among gender, as shown in Table 2.6, is approximately 50 percent male and 50 percent female in the Zone of Interest, very similar to the overall gender distribution in Texas.

Table 2.6 2020 Population by Gender

Geographical Area	Male (2020)	Female (2020)
Comanche County	6,784 (50.07%)	6,765 (49.93%)
Erath County	20,707 (48.97%)	21,581 (51.03%)
Brown County	18,972 (49.81%)	19,113 (50.19%)
Eastland County	8,848 (49.75%)	8,937 (50.25%)
Mills County	2,254 (48.87%)	2,266 (50.13%)
Hamilton County	4,083 (49.73%)	4,128 (50.27%)
Zone of Influence Total	61,648 (49.54%)	62,790 (50.46%)

Source: U.S. Census Bureau- 2020 Decennial Census

Figure 2.11 displays the population by age group. The graph shows that Texas is much younger percentage wise than Comanche County and the Zone of Interest.

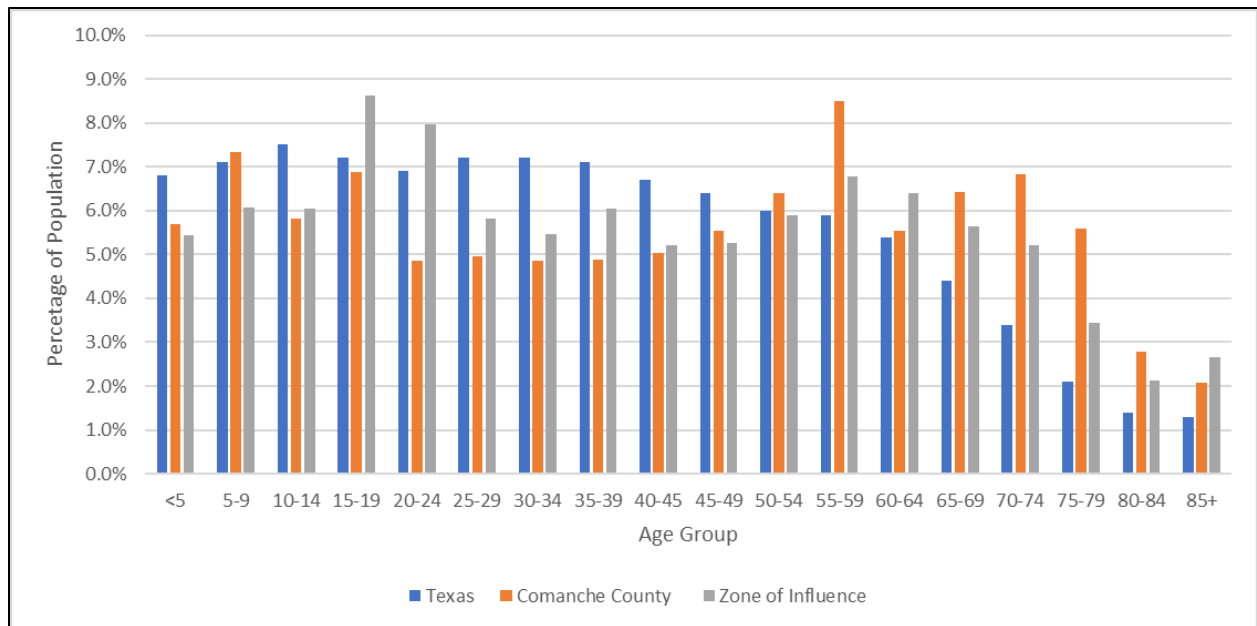


Figure 2.11 2020 Population by Age Group

Source: U.S. Census Bureau- - 2021 American Community Survey 5-Year Estimates

Population by race and Hispanic origin is displayed in Table 2.7. The Zone of Interest is approximately 66% White, 17% is Hispanic, 8% is Biracial, 6% is Other, 2% is Black, and 1% each is Asian and American Indian. By comparison, the state's population is approximately 49% White, 39% Hispanic or Latino, and 12% Black. These percentages are estimates to change drastically by 2050. The majority of the population will be heavily Hispanic at 53% with White being 28%, Black 10% and Other 9%.

Table 2.7 Population Estimate by Race/Hispanic Origin

Geographical Area	White	Black	American Indian and Alaska Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some other race alone	Two or more races	Hispanic or Latino
Texas	14,609,365	3,552,997	278,948	1,585,480	33,611	3,951,366	5,133,738	11,441,717
Comanche County	10,295	48	116	38	3	1,421	1,673	3,867
Erath County	32,674	1,247	416	353	14	3,652	4,189	9,254
Brown County	29,326	1,462	232	274	27	2,801	3,973	8,211
Eastland County	14,677	356	150	104	16	26	570	2,934
Mills County	3,654	30	15	5	0	287	465	728
Hamilton County	7,138	32	49	38	2	341	622	1,045
Zone of Interest	97,764	3,175	978	812	62	8,528	11,492	26,039

Source: U.S. Census Bureau- 2020 Decennial Census

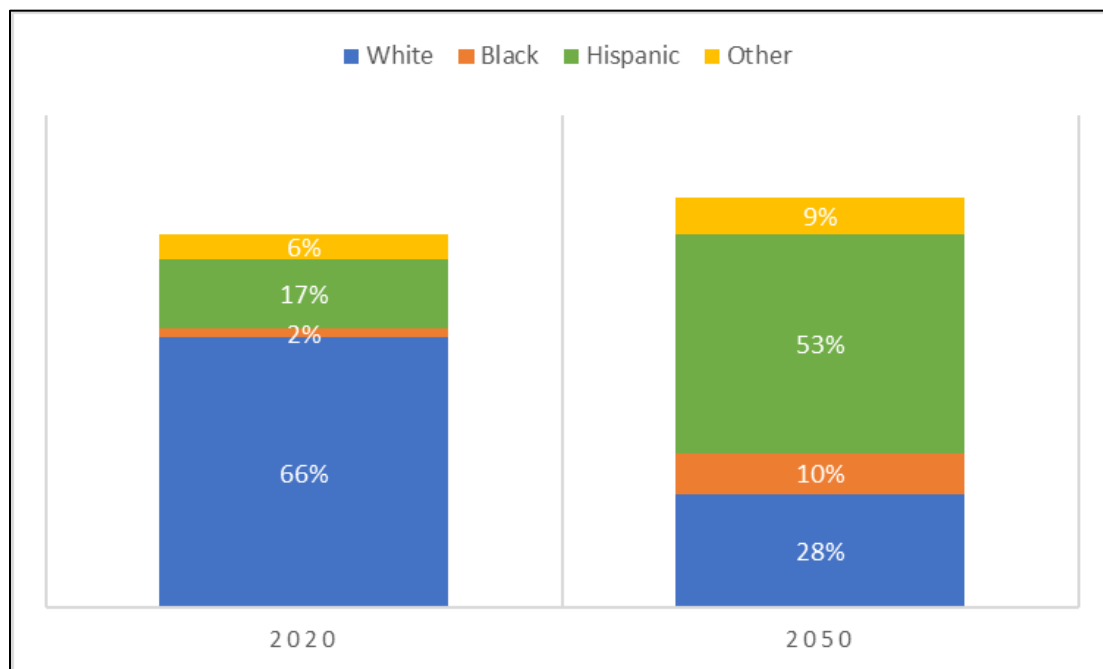


Figure 2.12 Zone of Interest Population Estimate and Projection by Race/Ethnicity

Source: U.S. Census Bureau- Texas State Data Center, The University of Texas at San Antonio (2050 Projections)

2.5.4 Education and Employment

Table 2.8 displays the highest level of education attained by the population ages 25 and over. In the Zone of Interest, 6.1% of the population has less than a 9th grade education, and another 7.8% has between a 9th and 12th grade education; 31.8% has a high school diploma or equivalent, and another 23.7% has some college and no degree; 7.8% has an Associate degree; 15.8% has a bachelor's degree; and 7% has a graduate or professional degree. In Texas, 7.6% of the population has less than a 9th grade education; another 7% has between a 9th and 12th grade education; 25% has least a high school diploma or equivalent; 20% has some college; 7.5% has an Associate degree; 21% has a bachelor's degree; and 12% has a graduate or professional degree. Thus, the education level in the Zone of Interest is slightly lower than that of the State of Texas.

Table 2.8 2020 Population Estimate by Highest Level of Educational Attainment, Population 25 Years of Age or Older

Geographical Area	Population 25 years and older	Less than 9 th Grade	9 th to 12 th Grade No Diploma	High School	Some College, No Degree	Associates	Bachelor	Graduate or Professional
Texas	19,224,688	7.60%	7.00%	24.60%	20.20%	7.50%	21.20%	11.90%
Comanche County	9,436	6.90%	7.50%	32.20%	25.20%	8.80%	13.30%	6.10%
Erath County	24,927	5.50%	6.90%	27.80%	22%	7.00%	20.80%	10%
Brown County	26,497	4.20%	8.90%	34.80%	25.20%	7.50%	14.30%	5.10%
Eastland County	12,119	6.60%	8.40%	29.10%	25.30%	9.20%	14%	7.40%
Mills County	3,386	7.30%	7.40%	30.90%	22.40%	7.30%	16.70%	8.10%
Hamilton County	5,679	4.30%	8.80%	35.70%	22.30%	7.30%	16.20%	5.50%
Zone of Interest	82,044	6.10%	7.80%	31.75%	23.73%	7.85%	15.88%	7.03%

Source: U.S. Census Bureau- 2021 American Community Survey 5-Year Estimates

Employment by sector is presented in Figure 2.13 and Table 2.9. Figure 2.13 shows that the largest percentage of the civilian employed population 16 years and older in the Zone of Interest is employed in the Education services, health care and social services(25%), Retail trade (12%),Construction(10%) and Agriculture, forestry, fishing and hunting, and mining (8%). These are higher than the State of Texas averages of Education services, health care and social services (22%), Retail trade (11%) , Construction (9%) and Agriculture, forestry, fishing and hunting, and mining (2%). The only sector that the Zone of Interest is significantly lower is in Professional, scientific, and management, and administrative and waste management services (Zone of Interest -6%. State of Texas -13%)

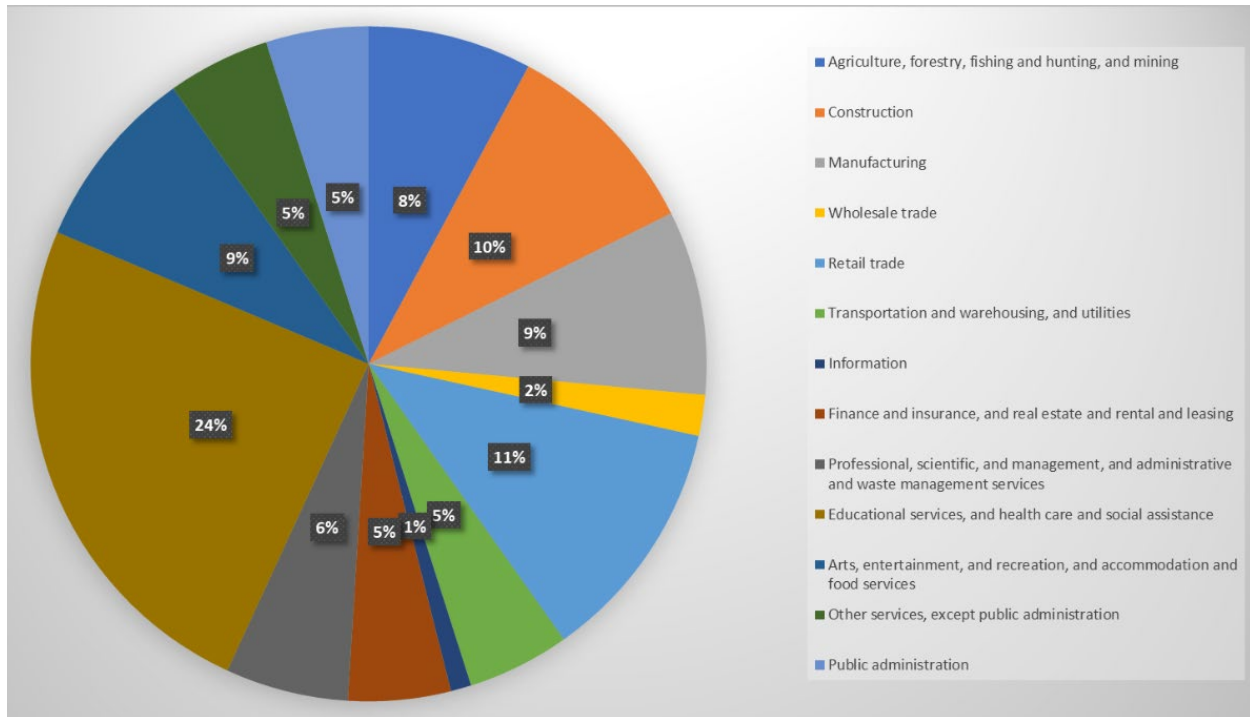


Figure 2.13 Zone of Interest Employment by Sector

Source: U.S. Census Bureau- 2021 American Community Survey 1-Year Estimates

Table 2.9 Occupation by Class of Worker by County

Employment Sector	Comanche County	Erath County	Brown County	Eastland County	Mills County	Hamilton County	Zone of Interest
Civilian employed population 16 years and over	5,999	19,837	16,799	7,101	1,969	3,194	54,899
Agriculture, forestry, fishing and hunting, and mining	669	2,149	697	594	117	248	4,474
Construction	540	1,453	1,345	871	285	317	4,811
Manufacturing	679	1,766	2,423	525	124	157	5,674
Wholesale trade	157	417	196	39	14	65	888
Retail trade	496	2,191	2,166	932	198	454	6,437
Transportation and warehousing, and utilities	389	1,098	676	364	69	200	2,796
Information	58	343	85	27	31	28	572

Employment Sector	Comanche County	Erath County	Brown County	Eastland County	Mills County	Hamilton County	Zone of Interest
Finance and insurance, and real estate and rental and leasing	246	618	495	243	164	181	1,947
Professional, scientific, and management, and administrative and waste management services	311	1,546	1,211	496	93	88	3,745
Educational services, and health care and social assistance	1,699	4,684	3,817	1,714	533	745	13,192
Arts, entertainment, and recreation, and accommodation and food services	343	1,771	1,606	659	144	373	4,896
Other services, except public administration	123	926	1,046	318	74	179	2,666
Public administration	289	875	1,036	319	123	159	2,801

Source: U.S. Census Bureau- 2021 American Community Survey 1-Year Estimates

The civilian labor force in the Zone of Interest accounts for less than one half of 1% of the civilian labor force of the state of Texas. As shown in Table 2.10, the Zone of Interest had an unemployment rate of 2.8% in 2021, significantly lower than that of the state of Texas, which had an unemployment rate of 4.0% that same year. Within the Zone of Interest, only Comanche County had a higher unemployment rate (4.5%) than the state of Texas.

Table 2.10 Labor Force, Employment and Unemployment Rates, 2021 Annual Average

Geographical Area	Civilian Labor Force	Number Employed	Number Unemployed	Unemployment Rate
Texas	14,707,042	13,796,229	910,813	4.00%
Comanche County	6,484	5,999	485	4.50%
Erath County	21,005	19,837	1,168	3.40%
Brown County	17,726	16,799	927	3.00%
Eastland County	7,511	7,101	410	2.90%
Mills County	2,018	1,969	49	1.30%
Hamilton County	3,318	3,198	124	1.90%
Zone of Interest Total	58,062	54,903	3,163	2.80%

Source: U.S. Census Bureau- 2021 American Community Survey 1-Year Estimate

2.5.5 Households, Income and Poverty

As shown in Table 2.11, there are approximately 50,000 households in the Zone of Interest with the average household size of 3.22 persons.

Table 2.11 Households and Household Size

Geographical Area	Total Households	Average Household Size
Texas	10,491,147	3.27
Comanche County	6,912	3.27
Erath County	18,325	3.29
Brown County	18,897	3.04
Eastland County	7,167	3.15
Mills County	2,529	3.13
Hamilton County	2,954	3.46
Zone of Interest	49,872	3.22

Sources: U.S. Census Bureau- 2020 Decennial Census, 2021 American Community Survey 5-Year Estimates

The median household income in the Zone of Interest ranged from \$43,953 in Hamilton County to \$56,691 in Erath County in 2021, as displayed in Table 2.12. Per capita income in the Zone of Interest was \$30,222 in 2021, comparable to the state of Texas, which had a per capita income of \$34,255.

Table 2.12 2021 Median and Per Capita Income

Geographical Area	Median Household Income	Per Capita Income- 2021
Texas	67,321	34,255
Comanche County	55,743	27,646
Erath County	56,691	29,321
Brown County	49,232	37,819

Geographical Area	Median Household Income	Per Capita Income- 2021
Eastland County	43,953	28,110
Mills County	53,483	31,069
Hamilton County	44,030	27,367
Zone of Interest Total	50,522	30,222

Sources: U.S. Census Bureau-2021 American Community Survey 5-Year Estimates

Table 2.13 displays the percentage of persons and families whose incomes fell below the poverty level in the past twelve months as of 2021. There was basically no difference in the percentage of persons in the in the Zone of Interest with incomes below the poverty level in 2021 (14.4%) as compared to the state of Texas (14.2%). Erath County had the most persons with incomes below the poverty level at 16.1% , followed by Comanche County at 16.1% , Brown County at 15.3%, Hamilton County had 14.8%, Eastland County had 13.7% and Mills County had 8.5%.

Table 2.13 Median Income and Percent below Poverty Level

Geographical Area	All Persons
Texas	14.2%
Comanche County	16.1%
Erath County	17.9%
Brown County	15.3%
Eastland County	13.7%
Mills County	8.5%
Hamilton County	14.8%
Zone of Interest Total	14.4%

Source: U.S. Census Bureau – 2021 American Community Survey 5-Year Estimates

2.6. SOCIAL, ENVIRONMENTAL, AND ECONOMIC JUSTICE

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income regarding the development, implementation, and enforcement of environmental laws, regulations, and policies, with no group bearing a disproportionate burden of environmental harms and risks.

For the U.S. Army Corps of Engineers, environmental justice and disproportionate impacts to vulnerable communities are considered throughout the agency's Civil Works programs and in all phases of project planning and decision-making. Environmental justice is achieved when everyone enjoys the same degree of protections and equal access to USACE Civil Works programs and services to achieve a healthy environment in which to live, learn, and work.

Whether studying, planning, designing, constructing, and operating the USACE Civil Works projects or providing assistance, the USACE works to meet the needs of diverse communities by reducing disparate environmental burdens, removing barriers to participation in decision-making, and increasing access to benefits provided by USACE

to vulnerable communities within the USACE authorities. USACE Environmental Justice Goals include the following (USACE, 2023), for which the Proctor Lake Master Plan and Environmental Assessment has been developed to achieve:

- Modify existing policy, guidance and programs to be more inclusive of diverse community needs.
- Utilize latest in GIS mapping and benefit analysis technologies.
- Develop outreach strategies that address tribal, regional and remote needs of the nation and our territories.
- Identify partnering opportunities with state, local, Tribal, and community based environmental justice groups to improve climate resiliency.

In studying, planning, designing, constructing, and operating USACE Civil Works projects or providing assistance, USACE shall work to meet the needs of disadvantaged communities by reducing disparate environmental burdens, removing barriers to participation in decision-making, and increasing access to benefits provided by Civil Works programs to disadvantaged communities within USACE authorities. USACE will work to accommodate and encourage participation of all communities as partners in the assessments of need, studies, planning development, and implementation. USACE Civil Works will focus environmental justice activities into three broad areas: 1) improving outreach and access to USACE Civil Works information and resources; 2) improving access to USACE Civil Works technical service programs (e.g., Planning Assistance to States and Floodplain Management Services programs) and maximizing the reach of Civil Works projects to benefit the disadvantaged communities, in particular as it relates to climate resiliency; and, 3) ensuring any updates to USACE Civil Works policies and guidance will not result in a disproportionate impact on disadvantaged communities.

According to the Administration's Council on Environmental Quality's Climate and Economic Justice Screening Tool, the Zone of Interest of this Master Plan contains one census tract identified as Disadvantaged directly adjacent to the Proctor Lake and 22 census tracts within 30 miles identified as Disadvantaged impacting 73,000 people (58% of the total population of 124,637). Disadvantaged Metrics for these census tracts include Impacted by Increased Wildfires, Energy Cost, Health Burdens, Housing and Work Force Development.

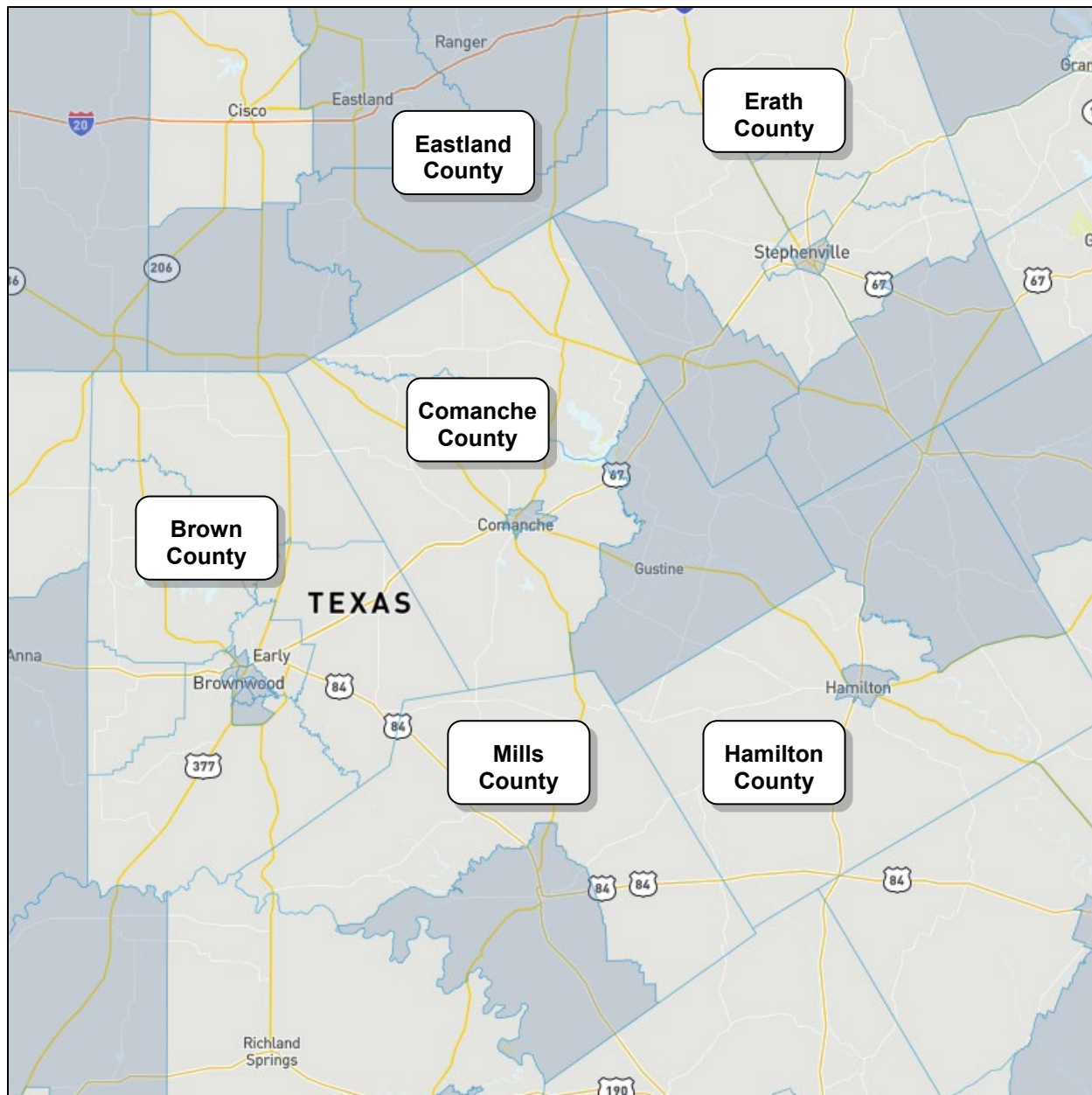


Figure 2.14 Disadvantaged Census Tracts in the Zone of Interest

Source: Administration's Council on Environmental Quality's Climate and Economic Justice Screening Tool -2023

Although economic benefit is not a mission of Proctor Lake, USACE recognizes the importance of Proctor Lake and the activities on USACE lands and waters as being an important part of the local economy. Besides the obvious economic savings through flood risk management and development advantages through water supply, businesses can see investment opportunities, and people are drawn to the natural areas surrounding USACE lakes, as is evidenced by the growing number of residents adjacent to USACE properties. Nationally, USACE lakes attracted about 368 million recreation visits in FY 21 to 402 lakes, with direct economic benefits on local economies within a 30-mile radius. Tables 2.14-2.16 describes some of the extended social,

environmental, and economic benefits of Proctor Lake for the surrounding communities for 2021.

Table 2.14 Proctor Lake Social Benefits 2021

Facilities in FY 2022
<ul style="list-style-type: none"> • 5 recreation areas • 63 picnic sites • 253 camping sites • 1 playground • 6 swimming areas • 2 trails • 11 trail miles • 7 fishing docks and piers • 7 boat ramps
Visits (person-trips) in FY 2021
<ul style="list-style-type: none"> • 116,105 in total • 67,759 picnickers • 13,247 campers/overnight visitors • 12,721 swimmers • 6,290 walkers/hikers/joggers • 500 boaters • 3,313 sightseers • 3,343 anglers • 29,165 special event attendees • 11,423 others
Public Outreach in FY 2021
<ul style="list-style-type: none"> • 1,072 public outreach contacts
Benefits in Perspective
<p>By providing opportunities for active recreation, USACE lakes help combat one of the most significant of the nation's health problems: lack of physical activity. Recreational programs and activities at USACE lakes also help strengthen family ties and friendships; provide opportunities for children to develop personal skills, social values, and self-esteem; and increase water safety</p>

Source: US Army Corps of Engineers, Institute for Water Resources <https://www.iwr.usace.army.mil/Missions/Value-to-the-Nation/>

Table 2.15 Proctor Lake Economic Benefit 2021

Economic Data in FY 2021
<p>Visitation per year resulted in:</p> <ul style="list-style-type: none"> • \$ 3,436,506 in visitor spending within 30 miles of the USACE lake • \$ 2,459,477 in sales within 30 miles of the USACE lake • 29 jobs within 30 miles of the USACE lake • \$ 583,841 in labor income within 30 miles of the USACE lake • \$ 867,212 in value added within 30 miles of the USACE lake • \$ 1,201,634 in National Economic Development Benefits

Economic Data in FY 2021

With multiplier effects, visitor trip spending resulted in:

- \$ 3,778,980 in total sales
- 41 jobs
- \$ 919,040 in labor income
- \$ 1,432,597 in value added (wages & salaries, payroll benefits, profits, rents, and indirect business taxes)

Benefits in Perspective

The money spent by visitors to USACE lakes on trip expenses adds to the local and national economies by supporting jobs and generating income. Visitor spending represents a sizable component of the economy in many communities around USACE lakes

Source: US Army Corps of Engineers, Institute for Water Resources <https://www.iwr.usace.army.mil/Missions/Value-to-the-Nation/>

Table 2.16 Proctor Lake Environmental Benefit 2021

Resources Data in FY 2021

- 4,399 land acres
- 4,610 water acres
- 38 shoreline miles

Benefits in Perspective

Recreation experiences increase motivation to learn more about the environment; understanding and awareness of environmental issues; and sensitivity to the environment.

Source: US Army Corps of Engineers, Institute for Water Resources <https://www.iwr.usace.army.mil/Missions/Value-to-the-Nation/>

2.7. RECREATION FACILITIES, ACTIVITIES, AND NEEDS

2.7.1 Zone of Influence and Visitation Statistics

The Zone of Influence for Proctor Lake encompasses Comanche, Hamilton, Erath, Eastland, Brown, and Mills counties. These are the primary areas from which visitors to Proctor Lake originate, thus have the most impact and are impacted the most from activities at Proctor Lake.

2.7.2 Visitation Profiles

Most visitors to Proctor Lake come from within a 100 miles radius of the lake (74.93%). Proctor Lake's visitors are a diverse group ranging from campers who utilize the campgrounds, full time and parttime residents of the nearby subdivisions that border the lake, waterfowl hunters who utilize the upper end of the lake area, day users who utilize the day use parks, designated swim beaches and boat ramps, and site seers.

There were 6,579 camping permits issued for the campgrounds through the Recreation One Stop Reservation Service (R1S) in FY 2022. Of those permits, 5,126 had zip codes (78%), with 57.4 % of the reservations having zip codes from locations within the Zone of influence. Of that percentage, 20.1% were from Erath County, 19.6%

from Comanche County, 8.4% from Brown County, 4.2% from Eastland County, 30% from Hamilton County, and 2.1% from Mills County.

Out of all reservations, 2,893 (44%) originated from zip codes within 50 miles of the lake which includes the Zone of Influence. An additional 937 permits (14.2%) originated from between 50 and 100 miles; 645 permits (10%) originated from between 100 and 150 miles; and 145 permits (2%) originated from 150 to 550 miles which includes El Paso, Brownsville, Dumas, Orange, and Atlanta, all representing the furthest points in Texas.

There were numerous reservations being made from out of state locations; either passing through or with Proctor Lake as a destination. There were 316 (5%) out of state reservations that were from as far away as Alaska, Michigan, Massachusetts, California, and Florida. Florida had 34, New Mexico 31, Arkansas, 27 and Illinois 25 during FY22.

In 2022, Proctor Lake had 118,921 visitors. This is almost equal to total population of the six counties that make up the Zone of Interest. The peak visitation months are April through October when 93% of the visits occur. June is the highest visitation month and accounts for 19% of the annual total. Approximately 99.5% of the visitation occurs on USACE managed recreation areas. Figure 2.15 depicts Proctor Lake's visitation for the last nine years. The lowest visitation was in 2016 when the lake experienced its pool elevation of record with the flood hitting right before the recreation season and the parks were closed due to high water and flood damage the rest of the year.

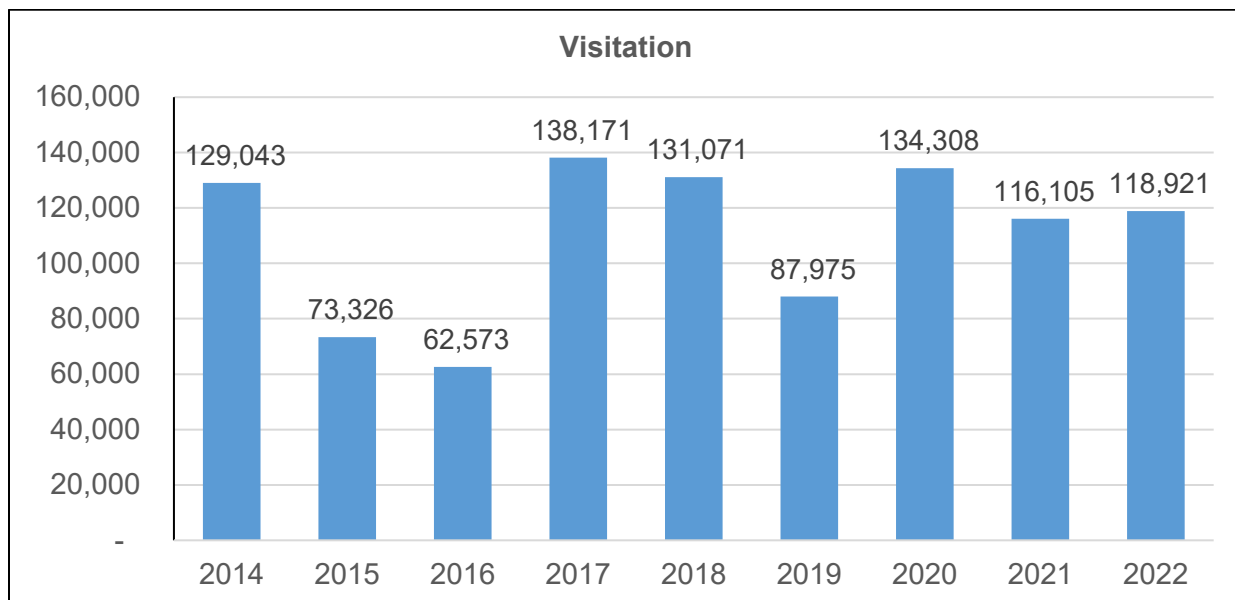


Figure 2.15 Proctor Lake Visitation 2014- 2022

Source: USACE- Visitor Estimation Reporting System – Project Roll Up Reports.

In 2018, USACE's National Recreation Program conducted user surveys at numerous parks across the country in order to convert metered volume vehicle counts into vehicle estimates (number of visitors per vehicle). As part of that survey, users were

asked what type of recreational activities they would be partaking in during their visit. From the results of those surveys a weighted load factor was developed and applied to the Visitor Estimation Reporting System (VERS) monthly traffic counter readings at all USACE recreation areas including those at Proctor Lake. According to the national FY22 VERS visitation role up report, there were 118,921 visits to Proctor Lake. This report also showed the percentage of each activity that the visitors engaged in during their visits as shown in Figure 2.16.

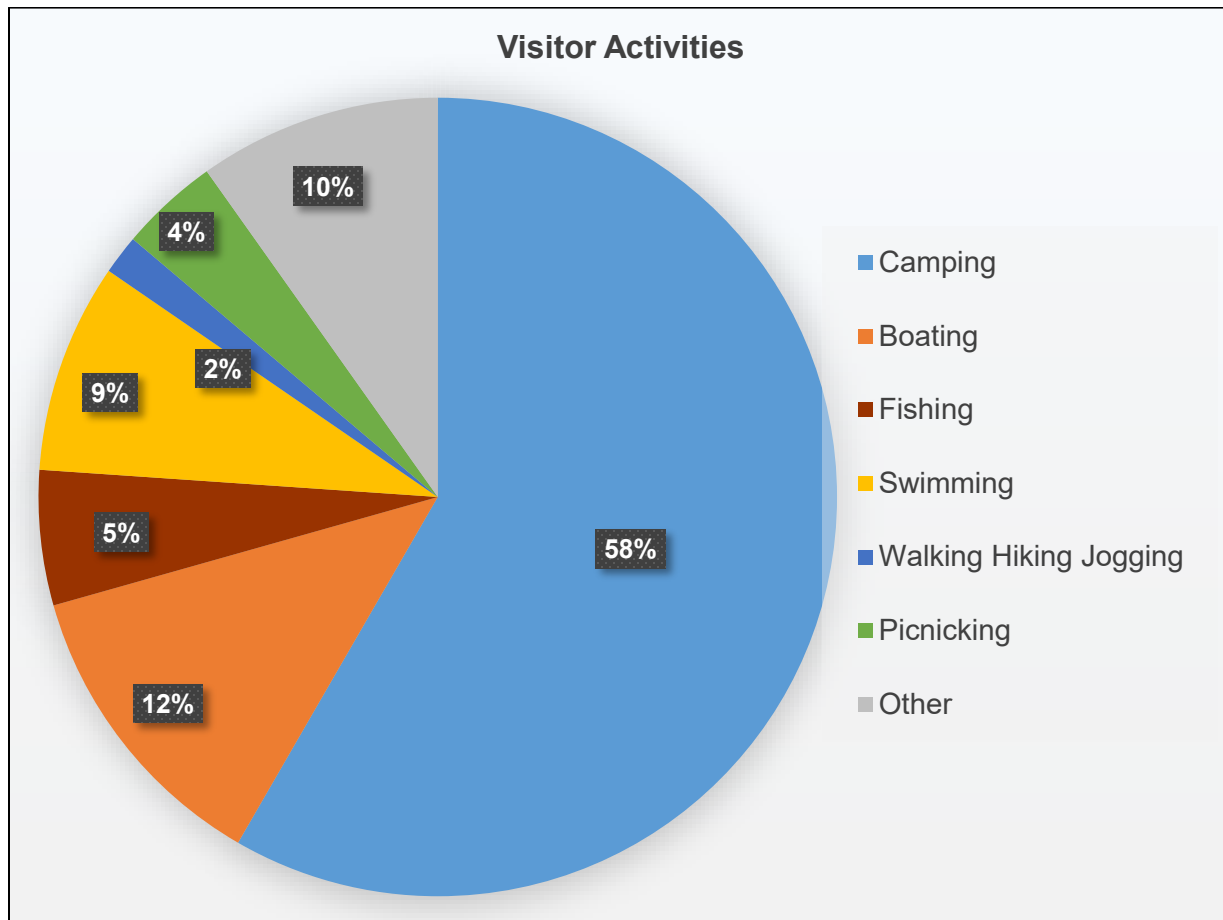


Figure 2.16 Visitor Activities

Source: USACE 2018 Visitor Survey

2.7.3 Recreation Areas and Facilities

USACE operates the following parks at Proctor Lake where user fees are charged: Copperas Creek, Copperas Day Use, Sowell Creek, and Promontory Parks. These parks, one of which is seasonal, have controlled access with 24-hour presence provided by either contract gate attendants for volunteer campground host. All fee parks combined provide 208 campsites, seven boat ramps with 14 launch lanes, seven group camping shelters with pavilions, 63 picnic sites, 38 parking lots with 856 parking spots, six swimming beaches, and 12.8 miles of paved park roads.

There is two access points that are free to the public. One is at the Sowell Creek Bridge which has and all-weather gravel parking area with no designated parking slots. The other is High Point Park. It is an access area and trail head for the Proctor's equestrian trails.

Proctor Lake has leased two small undeveloped areas to Comanche County. Each area consists of an unimproved boat ramp.

2.7.4 Recreational Analysis – Trends

Proctor Lake recreation areas, natural shoreline, and water add to the attractiveness, vitality, and increased appreciation for the outdoors by users. These areas provide a sense of place and allow a growing urban population to enjoy outdoor recreation opportunities in a rural, natural setting. Outdoor recreation at Proctor Lake falls within two broad categories: land-based and water-based recreation. Management objectives for each type vary depending on the location and the intensity of use. Recreation management objectives in this Plan project future direction and actions necessary to meet the public's needs for land and water-based recreation. The reservoir provides recreational opportunity for swimming, boating, fishing, and other water sports. The area around the reservoir provides picnicking and camping for casual, overnight, or vacationing visitors. Additionally, horseback riding is permitted in designated areas, and hiking and bird watching are encouraged throughout the project lands. Project lands are open for public hunting except in developed recreational area and lands in the vicinity of the dam and other project structures. Increases in these uses are expected, therefore, future development will be directed primarily toward those activities.

The most recent customer satisfaction comment card summary for Proctor Lake is provided in Table 2.17. The summary from the 2022 Proctor Lake Visitor Comment Card survey shows that visitors are very satisfied with the current facilities.

Table 2.17 2022 Proctor Lake Visitor Comment Card Survey – Customer Satisfaction

Customer Satisfaction Item	No. of Visitor Responses	Percent Response: Very Good (5)	Percent Response: Good (4)	Percent Response: Neither Good nor Poor (3)	Percent Response: Poor (2)	Percent Response: Very Poor (1)	Total	Mean Response (1-5 Scale)
FACILITIES:								
Suitability of park facilities for my recreational equipment and activities	228	64	32	3	1	0	100	4.6
Restroom cleanliness and availability of conveniences	221	57	35	5	2	1	100	4.3

Customer Satisfaction Item	No. of Visitor Responses	Percent Response: Very Good (5)	Percent Response: Good (4)	Percent Response: Neither Good nor Poor (3)	Percent Response: Poor (2)	Percent Response: Very Poor (1)	Total	Mean Response (1-5 Scale)
Appearance of park grounds	230	63	34	1	1	1	100	4.6
Adequacy of signs providing directions and information	228	67	32	1	0	0	100	4.7
Parking space availability during my visit	214	64	32	3	1	0	100	4.3
Condition of roads and parking areas in the park	229	61	32	6	1	0	100	4.6
EMPLOYEES:								
Availability of park rangers and staff	228	66	32	2	0	0	100	4.6
Helpfulness of park rangers and staff	228	71	28	1	0	0	100	4.7
ENVIRONMENTAL SETTING:								
Attractiveness of surrounding scenery and landscape	227	68	31	0	0	1	100	4.6
Quality of land and water resources for my activities	226	65	34	1	0	0	100	4.6
OVERALL:								
Waiting times needed to access park facilities and services	226	71	27	2	0	0	100	4.7
Feeling of safety and security in the park	229	74	25	1	0	0	100	4.8
Value received for any visitor fees paid	227	72	27	1	0	0	100	4.7

Customer Satisfaction Item	No. of Visitor Responses	Percent Response: Very Good (5)	Percent Response: Good (4)	Percent Response: Neither Good nor Poor (3)	Percent Response: Poor (2)	Percent Response: Very Poor (1)	Total	Mean Response (1-5 Scale)
Overall satisfaction with my visit to this area	229	75	25	0	0	0	100	4.8

Source: USACE- 2022 Proctor Lake Visitor Comment Card Survey

2.7.5 Recreational Analysis – Needs

A total of 103 written comments were collected from visitors in USACE parks from Proctor's 2022 Visitor Card Surveys. Individuals could write down anything on their comment cards. The most comments (31%) were centered around grounds keeping. These were complaints about mowing heights, stickers, and trash. The next topic mentioned was about fishing piers and boat ramp with 18%. These centered around wanting more fishing docks and improving the boat ramps for access during low water elevations. Campsite improvements received 17% of the comment. Nearly all of these comments wanted an increase in electrical service from 30 Amp service to 50 Amp service. Other comments requested wider sites, more shade and sewer hook ups. More trees were the next request at 16%. Restroom Improvements and More Activities each had 6%. Request for air conditioning and better ventilation were the comments for Restrooms. More activities ranged from request for basketball courts to more swim beaches.

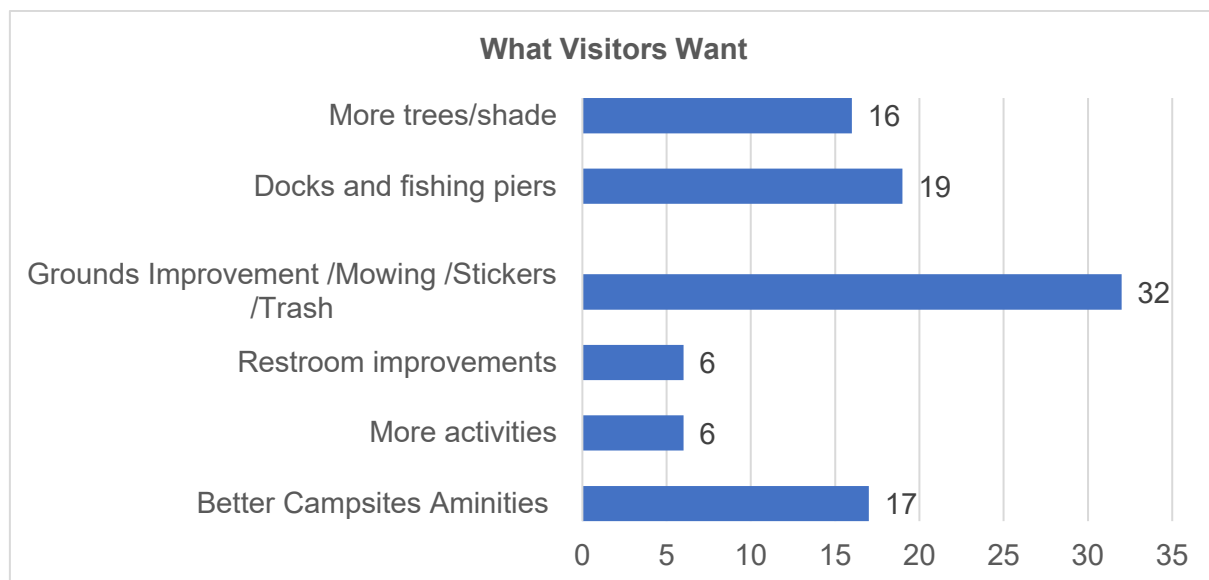


Figure 2.17 2022 Proctor Lake Comment Cards - What Visitors Want

Source: USACE- 2022 Proctor Lake Visitor Comment Card Survey.

The only public comments focused on recreation received during the master planning process pertained to the partial winter closure of Copperas Creek Park and the

operation and management of now closed High Point Park. There were no comments on the existing facilities nor desire to enhance the already outstanding outdoor recreation experience. USACE currently relies on partnerships for improvements to recreational amenities, and as time, partnerships, and budget allows, will integrate more facilities to accommodate the public's needs and desires. These activities are balanced with the primary missions of the project, namely flood risk management, water supply, and the inherent mission of environmental stewardship.

2.7.6 Recreational Carrying Capacity

The recreation carrying capacity of a project is the amount of development, use, and activity any lake and associated recreational lands can sustain without being permanently adversely impacted. No recreation carrying capacity studies have been conducted at Proctor Lake. Presently, USACE manages recreation areas at Proctor Lake using historic visitation data combined with best professional judgment to address recreation areas considered to be overcrowded, overused, underused, or well balanced. USACE will continue to identify possible causes and effects of overcrowding and overuse and apply appropriate best management practices and site management using Recreation One Stop Reservation Service (R1S) utilization data and Visitation Estimation & Reporting System (VERS).

Proctor's three Class A parks (parks offering modern restrooms, potable water, and electrical and water hookups at campsites), although full on major summer holiday weekends, are not being over utilized by the public. Occupancy rates for these parks averaged 40% from 2021-22 with the highest yearly average being 58% in Copperas Creek in 2021 and the lowest being 22% in Promontory in 2022.

June is Proctor's peak month for visitation. In June of FY 2022, average occupancy rates ranged from 28% on weekdays to 66% on weekends with an overall occupancy rate of 52%. This indicates that while on some summer weekends these parks are nearly full, there is additional capacity in these areas and no need for additional campsites.

There have been no water-related recreation development studies on Proctor Lake to determine the carrying capacity of the lake regarding 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 (WRRUS) at Proctor Lake, the 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 as the SWF's standard for resource protection and user enjoyment. The current Potential Lake Surface Boat Load for Proctor Lake is 38.2 acres of water per boat on peak use days. This is a potential level of use that assumes the lake level is at the conservation pool elevation of 1162.0 NGVD and that all boat ramp parking spaces are occupied, and every boat is on the water. This potential level of use is well above the Fort Worth District target of 22 acres of boatable water per boat, but actual use levels could only be determined through careful on-the-water boat counts coupled with counts of occupied boat ramp parking spaces on peak use days. Furthermore, since the physiography of Proctor Lake creates distinct

open water segments, the lake has very definable use zones. This would have to be considered when evaluating any future water-related recreation development on the lake. Furthermore, the water level is also subject to extreme fluctuations, with the water elevation falling far below the conservation pool during most peak recreation seasons, which further limits the boatable acres on the lake.

2.7.7 TPWD Texas Outdoor Recreation Plan (TORP)

The 2018 Texas Outdoor Recreation Plan (TORP) published by TPWD is a comprehensive recreational demand study that evaluates recreation trends and needs across Texas and in subdivided regions. Some of the information in the TORP was extracted from the National Survey on Recreation and the Environment (NSRE) and reports generated by the USFWS. Much of the data in the TORP was from a survey conducted in 2017 titled “Texas Residents’ Participation in and Attitudes Toward Outdoor Recreation by Responsive Management (Survey) on behalf of TPWD. Proctor Lake provides many recreation opportunities that help to meet the recreation needs identified in the TORP and Survey. The 2012 TORP was also referenced to compare the results and see how recreational trends have been changing.

The TORP indicated the rates of participation for various outdoor activities in Texas, with Proctor Lake located in TORP Region 5, which is the largest region in Texas and includes many rural northwestern and central counties as shown in Figure 2.18. Across the entire state, walking for pleasure is the most popular outdoor activity with picnicking, cookouts, and other gatherings being the second most popular activity. Those results are reversed in Region 5 with picnicking, cookouts, or other gatherings coming in as the most popular activity and with walking for pleasure being a close second. The top ten areas of participation for outdoor recreation in Region 5 are indicated in Figure 2.19. Proctor Lake provides an array of opportunities for walking for pleasure; picnicking, cookouts, and gatherings; sightseeing; wildlife viewing and photography; fishing; and swimming in the lake – providing most of the top 10 areas of participation for outdoor recreation activities in the state and region.



Figure 2.18 TORP Region 5

Source: TPWD TORP Survey 2017

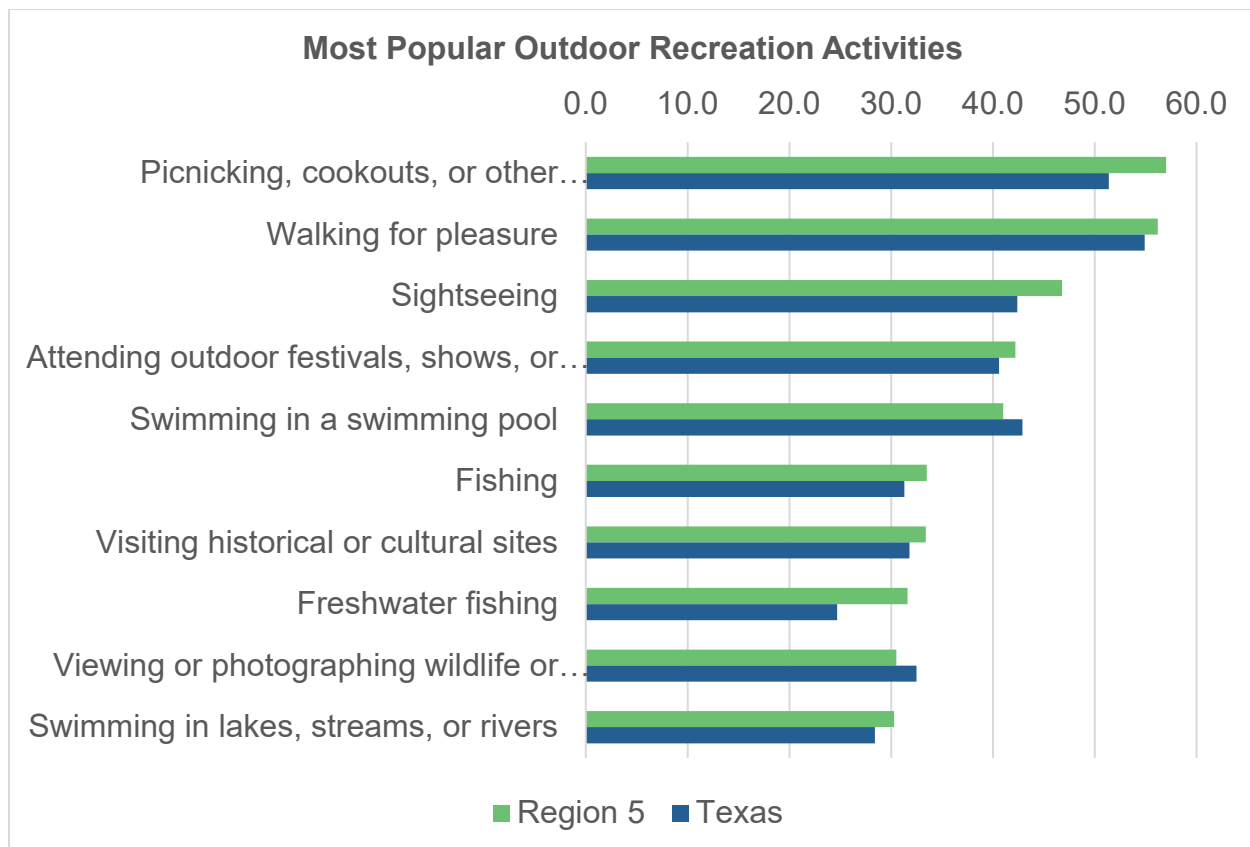


Figure 2.19 Region 5 Top 10 Areas of Participation for Outdoor Recreation Activities

Source: TPWD TORP Survey 2017

Asked “which outdoor recreation opportunities does your community currently lack or would like to see more of in your community,” the top answer across the state and region was trails/places to hike/bike; and the next highest response across the state was more parks or park capacity and pools or swimming facilities other than lakes, while in Region 5 the next highest was fishing places and access. The top ten responses are indicated in Figure 2.20. Proctor Lake provides an array of trails and paths for hiking, biking, and equestrian recreation as well as some of the few publicly available areas for fishing in Comanche County. The USACE provides and promotes natural resource-based recreation at lakes projects, and Proctor Lake provides many of the top ten that community members would like to see more of in the community.

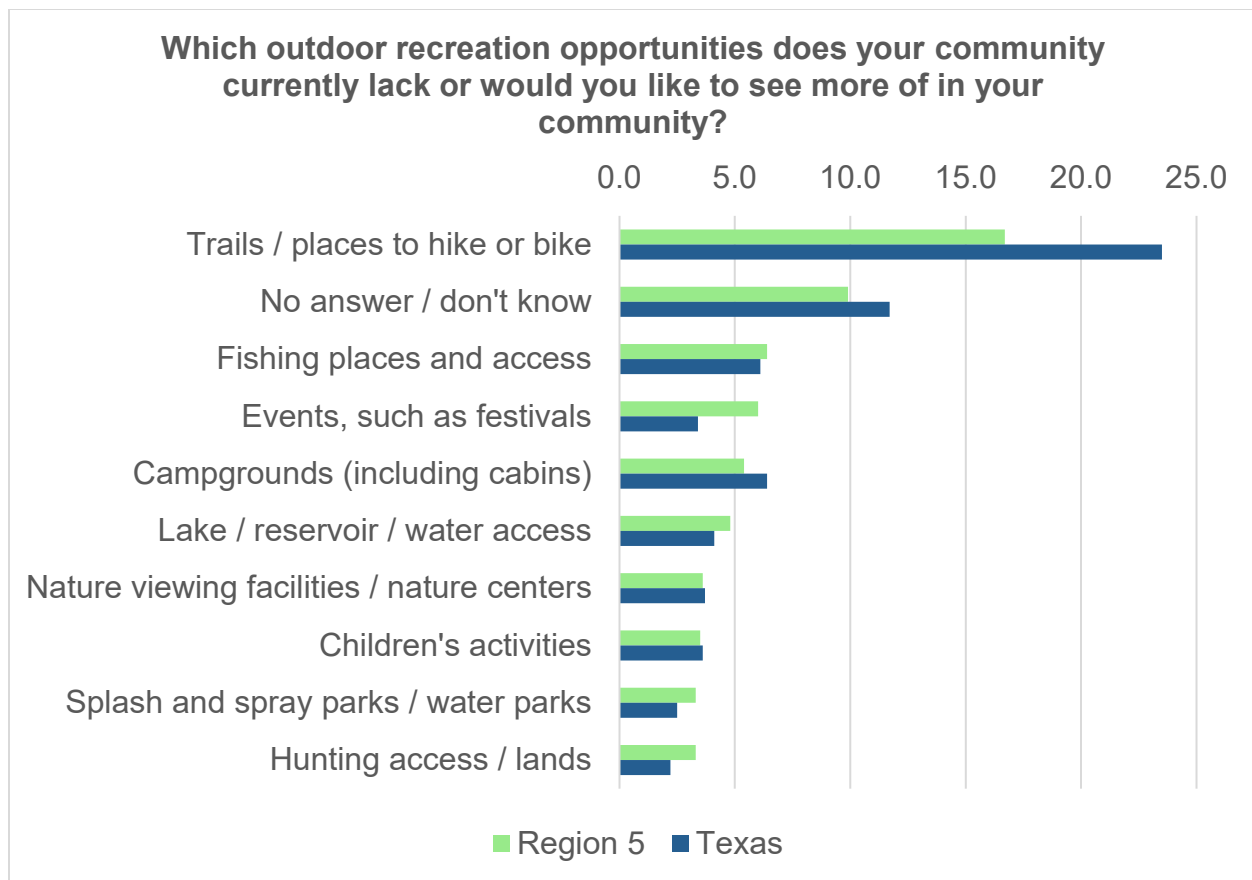


Figure 2.20 Region 5 Responses to “Which outdoor recreation opportunities does your community currently lack or would like to see more of in your community?”

Source: TPWD TORP Survey 2017

In accordance with historical visitation rates and recent outdoor recreation trends documented in the 2012 and 2018 TORP and 2017 TORP Survey Results, camping in developed and primitive settings has declined significantly since 2000. In contrast, the TORP documented an increase in demand for day trip activities including hiking/walking for pleasure; picnicking, cookouts, or other gatherings; sightseeing; swimming in pools; attending outdoor festivals, shows, or events; and viewing/photographing wildlife/nature. The recreation activity most people say their community lacks is hiking/biking trails but is lacking much less in the Region 5 than the entire state. In response to trends documented in the TORP, USACE will endeavor to improve access to trails in or adjacent to park areas as funding permits and work with other partners to further enhance and improve recreation opportunities. The USACE encourages partnerships with agencies who lease and manage parks to respond to increasing demands and build on the current quality of USACE parks for present and future visitors.

The TORP documented a dramatic increase in the demand for motor homes and travel trailers, but it did not make the top-ten areas of participation or top-ten lacking recreation opportunities. The USACE intends to continue to operate campgrounds and day use areas by maintaining and improving existing facilities but has no long-range plans to add additional campsites or add new motor home or recreational vehicle

facilities at Proctor Lake. In response to comments and the increased trend documented in the TORP, the USACE will continue to monitor demand for motor home and travel trailer facilities as well as other amenities. The USACE will make needed upgrades based on changes in demand as funding permits. The USACE referenced the TORP when developing management objectives for recreation as show in Table 3.1 in Chapter 3.

2.8. REAL ESTATE

Proctor Lake was authorized September 3, 1954, with the primary missions of flood control and water supply as contained in the Flood Control Act of 1954 (Public Law [PL] 780, 83rd Congress, 2nd Session), with the purposes of fish and wildlife and recreation being added later. The generally required fee simple acquisition of the area that closely followed and encompassed the 1172.0 feet NGVD29 elevation, 10 feet above the conservation pool of 1162.0 feet NGVD29. In lieu of fee simple acquisition, flowage easements were acquired in the upper reaches using guide contour elevation of approximate 1200.0 feet NGVD29.

The current fee simple owned lands total 9,009 acres. In addition to the fee land acquisition, the USACE owns approximately 7,695 acres of flowage easement land. A flowage easement, in general, grants to the government the perpetual right to temporarily flood/inundate private land during flood risk management operations and to prohibit activities on the flowage easement that would interfere with flood risk management operations such as placement of fill material or construction of habitable structures on flowage lands.

Table 2.18 Real Estate Fee and Flowage Acreage

Land	Acres
Fee Acres	9,009
Flowage Easement Acres	7,695

Source: USACE Real Estate

NOTE: Acreage are from REMIS real estate documents and subject to review based on auditing documents and changing precision. Acreage differences from those in the Master Plan are due to improvements in mapping and measurement technology, deposition/siltation, and erosion as well as measuring acres from GIS data and may not match current REMIS data which is under review.

Table 2.19 Outgrants at Proctor Lake

<u>Outgrant Type</u>	<u>Number</u>
Leases	0
Easements	21
Sewer/water/storm drain	7
Gas pipeline	0
Road/bridge	4
Electric/Communication	10
Licenses	7
Boat ramp/Road	2
Electric/ waterline	5
Consents/Other	23
Gas Pipeline	1
Storage Shed	2
Waterline/telephone/electric/well	10
Road	1
Other	9
Total Outgrants	51

Source: USACE Real Estate

2.8.1 Guidelines for Property Adjacent to Public Land

It is the policy of the USACE to manage the natural, cultural, and developed resources of Proctor Lake to provide the public with safe and healthful recreational opportunities, while protecting and enhancing those resources. While private exclusive use of public land is not permitted, property owners adjacent to public lands do have all the same rights and privileges as any other citizen. Therefore, the information contained in these guidelines is designed to acquaint the adjoining landowner and other interested persons with the types of property involved in the management of Proctor Lake. Adjoining landowners interested in more information should request additional information from the USACE office at Proctor Lake and reference the Proctor Lake Shoreline Management Plan.

2.8.2 Trespass and Encroachment

Government property is monitored by USACE personnel to identify and correct instances of unauthorized use, including trespasses and encroachments. The term “trespass” includes unauthorized transient use and occupancy, such as mowing, tree cutting and removal, livestock grazing, cultivation and harvesting crops, and any other alteration to Government property done without USACE approval. Unauthorized trespasses may result in a Title 36 citation to appear in Federal Magistrate Court, which could subject the violator to fines or imprisonment (See Title 36 Code of Federal Regulations (CFR) Part 327 Rules and Regulations Governing Public Use of Water

Resources Development Projects Administered by the Chief of Engineers). More serious trespasses will be referred to the USACE Office of Counsel for enforcement under state and federal law, which may require restoration of the premises and collection of monetary damages.

The term “encroachment” pertains to an unauthorized structure or improvement on Government property. When encroachments are discovered, lake personnel will attempt to resolve the issue at the project level. Where no resolution is reached, or where the encroachment is a permanent structure, the method of resolution will be determined by USACE Real Estate Division, with recommendations from Operations Division and Office of Counsel. USACE’s general policy is to require removal of encroachments, restoration of the premises, and collection of appropriate administrative costs and fair market value for the term of the unauthorized use.

2.9. PERTINENT PUBLIC LAWS

Numerous public laws apply directly or indirectly to the management of Federal land at Proctor Lake. Listed below are several key public laws that are most frequently referenced in planning and operational documents.

- PL 59-209, Antiquities Act of 1906. This was the first federal law established to protect what are now known as "cultural resources" on public lands. It provides a permit procedure for investigating "antiquities" and consists of two parts: An act for the Preservation of American Antiquities, and Uniform Rules and Regulations.
- PL 74-292, Historic Sites Act of 1935. This act declares it to be a national policy to preserve for (in contrast to protecting from) the public, historic (including prehistoric) sites, buildings, and objects of national significance. This act provides both authorization and a directive for the Secretary of the Interior, through the National Park Service, to assume a position of national leadership in the area of protecting, recovering, and interpreting national archeological historic resources. It also establishes an "Advisory Board on National Parks; Historic Sites, Buildings, and Monuments, a committee of eleven experts appointed by the Secretary to recommend policies to the Department of the Interior".
- Title 16 U.S. Code §§ 668-668a-d, 54 Stat. 250, Bald Eagle Protection Act of 1940, as amended. This act prohibits anyone, without a permit issued by the Secretary of the Interior, from taking bald eagles, including their parts, nests, or eggs. The act provides criminal penalties for persons who take, possess, sell, purchase, barter, offer to sell, transport, export or import, at any time or any manner, any bald eagle [or any golden eagle], alive or dead, or any part, nest, or egg thereof. The act defines “take” as pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.
- PL 78-534, Flood Control Act of 1944. - Section 4 of the act as last amended in 1962 by Section 207 of Public Law 87-874 authorizes USACE to construct, maintain, and operate public parks and recreational facilities in reservoir areas and to grant leases and licenses for lands, including facilities, preferably to Federal, State or local governmental agencies.

- PL 79-526, Flood Control Act of 1946 (24 July 1946). This law amends PL78-534 to include authority to grant leases to non-profit organizations at recreational facilities in reservoir areas at reduced or nominal fees.
- PL 83-780, Flood Control Act of 1954. This act authorizes the construction, maintenance, and operation of public park and recreational facilities in reservoir areas under the control of the Department of the Army and authorizes the Secretary of the Army to grant leases of lands in reservoir areas deemed to be in the public interest.
- PL 85-624, Fish and Wildlife Coordination Act 1958. - This act as amended in 1965 sets down the general policy that fish and wildlife conservation shall receive equal consideration with other project purposes and be coordinated with other features of water resource development programs. Opportunities for improving fish and wildlife resources and adverse effects on these resources shall be examined along with other purposes which might be served by water resources development.
- PL 86-523, Reservoir Salvage Act of 1960, as amended. This act provides for (1) the preservation of historical and archeological data that might otherwise be lost or destroyed as the result of flooding or any alteration of the terrain caused as a result of any Federal reservoir construction projects; (2) coordination with the Secretary of the Interior whenever activities may cause loss of scientific, prehistoric, or archeological data; and (3) expenditure of funds for recovery, protection, and data preservation. This Act was amended by Public Law 93-291.
- PL 86-717, Forest Conservation. - This act provides for the protection of forest and other vegetative cover for reservoir areas under the jurisdiction of the Secretary of the Army and the Chief of Engineers.
- PL 87-88, Federal Water Pollution Control Act Amendments of 1961, as amended. Section 2(b)(1) of this act gives the USACE responsibility for water quality management of USACE reservoirs. This law was amended by the Federal Water Pollution Control Act Amendment of 1972, Public Law 92-500.
- PL 87-874, Rivers and Harbors Act of 1962. This act authorizes the construction, repair, and preservation of certain public works on rivers and harbors for navigation, flood control, and for other purposes.
- PL 88-29, Recreation Coordination and Development Act of 1963. – This act authorized the Secretary of the Interior to inventory and classify outdoor recreation needs and resources and to prepare a comprehensive outdoor recreation plan taking into consideration the plans of the various Federal agencies, States, and other political subdivisions. It also stated that Federal agencies undertaking recreational activities shall consult with the Secretary of the Interior concerning these activities and shall carry out such responsibilities in general conformance with the nationwide plan.
- PL 88-578, Land and Water Conservation Fund Act of 1965. This act established a fund from which Congress can make appropriations for outdoor recreation. Section 2(2) makes entrance and user fees at reservoirs possible by deleting the words "without charge" from Section 4 of the 1944 Flood Control Act as amended.
- PL 89-72, Federal Water Project Recreation Act of 1965. - This act requires that not less than one-half of the separable costs of developing recreational facilities and all operation and maintenance costs at Federal reservoir projects shall be borne by a

non-Federal public body. A Head Quarters USACE (HQUSACE)/OMB implementation policy made these provisions applicable to projects completed prior to 1965.

- PL 89-90, Water Resources Planning Act (1965). This act established the Water Resources Council and gives it the responsibility to encourage the development, conservation, and use of the Nation's water and related land resources on a coordinated and comprehensive basis.
- PL 89-272, Solid Waste Disposal Act, as amended by PL 94-580, dated October 21, 1976. This act authorized a research and development program with respect to solid-waste disposal. It proposes (1) to initiate and accelerate a national research and development program for new and improved methods of proper and economic solid-waste disposal, including studies directed toward the conservation of national resources by reducing the amount of waste and unsalvageable materials and by recovery and utilization of potential resources in solid waste; and (2) to provide technical and financial assistance to State and local governments and interstate agencies in the planning, development, and conduct of solid-waste disposal programs.
- PL 89-665, Historic Preservation Act of 1966. This act provides for: (1) an expanded National Register of significant sites and objects; (2) matching grants to states undertaking historic and archeological resource inventories; and (3) a program of grants-in aid to the National Trust for Historic Preservation; and (4) the establishment of an Advisory Council on Historic Preservation. Section 106 requires that the President's Advisory Council on Historic Preservation have an opportunity to comment on any undertaking which adversely affects properties listed, nominated, or considered important enough to be included on the National Register of Historic Places.
- PL 90-483, River and Harbor and Flood Control Act of 1968, Mitigation of Shore Damages. Section 210 restricted collection of entrance fee at USACE lakes and reservoirs to users of highly developed facilities requiring continuous presence of personnel.
- PL 91-190, National Environmental Policy Act of 1969 (NEPA). – NEPA declared it a national policy to encourage productive and enjoyable harmony between man and his environment, and for other purposes. Specifically, it declared a “continuing policy of the Federal Government... to use all practicable means and measures...to foster and promote the general welfare, to create conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.” Section 102 authorized and directed that, to the fullest extent possible, the policies, regulations, and public law of the United States shall be interpreted and administered in accordance with the policies of the Act. It is Section 102 that requires consideration of environmental impacts associated with Federal actions. Section 101 of NEPA requires the federal government to use all practicable means to create and maintain conditions under which man and nature can exist in productive harmony.
- PL 89-665, Historic Preservation Act of 1966. - This act provides for: (1) an expanded National Register of significant sites and objects; (2) matching grants to states undertaking historic and archeological resource inventories; and (3) a

program of grants in aid to the National Trust for Historic Preservation; and (4) the establishment of an Advisory Council on Historic Preservation. Section 106 requires that the President's Advisory Council on Historic Preservation have an opportunity to comment on any undertaking which adversely affects properties listed, nominated, or considered important enough to be included on the National Register of Historic Places.

- PL 91-611, The Flood Control Act of 1970. This act authorizes the project and establishes the requirement (Section 122) for evaluating the economic, social, and environmental impact of projects.
- PL 92-347, Golden Eagle Passbook and Special Recreation User Fees. This act revises Public Law 88-578, the Public Land and Water Conservation Act of 1965, to require Federal agencies to collect special recreation user fees for the use of specialized sites developed at Federal expense and to prohibit the USACE from collecting entrance fees to projects.
- PL 92-500, Federal Water Pollution Control Act Amendments of 1972. The Federal Water Pollution Control Act of 1948 (PL 845, 80th Congress), as amended in 1956, 1961, 1965 and 1970 (PL 91- 224), established the basic tenet of uniform State standards for water quality. Public Law 92-500 strongly affirms the Federal interest in this area. "The objective of this act is to restore and maintain the chemical, physical and biological integrity of the Nation's waters."
- PL 92-516, Federal Environmental Pesticide Control Act of 1972. This act completely revises the Federal Insecticide, Fungicide and Rodenticide Act. It provides for complete regulation of pesticides to include regulation, restrictions on use, actions within a single State, and strengthened enforcement.
- PL 93-205, Conservation, Protection, and Propagation of Endangered Species Act of 1973, as amended. This law repeals the Endangered Species Conservation Act of 1969. It also directs all Federal departments/agencies to carry out programs to conserve endangered and threatened species of fish, wildlife, and plants and to preserve the habitat of these species in consultation with the Secretary of the Interior. This act establishes a procedure for coordination, assessment, and consultation. This act was amended by Public Law 96-159.
- PL 93-251, Water Resources Development Act of 1974. Section 107 of this law establishes a broad Federal policy which makes it possible to participate with local governmental entities in the costs of sewage treatment plant installations.
- PL 93-291, Archeological Conservation Act of 1974. The Secretary of the Interior shall coordinate all Federal survey and recovery activities authorized under this expansion of the 1960 act. The Federal Construction agency may transfer up to one percent of project funds to the Secretary with such transferred funds considered non-reimbursable project costs.
- PL 93-303, Recreation Use Fees. This act amends Section 4 of the Land and Water Conservation Act of 1965, as amended, to establish less restricted criteria under which Federal agencies may charge fees for the use of campgrounds developed and operated at Federal areas under their control.
- PL 93-523, Safe Drinking Water Act. The act assures that water supply systems serving the public meet minimum national standards for protection of public health. The act (1) authorizes the Environmental Protection Agency to establish Federal

standards for protection from all harmful contaminants, which standards would be applicable to all public water systems, and (2) establishes a joint Federal-State system for assuring compliance with these standards and for protecting underground sources of drinking water.

- PL 93-81, Collection of Fees for Use of Certain Outdoor Recreation Facilities. This act amends Section 4 of the Land and Water Conservation Act of 1965, as amended to require each Federal agency to collect special recreation use fees for the use of sites, facilities, equipment, or services furnished at Federal expense.
- PL 94-422, Amendment of the Land and Water Conservation Fund Act of 1965. This act expands the role of the Advisory Council. Title 2 - Section 102a amends Section 106 of the Historical Preservation Act of 1966 to say that the Council can comment on activities which will have an adverse effect on sites either included in or eligible for inclusion in the National Register of Historic Places.
- PL 95-217, Clean Water Act of 1977, as amended. This act amends the Federal Water Pollution Control Act of 1970 and extends the appropriations authorization. The Clean Water Act is a comprehensive Federal water pollution control program that has as its primary goal the reduction and control of the discharge of pollutants into the nation's navigable waters. The Clean Water Act of 1977 has been amended by the Water Quality Act of 1987, Public Law 100-4.
- PL 95-341, American Indian Religious Freedom Act of 1978. The act protects the rights of Native Americans to exercise their traditional religions by ensuring access to sites, use and possession of sacred objections, and the freedom to worship through ceremonials and traditional rites.
- PL 95-632, Endangered Species Act Amendments of 1978. This law amends the Endangered Species Act Amendments of 1973. Section 7 directs agencies to conduct a biological assessment to identify threatened or endangered species that may be present in the area of any proposed project. This assessment is conducted as part of a Federal agency's compliance with the requirements of Section 102 of NEPA.
- PL 96-95, Archeological Resources Protection Act of 1979. This act protects archeological resources and sites that are on public and tribal lands and fosters increased cooperation and exchange of information between governmental authorities, the professional archeological community, and private individuals. It also establishes requirements for issuance of permits by the Federal land managers to excavate or remove any archeological resource located on public or Indian lands.
- PL 98-63, Supplemental Appropriations Act of 1983. This act authorized the USACE Volunteer Program. The United States Army Chief of Engineers may accept the services of volunteers and provide for their incidental expenses to carry out any activity of the USACE, except policymaking or law or regulatory enforcement.
- PL 99-662, The Water Resources Development Act (WRDA) 1986. This act provides for the conservation and development of water and related resources and the improvement and rehabilitation of the Nation's water resources infrastructure and establishes new requirements for cost sharing.
- PL 101-233, North American Wetland Conservation Act (13 Dec 1989). This act directs the conservation of North American wetland ecosystems and requires

agencies to manage their lands for wetland/waterfowl purposes to the extent consistent with missions.

- PL101-336, Americans with Disabilities Act of 1990 (ADA), 26 July 1990, as amended by the ADA Amendments Act of 2008 (PL110-325). This law prohibits discrimination based on disabilities in, among others, the area of public accommodations and requires reasonable accommodations for persons with disabilities.
- PL 101-601, Native American Graves Protection and Repatriation Act (16 November 1990), requires Federal agencies to return Native American human remains and cultural items, including funerary objects and sacred objects, to their respective peoples.
- PL 102-580, Water Resources Development Act (WRDA) of 1992 (31 Oct 1992). This act authorizes the USACE to accept contributions of funds, materials and services from non-Federal public and private entities to be used for managing recreational sites and facilities and natural resources.
- PL 103-66 Omnibus Reconciliation Act-Day use fees (10 Aug 1993), authorizes the USACE to collect fees for the use of developed recreational sites and facilities, including campsites, swimming beaches and boat ramps.
- PL 104-303, WRDA 1996, authorizes recreation and fish and wildlife mitigation as purposes of a project, to the extent that the additional purposes do not adversely affect flood control, power generation, or other authorized purposes of a project.
- PL 104-333, Omnibus Parks and Public Lands Management Act of 1996, (12 Nov 1996). This act created an advisory commission to review the current and anticipated demand for recreational opportunities at lakes or reservoirs managed by the Federal Government and to develop alternatives to enhance such opportunities for such use by the public.
- PL106-147, Neo-tropical Migratory Bird Conservation Act (20 July 2000). This act promotes the conservation of habitat for neo-tropical migratory birds.

CHAPTER 3 – RESOURCE GOALS AND OBJECTIVES

3.1. INTRODUCTION

This chapter sets forth goals and objectives necessary to achieve the USACE vision for the future of Proctor Lake. The terms “goal” and “objective” are often defined as synonymous, but in the context of this Master Plan goals express the overall desired end state of the Master Plan whereas resource objectives are specific task-oriented actions necessary to achieve the overall Master Plan goals.

3.2. RESOURCE GOALS

The following goals are the priorities for consideration when determining management objectives and development activities. Implementation of these goals is based upon time, manpower, and budget. The objectives provided in this chapter are established to provide high levels of stewardship to USACE managed lands and resources while still providing a high level of public service. These goals will be pursued through the use of a variety of mechanisms such as: assistance from volunteer efforts, hired labor, contract labor, permit conditions, remediation, and special lease conditions. It is the intention of Proctor Lake staff to provide a realistic approach to the management of all resources. The following statements, based on EP 1130-2-550, Chapter 3, express the goals for the Proctor Lake Master Plan:

GOAL A. Provide the best management practices to respond to regional needs, resource capabilities and capacities, and expressed public interests consistent with authorized project purposes.

GOAL B. Protect and manage the project’s natural and cultural resources through sustainable environmental stewardship programs.

GOAL C. Provide public outdoor recreation opportunities that support project purposes and public interests while sustaining the project’s natural resources.

GOAL D. Recognize the project’s unique qualities, characteristics, and potentials.

GOAL E. Provide consistency and compatibility with national objectives and other State and regional goals and programs.

In addition to the above goals, USACE management activities are 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 to the environment; bringing 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.

3.3. RESOURCE OBJECTIVES

Resource objectives are clearly written statements that respond to identified issues and that specify measurable and attainable activities for resource development and/or management of the lands and waters under the jurisdiction of the Fort Worth District and Proctor Lake Project Office. The objectives stated in this Master Plan support the goals of the Master Plan, USACE Environmental Operating Principles (EOPs), and applicable national performance measures. They are consistent with authorized project purposes, Federal laws and directives, regional needs, resource capabilities, and they consider public input. Recreational and natural resources carrying capacities are also accounted for during development of the objectives found in this Master Plan. Regional and State planning documents including TPWD's Texas Conservation Action Plan (TCAP) and TORP are monitored for applicability to Proctor Lake.

The objectives in this master plan provide project benefits, meet public needs, and foster environmental sustainability for Proctor Lake to the greatest extent possible. Implementation of the objectives by the USACE are dependent upon available funds. Table 3.1 through Table 3.5 lists the objectives for the following objective categories: recreational objectives; natural resource management objectives; visitor information, education, and outreach objectives; general management objectives; and cultural resource management objectives.

Table 3.1 Recreational Objectives

Recreational Objectives	Goals:	A	B	C	D	E
Evaluate the demand for improved recreation facilities and increased public access on USACE-managed public lands and water for recreational activities (i.e. camping, walking, hiking, biking, boating, fishing, hunting, wildlife viewing, etc.) and facilities (i.e. campsites, picnic facilities, overlooks, all types of trails, boat ramps, courtesy docks, interpretive signs/exhibits, and parking lots).		*		*		
Improve, modernize, and implement sustainability measures into day use and campground facilities through addition and repair of amenities, including, but not limited to road improvements, sewer hook ups, increased electrical service, concrete or asphalt recreational vehicle pads, tent pads, restrooms, trails, pavilions, and improved park entrances.		*		*		
Monitor public use levels and evaluate potential impacts from overuse and crowding. Take action to prevent/remediate overuse, conflict, and public safety concerns.		*		*		
Evaluate recreational use zoning and regulations for designated quiet water or no-wake areas with emphasis on natural resource protection, quality recreational opportunities, and public safety concerns.		*				
Follow the Environmental Operating Principles associated with recreational use of waterways for all water-based management activities and plans.			*	*		*
Increase universally accessible facilities on Proctor Lake project lands.		*		*		*
Evaluate established permits/outgrants to determine impacts on public lands and waters. Sustain the Shoreline Management Program in order to balance private shoreline uses (such as mowing or vegetation removal requests along the Federal property boundary, or paths to the shoreline) with habitat management and impacts to the general public.		*		*		
Consider pool operation to address potential impact to recreational facilities (i.e. campsites, boat ramps, courtesy docks, etc.), primarily related to extended drawdowns.		*	*	*	*	
Consider long-term sustainable operational and maintenance costs when planning future new recreational facilities or upgrading and expanding existing facilities.						
Ensure consistency with USACE Recreation Strategic Plan.						*
Monitor the TCAP, the TORP, and adjacent municipality plans to insure that USACE is responsive to outdoor recreation trends, public needs, and resource protection within a regional framework. All plans by others will be evaluated in light of USACE policy and operational aspects of Proctor Lake.						*

Recreational Objectives	Goals:	A	B	C	D	E
Any personal floating facilities will be managed per the Shoreline Management Plan (SMP) and are subject to change with SMP updates and as laws and regulations require.				*		*

*Denotes that the objective helps to meet the specified goal.

Table 3.2 Natural Resource Management Objectives

Natural Resource Management Objectives	Goals:	A	B	C	D	E
Consider pool levels to ensure that natural resources are managed in ways that are compatible with primary project purposes of flood risk management and water supply.		*	*		*	
Ensure project lands are managed with preservation and conservation of natural habitat and open space as a primary objective in order to maintain the public open space.		*			*	
Actively manage and conserve fish and wildlife resources, with a focus on special status species, by implementing ecosystem management principles. Key among these principles is the use of native species adapted to the ecological region in restoration and mitigation plans.		*	*		*	*
Consider watershed approach during decision-making process.						*
Optimize resources, labor, funds, and partnerships for protection and restoration of fish and wildlife habitats.			*			*
Sustain the Proctor Lake public hunting program as a habitat and species management tool that maintains sustainable game populations, reduces invasive species such as feral hogs, improves habitat conditions and carrying capacity, maintains project lands and waters as a wildlife travel corridor and resting location, and considers public safety relative to proximity and density of adjacent development.		*	*	*	*	*
Minimize activities that disturb the scenic beauty and aesthetics of the lake.		*	*	*	*	
Continually evaluate erosion control and sedimentation issues at Proctor Lake and develop alternatives to resolve the issues.		*	*			*
Address unauthorized uses of public lands such as off-road vehicle use, trash dumping, unauthorized fires, fireworks, poaching, clearing of vegetation, unauthorized trails and paths, and placement of advertising signs that create negative environmental impacts.		*	*	*	*	*

Natural Resource Management Objectives	Goals:	A	B	C	D	E
Monitor lands and waters for invasive, non-native, and aggressively spreading native species and take action to prevent and/or reduce the spread of these species. Invasive species of great concern are described in Chapter 2. Implement control methods (chemical, biological, mechanical, fire) to manage the spread of noxious plants and animals, and to promote the vigor of the local ecoregion.		*	*		*	*
Protect and/or restore important native habitats such as, remnant prairies, riparian zones, and wetlands where they occur, or historically occurred, on project lands. Special emphasis should be taken to protect and/or restore special or rare plant communities, to include actions that promote butterfly and/or pollinator habitat, migratory bird habitat, and habitat for birds listed by USFWS as Birds of Conservation Concerns. Some of these habitats may be designated as Environmentally Sensitive Areas.		*	*	*	*	*

*Denotes that the objective helps to meet the specified goal.

Table 3.3 Visitor Information, Education, and Outreach Objectives

Visitor Information, Education, and Outreach	Goals:	A	B	C	D	E
Provide more opportunities for communication with agencies, special interest groups, and the general public (i.e. comment cards, updates to County officials and City Managers, web page).		*			*	*
Implement more educational, interpretive, and outreach programs at the lake office and around the lake. Topics to include: history, lake operations (flood risk management and water supply), water safety, recreation, nature, cultural resources, ecology, and USACE missions.		*	*	*	*	*
Enhance network among local, state, and federal agencies in order to exchange lake-related information for public education and management purposes.		*			*	*
Increase public awareness of special use permits or other authorizations required for special activities, organized special events, and commercial activities on public lands and waters of the lake.		*	*	*		
Capture trends concerning boating accidents and other incidents on public lands and waters and coordinate data collection with other public safety officials.		*		*	*	*
Promote USACE Water Safety message.		*		*	*	*
Educate adjacent landowners on shoreline management policies and permit processes in order to reduce encroachment actions.		*	*	*	*	*

*Denotes that the objective helps to meet the specified goal.

Table 3.4 General Management Objectives

General Management Objectives	Goals:	A	B	C	D	E
Maintain the public lands boundary line to ensure it is clearly marked and recognizable in all areas to reduce habitat degradation and encroachment actions.		*	*		*	
Secure sustainable funding for the shoreline management program.		*	*	*	*	*
Ensure consistency with USACE Campaign Plan (national level), IPlan (regional level), OPlan (District level).						*
Ensure green design, construction, and operation practices, such as the Leadership in Energy and Environmental Design (LEED) criteria for government facilities, are considered as well as applicable Executive Orders.						*
Carefully manage non-recreation outgrants such as utility and road easements in accordance with national guidance set forth in ER-1130-2-550 and applicable chapters in ER 405-1-12.		*	*			*
Manage project lands and recreational programs to advance broad national climate change mitigation goals in accordance with national USACE policy.						*

*Denotes that the objective helps to meet the specified goal.

Table 3.5 Cultural and Paleontological Resources Management Objectives

Cultural Resources Management Objectives	Goals:	A	B	C	D	E
Monitor and coordinate lake development and the protection of cultural and paleontological resources with appropriate entities.		*	*		*	*
Complete an inventory of cultural and paleontological resources.		*	*		*	*
Increase public awareness and education of regional history including cultural and paleontological resources and history.			*		*	*
USACE will ensure any future historical preservation is fully integrated into the Proctor Lake Master Plan and planning decision making process (Section 106 and 110 of the National Historic Preservation Act; the Archeological Resources Protection Act; and the Native American Graves Protection and Repatriation Act on public lands surrounding the lake).			*		*	*
Develop partnerships that promote and protect cultural and paleontological resources at Proctor.			*	*	*	*
Stop unauthorized use of public lands as it pertains to the illegal excavation and removal of cultural and paleontological resources.			*		*	*

*Denotes that the objective helps to meet the specified goal.

CHAPTER 4 – LAND ALLOCATION, LAND CLASSIFICATION, WATER SURFACE, AND PROJECT EASEMENT LANDS

4.1. LAND ALLOCATION

All lands at USACE water resource development projects are allocated by USACE into one of four categories in accordance with the congressionally authorized purpose for which the project lands were acquired: Operations, Recreation, Fish and Wildlife, and Mitigation. At Proctor Lake, the only land allocation category that applies is Operations, which is defined as those lands that are required to operate the project for the primary authorized purposes of flood risk management, water supply, fish and wildlife, and recreation. The remaining allocations of Recreation, Fish and Wildlife, and Mitigation would apply only if lands had been acquired specifically for these purposes. As measured by GIS, the entire fee simple federal estate at Proctor Lake is 9,109 acres of which 4,574 acres are inundated at conservation pool.

4.2. LAND CLASSIFICATION

The previous version of the Proctor Lake Master Plan included some land classification criteria that were similar but not the same as the current criteria. These prior land classifications were based on predicted projected need rather than actual experience, which resulted in some areas being classified for a type of use that has not or is not likely to occur. Additionally, in the 53 years since the previous Master Plan was published, wildlife habitat values, surrounding land use, and regional recreation trends have changed giving rise to the need for revised classifications. Refer to Table 8.1 and Table 8.2 in Chapter 8 for a summary of land classification changes and the justification for the specific changes.

4.2.1 Current Land and Water Surface Classifications

USACE regulations require project lands and waters to be classified in accordance with the primary use for which project lands are managed. There are five land classification and four subclassifications identified in USACE regulations, as well as four water designations as follows:

- Project Operations
- High Density Recreation
- Mitigation
- Environmentally Sensitive Areas
- Multiple Resource Management Lands
 - Low Density Recreation
 - Wildlife Management
 - Vegetative Management
 - Future/Inactive Recreation
- Water Surface
 - Restricted Areas
 - Designated No Wake Areas

- Fish and Wildlife Sanctuary
- Open Recreation

The revised land and water surface classifications for Proctor Lake were established after considering public comments, key stakeholder's input, and USACE expert assessment. Additionally, wildlife habitat values and the trends analysis provided in TPWD's TORP and TCAP were used in decision making. Maps showing the various land classifications can be found in Appendix A. Each of the land classifications, including the acreage and description of allowable uses, is described in the following paragraphs.

4.2.2 Project Operations

This classification includes the lands managed for operation of the dam, project office, and maintenance yards, all of which must be maintained to carry out the authorized purpose of flood risk management. In addition to the operational activities taking place on these lands, limited recreational use may be allowed for activities such as public access for fishing, hiking, or passive recreation except where prohibited for public safety. Regardless of any limited recreation use allowed on these lands, the primary classification of Project Operations will take precedent over other uses. There are 522 acres of Project Operations land specifically managed for this purpose.

4.2.3 High Density Recreation (HDR)

These are lands developed for intensive recreational activities for the visiting public including day use areas, campgrounds, marinas and related concession areas. Recreation development by lessees operating on USACE lands must follow policy guidance contained in USACE regulations at ER 1130-2-550, Chapter 16. That policy includes the following statement:

The primary rationale for any future recreation development must be dependent on the project's natural or other resources. This dependency is typically reflected in facilities that accommodate or support water-based activities, overnight use, and day use such as marinas, campgrounds, picnic areas, trails, swimming beaches, boat launching ramps, and comprehensive resort facilities. Examples that do not rely on the project's natural or other resources include theme parks or ride-type attractions, sports or concert stadiums, and standalone facilities such as restaurants, bars, motels, hotels, non-transient trailers, and golf courses. Normally, the recreation facilities that are dependent on the project's natural or other resources, and accommodate or support water-based activities, overnight use, and day use, are approved first as primary facilities followed by those facilities that support them. Any support facilities (e.g., playgrounds, multipurpose sports fields, overnight facilities, restaurants, camp stores, bait shops, comfort stations, and boat repair facilities) must also enhance the

recreation experience, be dependent on the resource-based facilities, and be secondary to the original intent of the recreation development...

Lands classified for High Density Recreation are suitable for the development of comprehensive resorts. The regulation cited above defines Comprehensive Resort as follows:

Typically, multi-faceted developments with facilities such as marinas, lodging, conference centers, golf courses, tennis courts, restaurants, and other similar facilities.

At Proctor Lake, prior land classifications included a number of areas under the Public Access Area classification. Several of these areas include Copperas Creek Park, Promontory Park, High Point Park, and Sowell Creek Park which were developed for recreation in the 1971 Master Plan. Using public and stakeholder input, the planning team revised the classification of some of these lands to reflect current and projected outdoor recreation needs and trends. Most of these areas were changed to the current classification High Density Recreation, while High Point Park was changed to Future or Inactive Recreation, described in Section 4.2.6. At Proctor Lake, there are 930 acres classified as High Density Recreation. Each of the High Density Recreation areas is described briefly in Chapter 5 of this Plan.

4.2.4 Mitigation

This classification is used only for lands set aside for mitigation for the purpose of offsetting losses associated with the development of the project. This is not the same as allocated lands that are purchased for the purpose of mitigation. There are no lands at Proctor Lake with this classification.

4.2.5 Environmentally Sensitive Areas (ESA)

These are areas where scientific, ecological, cultural, and aesthetic features have been identified. At Proctor Lake one area has been classified as Environmentally Sensitive Areas (ESA), primarily for the protection of a unique and sensitive habitat. This area is discussed in Chapter 5 of this Plan and illustrated on the maps in Appendix A. There are 20 acres classified as ESA at Proctor Lake.

4.2.6 Multiple Resource Management Lands (MRML)

This classification allows for designation of a predominate use with the understanding that other compatible uses may also occur on these lands. This classification is divided into four sub-classifications identified as Low Density Recreation, Wildlife Management, Vegetative Management, and Future/Inactive Recreation Areas. A given tract of land is typically classified using one of these sub-classifications, but the primary sub-classification should reflect the dominant use of the land. Typically, Multiple Resource Management Lands support only passive, non-intrusive uses with very limited facilities or infrastructure. Where needed, some areas

may require basic facilities that include, but are not limited to minimal parking space, a small boat ramp, and/or primitive sanitary facilities. There are 3,049 acres of land under this classification at Proctor Lake. The following paragraphs list each of the sub-classifications, and the number of acres and primary uses of each.

Low Density Recreation (LDR)

These are lands that may support passive public recreational use (e.g., fishing, hunting, wildlife viewing, natural surface trails, hiking, etc.). Under prior land classifications, numerous areas were classified as Esthetics to support “low use” recreation and wildlife management. The planning process resulted in most of these areas being reclassified as either LDR or Wildlife Management. In general, the relatively narrow tracts that have shoreline along the main body of the lake and are located immediately adjacent to residential areas have been reclassified as LDR. There are 549 acres under this classification at Proctor Lake.

Wildlife Management (WM)

This land classification applies to lands managed primarily for the conservation of fish and wildlife habitat. These lands generally include comparatively large contiguous parcels, most of which are located within the flood pool of the lake. Passive recreation uses such as natural surface trails, fishing, hunting, and wildlife observation are compatible with this classification unless restrictions are necessary to protect sensitive species or to promote public safety. There are 2,248 acres of land included in this classification at Proctor Lake.

Vegetative Management (VM)

These are lands designated for stewardship of forest, prairie, and other native vegetative cover. Passive recreation activities previously described may be allowed in these areas. There are no acres of land included in this classification at Proctor Lake.

Future or Inactive Recreation

These are lands with site characteristics compatible with High Density Recreation development but have been undeveloped or planned for very long-range recreation needs. There are 252 acres classified as Future or Inactive Recreation.

4.2.7 Water Surface

USACE regulations specify four possible sub-categories of water surface classification. These classifications are intended to promote public safety, protect resources, or protect project operational features such as the dam and spillway. These areas are typically marked by USACE or lessees with navigational or informational buoys, signs, or are denoted on public maps and brochures. The Water Surface Classification map can be found in Appendix A of this Plan. The four sub-categories of water surface classification are Restricted, Designated No Wake, Fish and Wildlife Sanctuary, and Open Recreation.

Restricted.

Restricted water surface includes those areas where recreational boating is prohibited or restricted for project operations, safety, and security purposes. The areas include the water surface immediately surrounding the gate control tower upstream of the Proctor Lake Dam as well as around the water intake towers and three designated swim beaches at Proctor Lake parks. There are 11 acres of Restricted water surface at Proctor Lake.

Designated No-Wake

Designated No-Wake areas are intended to protect sensitive shorelines and improve boating safety near key recreational water access areas such as boat ramps. Although there are 7 boat ramps at Proctor Lake, no-wake restrictions are managed through the project buoy plan in place for reasons of public safety and protection of property due to changes in water level and safety needs. As such, there are no acres of designated no-wake water surface at Proctor Lake, and those areas managed under the buoy plan are designated as Open Recreation.

Fish and Wildlife Sanctuary

This water surface classification applies to areas with annual or seasonal restrictions to protect fish and wildlife species during periods of migration, resting, feeding, nesting, and/or spawning. Proctor Lake has no water surface areas designated as a Fish and Wildlife Sanctuary.

Open Recreation

Open Recreation includes all water surface areas available for year-round or seasonal water-based recreational use. This classification encompasses the majority of the lake water surface and is open to general recreational boating. Boaters are advised through maps and brochures, or signs at boat ramps and marinas, that navigational hazards may be present at any time and at any location in these areas. This is especially true during summer and extended droughts when water level can drop far below the conservation pool. Operation of a boat in these areas is at the owner's risk. Specific navigational hazards may or may not be marked with a buoy. There are 4,579 acres of open recreation water surface at Proctor Lake. Future management of the water surface includes maintenance of warning, information, and regulatory buoys as well as routine water safety patrols during peak use periods.

4.3. PROJECT EASEMENT LANDS

Project Easement Lands are primarily lands on which easement interests were acquired. Fee title was not acquired on these lands, but the easement interests convey to the federal government certain rights to use and/or restrict the use of the land for specific purposes. Easement lands are typically classified as Operations Easement, Flowage Easement, and/or Conservation Easement. Flowage easement lands are the only easements that exist at Proctor Lake. A flowage easement, in general, grants to

the government the perpetual right to temporarily flood/inundate private land during flood risk management operations and to prohibit activities on the flowage easement that would interfere with flood risk management operations such as placement of fill material or construction of habitable structures. The Master Plan is intended to manage lands owned in fee title and is not applicable to easement lands. There are approximately 7,695 acres of flowage easements lands at Proctor Lake. For questions about easement lands, please contact the Proctor Lake Project Office.

CHAPTER 5 – RESOURCE PLAN

5.1. RESOURCE PLAN OVERVIEW

This chapter describes in broad terms how each land classification within the Master Plan will be managed. The classifications that exist at Proctor Lake are Project Operations (PO), High Density Recreation (HDR), Environmentally Sensitive Area (ESA), and Multiple Resource Management Lands (MRML) on which a predominant use is specified including Wildlife Management (WM) and Future or Inactive Recreation (FIR). The water surface is also classified into sub-classifications of Restricted, Designated No Wake, and Open Recreation. The management plans describe how the project lands and water surface will be managed in broad terms. Acreages shown for the various land classifications were calculated using satellite imagery and GIS technology and may not agree with lease documents, prior publications, or official land acquisition records.

5.2. PROJECT OPERATIONS

The Project Operations (PO) classification is land associated with the dam, spillway, levees, lake office, maintenance facilities, and other areas managed solely for the operation and fulfillment of the primary mission of the project. There are 522 acres of lands under this classification, which are managed by the USACE. The management plan for this area is to continue providing physical security necessary to ensure sustained operations of the dam and related facilities including restricting public access in hazardous locations near the dam and spillway.

5.3. HIGH DENSITY RECREATION

Proctor Lake has 930 acres classified as High Density Recreation. These lands are developed for intensive recreational activities for the visiting public including day use and campgrounds. National USACE policy set forth in ER 1130-2-550, Chapter 16, limits recreation development on USACE lands to those activities that are dependent on a project's natural resources and typically include water-based activities, overnight use, and day use such as marinas, campgrounds, picnic areas, trails, swimming beaches, boat launching ramps and comprehensive resorts. Examples of activities that are not dependent on a project's natural resources include theme parks or ride-type attractions, sports or concert stadiums, and stand-alone facilities such as restaurants, bars, motels, hotels, and golf courses. The following sections describe areas designated as High Density Recreation at Proctor Lake.

5.3.1 Parks Operated by the USACE

The USACE manages all park areas at Proctor Lake. The management plan for all the parks listed below is to continue to operate them as campgrounds, day use areas, and access points by maintaining and improving existing facilities as resources and personnel allow. Emphasis will be placed on improvements such as upgrading aging water and electrical infrastructure, repairing or replacing outdated restrooms, and

installing site amenities. Adding new or upgrading existing trails or trailheads will be considered in cooperation with agency partners for development and operation. Detailed park maps are provided in Appendix A showing major amenities and access points.

Sowell Creek Park

Located on the east side of Proctor Lake, Sowell Creek Park provides recreation opportunities for the public visiting the area. The park offers overnight camping, two day use areas, swim beaches, fishing, hiking, and boat ramps. Amenities include full RV hookups, showers, picnic tables, fire rings, and access to the shoreline to appeal to hikers, birdwatchers, naturalists, or those simply wanting to enjoy the outdoors.

Copperas Creek Park

Copperas Creek Park is located on the south end of Proctor Lake, to the west of the dam. The Overlook picnic area is located near the entrance of the park. Copperas Creek Park contains campsites, group shelters, a day use area, and swim beaches.

Copperas Creek Park offers an excellent venue to enjoy the outdoors. The park contains 66 campsites, four restroom/shower facilities, two group shelters, two boat ramps, two fishing piers, and a swim beach. Copperas Creek Park's day use area is a short drive from the campgrounds and has 12 picnic sites, as well as a swim beach, a fishing platform, and a boat ramp.

Promontory Park

Promontory Park boasts beautiful camping grounds and provides easy access to the lake! The park has 99 camping/picnic sites, six restroom/shower facilities, four group shelters, five screen shelters, two boat ramps, and one fishing pier. Promontory Park has one day use area, on the northern side of the park, that has a restroom/shower facility, several picnic sites, and a swim beach.

5.3.2 Parks and/or Recreation Areas Operated by Others through Lease Agreements

Recreational outgrants are issued in the form of leases or licenses to recreational partners, referred to as grantees, at the lake. Each grantee is responsible for the operation and maintenance of their leased area, and although USACE does not provide direct maintenance within any of the leased locations, 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 HDR areas. USACE works with partners to ensure that recreation areas are managed and operated in accordance with the objectives prescribed in Chapter 3 of this Plan.

Currently there are no parks or recreation areas operated by others through lease agreements. However, the USACE welcomes the opportunity to work with nearby cities or other stakeholders to provide other recreation areas through lease agreements.

5.3.3 Marinas

There are currently no marinas at Proctor Lake.

5.3.4 Trails

Trails of all type are in high demand across the nation, including the Proctor Lake region. Proctor Lake provides numerous trails to accommodate the recreating public offering multiuse trails throughout the site. These trails are managed by the USACE, but some trails are maintained or improved through agreements with local stakeholders. Partnerships are key to developing and maintaining trails throughout USACE. Trail users should pay attention to signs and warnings, and some trail availability may change based on site conditions.

High Point Trails

Located on the east side of the lake, approximately 8 miles of trails are available to the public for hiking, offroad bicycles, trail running, and enjoying nature. Parking and trailheads are available near Sowell Bridge Day Use Area, High Point Day Use Area, and Foley's Boat Ramp. A trail follows the shoreline between Sowell Bridge and High Point trailheads for approximately 1.25 miles. Within High Point Day Use Area are another 3.75 miles of trails along the shoreline and throughout the area. From the High Point Day Use Area is another trail that heads north along the shoreline towards Foley's Boat Ramp and continues towards the Upper Leon Wildlife Management Area for 3 miles. Trail information is available at the Proctor Lake Project Office and website.

Sabana Wildlife Management Area Trail

At the north end of Proctor Lake near Texas SH-16 is the trailhead for a the Sabana Wildlife Management Area Trail. Approximately 3 miles of trails provide access to hunting and fishing as well as non-motorized recreation including hiking, offroad bicycles, trail running, and enjoying nature. These trails are often unmarked and less maintained, especially at the most southern end of the trail, and users should exercise caution and be familiar with the area. Trail information is available at the Proctor Lake Project Office and website.

5.4. MITIGATION

The Mitigation classification is applied to lands that were acquired specifically for the purpose of offsetting losses associated with the development of the project. There are no acres at Proctor Lake under this classification. USACE lands at Proctor Lake where environmental mitigation activities have taken place in association with real estate easements or other outgrants are not included in lands classified for Mitigation.

5.5. ENVIRONMENTALLY SENSITIVE AREAS (ESA)

ESAs are areas where significant scientific, ecological, cultural or aesthetic features have been identified to be protected or preserved. Designation of these lands is not limited to just lands that are otherwise protected by laws such as the Endangered Species Act, the National Historic Preservation Act, or applicable state statutes. These areas must be managed to ensure they are not adversely impacted. Typically, limited or no high intensity, developed recreation is allowed on these lands. No agricultural or grazing uses are permitted on these lands unless necessary for a specific resource management benefit, such as prairie restoration and management or wildlife management. There are 20 acres at Proctor Lake under this classification that are managed for the protection of the unique resources. Management actions that may be implemented include planting suitable native vegetation, tillage restrictions, the use of prescribed burns, targeted herbicide treatments of invasive species, and other management practices. These areas will continue to be available for recreation to include hiking, wildlife viewing, and other less intensive recreation.

A Wildlife Habitat Appraisal Procedure (WHAP) was conducted May 5-9, 2023 by USACE staff. The WHAP is a tool developed by TPWD to evaluate the quality of habitat for wildlife, giving each point a rating based on a set criteria (see Appendix C of the EA). This assessment was used, in part, to assist in determining which areas should be classified as ESA. Other factors, including public and stakeholder comment, the presence of cultural resources, presence of species of conservation concern, and visual esthetics were also included in the selection of ESA areas. These areas are to be protected from intense development or disturbance from future land use actions such as utility or road easements. Passive public use such as natural surface trails, bank fishing, and nature study are appropriate for these areas.

At Proctor Lake, one area totaling approximately 20 acres was classification as ESA. This area is shown on the land classification maps in Appendix A and described below.

5.5.1 Sowell Creek Remnant Prairie

This 20-acre ESA is located to the north of Sowell Creek Park and FM 1476 until reaching the narrow floodplain associated with Sowell Creek north of the prairie. The area contains shallow soils ranging from sandy loam to weathered rocky sandstone with moderate changes in elevation with some exposed escarpments.



Photo 5.1 Photos of Native Vegetation in the Sowell Creek Remnant Prairie

Source: USACE

There are numerous native short grass prairie plant species with little signs of prior disturbances from agriculture. Guadalupe penstemon (*Penstemon guadalupensis*, discussed in Chapter 2), which have a narrow native range in central Texas and considered relatively rare, are one of plants found in the ESA and one of just a few sites at Proctor Lake. Other native plants in the ESA include the following:

- Barbara's buttons (*Marshallia caespitosa*)
- Bastard oak (*Quercus sinuata*)
- Beebalm (*Monarda* spp.)
- Berlandier's Sundrops (*Oenothera berlandieri*)
- Black prairie clover (*Dalea frutescens*)
- Breadroot (*Pedimelum* spp.)
- Buckley's oak (*Quercus buckleyi*)
- Elbow bush (*Forestiera pubescens*)
- Gum bumelia (*Sideroxylon lanuginosum*)
- Hairy grama grass (*Bouteloua hirsute*)
- Honey Mesquite (*Prosopis glandulosa*)
- Little bluestem grass (*Schizachyrium scoparium*)
- Longleaf Buckwheat (*Eriogonum longifolium*)
- Milkweeds (*Asclepias* spp.)
- Mimosa species (*Mimosa* spp.)
- Paintbrushes (*Castilleja* spp.)

- Prairie pleatleaf (*Nemastylis geminiflora*)
- Purple three-awn grass (*Aristida purpurea*)
- Redberry juniper (*Juniperus pinchotii*)
- Spinystar cactus (*Escobaria vivipara*)
- Star milkvine (*Matelea biflora*)
- Stemmy Four-nerved Daisy (*Tetraneuris scapose*)
- Texas bluebonnets (*Lupinus texensis*)
- Texas live oak (*Quercus fusiformis*)
- Texas prickly pear cactus (*Opuntia lindeimeri*)
- Texas stillingia (*Stillingia texana*)
- Yuccas (*Yucca* spp.)

Future management includes invasive species management, especially targeting King Ranch Bluestem (*Bothriochloa ischaemum*), wild oats (*Avena fatua*), and other non-native species found abundantly along the roadway and encroaching into the prairie. Future management could also include prescribed burns to enhance the native remnant prairie and discourage encroachment of woody species which are becoming more abundant due to decreased fires. Passive use of the area with natural surface trails and for nature viewing are appropriate.

5.6. MULTIPLE RESOURCE MANAGEMENT LANDS

Multiple Resource Management Lands (MRML) at Proctor Lake are organized into three sub-classifications. These sub-classifications are Low Density Recreation, Wildlife Management, and Future or Inactive Recreation. The following is a description of each sub-classification's resource objectives, acreages, and description of use.

5.6.1 MRML – Low Density Recreation

These lands have minimal development or infrastructure that support passive public use such as hiking, nature photography, bank fishing, and hunting. Since these lands are typically adjacent to private residential developments, hunting is only allowed in select areas that are a reasonable and safe distance from adjacent residential properties. These lands are typically open to the public, including adjacent landowners, for pedestrian traffic and are frequently used by adjacent landowners for access to the shoreline near their homes. Prevention of unauthorized use on this land, such as trespassing or encroachment, is an important management and stewardship objective for all USACE lands but is especially important for lands in close proximity to private development. Future management of these lands calls for maintaining a healthy, ecologically adapted vegetative cover to reduce erosion and improve aesthetics as well as monitoring for unauthorized uses by neighboring landowners. Maintenance of an identifiable property boundary is also a high priority in these areas. There are 549 acres of MRML – Low Density Recreation at Proctor Lake.

5.6.2 MRML – Wildlife Management

These are lands designated primarily for the stewardship of fish and wildlife resources but are open to passive recreation use such as installing natural surface trails, hiking, hunting, bank fishing, equestrians, and nature study. There are currently 2,248 acres under this classification.

5.6.3 MRML – Vegetative Management

These are lands that have native vegetative types considered to be sensitive and needing special classification to ensure protection or management. Management activities could include clearing of invasive species and woody species on select parcels that are good candidates for prairie restoration as well as periodic prescribed burns to promote the native grasses and forbs already present on the sites. Currently there are no acres classified for the primary use of Vegetative Management.

5.6.4 MRML – Future or Inactive Recreation Areas

These are areas with site characteristics compatible with potential future recreational development or recreation areas that are closed. High Point Park was previously classified as a Public Access Area, similar to the current High Density Recreation land classification. However, due to lack of resources, the park was closed to intensive recreation activities but remains open for passive recreation activities. The area has been reclassified as Future or Inactive Recreation since it has been closed to intensive recreation but remains a possible option for opening back up with sufficient demand and resources. Until there is an opportunity to develop or reopen these areas, they will be managed for multiple resources. There are 252 acres classified under this sub-classification at Proctor Lake.

High Point Park (Currently Closed)

This park is closed to overnight camping without a special use permit. The park is open for fishing along the shores, picnicking, and use of the volunteer-developed equestrian trails. Trails can be accessed from the large day use parking lot located at the park's entrance. No motorized vehicles of any type are allowed in High Point Park. There are no restrooms or utilities available in this park.

5.7. WATER SURFACE

At conservation pool level of 1162.0 feet there are 4,574 acres of surface water. Classifying the water surface is intended to ensure the security of key operations infrastructure, promote public safety, and protect habitat. In accordance with national USACE policy set forth in EP 1130-2-550, the water surface of the lake at the conservation pool elevation may be classified using the following classifications:

- Restricted
- Designated No-Wake

- Fish and Wildlife Sanctuary
- Open Recreation

Some areas are designated with buoys and are managed by the USACE within the project buoy plan based on existing needs and conditions. These buoys help mark hazards, swim beaches, boats keep-out and no-wake areas. The following water surface classifications are designated at Proctor Lake.

5.7.1 Restricted

Restricted areas are around swim beaches, fishing docks, and on either side of the dam. Vessels are not allowed to enter Restricted water surface. Water surface zoned as Restricted totals approximately 11 acres at Proctor Lake.

5.7.2 Designated No-Wake

Designated No-Wake areas are intended to protect environmentally sensitive shorelines and improve visitor safety near key recreation water access areas such as around boat ramps. Due to variable water levels and changing safety needs, no-wake areas are managed with the project buoy plan rather than designated no-wake areas. There are 7 boat ramp areas at Proctor Lake where no-wake restrictions may be in place for public safety and protection of property. Future management of these areas rests with the USACE. Specific measures to be taken include placement of buoys, placement of signs near boat ramps, and describing the areas on maps available to the public. Growing interest in kayaks and paddle boats indicates a possible future need for designated no-wake areas where kayaks or paddle boats can be operated without competing with motorized vessels. The USACE is open to the concept of paddle trails and will work with interested parties to fulfill this need. There are no acres of water surface Proctor Lake classified as No-Wake.

5.7.3 Fish and Wildlife Sanctuary

Fish and Wildlife Sanctuary areas are managed with annual or seasonal restrictions to protect fish and wildlife species during periods of migration, resting, feeding, nesting, and/or spawning. There are no water surface acres under this classification at Proctor Lake.

5.7.4 Open Recreation

Open Recreation includes all water surface areas available for year-round or seasonal water-based recreational use. Signs at boat ramps warn boaters that navigation hazards such as standing dead timber, shallow water, and floating debris may be present at any time and location and it is incumbent upon boat operators to exercise caution. Boating on the lake is in accordance with USACE and TPWD regulations and water safety laws of Texas. The USACE encourages all boaters and swimmers to wear their lifejackets at all times and to learn to swim well. Approximately 4,579 acres of Proctor Lake is classified for Open Recreation. As mentioned in Section

5.7.3, some Open Recreation areas may be managed as no-wake areas through the project buoy plan and may be designated with buoys, signs, and maps.

5.7.5 Future Management of the Water Surface

Future management of the water surface includes the maintenance of warning, information, and regulatory buoys as well as routine water safety patrols during peak use periods. Currently, water safety patrols are conducted by USACE Park Rangers.

5.7.6 Recreational Seaplane Operations

Seaplane restrictions are part of Title 36 Code of Federal Regulations. At Proctor Lake and other USACE lakes across the nation, areas where recreational seaplane operations are prohibited were established through public meetings and environmental assessments circa 1980. The seaplane policy for USACE Fort Worth District is found in the Notice to Seaplane Pilots (see Appendix D), which lays out the general restrictions as well as lake-specific restrictions for seaplane operation. Due to potential hazards from sub-surface tree stumps and fluctuating water levels, seaplane operations at Proctor Lake, landings and takeoffs are prohibited in all areas north and west of the eastern tip of Promontory Park and all areas west of the southwest tip of Promontory Park.

CHAPTER 6 – SPECIAL TOPICS/ISSUES/CONSIDERATIONS

6.1. COMPETING INTERESTS ON THE NATURAL RESOURCES

Proctor Lake is a multi-purpose project with numerous authorized purposes. The authorized purposes accommodate the needs of federal, state, and municipal users which have developed over time and have contractual rights that must be honored. The benefits provided by virtue of authorized purposes are critical to the local and regional economies and are of great interest to the public. Aside from operating the reservoir to meet the needs of those entities with contractual rights, there are many competing interests for the utilization of federal lands including recreational users, adjacent landowners, those who own mineral rights, utility providers, and all entities that provide and maintain public roads. A growing population places additional stresses on these competing interests through increased demand for water resources and recreation spaces as well as diminishing quality and space for natural habitat and open spaces. Balancing the interests of each of these groups to ensure that valid needs are met while at the same time protecting natural and cultural resources is a challenge. The purpose of this Plan is to guide management into the foreseeable future to ensure responsible stewardship and sustainability of the project's resources for the benefit of present and future generations.

6.2. UTILITY CORRIDORS

USACE policy encourages the establishment of designated corridors on project lands, where feasible, to serve as the preferred location for future outgrants such as easements for roads or utility lines. The USACE considered public input and examined the location of existing roads and utility lines on project lands and as well as those located nearby to the project. The USACE project team determined that there should be minimal demand for any future utilities that might want to cross USACE property and that utility corridors would not be designated at Proctor Lake.

Although no utility corridors have been designated, there may be future demand for a utility or regional arterial road or highway to cross USACE land. In those cases, any future utility or road must follow USACE guidance including those in ER 1130-2-550 and the USACE Non-Recreation Outgrant Policy.

6.3. SHORELINE MANAGEMENT POLICY

On December 13, 1974 the USACE published a regulation, ER 1130-2-406, in the Federal Register entitled "Civil Works Projects: Lakeshore Management." This regulation was published as Part 327.30 of Chapter III, Title 36 of the Code of Federal Regulations. A subsequent change to the regulation was published in the Federal Register on October 31, 1990, incorporating the results of recent legislation and changing the name to "Shoreline Management at Civil Works Projects." The focus of this regulation is to establish national policy, guidelines, and administrative procedures for management of certain private uses of Federal lands administered by USACE. A key requirement in the regulation is that private shoreline uses, as defined in the regulation,

are not allowed at lakes where no such private uses existed as of December 13, 1974. No private shoreline uses such as private docks have been permitted since the changes to the Federal Register, and as such, new private docks will not be allowed on Proctor Lake, while existing docks will be allowed to remain.

The private uses described in the regulation primarily include privately-owned floating facilities such as floating boat docks, fixed or movable piers, and vegetation modification activities such as plantings, mowing, and selective removal of shrubs and trees to the extent that exclusive benefits accrue to an individual or group and the general public is denied use of public lands or waters. Not included in the above definition are certain limited private activities that do not provide exclusive benefits to an individual or group, nor preclude general public use. These limited private activities may be allowed at Proctor Lake by written shoreline use permit for reasons of public safety, erosion control, benefits to wildlife, or to provide reasonable pedestrian access to the shoreline. USACE regulations in ER 1130-2-406 requires the preparation of a Shoreline Management Policy Statement (SMPS) or Shoreline Management Plan (SMP). A Lakeshore Management Plan was prepared for Proctor Lake in 1976, which was the old name of the document that managed shoreline activities and is available for review at the Proctor Lake Office. However, a Shoreline Management Plan is being developed in conjunction with the Master Plan revision to replace the 1976 Lakeshore Management Plan to ensure both plans can be implemented holistically to manage and protect the resources at Proctor Lake. For further information see the Shoreline Management Plan.

6.4. PUBLIC HUNTING PROGRAM

Hunters may harvest waterfowl, dove, squirrels, rabbits, and feral hog at Proctor Lake with a free permit obtained from the Project Office. This permit allows a permit-holder and up to two (2) guests to hunt the Sabana Wildlife Management Area, Upper Leon Wildlife Management Area, and Rush Creek Hunting Area. A permit is not required to hunt waterfowl on the main lake. However, all hunters are required to abide by TPWD hunting seasons, and regulations including having a valid Texas hunting license. Rules, guidelines, regulations and hunting areas are subject to change. Hunters at Proctor Lake must follow all seasons and regulations set by TPWD.

Hunting at Proctor Lake has a long and evolving history. Quail were a popular and abundant game animal until land use changes caused quail populations to decrease across the region. Duck hunting was an early popular game animal while peanuts were the dominant crop in the surrounding area. As the acres used to grow peanuts were decreasing, so the numbers of ducks decreased in the area. During this period, populations of other game animals grew and became popular game until a major flood in 1990 caused significant damage to wildlife habitat, closing the white tailed deer and wild turkey hunting seasons. The USACE intended these closures to last until populations improved, but the USACE never re-opened deer or turkey hunting after the 1990 flood. Droughts in the early and mid-2000s also reduced numbers and hunting opportunities at the lake. Later, the Lower Leon Wildlife Management Area below the dam had to be closed due to severe vandalism issues. Into the 2010s, hogs had become a growing problem in the area, and Proctor Lake opened up hunting for hogs.

During this same period, USACE staff created programs to partner with local groups to provide additional hunting opportunities and help control the growing deer population. For more detailed information on the history of the Hunting and Wildlife Management Program at Proctor Lake, see Appendix F.

6.5. MONARCH BUTTERFLY AND POLLINATOR HABITAT CONSERVATION

The USACE received comments from TPWD about the decline of monarch butterflies and other native insect pollinators due to reductions in native floral resources across Texas. The Master Plan does not include specific projects or detailed plans, but a framework on how the overall project and resources will be managed. The USACE acknowledges the decline of monarch butterflies and other native pollinators and the candidate status of monarch butterflies specifically. Intentionally managing habitat is crucial to monarch butterflies and other native insect pollinator species. Several species of milkweeds (*Asclepias* spp.) and milkvines (*Matelea* spp.) required as host plants for monarch butterfly larvae are found at Proctor Lake including antelopehorn milkweed (*A. asperula*), green antelopehorn (*A. viridis*), green comet milkweed (*A. viridiflora*), star milkvine (*M. biflora*), pearl milkweed vine (*M. reticulata*), and others. In addition, a wide variety of wildflowers found at Proctor Lake are essential sources of nectar for adult monarch butterflies and other pollinator species. The USACE will continue to monitor and manage invasive species and make improvements to native pollinator habitat as part of ongoing projects as resources allow. The USACE also welcomes the opportunity to work with partners and stakeholders to manage and further develop pollinator habitat at Proctor Lake.

CHAPTER 7 – PUBLIC AND AGENCY COORDINATION

7.1. PUBLIC AND AGENCY COORDINATION OVERVIEW

The USACE is dedicated to serving the public interests in support of the overall development of land uses related to land management for cultural, natural, and recreational resources of Proctor Lake. An integral part of this effort is gathering public comment and engaging stakeholders in the process of planning. USACE policy guidance in ER and EP 1130-2-550 requires thorough public involvement and agency coordination throughout the master plan revision process including any associated NEPA process. Public involvement is especially important at Proctor Lake to ensure that future management actions are both environmentally sustainable and responsive to public outdoor recreation needs in a region which is experiencing rapid population growth. The following milestones provide a brief look at the overall process of revising the Proctor Lake Master Plan.

The USACE began planning to revise the Proctor Lake Master Plan in the fall of 2022. The objectives for the Master Plan revision are to (1) revise land classifications to reflect changes in USACE land management policies since 1972, (2) prepare new resource objectives, and (3) revise the Master Plan to reflect new agency requirements for Master Plan documents in accordance with ER 1130-2-550, Change 7, January 30, 2013 and EP 1130-2-550, Change 5, January 30, 2013.

7.2. INITIAL STAKEHOLDER AND PUBLIC PRESENTATION

The first public input meeting was held January 19, 2023. The presentation and associated documents were made available online. The public meeting started a 30-day comment period that began January 20, 2023 and ran through February 20, 2023.

The presentation included a description and definition of a master plan, descriptions of the new land use classification options, and instructions for commenting on the Master Plan. Presentation topics included:

- Public involvement process
- Project overview
- Overview of the National Environmental Policy Act (NEPA) process
- Master Plan and current land classifications
- Instructions for submitting comments

Interested persons had the opportunity to comment about the project using a variety of methods, including the following:

- Filling out submitting a comment using electronic mail (e-mail)
- Writing a comment on letterhead or any choice of paper and mailing it to the District Office or Lake Office
- Printing a comment form, filling it out, and mailing it to the USACE District Office or Lake Office

During the public comment period, the USACE received comments from five members of the public, the Comanche Electric Cooperative, and Texas Parks and Wildlife Department. While issues raised are important, some of the comments received do not pertain to land use or the goals and objectives discussed within the master plan. Some comments were related to the concurrent revision to the Shoreline Management Plan and are addressed in that revision. Topics addressed in the comments included access to recreation areas, boat ramps, hunting and fishing, maintenance, utility corridors, and natural resource management. All the comments received were noted and relevant comments will be addressed as future funding and developments are considered.

Proctor Lake is a federally owned and managed public property. It is the USACE's goal to be a good neighbor as well as steward of the public interest as it concerns Proctor Lake. As such, the USACE is bound to the equal enforcement of policies and rules for this publicly held national asset. Table 7.1 provides the comments received during the initial scoping comment period for the Master Plan, as well as the USACE response.

Table 7.1 Public Comments from Initial Public Scoping Presentation

Comment	USACE Response
Comanche Electric Cooperative is interested in your plans for a utility corridor and how it may be used to support/benefit CECA's electric services to the USACE and its other members.	Thank you for the comment on interest in a utility corridor. The USACE will work with Comanche Electric Cooperative to determine where utility corridors may be needed and considered designating such corridors in the revised Master Plan. However, due to no specific areas requested, the USACE will consider requests on a case-by-case basis and in consideration of the USACE Non-Recreational Outgrant Policy.
As it relates to boat docks or boat mooring facilities, it seems that the intent of the July 1976 Lakeshore Management Plan was to encourage the use of commercial marinas or community docks. There are no commercial marinas and I do not expect there will be any in the future due to the relative low volume of boat traffic on the lake even during the peak summer time three day weekends. I would not think a commercial marina would be an economic endeavor especially with the additional cost of installing a facility that would be designed to accommodate the sometimes	These comments are related to the Shoreline Master Plan revision and were considered in preparation of the Draft Shoreline Management Plan.

Comment	USACE Response
<p>extreme changes in the lake level. The communities that are located on or near Adjoining Land are not part of an organized development or association. Any community docks would essentially be owned/controlled by a small group of neighbors and their friends. A community dock would be much larger in scope than any existing grandfathered private dock to accommodate multiple vessels. I do not think this would be good for the management of the shore line nor would it actually accomplish the intent of a community dock. Any community dock would likely suffer the same consequences of existing docks in that they would be accessible to boats within a limited lake level variance. Most private docks are either under the water when the lake level is high or dry docked when the lake level is low.</p> <p>The prohibition of any new private dock or boat mooring facilities forces all those that do not have access to a grandfathered dock to use the boat ramps every time it is desired to launch a boat and retract the boat from the lake. This is fine for the occasional boater but is not the best solution for those that have Adjoining Land and use the lake for boating on a regular basis. Without the availability of a dock, boats that are left in the water for an extended period of time during the summer boating season, several days or weeks in a row, have the risk of becoming dry docked on the shore if there is a sudden reduction to the water level or ending up adrift if not secured to a fixed object when the lake suddenly rises. I have experienced a situation when a boat was pulled inland when the lake was at a high level and then dry docked when the lake level lowered in a short period of time. This boat remained on the shore for over two years before the lake level rose to a level that allowed it to be lifted from the shore. Even the change in water level over a day or two during the hot summer period can leave a boat that</p>	

Comment	USACE Response
<p>has only been pulled ashore very difficult to relaunch into the water.</p> <p>If docks, of any kind, are not allowed, the only other option is to either leave boats on the shoreline is to constantly utilize the boat ramp for the launching and loading of boats. This additional traffic at the boat ramps is a detriment in many ways (i.e. limited parking space for trailers, traffic in and out of the park area, dangers of backing a trailer into the lake, the elimination of boat use for those that do not have trailer backing skills, unnecessary use of vehicle fuel and the resulting engine emissions, etc.).</p> <p>A solution to the above is the use of completely portable docks. Unlike the docks that were used when Lake Proctor was first established and are now Grandfathered, a portable dock can be easily and completely extracted from the lake. These newer portable docks were designed for lakes that do not allow permanent docks due to constant and sudden changes in the water level. Portable docks have the following characteristics:</p> <p>The buoyancy element is totally encased in a thick hard outer plastic covering that is also buoyant.</p> <p>The dock is anchored at the water end of the dock with heavy metal poles that are securely attached to the dock and secured in place to the bottom of the lake with an auger end. The attachment of the poles to the dock is done in a manner that allows the dock to slide up and down the poles as the lake level ascends and recedes.</p> <p>The shore line end of the dock is secured with a heavy metal gang plank that can be easily lifted when moving the dock in and out to accommodate changes in the water level.</p>	

Comment	USACE Response
<p>The docks have removable hard plastic wheels that are used to move the dock into and completely out of the lake and also allows for the dock to be positioned well up on the shore line and beyond the Government property line when not in use.</p> <p>The use of portable docks should be allowed under the following conditions:</p> <p>A permit should be required.</p> <p>The dock should be maintained and moved in and out when the water level changes.</p> <p>A bond should be required to ensure compliance with any regulations concerning these docks.</p> <p>The docks should be extracted from lake and moved off the Government property during the nonsummer season which is also, typically, the time in the fall, winter and spring when rainfalls tend to cause the lake level to rise abruptly.</p> <p>If you need any additional information concerning the above described docks, I would be pleased to provide.</p>	
<p>Why is the most preferred camping area at Copperas Creek closed throughout the winter but is allowed for volunteers that are not needed allowed to use it free?</p> <p>Why is Highpoint not open to public?</p> <p>Why does Corp own so much property that is not used by anyone?</p> <p>Will the excess property ever be sold? Will previous landowners ever be allowed to purchase said property?</p> <p>The Equestrian Trailriders Association once had agreement w/Corp to camp and use Highpoint for camping and trail riding?</p>	<p>Operating times and seasons are not topics covered in the Master Plan. However, those times and seasons are subject to change based on demand and available resources. Copperas Creek is currently closed to the public during winter months due to the low demand during those months. Volunteers who are staying at Proctor Lake are providing services to the Project Area, even during winter months. Furthermore, the area designated for volunteers to stay at Proctor Lake is at Copperas Creek, even if they are providing services at</p>

Comment	USACE Response
<p>Volunteers readily maintained the area and trails until ridiculous rules for using their own equipment made it impossible.</p>	<p>other parts of the Project, not just Copperas Creek.</p> <p>High Point Park was formerly open to various forms of intensive recreation. However, due to changing demand in parallel with excessive vandalism and limited resources to deal with that vandalism, the intensive recreation facilities were closed. High Point Park does offer many miles of multi-purpose (non-motorized) trails with parking at the trailheads. The USACE welcomes the opportunity to work with local cities or stakeholders to provide future recreation opportunities at High Point Park and other areas of Proctor Lake. In the meantime, it has been classified as Future and Inactive Recreation with the possibility of changing to HDR in a future update if the need arises and resources become available.</p> <p>The USACE purchased land required not only for storage of water up to the flood pool, but also required for access and maintenance of operational facilities. In addition, the USACE purchased additional acres as flowage easement, which is permits the government to occasionally flood that land as required for operations and flood risk management within the watershed. These purchases were Congressionally mandated, and in most cases would require additional Congressional authorization to dispose of (sell) the property. For further details and questions about property disposal, please contact the Fort Worth District Office.</p> <p>The USACE welcomes the opportunity to work with stakeholders, including equestrian groups, to</p>

Comment	USACE Response
	<p>maintain trails, parking areas, or other facilities, but are subject to USACE rules and guidelines. For interest or questions about working with the USACE to make improvements to High Point Park or other areas of Proctor Lake, please contact the Proctor Lake Project Office.</p>
<p>I would like to suggest that High Point Park be returned to Army Corp of Engineers maintenance. There is still frequent use by equestrians from there all along the waterfront to Foley's Boat Dock. The park and all the trails out from it need maintenance to clear briars and large cockleburs. Pedestrian use of the trails is heaviest from the Foley Boat Dock parking area through to fishing spots in the coves. The briars are a tripping hazard for them although horses seem unaffected except for steeper grades in a couple of places.</p> <p>Also regarding High Point Park: It would be an ideal place to repair and restore the boat ramps. The slope is steep and accesses deep water quickly. The ramp at Foley's is almost unusable because of the very slight slope and shallow water. The ramps at Sowell Creek are good, but the closest one for north shore visitors is only permitted for campers. The long drive through Sowell Creek park to the ramp at the dam gets you a ramp so steep that it's a bit difficult to pull a boat out. There needs to be public access to a deep water ramp on the north side similar to what is available at Copperas Creek.</p> <p>I would also like to suggest that some accommodation be made in the rules for adjacent land owners who want to clean up and mow Corp of Engineer land between their properties and the water's edge. I have a 465' border. I am 75 years old and can not sickle or push mow to clean up the cockleburs that make the shoreline strip almost impassable. It</p>	<p>High Point Park was formerly open to various forms of intensive recreation. However, due to changing demand in parallel with excessive vandalism and limited resources to deal with that vandalism, the intensive recreation facilities were closed. High Point Park does offer many miles of multi-purpose (non-motorized) trails with parking at the trailheads. The USACE welcomes the opportunity to work with local cities or stakeholders to provide future conducting periodic maintenance at High Point Park and other areas of Proctor Lake. There are currently no plans to re-open the boat ramp at High Point Park. In order to re-open the boat ramp, there would need to be significant repairs not only to the boat ramp, but also the parking lot and road leading towards the boat ramp. Due to limited resources, there are no plans to make those repairs at this time. However, High Point Park is classified as Future or Inactive Recreation in the Master Plan Revision which would allow the area to be reclassified to HDR in the future to allow boat ramps to re-open or other intensive recreation if there was sufficient demand and resources became available.</p> <p>Mowing vegetation on USACE property between the boundary line and water surface is covered under the</p>

Comment	USACE Response
<p>would be easy enough for me to use my riding mower like I do on my own acreage. I have assumed the restriction on motorized vehicles applies to a riding mower. Also there is a lot of dead brush in the shoreline strip left behind by the 2016 flooding. It would take a tractor pulled shredder to clear and remove that. I have that equipment available.</p>	<p>Shoreline Master Plan Revision. Reference the Shoreline Master Plan or send specific requests to the Proctor Lake Project Office.</p>
<p>Texas Parks and Wildlife Department (TPWD) has received the scoping notice regarding the proposed project listed above. TPWD staff has reviewed the information provided and offers the following comments concerning this project.</p> <p>In addition to state and federally protected species, TPWD tracks species considered to be Species of Greatest Conservation Need (SGCN) that, due to limited distributions or declining populations, face threat of extirpation or extinction but currently lack the legal protections given to threatened or endangered species. Special landscape features, natural plant communities, and SGCN are rare resources for which TPWD actively promotes conservation, and TPWD considers it important to minimize impacts to such resources to reduce the likelihood of endangerment and preclude the need to list SGCN as threatened or endangered in the future. These species and communities are tracked in the Texas Natural Diversity Database (TXNDD). The most current and accurate rare and protected species data for Comanche County can be requested from the TXNDD website.</p> <p>Please note that the absence of TXNDD information in the proximity does not imply that a species is absent from that area. Given the small proportion of public versus private land in Texas, the TXNDD does not include a representative inventory of rare resources in the state. Although it is based on</p>	<p>The USACE has referenced the TXNDD and continues to monitor for SGCN as well as special landscape features, natural plant communities, and other important natural resources at Proctor Lake.</p> <p>One unique, shallow-soil prairie was designated as an Environmentally Sensitive Area to help give added protection to the natural resources in that area.</p> <p>The USACE conducted a habitat assessment to help identify unique features, habitats, or communities, and also reviewed citizen science observations including iNaturalist and eBird to identify significant species observed at or near Proctor Lake, helping to add additional data to the TXNDD and other state inventories.</p> <p>No rare habitat or protected species have been discovered that would warrant special protection. However, if such habitat or species are discovered, the USACE will review the TPWD website and inform TPWD personnel of such observations.</p> <p>The USACE has referenced the TEAM in the development of the Master Plan and Environmental Assessment.</p>

Comment	USACE Response
<p>the best data available to TPWD regarding rare and protected species, data from the TXNDD does not provide a definitive statement as to the presence, absence, or condition of special species, natural communities, or other significant features within a project area. These data are not inclusive and cannot be used as presence/absence data or be substituted for on the ground surveys.</p> <p>If suitable habitat is available, rare and protected species could be present in the project area. Please review the TPWD county list for Comanche County which can be found on the Rare, Threatened, and Endangered Species of Texas website.</p> <p>The TPWD Landscape Ecology Program has developed an interactive mapping application, the Texas Ecosystem Analytical Mapper (TEAM), to assist wildlife biologists, land managers, naturalists, planners, and conservationists in understanding Texas habitats and to integrate vegetation data with land management and resource planning of all types. For more information on TEAM please visit the TPWD Landscape Ecology Program website.</p> <p>Future correspondence regarding this project · can be submitted to HAB@tpwd.texas.gov. Please contact me at Richard.Hanson@tpwd.texas.gov or (806) 761-4930 ext. 4936 if you have any questions.</p>	
<p>In conjunction with the Proctor Lake MP and SMP revision, I was reviewing the 1976 Lakeshore Management Plan provided by a link on the related web page. There were a few pages on the 1976 plan missing:</p> <p>2nd page ii of the Table of Contents</p>	<p>Email response sent shortly after receiving comment:</p> <p>Thank you for. reviewing the SMP and catching those missing pages! We have re-scanned the entire document and included all missing pages. The following pages have been added: Table of Contents ii, F-14, F-18, F-24, and Map Attachment.</p>

Comment	USACE Response
<p>Section 8-05-the last sentence is not complete. It appears that the next page (F-18) is missing</p> <p>Standards for Existing Facilities, Section 7(b)-the last sentence is not complete. It appears that the next page F-24 is missing</p> <p>The Lake Management Plan Map referenced in Section 4-01 is not attached to the document</p> <p>Please send the missing pages to this e-mail address or if the document on the link is not complete, please inform me when it is.</p>	<p>However, please note that some even page numbers still appear to be missing; these pages are not in the original plan and have not been excluded from the scanned document. The new version has been uploaded to the original website, and the comment period has been extended to March 2, 2023 to ensure that stakeholders, agencies, and the public have 30 days to review and provide comments. Please share this information with anyone who might have interest in providing comments as we begin the process of revising the Proctor Lake Master Plan and Shoreline Management Plan and provide comments by March 2, 2023.</p> <p>https://www.swf.usace.army.mil/About/Lakes-and-Recreation-Information/Master-Plan-Updates/Proctor/</p>

Comment	USACE Response
<p>Please do not allow any more docks.</p> <p>Stop/adjust hunting with blast & cast-39 deer were taken this year. It needs to be doe only & under privileged kids only.</p> <p>Bring back crappie tournaments. Our core guys have worked hard at putting in all the structure. Use it.</p> <p>Please keep the same people around cleaning restroom. They haven't been that clean in years. They do a great job.</p> <p>Replace Sowell creek dam boat dock. It's on rocks at 4 ft low.</p>	<p>1. This is a topic covered in the Revised Shoreline Master Plan.</p> <p>2. Specific hunting programs and partnerships are not part of the Master Plan. However, USACE staff carefully considers the local deer population and local carrying capacity when making decisions on hunting restrictions. For specific questions regarding hunting, including hunters and take limits. Please contact the Proctor Lake Project Office for making specific recommendations.</p> <p>3. This topic is not covered in the Master Plan. However, fishing is generally permitted, and any tournaments could be allowed if there is demand and a sponsor to organize the tournaments.</p> <p>4. Noted.</p> <p>5. The USACE is aware of the issues at the Sowell Creek boat dock during low water and is researching ways of resolving those issues. However, such projects are subject to the limited to available resources.</p>

7.3. PUBLIC AND AGENCY REVIEW OF DRAFT MP, EA, AND FONSI

This section will be completed after the conclusion of the 30-day comment period after the release of the Draft Proctor Lake Master Plan. The USACE will consider all comments received and summarize those comments and USACE responses as well as any changes that will be made from the Draft to Final Master Plan documents.

CHAPTER 8 – SUMMARY OF RECOMMENDATIONS

8.1. SUMMARY OVERVIEW

The preparation of the Proctor Lake Master Plan followed the USACE master planning guidance in ER 1130-2-550 and EP 1130-2-550, both dated 13 January 2013. Three major requirements set forth in the guidance include (1) the preparation of contemporary resource objectives, (2) classification of project lands using the newly approved classification standards, and (3) the preparation of a resource plan describing in broad terms how the land in each of the land classifications will be managed into the foreseeable future. Additional important requirements include public involvement throughout the process, and consideration of regional recreation and natural resource management priorities identified by other federal, state, and municipal authorities. The study team endeavored to follow this guidance to prepare a master plan that will provide for enhanced recreational opportunities for the public, improve environmental quality, and foster a management philosophy that promotes partnerships and the success of each stakeholder involved in the management of the lands and surface waters of Proctor Lake. Factors considered in the Plan were identified through public involvement and review of statewide and regional planning documents including the following:

- TPWD's TORP, 2018 and 2012
- TCAP – Cross Timbers Ecoregion
- West Central Texas Council of Governments planning documents

This Master Plan will ensure the long-term sustainability of the outdoor recreation program and natural resources associated with Proctor Lake.

8.2. LAND CLASSIFICATION PROPOSALS

A key component in preparing this Master Plan was examining prior land classifications and addressing the needed transition to the new land classification standards. During the public involvement process USACE sought public input into whether, besides the simple change in nomenclature, a shift in land classification was desired (for example, should lands with a recreation classification be reclassified to a wildlife classification or vice versa.). Chapter 7 of the Plan describes the public input process.

Based on an evaluation of documents such as those listed in Section 8.1, development of goals and objectives, public and stakeholder comments, interviews with adjacent cities and concerned agencies, as well as subject matter experts; the planning team prepared the land reclassification proposal for Proctor Lake. All changes reflect historic and projected public use and new guidance from ER 1130-2-550 and EP 1130-2-550. A summary of acreage changes from prior land classifications to the current classifications is provided in Table 8.1 and key decision points in the reclassification of project lands are presented in Table 8.2.

Table 8.1 Changes from Prior Classification (1971) to Classification (2024)

Prior Land Classifications (1971 Plan)	Acres	New Land Classifications (2024)	Acres
Esthetics	804	Environmentally Sensitive Areas	20
Public Access Area Recreation	1,181	High Density Recreation	930
Operations and Maintenance	302	Project Operations	522
Wildlife and Nature Study Area	2,248	Multiple Resource Management – Wildlife Management	2,248
--	--	Multiple Resource Management – Low Density Recreation	549
--	--	Multiple Resource Management – Future or Inactive Recreation	522
TOTAL Land Acres	4,535	TOTAL Land Acres	4,520
Prior Water Surface Classifications (1971 Plan)	Acres	New Water Surface Classifications (2024)	Acres
Water Surface	4,574	Permanent Pool	4,589
--	--	– Restricted	11
--	--	– Open Recreation	4,579
TOTAL Water Surface	4,574	TOTAL Water Surface	4,589

NOTE: Some acreage differences are due to improvements in mapping and measurement technology, deposition/siltation, and erosion. Other minor differences in totals are due to rounding.

There are several major differences in the acres between the 1971 Master Plan and the 2024 Master Plan which are not accounted for in Table 8.1, Table 8.2, or the maps in Appendix A. These differences are due to the following:

- Current mapping and measuring technology have improved since the 1971 Master Plan, providing more precise measurements. The current Plan uses GIS computer software, LiDAR spatial mapping, and updated boundary surveys.
- Since the 1971 Master Plan, erosion and deposition/siltation have led to changes in the water surface acres and land acres, with some areas increasing and other areas decreasing the total acres.
- The prior land classification Public Access Recreation is similar to the current HDR classification.
- The prior land classification Esthetics is not similar to any current classification, but is most comparable to Multiple Resource Management Lands, in general.
- The prior land classification Operations and Maintenance is similar to the current Project Operations classification.
- The prior land classification Wildlife and Nature Study Area is similar to the current MRML–Wildlife Management Area classification.

- The prior water classification Water Surface is similar to the current classifications for Water Surface Open Recreation.

The following table shows changes from the prior classification to current but combines the similar classifications for ease of showing changed acres:

Table 8.2 Reclassification Description

Proposal	Reclassification Description Justification
Esthetics to ESA	20 acres of land that were previously classified as Esthetics have been reclassified as ESA. This change is to reflect both the original intention of the Esthetic classification to protect sensitive areas, and the current ESA classification to protect the remnant prairie as described in Chapter 5.
Esthetics to MRML–LDR	535 acres of land that were classified as Esthetics have been reclassified to LDR. This change is to reflect both the original intention of the Esthetic classification to include passive recreation, but also the current recreational usage for those areas. These areas will continue to include passive recreation to include hiking, fishing, and observing natural resources. Typically, hard surface or paved parking lots are not permitted in LDR areas.
Esthetics to MRML–WM	13 acres of land that were classified as Esthetics have been reclassified to WM. This change is to reflect both the original intention of the Esthetic classification to include passive recreation but also for managing other natural resources. These areas are used to manage wildlife and often included in Proctor Lake hunting areas. These areas will continue to be available for passive based recreation, but primary uses are for wildlife habitat and hunting areas.
Esthetics to Project Operations	235 acres of land that were classified as Esthetics have been reclassified to Project Operations. These areas are below the dam and along the Leon River. Much of this area is off limits to the public for safety or security. Although the primary use of this area is for operations and maintenance, some areas can include subsequent recreation where not prohibited.
Operations and Maintenance to Project Operations	286 acres of land that were classified as Operations and Maintenance have been classified to Project Operations. This is mostly a change in name, and the primary purpose of these areas continues to be for the operations and maintenance of Proctor Lake.
Operations and Maintenance to Water Surface Open Recreation	9 acres of land that were classified as Operations and Maintenance have been classified to Water Surface Open Recreation. This change is to recognize the water surface at conservation pool based on latest mapping technology and is available for open recreation.

Proposal	Reclassification Description Justification
Operations and Maintenance to Water Surface Restricted	6 acres of Operations and Maintenance has been reclassified as Water Surface Restricted. At conservation pool, these areas are under water based on latest mapping technology. However, this area is Restricted due to hazardous conditions and requirements for operations and maintenance of the project.
Public Access Recreation Area to HDR	930 acres have been reclassified from Public Recreation Area to HDR. This is mostly a change in name, as the original classification would permit intensive recreation facilities and uses just as the current HDR classification.
Public Access Recreation Area to MRML–Future or Inactive Recreation	252 acres at High Point Park were changed from Public Access Recreation Area to MRML–Future or Inactive Recreation, because the intensive recreation facilities have been closed in that park as described in Chapter 4. This area remains available for multiple resource management and can include various forms of passive recreation including hiking, observing nature, or horse riding. However, this area has the potential to revert back to High Density Recreation if resources and demand are sufficient to re-open the park for intensive recreation in a future Master Plan update or revision.
Wildlife and Nature Study Area to MRML–WMA	2,235 acres have been classified from Wildlife and Nature Study Area to WMA. This is mostly a change in name, as both areas are dedicated to natural resources including wildlife and have been included in hunting areas around Proctor Lake.
Wildlife and Nature Study Area to MRML–LDR	13 acres have been classified from Wildlife and Nature Study Area to LDR. This change is to reflect the current management of that area which includes passive recreation. These areas will continue to include passive recreation including hiking, fishing, and observing natural resources. Typically, hard surface or paved parking lots are not permitted in LDR areas.
Water Surface to Water Surface Open Recreation	4,570 acres have been classified from Water Surface to Water Surface Open Recreation. This is mostly a change in name, as both classifications would permit general recreational usage on the water surface above conservation pool.
Water Surface to Water Surface Restricted	4 acres have been classified from Water Surface to Water Surface Restricted. At conservation pool, this area is classified as water. However, this area is Restricted due to hazardous conditions and requirements for operations and maintenance of the project.

Note: The land classification changes described in this table are the result of changes to individual parcels of land ranging from a few acres to more than 100 acres. Acreages were measured using GIS technology. The acreage numbers provided are approximate and may be subject to rounding differences.

CHAPTER 9 – BIBLIOGRAPHY

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