

Appendix E – HTRW

Mitchell Lake, San Antonio, TX

General Investigations Feasibility Study
Integrated Draft Feasibility Report and Environmental Impact Assessment

September 2019



**US Army Corps
of Engineers[®]**

Fort Worth District

(NOTE: This page intentionally left blank.)

Table of Contents

List of Figures	4
List of Tables	5
List of Acronyms	6
1 Background	1
1.1 Introduction.....	1
1.2 Records Review.....	1
1.3 Site Visit	3
1.4 Interviews	3
1.5 Conclusion of Background Records Review	4
2 Existing Conditions	6
2.1 General Description	6
3 Expected Future Without-Project Conditions	6
4 Future With-Project Conditions	7
5 *References	8

List of Figures

Figure 1: Map of EDR Results

Figure 2: Map of Mitchell Lake HTRW Sites

Figure 3: Map of Oil and Gas Wells from RRC

Figure 4: Map of Mitchell Lake ST/AST's

List of Tables

Table 1: Standard ASTM Search Distances and Records Review Results

List of Acronyms

AE	Architectural and Engineering
AFB	Alternative Formulation Briefing
ATR	Agency Technical Review
ATRT	Agency Technical Review Team
CAR	Corrective Action Request
CCIR	Commander's Critical Information Requirement
CE/ICA	Cost Effectiveness/Incremental Cost Analysis
Corps	U.S. Army Corps of Engineers
CMI	Corporate Management Information
CMP	Cost Management Plan
DQC	District Quality Control
DX	Directorate of Expertise
EC	Engineer Circular
EIS	Environmental Impact Statement
EM	Engineer Manual
ER	Engineer Regulation
ERDC	Engineer Research and Development Center
EVM	Earned Value Management
FCSA	Feasibility Cost Share Agreement
FGDC	Federal Geographic Data Committee
FRA	Flood Risk Assessment
FRM	Flood Risk Management
FWOP	Future without Project
FWS	Fish and Wildlife Service
FY	Fiscal Year
GDM	General Design Memorandum
GIS	Geographic Information Systems
HEC	Hydrologic Engineering Center
HEC-FDA	Hydrologic Engineering Center Flood Damage Assessment Model
HEC-FRM	Hydrologic Engineering Center Flood Risk Management Model
HEMP	Hydrologic Engineering Management Plan
H&H	Hydrology and Hydraulics
HQUSACE	Headquarters, U.S. Army Corps of Engineers
HTRW	Hazardous, Toxic and Radioactive Waste Program
IRC	Issue Resolution Conference
IEPR	Independent External Peer Review
IPR	In-Progress Review
IWR	Institute of Water Resources
LAERF	Lewisville Aquatic Ecosystem Research Facility
LERRD	Lands, Easement, Right-of-Way, Relocations, and borrow and dredged or Excavated materials Disposal areas
MIPR	Military Interdepartmental Purchase Request
MSC	Major Subordinate Command

MFR	Memorandum for Record
NED	National Economic Development
NEPA	Nation Environmental Protection Act
NER	National Ecosystem Restoration
NOA	Notice of Availability
NWP	Nationwide Permit
O&M	Operations and Maintenance
OMB	Office of Management and Budget
P2	Scheduling software database
PCX	Planning Center of Expertise
PDT	Project Delivery Team
PED	Pre Engineering and Design
PES	Project Executive Summary
PL	Lead Planner
PM	Project Manager
PMBP	Project Management Business Process
PMP	Project Management Plan
PROC	Process
QMS	Quality Management System
RIT	Regional Integration Team
RMO	Resource Management Office
SAWS	San Antonio Water System
SDSFIE	Set of data standards that define the content of the database
SMART	Specific, Measurable, Attainable, Risk Informed and Timely
SMT	Study Management Team
SWD	Southwest Division
SWF	Fort Worth District
TCEQ	Texas Commission on Environmental Quality
TPWD	Texas Parks and Wildlife Department
TSP	Tentative Selected Plan
TX SHPO	Texas State Historical Preservation Officer
USFWS	US Fish and Wildlife Services
VT	Vertical Team
WBS	Work Breakdown Structure
WIK	Work-In-Kind
WRDA	Water Resources Development Act

1 Background

1.1 Introduction

In order to complete a feasibility level HTRW evaluation for Mitchell Lake, a report was completed following the rules and guidance of ER 1165-2-132: *HTRW Guidance for Civil Works Projects*, and ASTM E1527-13: *Standard Practice for Environmental Site Assessment: Phase 1 Environmental Site Assessment Process*. These two documents outline a process which has three main components (excluding the report itself): the records review, site reconnaissance, and interviews.

1.2 Records Review

Perhaps the most critical part of the feasibility level HTRW evaluation is the records review. In this, records, maps and other documents that provide environmental information about the project area are obtained and reviewed. To complete the records review, USACE used a commercially available vendor of environmental database searches called Environmental Data Resources, of Shelton, CT. This records review was completed using the proposed footprint of the project, and the standard ASTM environmental record sources, along with an approximate

1 Mile search distance for each of the sources shown in the below Table 1. The Environmental Data Resources report will be included with the compiled background reference materials as it is too long to include in the HTRW Appendix. Once the database searches were complete, USACE analyzed the results for recognized environmental conditions (RECs) that could affect the proposed project or need further investigation, given the proposed project measures. Due to the conservative search distances and specifics of the proposed project, many of the record search results can be dismissed from further consideration in this study. The results of that analysis, specifics of the REC (where applicable), and justification for dismissal from further evaluation (where applicable) are discussed below.

Due to the extensive area of the search, some environmental databases had to be searched manually. These databases included the Environmental Protection Agency (EPA) Cleanups in my Community database, the EPA Envirofacts database, TCEQ's web map of UST/AST's and the Railroad Commissions oil and gas well Public GIS Viewer. Maps for these database results can be seen in Figures 3 and 4 of the HTRW Appendix.

Table 1: Standard ASTM Search Distances and Records Review Results

ASTM Source	ASTM Distance (miles)	Searched Distance (miles)	Number of Results
Federal National Priorities List (NPL) site list	1.0	1.0	0
Federal Delisted NPL site list	0.5	1.0	0
Federal CERCLIS (SEMS) list	0.5	1.0	0
Federal NFRAP (SEMS archive) site list	0.5	1.0	0
Federal RCRA Corrective Action facilities list	1.0	1.0	0
Federal RCRA TSD facilities list	0.5	1.0	0
Federal RCRA generators list	Property and adjacent properties only	1.0	0
Federal ICs/Engineering Control registry	Property only	1.0	0
Federal ERNS list	Property only	1.0	0
State and tribal equivalent NPL list	1.0	1.0	0
State and tribal equivalent CERCLIS	0.5	1.0	0
State and tribal landfill and/or solid waste disposal sites	0.5	1.0	55
State and tribal leaking AST/UST sites	0.5	1.0	3
State and tribal registered storage tank list	Property and adjacent properties only	1.0	0
State and tribal ICs/Engineering Control registry	Property only	1.0	0
State and tribal voluntary cleanup sites	0.5	1.0	0
Federal, State and tribal Brownfields site list	0.5	1.0	0

(See Figure 1 for map of EDR Results)

Federal RCRA TSDf List – The Federal RCRA TSDf list contains sites that a. As such, no RCRA TSDFs are located on the subject property. Additionally, the presence of a TSDf is not sufficient to believe that contamination is likely to be generated, as long as the facility is permitted. As a result, none of the sites on the list will be carried forward as RECs.

Federal RCRA Generators List – Similar to the TSDf list, the RCRA generators list identifies sites that generate quantities of waste classified as hazardous under RCRA. No sites were identified within a one mile radius of Mitchell Lake.

Federal Institutional Controls (IC)/Engineering Controls Registry – Engineering controls and ICs are both methods of preventing exposure to contaminants on a particular site. This database is a listing of sites where one or both of those controls are in place. There weren't any sites with these measures in place that were identified within a one mile radius of Mitchell Lake. However, the ASTM standard only requires that the proposed project property be searched for ICs or engineering controls.

State and Tribal Solid Waste Facilities/Landfill Sites – This search is designed to check any state or tribal databases for solid waste handling facilities or landfills in the project vicinity. The search found 5 different sites within 0.5 miles that handled solid waste. Four of the sites were identified on the CLI database – or the “Closed Landfill Inventory” database. One other site was identified on the SWF/LF (Solid Waste Facility/Landfill) database.

State and Tribal Registered Storage Tanks – This list is a combination of the State of Texas registered UST and AST databases, representing sites with storage tanks registered with the State of Texas. Within a mile radius there were 3 tanks identified. However, the existence of a registered storage tank (UST or AST) is not sufficient to believe that contamination is likely to be generated, and therefore none of these sites will be carried forward as RECs. (Figure 4 of HTRW Appendix).

1.3 Site Visit

The site visit in environmental investigations is designed to identify environmental conditions that would otherwise not be identified in the records search. The site visit also is used to look at indoor areas and area usages on the subject property. Due to the proposed action occurring mostly in-and directly adjacent to a water body, Mitchell Lake, a site visit will not be conducted for this phase of the investigation.

1.4 Interviews

The objective of the interviews is to discover environmental conditions that could not be obtained in the records search, as well as to determine past uses of the subject property. Due to the nature of the proposed project and its ownership, it is expected that the subjects and scope of the interviews for this project will be limited. The subjects of the interviews will be determined at a later time, once the records search is completed and allows for the narrowing of potential interviewees.

1.5

Conclusion of Background Records Review

In order to complete a feasibility level HTRW evaluation for Mitchell Lake, this report was completed following the rules and guidance of ER 1165-2-132: *HTRW Guidance for Civil Works Projects*, and ASTM E1527-13: *Standard Practice for Environmental Site Assessment: Phase 1 Environmental Site Assessment Process*. No sites were found that had recognized environmental conditions.

Figure 1: EDR Report Findings

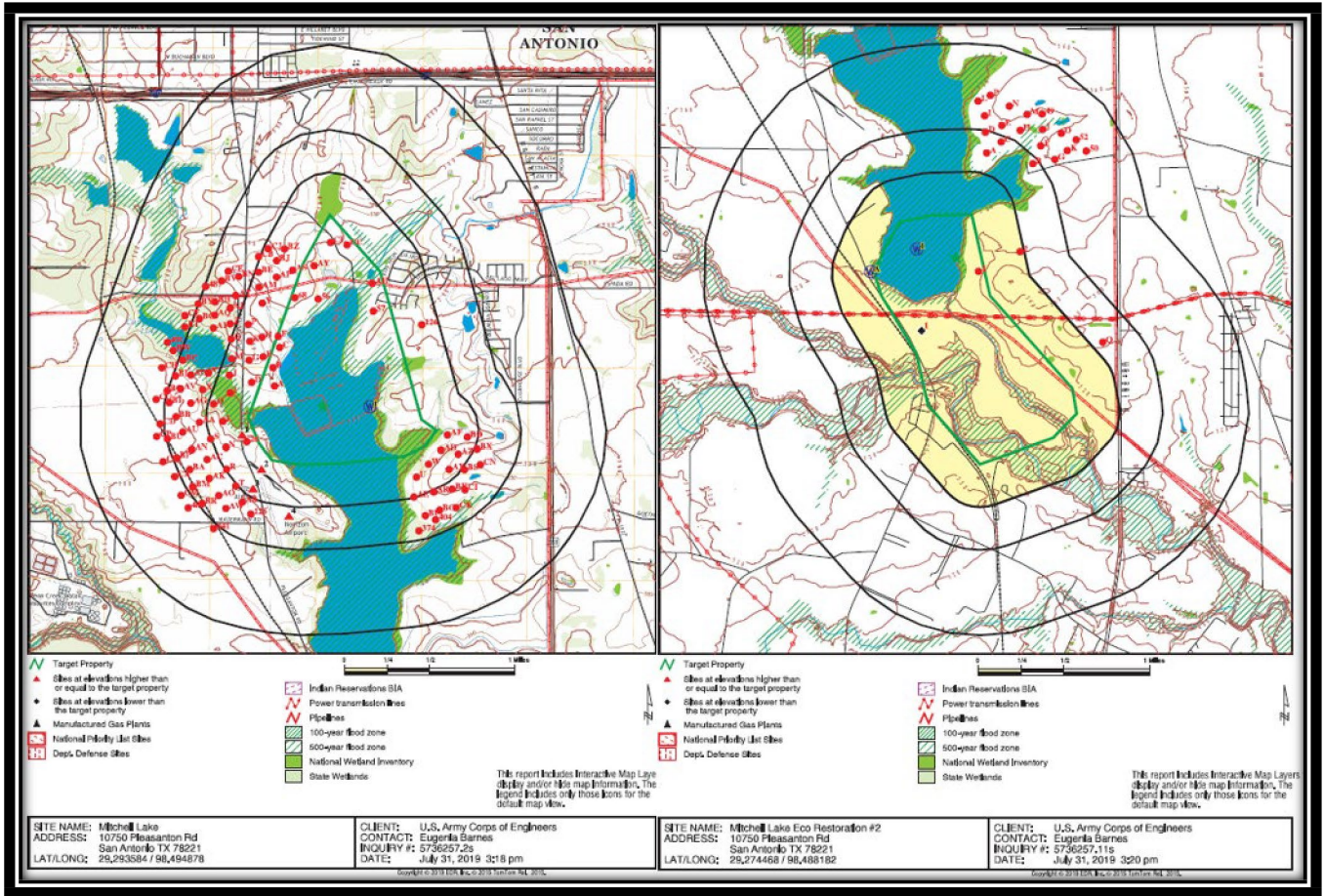


Figure 2: Map of Mitchell Lake Oil & Gas Well Sites

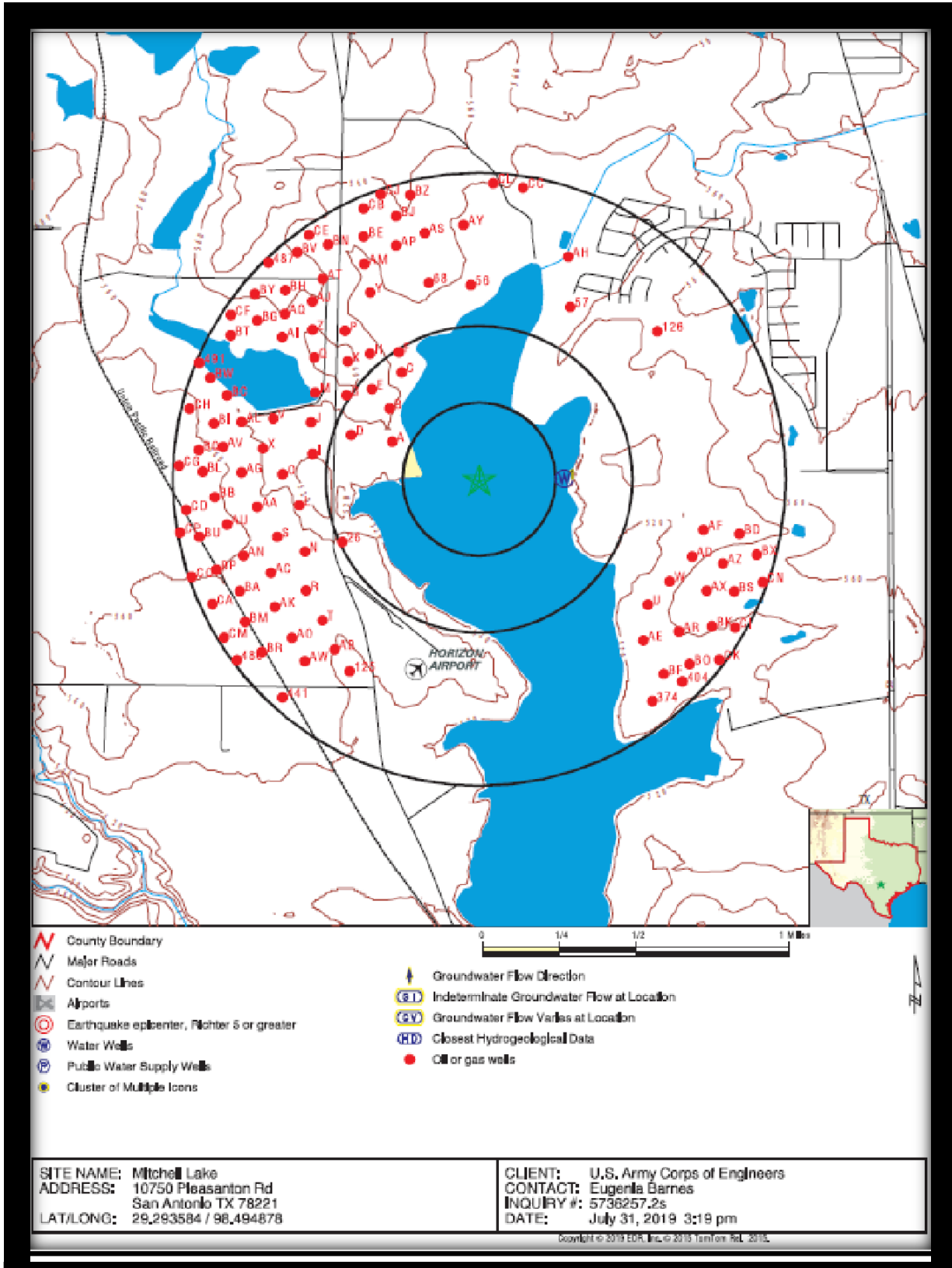


Figure 3: Map of Mitchell Lake Oil & Gas Well Sites by RRC

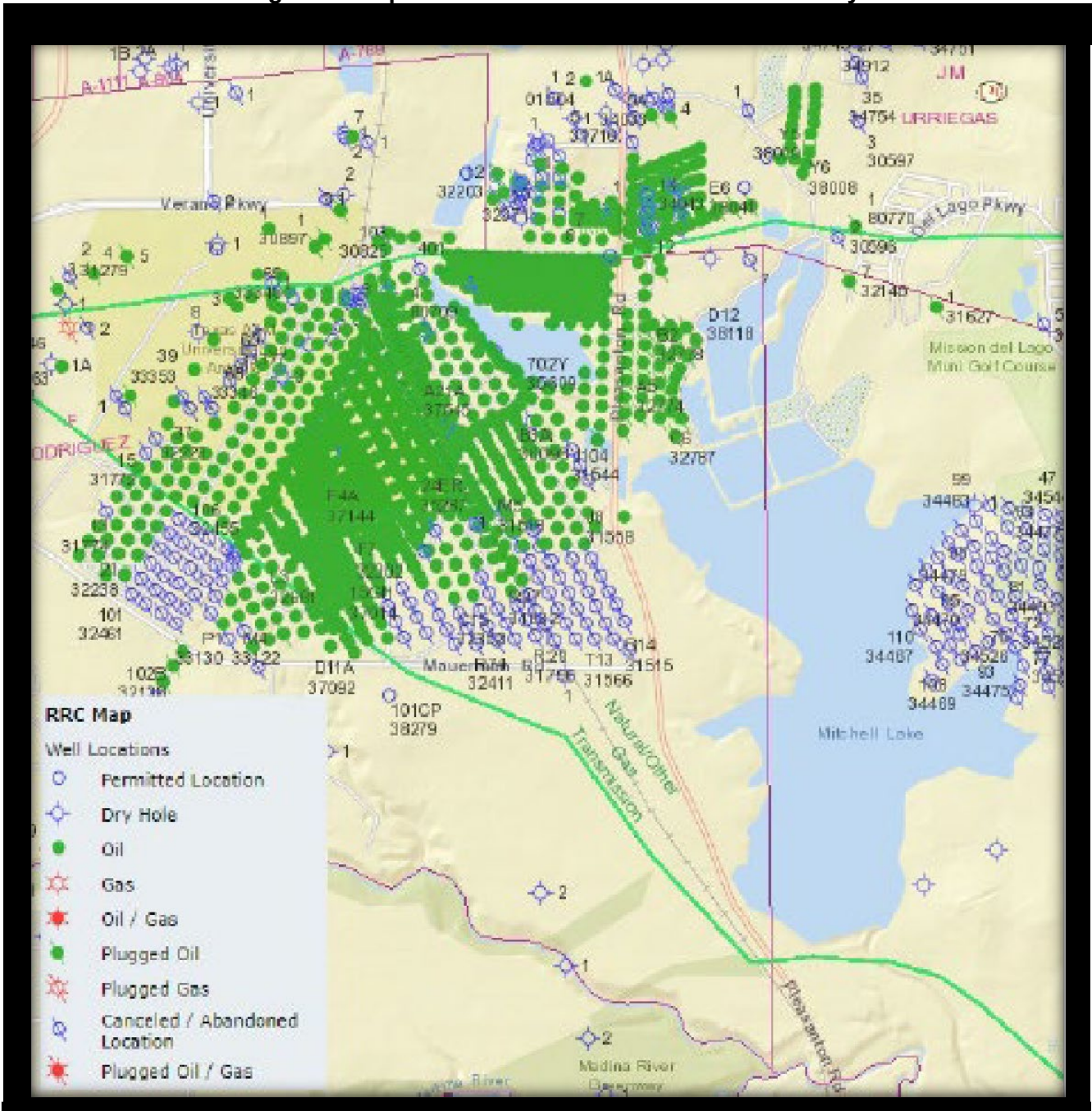
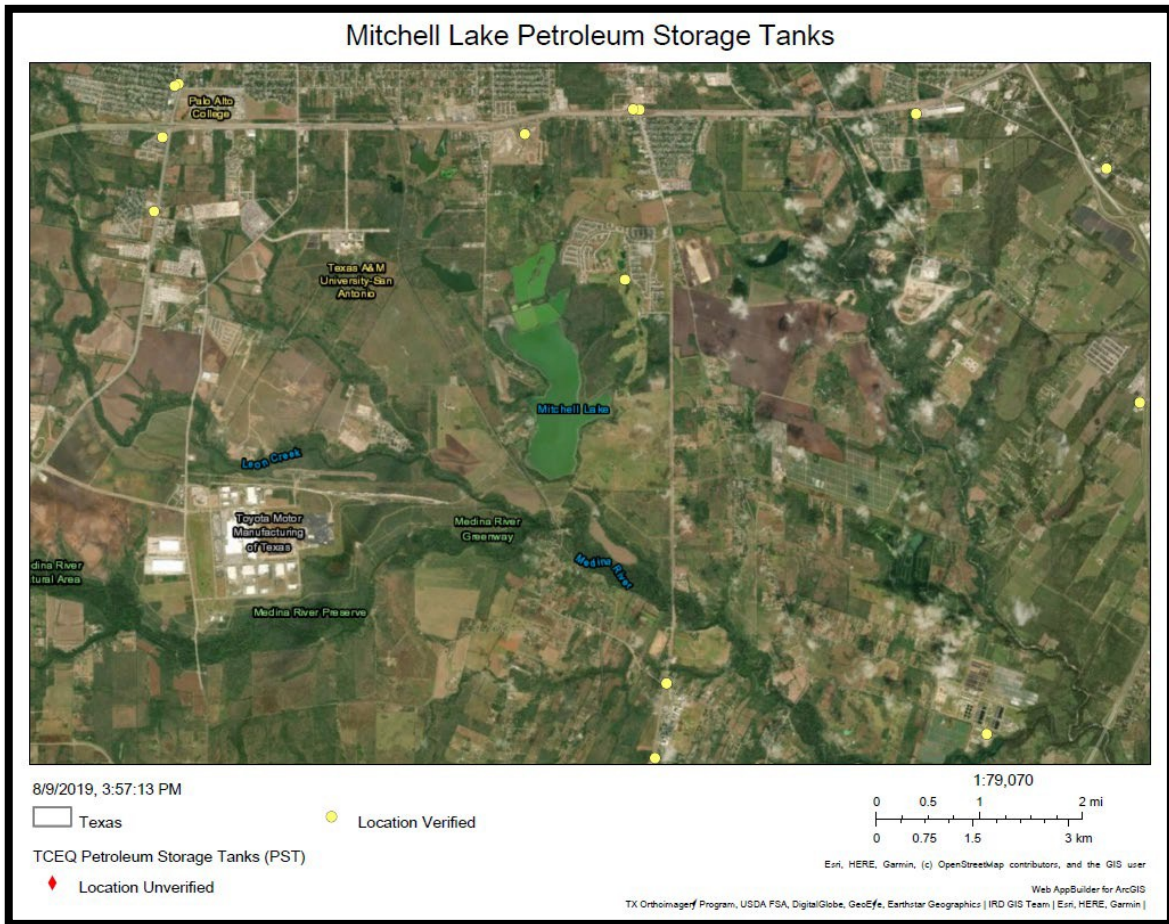


Figure 4: Map of Mitchell Lake UST/AST's



2 Existing Conditions

2.1 General Description

In order to complete a feasibility level HTRW evaluation for the Mitchell Lake Ecosystem Restoration Project, a records search was conducted following the rules and guidance of ER 1165-2-132: *HTRW Guidance for Civil Works Projects*, and ASTM E1527-13: *Standard Practice for Environmental Site Assessment: Phase 1 Environmental Site Assessment Process*. In the records review, files, maps and other documents that provide environmental information about the project area are obtained and reviewed. To complete the records review, USACE reviewed publicly available databases and sources, using the proposed footprint of the project, along with an approximate 1 mile search distance for each of the sources. The records search revealed only 8 potential HTRW sites in lower Bexar County, although none of these sites have the potential to affect the proposed project. See the future without and alternative analyses, and the HTRW appendix for more information about risks from these sites.

Mitchell Lake is hyper eutrophic due to its past use as a wastewater treatment site. The entire lake, along with its polders and basins is reported to be contaminated with wastewater sludge. Basin 3 is reported to be lined with fly ash. Fly ash is a by-product of coal ash (EPA 2019). Coal ash is referred to by the EPA as a coal combustion residual and is produced by the burning of coal in coal-fired power plants. Fly ash is a very fine and powdery material composed of mostly silica that is made from the burning of finely ground coal in a boiler. The EPA has determined that improperly constructed or mismanaged coal ash disposal units have been linked to surface, groundwater and air quality contamination. It is important to consider this if Basin 3 were to be included in any excavation or construction plans. At this time, however, there are no plans to disturb this Basin and the recommended treatment is to leave the contaminant “as is” or undisturbed.

Mitchell Lake has a few potential HTRW sites in relative proximity (one mile) to the proposed project footprint, including 3 registered petroleum storage tanks, and 4 state and tribal solid waste facilities/landfills which were primarily for disposal of brush. None of the storage tanks are reported as leaking and the landfills are reported as no longer active. San Antonio is a highly developed city within close proximity and most potential HTRW sites are located in or around this settlement.

Although not classified as HTRW, pipelines and oil wells are present in and around Mitchell Lake. Numerous oil and gas wells are located within 1.0 miles of Mitchell Lake and the restoration area. A Railroad Commission of Texas (RRC) database shows numerous operating oil, gas, and injection wells (Figures 2 and 3 of HTRW Appendix). Pipelines can be found crossing the lake and restoration areas. In 2003 one of these pipelines had a valve malfunction and released 20,000 gallons of sewage in a rural area adjacent to Cottonmouth Creek which feeds the Medina River. This release was of waste activated sludge mixed with primary sludge. This case is closed and is no longer a concern but it illustrates the relevance of well and pipeline locations with regards to potential HTRW issues. Excavations and sediment disturbance in the vicinity has the potential to interact in some way with some type of oil and gas infrastructure, and this has been taken into account for the proposed project. Refer to the HTRW Appendix for maps of known pipelines and oil wells surrounding the Lake. However, all of these instances have an extremely low potential to impact the proposed project.

3 Expected Future Without-Project Conditions

The HTRW situation in and around Mitchell Lake will most likely stay the same in the future without project condition. Southern Bexar County is a relatively lightly developed area, but contains a high concentration of oil and gas infrastructure. The petroleum industry can be reasonably expected to grow in conjunction with this developing region. The manufacture and use of petroleum, chemicals, and other hazardous materials will continue in the project vicinity with or without the implementation of the proposed project. The extent to which HTRW sites continue to be created and discovered is impossible to predict, although currently existing HTRW sites can be expected to be remediated over time.

4 Future With-Project Conditions

In order to complete a feasibility level HTRW evaluation for the Mitchell Lake Ecosystem Restoration Project, a records search was conducted following the rules and guidance of ER 1165-2-132: *HTRW Guidance for Civil Works Projects*, and ASTM E1527-13: Standard Practice for Environmental Site Assessment: Phase 1 Environmental Site Assessment Process.

Although not classified as HTRW, pipelines and oil wells are present in and around Mitchell Lake. A Railroad Commission of Texas (RRC) database shows numerous oil and gas wells are located within 1.0 miles of Mitchell Lake and the restoration area (Figure 2). Pipelines can be found crossing the lake and restoration areas any excavations and displacement of sediment or soil materials within this general area has the potential to interact in some way with some type of oil and gas infrastructure. Refer to the HTRW Appendix for maps of known pipelines and oil wells surrounding the Lake. The project alternatives have taken the oil and gas wells and pipelines into consideration.

5 *References

1989. U.S. Army Corps of Engineers. Matagorda Ship Channel, Texas – Reconnaissance Report.

2019. Railroad Commission of Texas (RRC) Database. Public GIS Viewer.
<http://www.gisp.rrc.texas.gov/GISViewer2/>

2019. EDR Report. Environmental Data Resources - Shelton, CT. www.edrnet.com

2019. Environmental Protection Agency. Envirofacts Web-Mapper.
<https://enviro.epa.gov/facts/multisystem.html>

2019. Environmental Protection Agency. Cleanups in my Community Web-Mapper.
<https://19january2017snapshot.epa.gov/cleanups/cleanups-my-community.html>

2019. Texas Commission on Environmental Quality. PST Map Viewer.
<https://www.tceq.texas.gov/gis/petroleum-storage-tanks-pst-viewer>

*Sections that fulfill NEPA requirements for an EA