

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S. ARMY CORPS OF ENGINEERS, FORT WORTH DISTRICT,  
THE TEXAS STATE HISTORIC PRESERVATION OFFICER,  
AND THE SAN ANTONIO WATER SYSTEM (SAWS),  
REGARDING COMPLIANCE WITH SECTION 106 OF THE  
NATIONAL HISTORIC PRESERVATION ACT FOR THE  
MITCHELL LAKE AQUATIC ECOSYSTEM RESTORATION STUDY AND  
ENVIRONMENTAL ASSESSMENT  
IN  
BEXAR COUNTY, TEXAS**

WHEREAS, the U.S. Army Corps of Engineers, Fort Worth District (USACE) is cost sharing with the San Antonio Water System (SAWS) for the implementation of the Mitchell Lake Aquatic Ecosystem Restoration Study, which presents an alternative (Plan 8) that incorporates increasing areal extent & quality of wetlands, increasing floral & faunal species diversity & richness and managing/controlling invasive plant species; and

WHEREAS, the Mitchell Lake Aquatic Ecosystem Restoration Study is authorized by Resolution of the Committee on Transportation and Infrastructure, U.S. House of Representatives, House Resolution Docket No. 2547, dated 11 March 1998, to provide improvements in the interest of flood control, environmental restoration and protection, water quality, water supply and allied purposes on the Guadalupe and San Antonio Rivers in Texas; and

WHEREAS, Plan 8 in the Mitchell Lake Aquatic Ecosystem Restoration Study (hereinafter, “undertaking”) consists of constructing approximately 49.52 acres of mudflat habitat, 74.54 acres of emergent/submergent wetland habitat and 76.11 acres of emergent wetland habitat, totaling 110.8 acres; and

WHEREAS, USACE has defined the undertaking’s preliminary area of potential effects (APE) as described in **Appendix B-Project Summary**; however, the final horizontal and vertical APE cannot be fully determined until the pre-construction, engineering and design phase of the study, and will be developed in consultation with the SHPO and those Tribal Nations requesting consulting party status (hereinafter, “Tribal Nations”) prior to a cultural resource survey being performed; and

WHEREAS, during the pre-construction, engineering and design phase of the study, the construction footprint of the undertaking will be developed through revisions and redesigning, with the final work plan being developed in consultation with all signatories and consulting parties to this PA; and

WHEREAS, USACE has determined that all activities associated with the undertaking have the potential to affect historic properties eligible for listing in the National Register of Historic Places (NRHP) (hereinafter, “historic properties”), pursuant to Section 106 of

the National Historic Preservation Act (54 U.S.C. § 306108) (NHPA), as amended, and its implementing regulations (36 CFR Part 800); and

WHEREAS, SAWS is the non-Federal partner with the USACE for this undertaking, and are providing the necessary lands, easements, relocations, rights-of-way and disposal areas; and

WHEREAS, USACE has developed this Programmatic Agreement (PA) to describe the process that will be followed for identifying historic properties, assessing effects, and resolving any identified adverse effects within the horizontal footprint of the undertaking, prior to construction, and the process USACE will follow in the event that unanticipated discoveries are identified during construction and maintenance activities, and to ensure that the Section 106 process is fulfilled for the Mitchell Lake Aquatic Ecosystem Restoration Study Integrated Feasibility Report and Environmental Assessment; and

WHEREAS, the USACE, has consulted with the Texas State Historic Preservation Officer (SHPO), pursuant to 36 CFR 800, the regulations implementing Section 106 of the NHPA in developing a PA for the implementation of the undertaking, in accordance with 36 CFR § 800.6 and 36 CFR § 800.14(b)(1)(ii); and

WHEREAS, in 2019, the USACE has consulted with the Alabama-Coushatta Tribe of Texas, Alabama-Quassarte Tribal Town, the Comanche Nation of Oklahoma, the Caddo Nation, the Mescalero Apache Tribe, the Tunica Biloxi Tribe, the United Keetoowah Band of Cherokee Indians, the Delaware Nation, Seminole Nation of Oklahoma, the Coushatta Tribe of Louisiana, the Kiowa Indian Tribe of Oklahoma, the Tonkawa Tribe of Oklahoma, and the Northern Arapaho, for which the undertaking was believed to be in these Tribal Nations area of interest, and for which historic properties within the focused study area of the undertaking are believed to have religious and cultural significance to these Tribal Nations; and

WHEREAS, in accordance with 36 CFR § 800.6 (a)(2), the Comanche Nation of Oklahoma, the Mescalero Apache Tribe, the Northern Arapaho Tribe, the Caddo Nation of Oklahoma and the Seminole Nation of Oklahoma are consulting parties to this PA (**Appendix A**); and

WHEREAS, in accordance with 36 CFR § 800.6 (c)(2), the USACE has invited SAWS to be a signatory in this PA; and

WHEREAS, the USACE has invited the Advisory Council on Historic Preservation (ACHP) to participate and the ACHP has chosen not to participate; and

WHEREAS, since 2019 the USACE has involved the public in this study by providing news releases to the local paper, holding public scoping meetings, and publishing the studies draft Integrated Feasibility Report and Environmental Assessment on the Fort Worth District's website for a public comment period; and

NOW, THEREFORE, the USACE, the SHPO and SAWS agree that the proposed undertaking shall be implemented and administered in accordance with the following stipulations in order to take into account the effects of the undertaking on historic properties.

## **STIPULATIONS**

### **I. Identification, Evaluation, Effects Determination, and Resolution**

- A. Scope of undertaking. This PA shall be applicable to all activities associated with the construction of the Mitchell Lake Aquatic Ecosystem Restoration Study Tentatively Selected Plan (TSP). The final APE shall be established by the USACE in consultation with the SHPO and Tribal Nations to include all areas that will be affected by new construction, terrestrial construction staging and access areas, terrestrial equipment placement needs during use in construction activities, access routes, and project maintenance activities that will result from this undertaking.
- B. Qualifications and Standards. The USACE shall ensure that all work conducted in conjunction with this PA is performed in a manner consistent with the Secretary of Interior's "Standards and Guidelines for Archeology and Historic Preservation" (48 FR 44716-44740; September 23, 1983), as amended, the Secretary of the Interior's "Standards for the Treatment of Historic Properties" (36 CFR § 68), National Register Bulletin 15 "How to Apply the National Register Criteria for Evaluation" (NPS 1990), and the requirements for archaeological survey as outlined in the Archeological Survey Standards for Texas (Texas Historical Commission), as appropriate. The USACE shall ensure that the Principal Investigator hired to conduct the work will meet the Secretary of Interior's standards, and is able to be issued a Texas Antiquities Permit.
- C. Definitions. The definitions set forth in 36 CFR § 800.16 are incorporated herein by reference and apply throughout this PA.
- D. Identification of Historic Properties (Cultural Resource Survey). Prior to the initiation of construction, the USACE shall make a reasonable and good faith effort to identify historic properties located within the APE. These steps may include, but are not limited to, background research, consultation, oral history interviews, seek information from consulting parties, and other individuals and organizations likely to have knowledge of, or concerns with historic properties in the area, sample field investigations, and a cultural resource field survey. All draft reports of survey shall be submitted to the SHPO and Tribal Nations for review and comment. If the SHPO and Tribal Nations comments are not received by the USACE within thirty (30) calendar days of receipt, the reports and their recommendations shall be considered adequate by the SHPO. Comments received by the USACE from the SHPO and Tribal Nations shall be addressed in the final reports, which shall be provided to all consulting parties. If no historic properties

are identified in the APE, the USACE shall document this finding pursuant to 36 CFR § 800.11(d), and provide this documentation to the SHPO and Tribal Nations.

E. Evaluation of National Register Eligibility. If cultural resources are identified within the APE, the USACE shall determine their eligibility for the NRHP in accordance with the process described in 36 CFR § 800.4(c) and criteria established in 36 CFR § 60. Any potential historic properties identified on state public land shall also be assessed as potential State Antiquities Landmarks. All draft reports of NRHP site testing/draft research design or other NRHP investigations shall be submitted to the SHPO/Tribal Nations/additional consulting parties identified in consultation with SHPO for review and comment. If SHPO/additional consulting parties comments are not received by the USACE within thirty (30) calendar days of receipt, the reports/draft research design or investigations and their recommendations shall be considered adequate by the SHPO and Tribal Nations. Comments received by the USACE from the SHPO or Tribal Nations shall be addressed in the final report/draft research design, which shall be provided to all consulting parties. The determinations of eligibility shall be conducted in consultation and concurrence with the SHPO and Tribal Nations. Should the USACE, SHPO, and Tribal Nations agree that a property is or is not eligible, then such consensus shall be deemed conclusive for the purpose of this PA. Should the USACE, SHPO and Tribal Nations not agree regarding the eligibility of a property, the USACE shall obtain a determination of eligibility from the Keeper of the National Register pursuant to 36 CFR § 63. For cultural resources found not eligible for the NRHP, no further protection or consideration of the site will be afforded for compliance purposes.

F. Assessment of Adverse Effects.

1. No Historic Properties Affected. The USACE shall make a reasonable and good faith effort to evaluate the effect of the undertaking on identified and determined historic properties in the APE. The USACE may conclude that no historic properties are affected by the undertaking if no historic properties are present in the APE, or the undertaking will have no effect as defined in 36 CFR § 800.16(i). This finding shall be documented in compliance with 36 CFR § 800.11(d), and the documentation (cultural resource report, per Stipulation I. D.) shall be provided to the SHPO and Tribal Nations. The USACE shall provide information on the finding to the public upon request, consistent with the confidentiality requirements of 36 CFR § 800.11(c) and Section 304 of the NHPA.
2. Finding of No Adverse Effect. The USACE, in consultation with the SHPO, and Tribal Nations shall apply the criteria of adverse effect to historic properties within the APE in accordance with 36 CFR § 800.5. The USACE may propose a finding of no adverse effect if the undertaking's effects do not meet the criteria of 36 CFR § 800.5(a)(1) or the undertaking is modified to



avoid adverse effects in accordance with 36 CFR § 68. The USACE shall provide to the SHPO and Tribal Nations documentation of this finding meeting the requirements of 36 CFR § 800.11(e) and the documentation (cultural resource report, per Stipulation I. D.) shall be provided to the SHPO and Tribal Nations. The USACE shall maintain a record of the finding and provide information on the finding to the public upon request, consistent with the confidentiality requirements of 36 CFR § 800.11(c) and Section 304 of the NHPA.

3. Resolution of Adverse Effect. If the USACE determines that the undertaking will have an adverse effect on historic properties as measured by criteria in 36 CFR § 800.5(a)(1), the USACE shall consult with the SHPO and Tribal Nations to resolve adverse effects in accordance with 36 CFR § 800.6(a). In accordance with 36 CFR § 800.6 (a)(1), USACE shall notify the ACHP of the adverse effect finding by providing the documentation specified in 36 CFR § 800.11(e).
  - a) For historic properties that the USACE, SHPO, and Tribal Nations agree will be adversely affected, the USACE shall:
    - (1) Afford the public an opportunity to express their views on resolving adverse effects in a manner appropriate to the magnitude of the project and its likely effects on historic properties.
    - (2) Consult with the SHPO, Tribal Nations, and any additional consulting parties to seek ways to avoid, minimize or mitigate adverse effects.
    - (3) Prepare a mitigation plan (Prepared in consultation once adverse effect determination is reached) which describes mitigation measures the USACE proposes to resolve the undertaking's adverse effects and provide this mitigation plan for review and comment to all consulting parties. All parties have 30 calendar days in which to provide a written response to the USACE. Once 30 calendar days has passed any received comments will be incorporated into the mitigation plan, then reviewed by the appropriate USACE approving official. Once approved and signed by the appropriate USACE approving official, the mitigation plan will be executed. Once the mitigation plan is fulfilled all consulting parties will be notified in writing.
  - b) If the USACE, SHPO, and Tribal Nations fail to agree on how adverse effects will be resolved, the USACE shall request that the Council join the consultation in accordance with 36 CFR § 800.6 (b)(v).
  - c) If the Council agrees to participate in the consultation, the USACE shall proceed in accordance with 36 CFR § 800.6 (b)(2).

- d) If, after consulting to resolve adverse effects, the Council, the USACE, SHPO, or Tribal Nations determines that further consultation will not be productive, then procedures outlined in Stipulation VII should be followed.

## **II. Post Review Changes and Discoveries**

- A. Changes in the Scope of the undertaking. If construction on the undertaking has not commenced, or construction has started, and the USACE determines that it will not conduct the undertaking as originally coordinated, the USACE shall notify all consulting parties to this PA in writing of the proposed change in scope, and provide maps illustrating the proposed changes to the undertaking requesting comments within 30 calendar days of receipt. If no comments are received within 30 calendar days, USACE will assume all consulting parties notified have no comments and the undertaking will proceed with the proposed changes.
- B. Unanticipated Discoveries or Effects. Pursuant to 36 CFR § 800.13(b)(3), if archaeological resources are discovered or unanticipated effects on historic properties are found after construction on an undertaking has commenced, the USACE archaeologist shall notify the appropriate Tribal Nations and SHPO of an unanticipated discovery within 48 hours, to include an evaluation of the resource, provide recommendations and a treatment plan for the discovery seeking comments.

## **III. Curation and Disposition of Recovered Materials, Records, and Reports**

- A. Curation. The USACE shall ensure that all archeological materials and associated records, which result from identification, evaluation, and treatment efforts conducted under this PA, are accessioned into a curation facility in accordance with the standards of 36 CFR 79, and as applicable, the Antiquities Code of Texas (Texas Natural Resource Code, Chapter 191), the Texas Administrative Code 13 TAC §29.5, and the Council of Texas Archeologists Guidelines and Standards for Curation, except as specified in Stipulation IV for human remains. Archeological materials from privately owned lands will **NOT** be collected, and as such will require in-field analysis by senior staff with laboratory experience and knowledge of regional artifacts.
- B. Reports. The USACE shall provide copies of final technical reports of investigations and mitigation to the consulting parties and the SHPO, as well as additional copies (specific site locational data removed) for public distribution. All consulting parties shall withhold site location information or other data that may be of a confidential or sensitive nature pursuant to 36 CFR § 800.11(c).

#### **IV. Treatment of Native American Human Remains**

- A. Prior Consultation. If the USACE's investigations, conducted pursuant to Stipulation I of this PA, indicate a high likelihood that Native American Indian human remains may be encountered, the USACE shall develop a treatment plan for these remains in consultation with the SHPO and Tribal Nations. The USACE shall ensure that Tribal Nations, indicating an interest in the undertaking, are notified and given 30 calendar days (from date of notification) to identify concerns, provide advice on identification and evaluation, and participation in the resolution of adverse effects in compliance with the terms of this PA. If no response is received within 30 calendar days from Tribal Nations, the USACE will assume that Tribal Nations have no concerns.
- B. Inadvertent Discovery. Immediately upon the inadvertent discovery of human remains and funerary objects during historic properties investigations or construction activities conducted pursuant to this PA, the USACE shall ensure that all ground disturbing activities cease in the vicinity of the human remains and any associated grave goods and that the site is secured from further disturbance or vandalism. The USACE shall be responsible for immediately notifying local law enforcement officials, and within 48 hours of the discovery, shall initiate consultation with the SHPO and Tribal Nations to develop a plan for resolving the adverse effects.
- C. Dispute Resolution. If, during consultation conducted under paragraphs A and B of Stipulation IV, all consulting parties cannot agree upon a consensus plan for resolving adverse effects, the matter shall be referred to the Council for resolution in accordance with the procedures outlined in Stipulation V.

#### **V. Dispute Resolution**

Should any signatory or consulting party to this PA object at any time to any actions proposed or the manner in which the terms of this PA are implemented, USACE shall consult with such party to resolve the objection. If USACE determines that such objection cannot be resolved, USACE will:

- A. Forward all documentation relevant to the dispute, including the USACE's proposed resolution, to the ACHP. The ACHP shall provide USACE with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, USACE shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories and consulting parties, and provide them with a copy of this written response. USACE will then proceed according to its final decision.
- B. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, USACE may make a final decision on the dispute and

proceed accordingly. Prior to reaching such a final decision, USACE shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and consulting parties to the PA, and provide them and the ACHP with a copy of such written response.

## **VI. Amendments**

This PA may be amended when such an amendment is agreed to in writing by all signatories. The amendment will be effective on the date a copy signed by all the signatories is filed with the ACHP.

## **VII. Termination**

If any signatory to this PA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other signatories to attempt to develop an amendment per Stipulation VI, above. If within (60) days (or another time period agreed to by all signatories) an amendment cannot be reached, any signatory may terminate the PA upon written notification to the other signatories.

Once the PA is terminated, and prior to work continuing on the undertaking, USACE must either (a) execute an MOA pursuant to 36 CFR § 800.6 or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7. USACE shall notify the signatories as to the course of action it will pursue.

Execution of this MOA by the USACE, SHPO and SAWS, and implementation of its terms evidence that USACE has taken into account the effects of this undertaking on historic properties and afforded the ACHP an opportunity to comment.

## **VIII. Anti-Deficiency Clause**

The stipulations of this agreement are subject to the provisions of the Anti-Deficiency Act. If compliance with the Anti-Deficiency Act alters or impairs the USACE's ability to implement the stipulations of the agreement, the USACE will consult according to the amendment and termination provisions found at Stipulations VI and VII of this agreement.

## **IX. Term of this Agreement**

The USACE intends the term of this PA document to be in effect for 15 years from the date of execution of this agreement, unless terminated pursuant to Stipulation VII.

Execution of this PA and implementation of its terms evidences that the USACE has taken into account the effects of this undertaking on historic properties and afforded the ACHP an opportunity to comment.

**EXECUTION AND IMPLEMENTATION** of this PA evidences that the USACE has taken into account the effects of this undertaking on historic properties and afforded the ACHP an opportunity to comment.

**SIGNATORIES** include the USACE Fort Worth District, Texas State Historic Preservation Officer, and the San Antonio Water System. Separate signature pages for each agency follow.

**USACE FORT WORTH DISTRICT**

Date: \_\_\_\_\_

**Colonel Kenneth Reed**  
**District Engineer**

DRAFT

## **EXECUTION AND IMPLEMENTATION**

**SIGNATORIES** include the USACE Fort Worth District, Texas State Historic Preservation Officer, and the San Antonio Water System.

### **TEXAS STATE HISTORIC PRESERVATION OFFICER**

\_\_\_\_\_  
Date: \_\_\_\_\_

**Mark Wolfe**

**Texas State Historic Preservation Officer**

DRAFT

## **EXECUTION AND IMPLEMENTATION**

**SIGNATORIES** include the USACE Fort Worth District, Texas State Historic Preservation Officer, and the San Antonio Water System.

### **SAN ANTONIO WATER SYSTEM**

Date: \_\_\_\_\_

**Paul Beard**

**San Antonio Water System**

DRAFT

## **APPENDIX A**

The following Federally Recognized Tribal Nations have responded with an interest in this study and are Consulting Parties to this PA:

### **The Comanche Nation of Oklahoma**

Ms. Martina Callahan  
Tribal Historic Preservation Officer  
P.O. Box 908  
Lawton, OK 73502

### **Mescalero Apache Tribe**

Ms. Holly Houghten  
Tribal Historic Preservation Officer  
P.O. Box 227  
Mescalero, New Mexico 88340

### **Northern Arapaho Tribe**

Mr. Devin Oldman  
Tribal Historic Preservation Officer  
Northern Arapaho Tribe  
P.O. Box 67  
St. Stevens, WY 82524

### **Caddo Nation of Oklahoma**

Derek Hill  
Cultural Preservation Department  
Caddo Nation of Oklahoma  
P.O. Box 487  
Binger, OK 73009

### **Seminole Nation of Oklahoma**

Theodore Isham  
Tribal Historic Preservation Officer  
Seminole Nation of Oklahoma  
P.O. Box 1498  
Wewoka, OK 74884



## **Appendix B-Project Summary**

### **Study Purpose**

The US Army Corps of Engineers (USACE) has prepared an Integrated Feasibility Report and Environmental Assessment (IFR-EA) that presents the results of a feasibility study to recommend for Congressional approval, a plan that will increase areal extent & quality of wetlands, increase floral & faunal species diversity & richness and manage/control invasive plant species. Authorization for the study is derived from a resolution of the Committee on Transportation and Infrastructure, U.S. House of Representatives, House Resolution Docket No. 2547, dated 11 March 1998.

*“Resolved by the Committee on Transportation and Infrastructure of the United States House of Representatives, That, the Secretary of the Army is requested to review the report of the Chief of Engineers on the Guadalupe and San Antonio Rivers, Texas, published as House Document 344, 83rd Congress, 2nd Session, and other pertinent reports, with a view to determining whether any modifications of the recommendations contained therein are advisable at the present time, with particular reference to providing improvements in the interest of flood control, environmental restoration and protection, water quality, water supply and allied purposes on the Guadalupe and San Antonio Rivers in Texas.”*

The study fits into the overall concept of the authorization to conduct an integrated and coordinated approach to locating and implementing opportunities for ecosystem restoration (ER). The purpose of this study is to recommend for Congressional approval an ER project that would reconnect the upstream and downstream hydrology's and improve water quality through ecosystem restoration at Mitchell Lake in San Antonio, Texas, thereby providing additional recreation and ecotourism benefits to the community.

Pursuant to the National Environmental Policy Act (NEPA), an Environmental Assessment (EA) will be integrated into the Interim Feasibility Report (IFR). The non-federal sponsor for this study is the San Antonio Water System (SAWS). This document has been prepared to provide background information supporting coordination of a Programmatic Agreement to ensure that Section 106 requirements will be fulfilled for the studies Environmental Assessment. Information is presented on the recommended plan, cultural resources in the focused study area, the preliminary Area of Potential Effects (APE), and the USACE's determination on potential project effects on these properties.

### **Recommended Plan: Plan 8**

Plan 8 was chosen as the tentatively selected plan (the plan) based on preliminary analyses because it meets the study objectives, reasonably maximizes benefits for the associated costs, and includes key restoration features to restore and sustain the structure and function of the wetland system in a portion of the study area. This plan incorporates mud flat and wetland habitat restoration features which are critical to the sustainment of the aquatic ecosystem at Mitchell Lake. Plan 8 includes Alternatives 1B, 2B, 3, 6, 7G, and 10. Each of these Alternatives correspond to their respective project area within the overall study area.

Plan 8 includes the restoration features included in Plan 7 and adds the restoration and expansion of the Bird Pond Wetland (Figure 1). The Bird Pond Wetland is an existing wetland located east of Bird Pond and upslope of the Central Wetlands. The existing wetlands are dominated by cattails with little herbaceous diversity. An indistinct drainage comprised of a swale of wetlands with intermittent sections of distinct channels connects the Bird Pond and Central Wetlands. The restoration measures would improve the plant diversity and expand the wetland complex.

**Table 1. Measures in Acreage.**

<b>Mudflat Habitat</b>	<b>Emergent/Submergent Wetland Habitat</b>	<b>Emergent Wetland Habitat</b>
49.52	74.54	76.11

### ***Alternative Measures***

The restoration goal for Alternative 1B is the enhancement of the existing wetland adjacent to Bird Pond. The existing Bird Pond Wetland is degraded, shallow, dominated by cattails, and has little or no variation in water depth. The restoration strategy is to increase the depth of the wetland, establish water supply to sustain the wetland, manage the water to inundate the wetland with seasonal pulses, and establish a diverse native wetland vegetation community.

Alternative 1B incorporates the following measures:

- Clearing/Excavation,
- Installation of Pipeline,
- Seasonal Pulses,
- Native Wetland Species Plantings,

- Invasive Species Management,
- Low Quality Vegetation Removal,
- Water Control Structures
- Habitat Structure Augmentation, and
- Installation of Bat/Nest Boxes measures.

With the exception of the Bat/Nest Boxes measure, each one of these measures provide hydraulic and ecological components that are critical for the creation of a resilient, sustainable wetland.

The clearing/excavation measure would create the variable water depths required to support a diverse wetland habitat and eliminate the homogenous shallow depths that promote cattail monocultures. The installation of a pipeline measure would provide a dependable water supply to ensure that the wetland is inundated to a level that supports a diverse vegetation community. Similarly, the water control structures required for the seasonal pulses measure would provide water management to vary the depths of the wetland seasonally to manage for the diverse vegetative community and control of cattails.

The woody material cleared as part of the clearing/excavation measure would be stock piled and placed back into the excavated wetland as fallen logs or debris piles to increase to create wildlife habitat structure in the wetland. In addition, excavation of the existing wetlands near large trees could be designed to preserve the tree allowing the conversion of the trees to standing snags by treating the tree with an aquatic labeled herbicide.

Site-specific, native emergent and submergent plant species would be planted to establish a diverse community. In an effort to minimize the establishment of invasive species after the final grading of the wetlands, management, and control of invasive species would be required to ensure establishment of the diverse planted vegetation. An integrated Invasive species management plan would be developed and implemented utilizing chemical, mechanical and/or biological control.

Alternative 2B, the enhancement of the Central Wetlands, would be identical to the combination of measures listed for Alternative 1B.

Alternative 3, enhancement of Skip's Pond, would incorporate the same measures as described for Alternative 1B and 2B with the exception of the installation of a pipeline. This is due to the petroleum pipeline that separates the Central Wetlands from Skip's Pond.

Alternative 6 utilizes the existing polders of the old Mitchell Lake waste water treatment facility.

Currently, these polders are maintained as open water habitats to prevent the polder sediments from drying out and becoming airborne. Implementation of the proposed action would manipulate the water levels in the polders to create mudflats for migratory shorebird foraging habitat. The polder cells incorporated in Alternative 6 would be cycled to prevent the complete drying of the sediments and ensuring there is a water supply to inundate the drained polders.

The wetlands found within Coves 1, 2, and 3 of Mitchell lake are limited in habitat quality and heavily degraded due to the poor water quality of the lake. The implementation of the Proposed Action would involve invasive species management/removal and the planting of native emergent, submergent, and riparian species within these coves. Alternative 7G would incorporate the following measures for Coves 1, 2, and 3:

- Native Wetland Species Plantings,
- Invasive Species Management,
- Habitat Structure Augmentation, and
- Installation of Bat/Nest Boxes.

Alternative 10 would involve the creation of wetlands downstream of the Mitchell Lake dam. Alternative 10 would implement the following measures:

- Clearing/Excavation,
- Native Wetland Species Planting,
- Seasonal Pulses,
- Habitat Structure Augmentation,
- Water Control Structures
- Installation of Bat/Nest Boxes, and
- Construction of Berms.

### ***Equipment Needs and Access Routes***

Heavy machinery would be used to clear vegetation and excavate areas for the expansion of wetlands. Heavy equipment could include bulldozers, front-end loaders, track-hoes, backhoes, etc. Various support equipment would also be used, such as crew, trucks, trailers, construction trailers, and all-terrain vehicles. Identification of staging areas and temporary haul routes would occur during PED; however, San Antonio Water System has offered their previous work site as a

prospective staging area. Disturbance for access and staging would be placed outside of environmentally sensitive areas to the greatest extent practicable. All ground disturbance for access and staging areas would be temporary and fully restored to result in no permanent loss.

### ***Timing***

Timing of initial construction of this project is dependent on a number of factors including: timing of authorization, duration of pre-engineering and design phase, and Federal- and non-federal funding cycles. It is assumed that construction Alternatives 6, 7G, and 10 can be conducted simultaneously or one at a time. Alternatives 1B, 2B, and 3 will have to be conducted simultaneously in order to maintain water flow and connection through the wetland systems. Any clearing within the project area should be conducted outside of the nesting season (March 15 to September 15).

### **Focused Study Area**

The preliminary project footprint (TSP), and up to a kilometer buffer surrounding, was examined for the presence of any known historic properties using the Texas Historical Commission's (Atlas) database. This review found 21 previous cultural resource surveys that took place within (or partially within) the focused study area and one historic resources study (Table 2). Eight of these previous cultural resource surveys and the historic resources study resulted in the identification of nine archaeological sites and six identified architectural resources within the focused study area (Table 3). These eight previous cultural resource surveys and historic resources study vary in age and comprehensiveness being conducted from 1977 to 2018 by a variety of sponsors including the Environmental Protection Agency, the City of San Antonio, the USACE Fort Worth District, an Independent School District, the Texas Department of Transportation, and the San Antonio Water System. These recorded archaeological sites were reported to the Texas Historical Commission, with only seven of the identified archaeological sites receiving formal evaluations for potential inclusion in the National Register of Historic Places (NRHP) from the Texas State Historic Preservation Officer (SHPO). The historic structure resources in Table 3 have contractor recommendations of eligibility, with one archaeological site considered unevaluated (i.e., treated as eligible for listing) for eligibility.

Although the review identified previous surveys, it is important to note that the majority of the focused study area has not been culturally or architecturally surveyed. As the TSP has not currently been subjected to a cultural resource survey there is a potential for encountering newly identified cultural resources within the final developed Area of Potential Effect (APE).

The primary considerations concerning cultural resources are threats from direct impacts to intact terrestrial archeological sites and direct and indirect impacts to historic structures from new construction and/or improvements.

**Table 2. Cultural Resource Surveys within (or partially within) the Focused Study Area.**

<b>Date of Survey</b>	<b>Sponsor</b>	<b>Type of Survey</b>	<b>Identified Resources within Focused Study Area</b>
2018	SAWS	Pedestrian Survey	41BX2216
2018	SAWS	Architectural	Embankment dam; Floodgate; Spillway; Purge pond; Irrigation canal system; Electric transmission line
2012	City of San Antonio/ USACE Fort Worth District	Linear Pedestrian Survey	41BX1573
2012	CPS Energy	Linear Pedestrian Survey	N/A
2010	Independent School District	Pedestrian Survey	41BX1871; 41BX1872
2009	SAWS	Linear Pedestrian Survey	41BX1376; 41BX1835
2008	CPS Energy	Pedestrian Survey	N/A
2006	SAWS	Pedestrian Survey	41BX1720
2006	Texas Department of Transportation	Linear Pedestrian Survey	N/A
2004	City of San Antonio	Pedestrian Survey	N/A
2004	City of San Antonio	Pedestrian Survey	N/A
1995	Federal Highway Administration/ Texas Department of Transportation	Linear Pedestrian Survey	N/A
1995	Federal Highway Administration/ Texas Department of Transportation	Linear Pedestrian Survey	N/A
1991	Federal Highway Administration	Pedestrian Survey	N/A
1990	Texas Department of Transportation	Pedestrian Survey	41BX629
1990	Texas Department of Transportation	Pedestrian Survey	41BX628
1984	Texas Department of Highways and Public Transportation	Pedestrian Survey	N/A
1978	EPA	Linear Pedestrian Survey	N/A
1977	EPA	Pedestrian Survey	N/A
Unknown	Unknown	Pedestrian Survey	N/A
Unknown	Unknown	Linear Pedestrian Survey	N/A
Unknown	Unknown	Linear Pedestrian Survey	N/A

## **Preliminary APE**

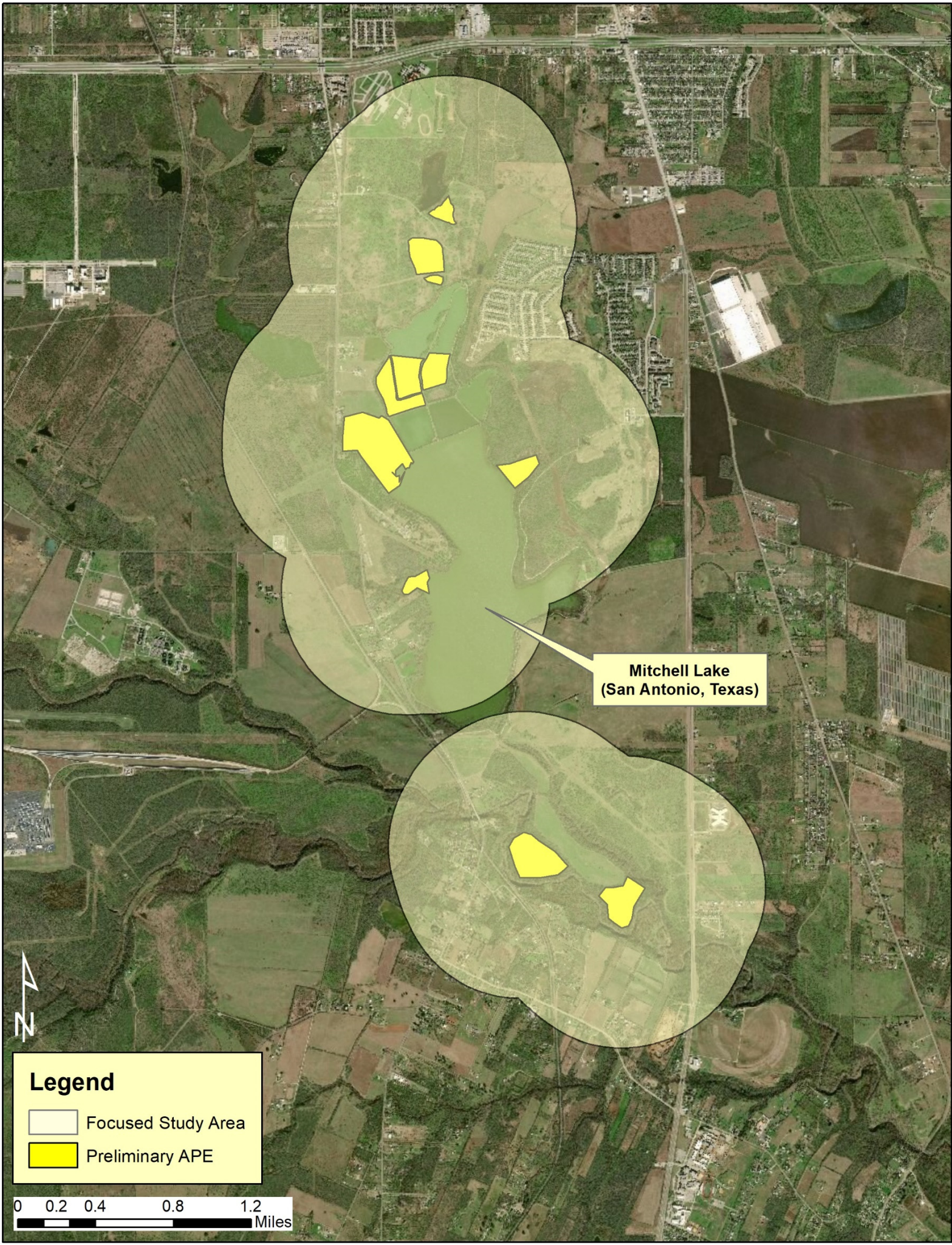
The activities associated with the proposed undertaking include all new construction, improvements, and maintenance activities related to the proposed Mitchell Lake Aquatic Ecosystem Restoration project. The preliminary APE includes the maximum horizontal footprint of all areas of direct and indirect impacts from the excavation and construction of wetlands, construction of water control structures, wetland plantings, berm construction and all terrestrial horizontal and vertical ground disturbance activities that will occur as a result of this undertaking. The eligible and unevaluated archaeological sites listed (41BX628, 41BX629, 41BX1573 and 41BX1720) in Table 3 are not within the footprint of the preliminary APE and do not have the potential to be directly affected by the recommended plan. In addition, the historic structures listed in Table 3 are not within the footprint of the preliminary APE and do not have the potential to be directly or indirectly affected by the recommended plan. The recommended plan does not overlap known historic properties based on background research; however, with the majority of the recommended plan not being previously culturally surveyed to identify historic properties, pursuant to 36 CFR 800.4, the potential to encounter newly identified cultural resources is high.

Based on the current information for the proposed construction activities associated with Plan 8, there is a potential to affect newly identified historic properties. The USACE recommends intensive Section 106 cultural resource investigations to identify and evaluate any historic properties within proposed construction areas. The scope of these investigations will be determined in consultation with the Texas State Historic Preservation Officer and appropriate Native American Tribal Nations in accordance with the Programmatic Agreement developed for cultural resources for this study.

**Table 3. Cultural Resources Located within the Focused Study Area.**



<b>Resource</b>	<b>Type</b>	<b>Component</b>	<b>Description</b>	<b>NR Status</b>
41BX628	Archaeological	Historic	Village	Eligible
41BX629	Archaeological	Multi	Open prehistoric campsite and historic residence	Eligible
41BX1376	Archaeological	Prehistoric	Lithic Scatter	Not Eligible
41BX1573	Archaeological	Prehistoric	Lithic Scatter	Eligible
41BX1720	Archaeological	Prehistoric	Campsite	Unevaluated
41BX1835	Archaeological	Prehistoric	Prehistoric Open Campsite	Not Eligible within ROW
41BX1871	Archaeological	Prehistoric	Lithic Scatter	Not Eligible within ROW
41BX1872	Archaeological	Historic	Acequia	Not Eligible
41BX2216	Archaeological	Prehistoric	Lithic Scatter	Recommended Not Eligible
N/A	Structure	Historic	Embankment Dam	Recommended Eligible
N/A	Structure	Historic	Flood gate	Recommended Eligible
N/A	Structure	Historic	Spillway	Recommended Eligible
N/A	Structure	Historic	Purge pond	Recommended Eligible
N/A	Structure	Historic	Irrigation canal system	Recommended Not Eligible
N/A	Structure	Historic	Electric transmission line	Recommended Not Eligible





Mitchell Lake  
(San Antonio, Texas)

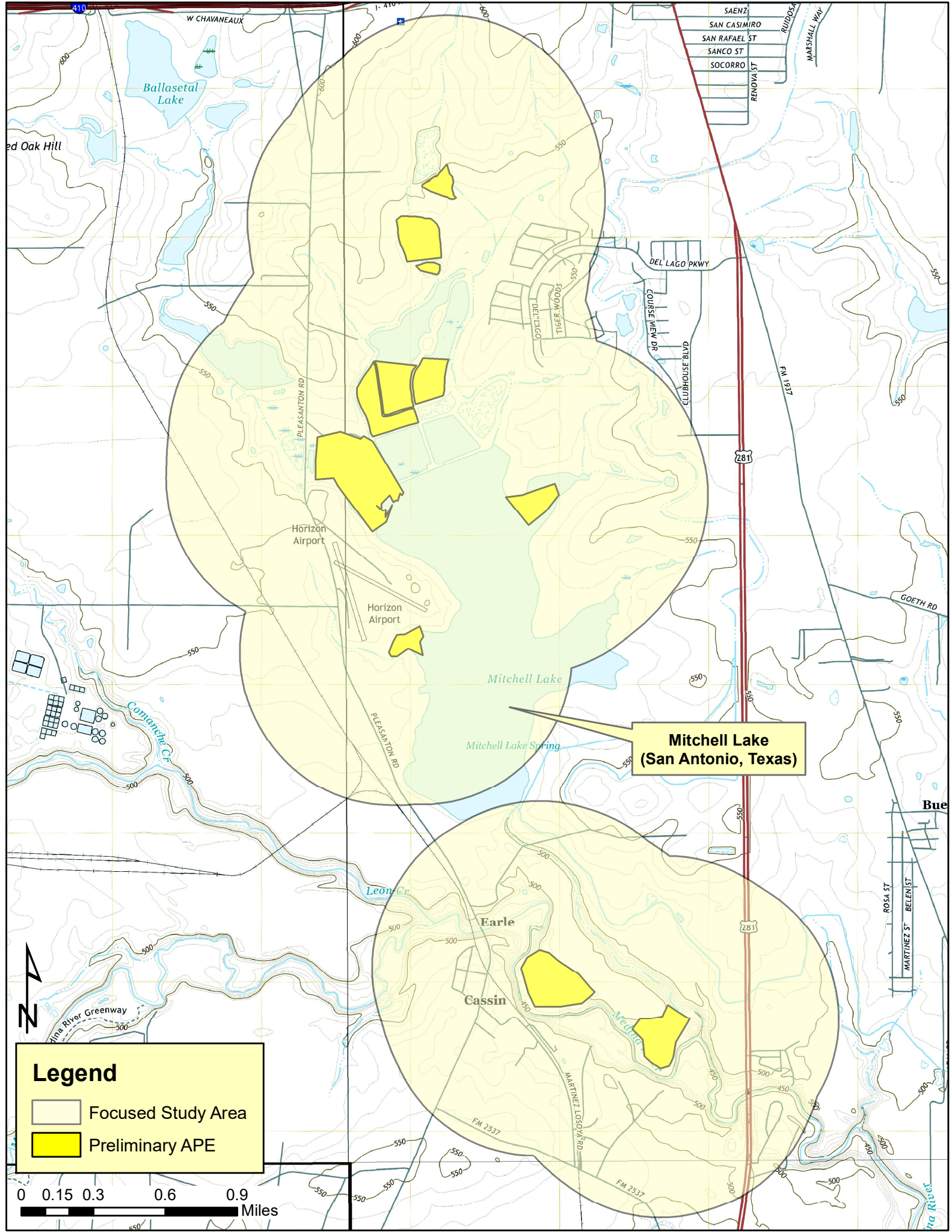
**Legend**

-  Focused Study Area
-  Preliminary APE

0 0.2 0.4 0.8 1.2 Miles









**Mitchell Lake  
(San Antonio, Texas)**

**Legend**

-  Focused Study Area
-  Preliminary APE

0 0.15 0.3 0.6 0.9 Miles