Texas Natural Diversity Database (TXNDD) Search

(Halff, 2013)

Element Occurrence Record

Scientific Name: Argythamnia aphoroides **Occurrence #:** 14 **Eo Id:** 1107

Common Name: Hill Country wild-mercury **Track Status:** Track all extant and selected historical EOs

TX Protection Status:

Global Rank: G2 **State Rank:** S2 **Federal Status:**

Location Information:

Directions:

SAN MARCOS AND VICINITY

Survey Information:

First Observation: **Survey Date:** **Last Observation:** 1898-SUMM

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data:

Reference:

Citation:

RARE PLANT STUDY CENTER, UNIVERSITY OF TEXAS AT AUSTIN. 1978. REPORT ON ARGYTHAMNIA APHOROIDES.

Specimen:

New York Botanical Garden, Bronx. 1898. S.W. Stanfield (s.n.), Specimen # ? NY. Summer 1898.

Element Occurrence Record

Scientific Name: Graptemys caglei **Occurrence #:** 10 **Eo Id:** 8881

Common Name: Cagle's Map Turtle **Track Status:** Track all extant and selected historical EOs

TX Protection Status: T

Global Rank: G3 **State Rank:** S1 **Federal Status:**

Location Information:

Directions:

Turtles were observed in the San Marcos River at the FM 20 crossing.

Survey Information:

First Observation: 2006 **Survey Date:** 2006 **Last Observation:** 2006

Eo Type: **Eo Rank:** E **Eo Rank Date:** 2006

Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 2005-2006: Four individuals were identified visually with spotting scopes.

Reference:

Citation:

Simpson, Thomas R. and F. L. Rose. 2007. Distribution of Cagle's map turtle (Graptemys caglei) in the Blanco and San Marcos rivers. The Texas Journal of Science. 59(3): 201-208

Specimen:

Element Occurrence Record

Scientific Name: Holbrookia lacerata
Occurrence #: 129 **Eo Id:** 9733
Common Name: Spot-tailed Earless Lizard
Track Status: Track all extant and selected historical EOs
TX Protection Status:
Global Rank: G3G4 **State Rank:** S2
Federal Status:

Location Information:

Directions:
Bastrop, 16 miles W on Moore Brothers Ranch.

Survey Information:

First Observation: 1970-11-15 **Survey Date:** 1970-11-15 **Last Observation:** 1970-11-15
Eo Type: **Eo Rank:** H **Eo Rank Date:** 1970-11-15
Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 15 Nov 1970: A specimen was collected.

Reference:

Citation:

Duran, Mike and R. W. Axtell. 2010. A rangewide inventory and habitat model for the spot-tailed earless lizard (Holbrookia lacerata). Horned Lizard License Plate Fund Contract # 199464. Submitted to Texas Parks and Wildlife Dept. 30 November 2010. 35 pp with additional files.

Ralph Axtell. 1998. Holbrookia lacerata Cope. Interpretive Atlas of Texas Lizards, No. 20. Self published. 12 pp.

Specimen:

Texas Cooperative Wildlife Collection, Texas A&M University, College Station, TX; Wallace, Catalog # 36582, 15 Nov 1970, TCWC.

Element Occurrence Record

Scientific Name: Micropterus treculi **Occurrence #:** 24 **Eo Id:** 3822

Common Name: Guadalupe Bass **Track Status:** Track all extant and selected historical EOs

TX Protection Status:

Global Rank: G3 **State Rank:** S3 **Federal Status:**

Location Information:

Directions:

SAN MARCOS RIVER FROM SAN MARCOS TO LULING, LOCATED ESPECIALLY AT 1.6 KILOMETERS EAST OF STAPLES

Survey Information:

First Observation: **Survey Date:** **Last Observation:** 1978-03

Eo Type: **Eo Rank:** D **Eo Rank Date:**

Observed Area:

Comments:

General Description: CLEAR, MEDIUM STREAM, LIMESTONE AND SILT SUBSTRATE, RIFFLES AND POOLS

Comments: ENDEMIC TO SEVERAL RIVERS OF EASTERN EDWARDS PLATEAU, COMMON IN PREFERRED HABITAT

Protection Comments: HYBRIDIZES WITH MICROPTERUS PUNCTULATUS

Management Comments:

Data:

EO Data: SPECIMENS COLLECTED AT THIS LOCALITY, SEE SUMMARY IN EDWARDS, 1980, Ph.D. DISSERTATION, ZOOLOGY DEPARTMENT, UT-AUSTIN

Reference:

Citation:

EDWARDS, ROBERT J. 1980. THE ECOLOGY AND GEOGRAPHIC VARIATION OF THE GUADALUPE BASS (MICROPTERUS TRECULI). PhD. DISSERTATION, ZOOLOGY DEPARTMENT, UT-AUSTIN.

LEE, DAVID S. ET AL. 1980. ATLAS OF NORTH AMERICAN FRESHWATER FISHES. N.C. STATE MUSEUM OF NAT. HIST., GREENSBORO, NC.

Specimen:

Element Occurrence Record

Scientific Name: Quercus buckleyi series **Occurrence #:** 23 **Eo Id:** 2908

Common Name: Texas Oak Series **Track Status:** Track all extant and selected historical EOs

TX Protection Status:

Global Rank: G3 **State Rank:** S3 **Federal Status:**

Location Information:

Directions:

CALCAREOUS SANDSTONE SLOPES OF VARIOUS ASPECT NORTH, SOUTH, AND WEST OF RECREATION HALL, LOCKHART SRA

Survey Information:

First Observation: **Survey Date:** 1990-06-12 **Last Observation:** 1990

Eo Type: **Eo Rank:** CD **Eo Rank Date:** 1990-06-12

Observed Area:

Comments:

General Description: YOUNG GROWTH FOREST, MOSTLY CEDAR ELM WITH SCATTERED STANDS OF TEXAS OAK

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: DESCRIPTION AND PLANT LIST IN DLI REPORT, SITE 1

Reference:

Citation:

TEXAS PARKS & WILDLIFE DEPARTMENT. 1990. LOCKHART STATE RECREATION AREA. SUMMARY OF REPRESENTATIVE PLANT COMMUNITIES.

Specimen:

Element Occurrence Record

Scientific Name: Quercus fusiformis/schizachyrium scoparium series
Occurrence #: 7 **Eo Id:** 3659
Common Name: Plateau Live Oak/little Bluestem Series
Track Status: Track all extant and selected historical EOs
TX Protection Status:
Global Rank: G2G4 **State Rank:** S3
Federal Status:

Location Information:

Directions:
LEVEL UPLAND ON LEONA FORMATION TERRACE GRAVELS SOUTH OF ROAD TO RECREATION HALL, SOUTHWEST CORNER OF LOCKHART SRA

Survey Information:

First Observation: **Survey Date:** 1990-06-13 **Last Observation:** 1990
Eo Type: **Eo Rank:** C **Eo Rank Date:** 1990-06-13
Observed Area:

Comments:

General Description: OLD PASTURE WITH SCATTERED POST OAK, LIVE OAK MOTTES; LITTLE BLUESTEM ON DEEPER SOILS, WEEDY FORBS ON SHALLOWER SOILS

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: DESCRIPTION AND PLANT LIST IN DLI REPORT, SITE 2

Reference:

Citation:

TEXAS PARKS & WILDLIFE DEPARTMENT. 1990. LOCKHART STATE RECREATION AREA. SUMMARY OF REPRESENTATIVE PLANT COMMUNITIES.

Specimen:

Element Occurrence Record

Scientific Name: Rookery **Occurrence #:** 539 **Eo Id:** 6195

Common Name: **Track Status:** Track all extant and selected historical EOs

TX Protection Status:

Global Rank: GNR **State Rank:** SNR **Federal Status:**

Location Information:

Directions:

AT AQUADUCT RESERVOIRS SOUTHEAST OF LOCKHART

Survey Information:

First Observation: 1988 **Survey Date:** **Last Observation:** 1989

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area:

Comments:

General Description:

Comments: COLONY NUMBER 599-001

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE LITTLE BLUE HERON AND CATTLE EGRET

Reference:

Citation:

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1986-1989. TEXAS COLONIAL WATERBIRD CENSUS SUMMARY. SPECIAL ADMINISTRATIVE REPORTS.

Specimen:

Element Occurrence Record

Scientific Name: Rookery **Occurrence #:** 592 **Eo Id:** 8928

Common Name: **Track Status:** Track all extant and selected historical EOs

TX Protection Status:

Global Rank: GNR **State Rank:** SNR **Federal Status:**

Location Information:

Directions:

Along the main road in Dale, TX. Approx. 11 air kilometers NE of Lockhart.

Survey Information:

First Observation: 2008 **Survey Date:** 2009-06-01 **Last Observation:** 2009-06-01

Eo Type: **Eo Rank:** A **Eo Rank Date:** 2009-06-01

Observed Area:

Comments:

General Description: The rookery is approx. 5,500 sq. meters and in a woodlot that appeared to be 100 percent hackberry. It looked like a second growth woodlot; the trees were not mature. They appeared to be around the same age. The volume of birds had a severe impact on the trees and the forest floor. The woodlot is bound by a highway on one side and driveways on two more sides.

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 2008: Landowner first noticed birds using the rookery. 1 June 2009: Based on the size of the area, and the density of nests, there were 6,000-10,000 Cattle Egret nests and approx. 500 Little Blue Heron nests. In addition, a few pairs of Great Egrets and a single White Ibis were observed coming into the rookery, but nesting was not confirmed for these species.

Reference:

Citation:

Hanks, Cullen. 2009. Field survey to a rookery in Dale, Texas, of 1 June 2009.

Specimen:

Element Occurrence Record

Scientific Name: Schizachyrium scoparium-sorghastrum nutans series
Occurrence #: 75 **Eo Id:** 5073
Common Name: Little Bluestem-indiangrass Series
Track Status: Track all extant and selected historical EOs
TX Protection Status:
Global Rank: G2 **State Rank:** S2 **Federal Status:**

Location Information:

Directions:
EAST SIDE OF CLEAR FORK PLUM CREEK, SOUTH SIDE OF RODEO GROUNDS, HIDDEN SOUTHEAST CORNER OF LOCKHART SRA

Survey Information:

First Observation: **Survey Date:** 1990-06-13 **Last Observation:** 1990
Eo Type: **Eo Rank:** C **Eo Rank Date:** 1990-06-13
Observed Area:

Comments:

General Description: SELDOM MOWN OLD PASTURE WITH DENSE COVER OF LITTLE BLUESTEM AND SEVERAL "PRAIRIE" FORBS

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: DESCRIPTION AND PLANT LIST IN DLI REPORT, SITE 3

Reference:

Citation:

TEXAS PARKS & WILDLIFE DEPARTMENT. 1990. LOCKHART STATE RECREATION AREA. SUMMARY OF REPRESENTATIVE PLANT COMMUNITIES.

Specimen:

Element Occurrence Record

Scientific Name: Thamnophis sirtalis annectens
Occurrence #: 24 **Eo Id:** 4519
Track Status: Track all extant and selected historical EOs
Common Name: Texas Garter Snake
TX Protection Status:
Global Rank: G5T4 **State Rank:** S2
Federal Status:

Location Information:

Directions:
7 MILES NORTH-NORTHEAST OF KYLE

Survey Information:

First Observation: **Survey Date:** **Last Observation:** 1950-07-09
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data:

Reference:

Citation:

Specimen:

Baylor University, Bryce C. Brown Collection. 1950. Unknown Collector, Catalog # 5957 BCB. 9 July 1950.

Element Occurrence Record

Scientific Name: Ulmus crassifolia-celtis laevigata series
Occurrence #: 31 **Eo Id:** 3352
Common Name: Cedar Elm-sugarberry Series
Track Status: Track all extant and selected historical EOs
TX Protection Status:
Global Rank: G2G3 **State Rank:** S4
Federal Status:

Location Information:

Directions:
TERRACES ALONG CLEAR FORK OF PLUM CREEK, FROM LOW WATER CROSSING DOWNSTREAM TO PARK BOUNDARY, LOCKHART SRA

Survey Information:

First Observation:
Survey Date: 1990-06-13
Last Observation: 1990
Eo Type:
Eo Rank: CD
Eo Rank Date: 1990-06-13
Observed Area:

Comments:

General Description: DECIDUOUS BOTTOMLAND HARDWOOD FOREST ON CREEK TERRACE; HEAVILY DISTURBED

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: DESCRIPTION AND PLANT LIST IN DLI REPORT, SITE 4

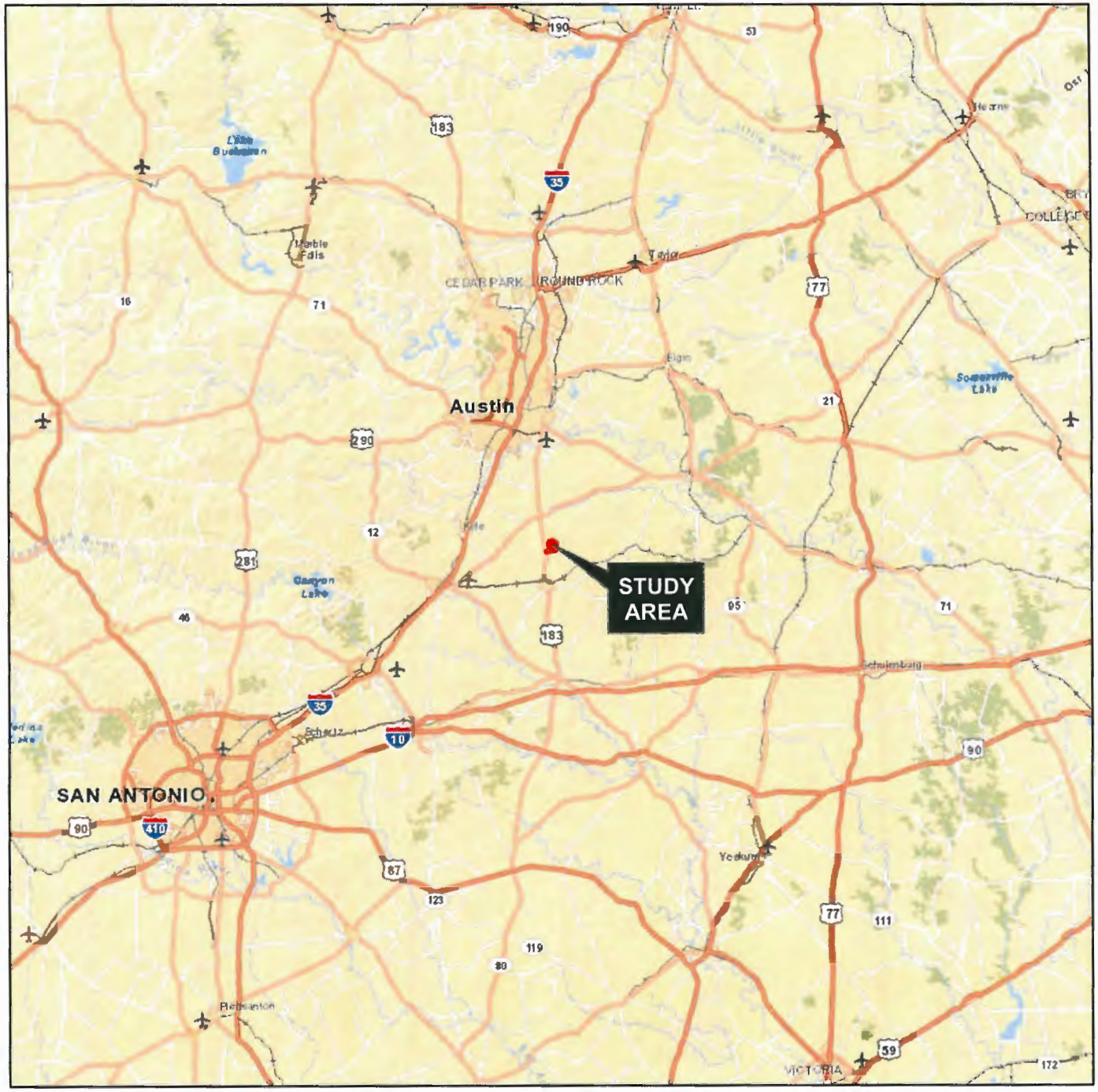
Reference:

Citation:

TEXAS PARKS & WILDLIFE DEPARTMENT. 1990. LOCKHART STATE RECREATION AREA. SUMMARY OF REPRESENTATIVE PLANT COMMUNITIES.

Specimen:

Location Maps, Vegetation Maps, Soils Map, and Aerial Photography



N

0 10 20 40

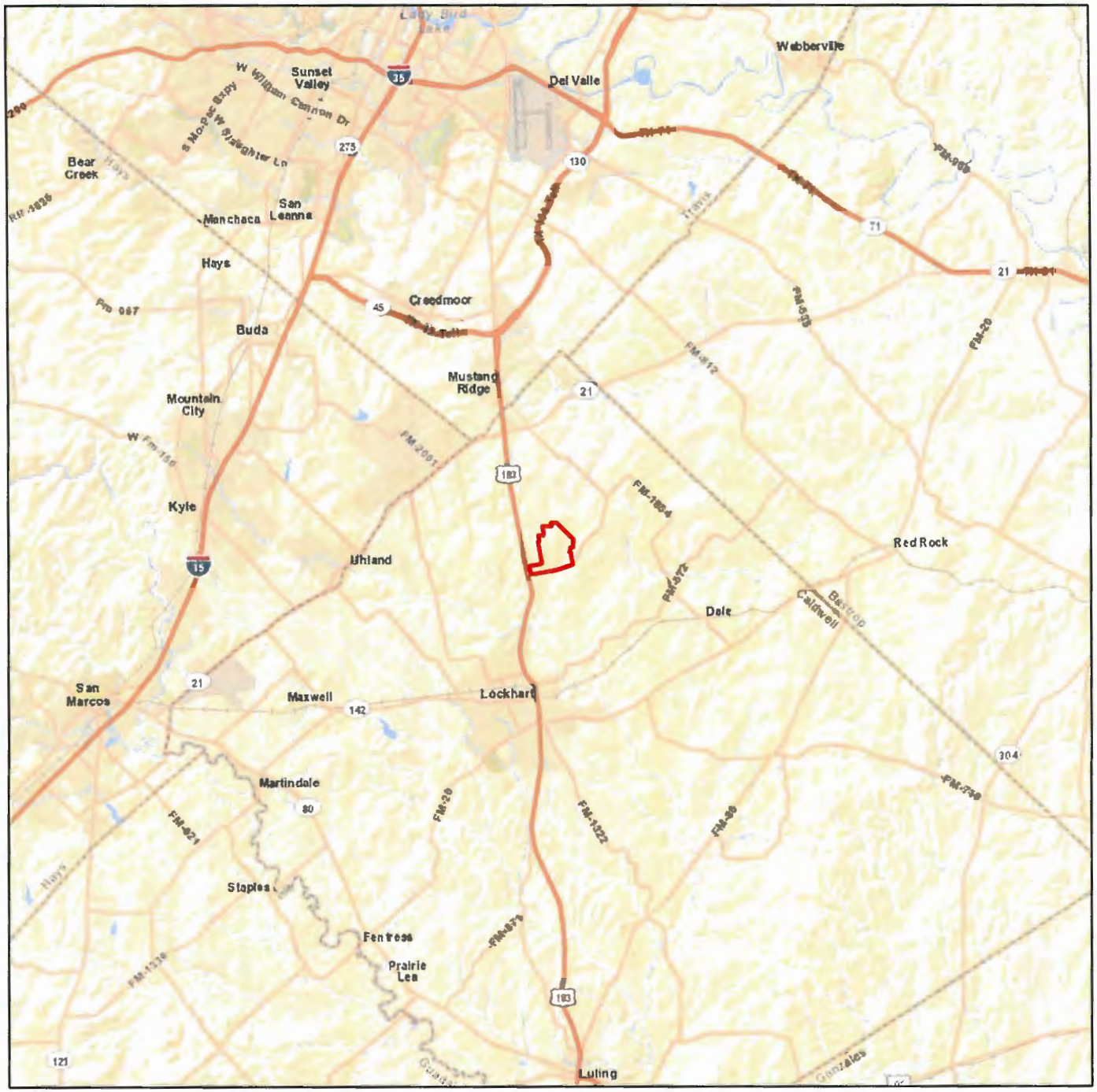
Miles

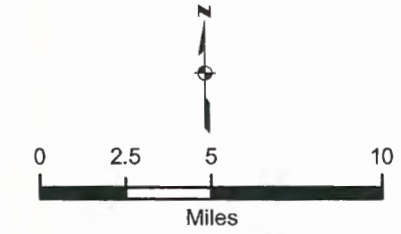
Legend

Study Area

Notes:
1. Source/Year of Base Map: ESRI, World Street Map/2013
2.
3.
4.
5.

Project Title: 130 ENVIRONMENTAL PARK
Project Number
Date: 06/2013 AVO: 29520
Sheet Title: PROJECT LOCATION MAP
Sheet Number: FIGURE 1
HALFF





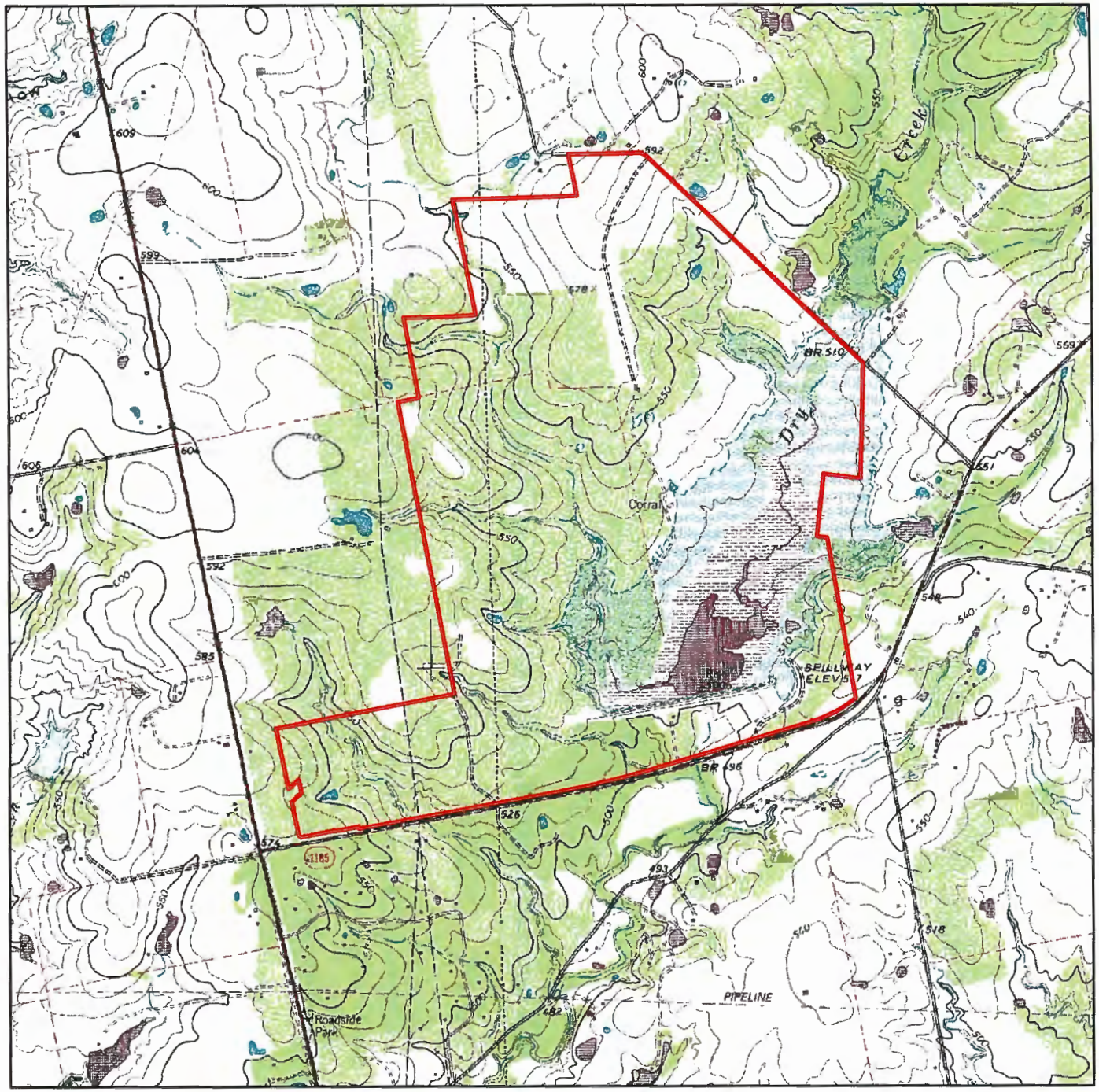
Legend

Study Area

Notes:
1. Source/Year of Base Map: ESRI, World Street Map Service/2013
2.
3.
4.
5.

Project Title: 130 ENVIRONMENTAL PARK	
Project Number	
Date: 06/2013	AVO: 29520
Sheet Title: PROJECT VICINITY MAP	
Sheet Number: FIGURE 2	

HALFF



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0 1,000 2,000 4,000

Feet

Legend

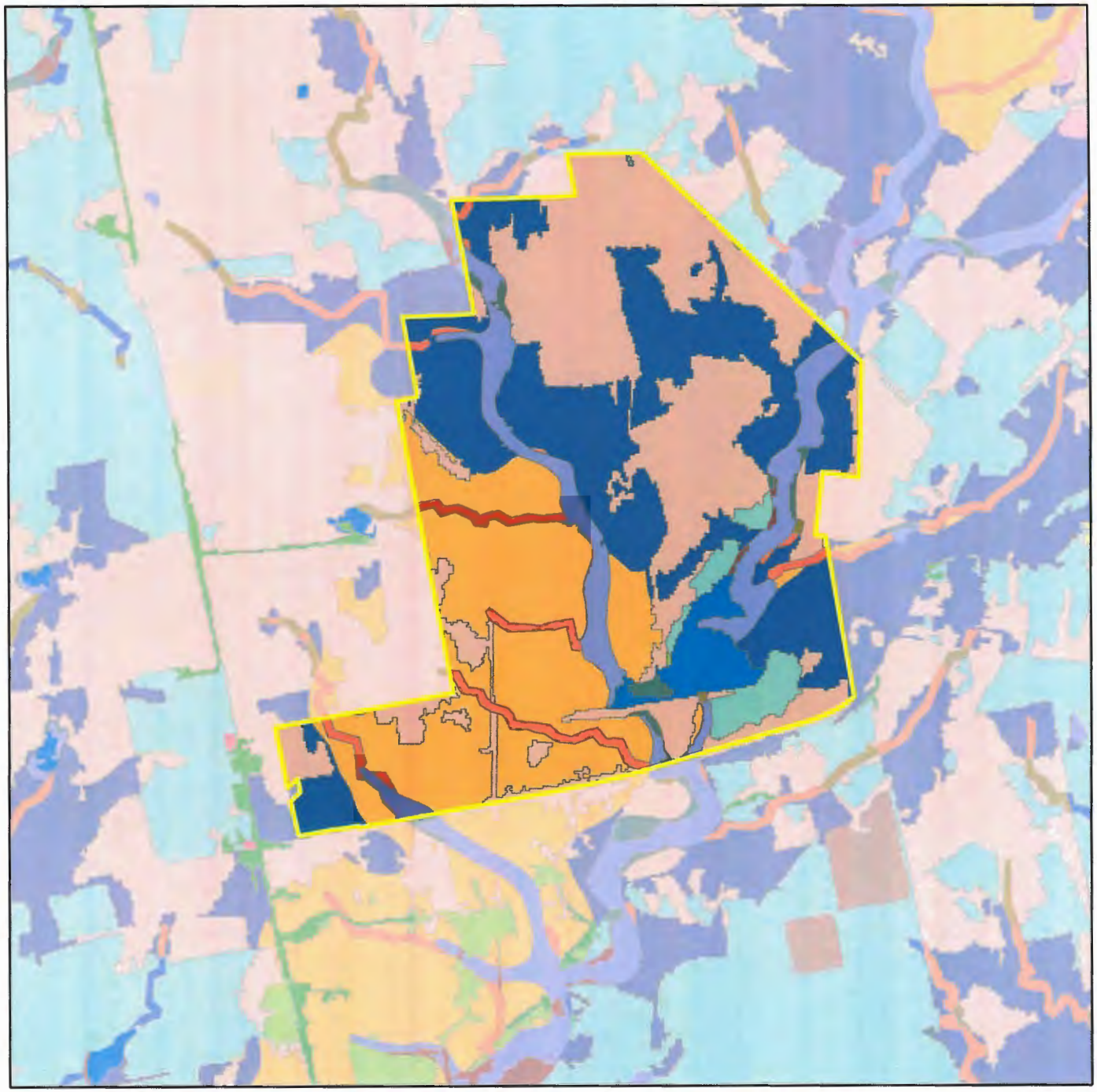
Study Area

Notes:
1. Source/Year of Base Map: Copyright:© 2013 National Geographic Society, i-cubed Map Service
2. USGS Quarter Quadrangle: Lockhart North
3.

Project Title: 130 ENVIRONMENTAL PARK
Project Number:
Date: 06/2013 AVO: 29520
Sheet Title:USGS TOPOGRAPHICAL MAP
Sheet Number: FIGURE 3

HALFF

Technically Complete October 28, 2014



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Study Area

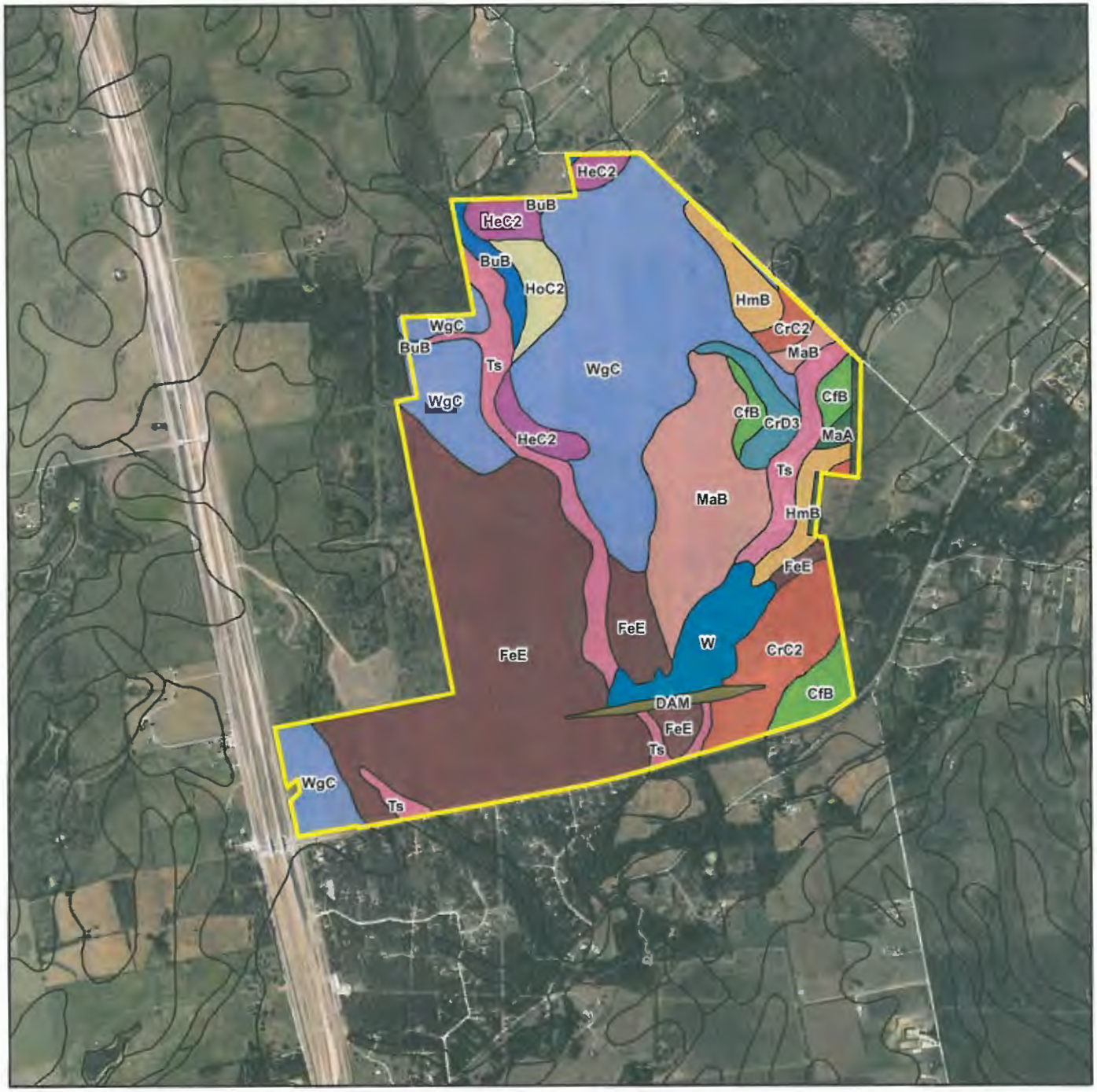
Vegetation Common Name

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Deciduous Shrubland
- Central Texas: Floodplain Hardwood Forest
- Central Texas: Floodplain Herbaceous Vegetation
- Central Texas: Riparian Deciduous Shrubland
- Central Texas: Riparian Hardwood Forest
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Open Water
- Post Oak Savanna: Post Oak Motte and Woodland
- Post Oak Savanna: Savanna Grassland

Notes:

1. Source/Year of vegetation data: Texas Parks and Wildlife Department/2012
2.
3.
4.

Project Title: 130 ENVIRONMENTAL PARK
Project Number:
Date: 06/2013 AVO: 29520
Sheet Title: TPWD ECOLOGICAL SYSTEMS CLASSIFICATION TYPES
Sheet Number: FIGURE 4
HALFF



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Study Area

- BuB - Burleson clay, 1 to 3 percent slopes
- CfB - Crockett fine sandy loam, 1 to 3 percent slopes
- CrC2 - Crockett soils, 2 to 5 percent slopes, eroded
- CrD3 - Crockett soils, 3 to 8 percent slopes, severely eroded
- DAM - Dams
- FeE - Fett gravelly soils, 1 to 12 percent slopes
- HeC2 - Heiden clay, 3 to 5 percent slopes, eroded
- HmB - Heiden-Wilson complex, 1 to 3 percent slopes
- HoC2 - Houston Black clay, 3 to 5 percent slopes, eroded
- MaA - Mabank loam, 0 to 1 percent slopes
- MaB - Mabank loam, 1 to 3 percent slopes
- Ts - Tinn soils, frequently flooded
- W - Water
- WgC - Wilson gravelly loam, 1 to 5 percent slopes

Notes:
1. Source/Year of Soil Survey: NRCS/USDA Web Soil Survey downloader for Caldwell County/2012
2.

Project Title: 130 ENVIRONMENTAL PARK
Project Number:
Date: 06/2013 AVO: 29520
Sheet Title: SOIL SURVEY MAP
Sheet Number: FIGURE 5
HALFF

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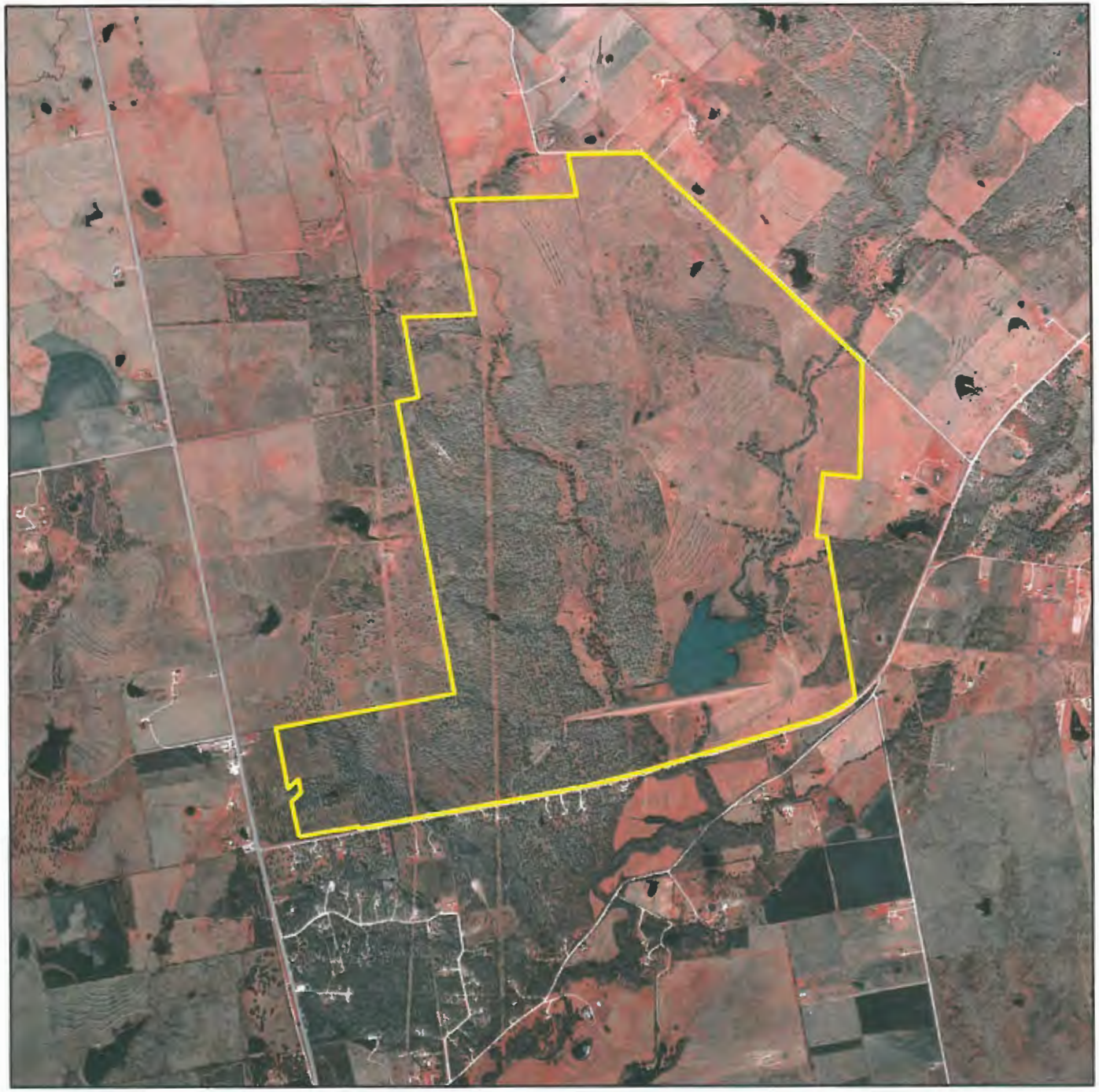
Feet

Legend

- Study Area
- 1-Percent Annual Flood Risk Zone
- River or Stream

Notes:
1. Source/Year of Effective Floodplain Data: FEMA/2012
3. Source/Year of Streams: National Hydrography Dataset/2011
4.
5.

Project Title: 130 ENVIRONMENTAL PARK
Project Number:
Date: 06/2013 AVO: 29520
Sheet Title: FLOODPLAIN MAP
Sheet Number: FIGURE 6
HALFF



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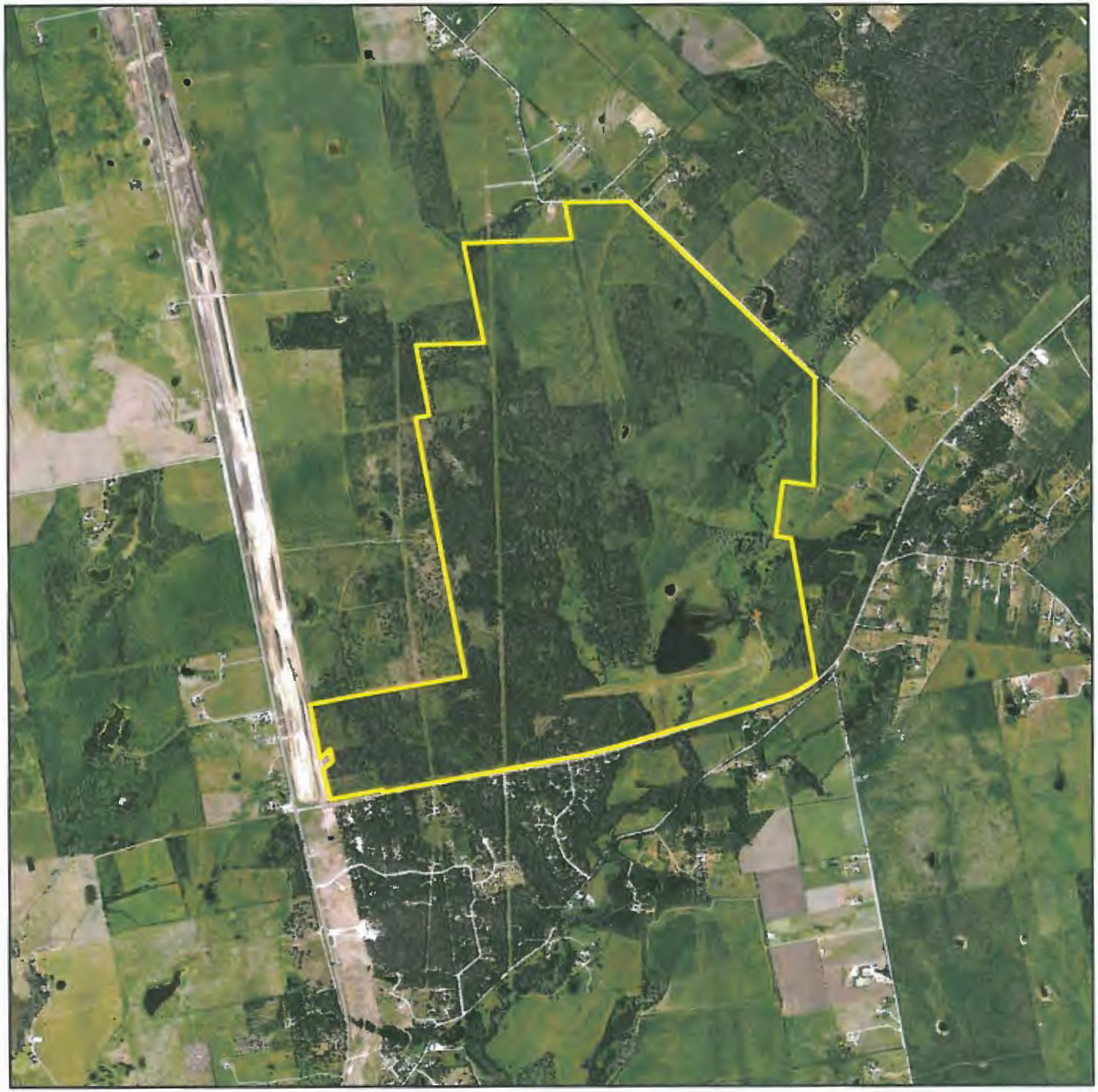
Feet

Legend

Study Area

Notes:
1. Source/Year of Orthophoto: TNRIS, Lockhart North NE DOQQ Raster Dataset/1996
2.
3.
4.

Project Title: 130 ENVIRONMENTAL PARK
Project Number:
Date: 06/2013 AVO: 29520
Sheet Title: 1996 ORTHOPHOTO MAP
Sheet Number: FIGURE 7
HALFF



N

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Feet

Legend

Study Area

Notes:
1. Source/Year of Orthophoto: TNRIS, Lockhart North NE DOQQ Raster Dataset/2010
2.
3.
4.

Project Title: 130 ENVIRONMENTAL PARK
Project Number:
Date: 06/2013 AVO: 29520
Sheet Title: 2010 NAIP ORTHOPHOTO
Sheet Number: FIGURE 8
HALFF

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Feet

Legend

Study Area

Notes:
1. Source/Year of Orthophoto: APFO-USDA NAIP Imagery web service/2012
2.
3.
4.
5.

Project Title: 130 ENVIRONMENTAL PARK
Project Number:
Date: 06/2013 AVO: 29520
Sheet Title: 2012 NAIP ORTHOPHOTO
Sheet Number: FIGURE 9

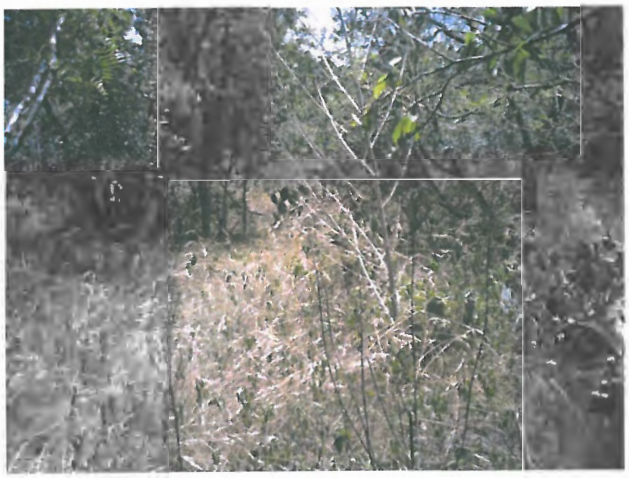
HALFF

Technically Complete October 28, 2014

Site Photographs

VEGETATION COMMUNITY PHOTOGRAPHS

Mesquite Grassland Mosaic
This was one of the most frequently encountered vegetation communities within the study area. Dominant vegetation included mesquite scrub, prickly pear, pencil cactus, Texas persimmon, agarita, Texas wintergrass, lemon bee balm, and plains coreopsis.



Mesquite Woods
This community was similar to the mesquite grassland mosaic, and occurred at the transition to more wooded areas. Dominant vegetation in this community included large mesquite trees, cedar elm, post oak, hackberry, agarita, Texas persimmon, prickly pear, pencil cactus, and Texas wintergrass.

Sumpweed Depression Wetlands
Dominant vegetation in this community included sumpweed and common spikerush. These depressions were emergent wetlands occurring in terraced areas of the surrounding uplands and typically occurred within the mesquite grassland mosaic.

VEGETATION COMMUNITY PHOTOGRAPHS

Post Oak/ Cedar Elm Woods
Dominant vegetation in this community included post oak, cedar elm, yaupon holly, agarita, deciduous holly, Texas persimmon, mesquite, prickly pear, pencil cactus, pink thoroughwort, Virginia wild rye, slimleaf panicgrass, and wild oat.

Riparian Woods (Cedar Elm/ Oak) – This community occurred along riparian corridors at higher elevations and in the upper reaches of ephemeral streams. Dominant vegetation included cedar elm, live oak, post oak, hackberry, giant ragweed, Virginia wild rye, Texas wintergrass, pink thoroughwort, itchgrass, and lean flatsedge.

Riparian Woods (Green Ash/ Pecan/ Hackberry)
This community occurred at lower elevations along the larger tributaries within the study area. Dominant vegetation included hackberry, green ash, pecan, Virginia wild rye, giant ragweed, and common greenbriar.

VEGETATION COMMUNITY PHOTOGRAPHS

Floodplain Meadows
This vegetation complex occurred within the floodplain of Dry Creek, and appeared to be regularly mowed. Woody vegetation was sparse and limited to scattered cedar elm and bois d'arc. Dominant herbaceous vegetation included common ragweed, giant ragweed, ironweed, shortbeak sedge, rough cocklebur, annual canarygrass, bermudagrass, buffalograss, Virginia wild rye, and Carolina canarygrass.

Forested Wetlands – This community was observed at lower elevations within the study area. Herbaceous vegetation was more-or-less absent from this community and dominant woody species included green ash and cedar elm.

Emergent Wetlands (Pond Fringe) - This community occurred along the fringe of stock ponds and was typically surrounded by upland vegetation. Woody vegetation was more-or-less absent from this community with the exception of sesbania and the occasional mesquite or cedar elm at the wetland/ upland transition. Dominant herbaceous vegetation included common spikerush, flatstemmed spikerush, sumpweed, water-pepper, and manyspike flatsedge.

VEGETATION COMMUNITY PHOTOGRAPHS

Emergent Wetlands (Lacustrine Fringe) – These wetlands occurred along the shoreline and floodplain area of the large lake in the southern portion of the study area. Typical dominant vegetation included several species of spikerush, Pennsylvania smartweed, rough cocklebur, broadleaf arrowhead, and upright burhead.

Scrub/Shrub Wetlands –These wetlands occurred at higher elevations along the shoreline of the large lake in the southern portion of the study area. Typical dominant vegetation included sesbania, cedar elm, green ash, common spikerush, and sumpweed.

130 ENVIRONMENTAL PARK

APPENDIX IIF
CULTURAL RESOURCES SURVEY

Technically Complete October 28, 2014

TEXAS HISTORICAL COMMISSION
real places telling real stories

December 17, 2013

Molly A. Hall
AR Consultants, Inc.
805 Business Parkway
Richardson, Texas 75081

Re: Project review:
Revised Draft report: *Cultural Resources Survey of the 130 Environmental Park Tract Caldwell County, Texas*

Dear Ms. Hall:

Thank you for allowing us to review the report referenced above. This letter serves as comment on the proposed undertaking from the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission.

The review staff, led by Jeff Durst, has completed its review. After reviewing the documentation, we concur that newly recorded prehistoric sites 41CW158 and 41CW159 that will be impacted by construction are ineligible for inclusion in the National Register of Historic Places (NRHP) based on the lack of buried deposits, cultural features, or temporally diagnostic materials. Additionally, we concur that newly recorded historic site 41CW157 is not eligible for inclusion in the NRHP based on the lack of clear vertical or horizontal stratigraphy which would allow for the segregation of the pre- and post-1900 occupations.

The draft report that you have submitted is accepted and this project may proceed without further consultation with this office, provided that no significant archeological deposits are encountered during construction and development of the property.

Thank you for your cooperation in this federal review process, and for your efforts to preserve the irreplaceable heritage of Texas. **If we may be of further assistance, please call Jeff Durst of our staff at 512/463-8884.**

Sincerely,

for
Mark Wolfe, State Historic Preservation Officer

MW/jjd

AR Consultants, Inc.

Archaeological and Environmental Consulting
805 Business Parkway, Richardson, Texas 75081
Phone: (214) 368-0478
Fax: (214) 221-1519
E-mail: arcdigs@aol.com

November 25, 2013

Jeff Durst, Archeologist
Texas Historical Commission
PO Box 12276
Austin, TX 78711-2276

Dear Mr. Durst:

Enclosed is an updated version of the draft report entitled *Cultural Resources Survey of the 130 Environmental Park Tract, Caldwell County, Texas* for your review. I believe this new version of the report addresses your concerns presented in the letter dated September 17, 2013. Specifically, the following changes have been made:

-The number and sizes of the hearth test units were added to the text and the site map and are shown in a photograph (pp. 24-26).
-Several artifact photos were added to the report (pp. 23, 29-34).
-Details regarding chain of ownership have been added (p. 34).

41CW157 likely dates from the late 1800s through the early 1900s but does not exhibit any clear vertical or horizontal stratigraphy that allowed for segregation of the pre- and post-1900 occupations. Due to the overpatterning exhibited at the historic site, it has no potential to yield information about past lifeways or environments and is recommended as not eligible for listing on the National Register of Historic Places and does not warrant designation as a Texas State Antiquities Landmarks. Given the results of this survey, ARC recommends that further cultural resource investigations are unnecessary for this project, and requests that the Texas Historical Commission concur with this recommendation.

If you have questions, please contact me at 214.368.0478

Sincerely,

Molly A Hall

Molly A. Hall
Principal Investigator
AR Consultants, Inc.

Encl. Final Report

AR Consultants, Inc.

Archaeological and Environmental Consulting
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CULTURAL RESOURCES SURVEY OF THE

130 ENVIRONMENTAL PARK TRACT

CALDWELL COUNTY, TEXAS

By:

S. Alan Skinner, PhD
and
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Issued to:

CATHY MOORE HUNTER
and
130 ENVIRONMENTAL PARK, LLC

Submitted by:

AR CONSULTANTS, INC.
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Cultural Resources Report 2013-43
November 5, 2013

HISTORIC BUILDINGS ARCHAEOLOGY NATURAL SCIENCES

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ABSTRACT

The 1,229-acre 130 Environmental Park Tract, within which a 208-acre municipal solid waste landfill and a transfer station are proposed to be developed, is located in north central Caldwell County, Texas. Biggs and Matthews Environmental, Inc., contracted with AR Consultants, Inc. (ARC) to conduct a pedestrian survey of the 809-acre study area within the tract. The survey was conducted June 4-5, July 8-12 and 17-19, 2013, and included systematic shovel testing in limited areas.

Two prehistoric scatters (41CW158 and 159) and one historic residential site (41CW157) were newly recorded. The prehistoric sites do not have any structures, features, or datable materials. The historic site dates from the late 1800s through the early 1900s but does not exhibit any clear vertical or horizontal stratigraphy that allowed for segregation of the pre- and post-1900 occupations. Due to the surficial nature of the prehistoric sites and the overpatterning exhibited at the historic site, they have no potential to yield information about past lifeways or environments and they are recommended as not eligible for listing on the National Register of Historic Places and do not warrant designation as Texas State Antiquities Landmarks. Given the results of this survey, ARC recommends that further cultural resource investigations are unnecessary for this project.

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r-arc: 130 EP Tract Survey (130606)

INTRODUCTION

The 1,229-acre 130 Environmental Park (130 EP) Tract is located in north central Caldwell County, Texas just north of the town of Lockhart and south of the cross roads community of Mendoza (Figure 1). The roughly backwards-oriented, L-shaped tract fronts on US Highway 183 on the west and extends east for a distance of 1.6 miles from the intersection of US 183 and FM 1185 to almost the intersection with CR 183. The northeast boundary of the tract follows CR179 (Homannville Trail). All other boundaries follow barbed wire property line fences as shown on Figure 1. The 130 EP Facility is proposed to include a 208-acre Type I municipal solid waste landfill and a Type V municipal solid waste transfer station to be developed within a 520-acre facility boundary located on the north end of the tract. A 809-acre study area was selected and includes the entire facility boundary, additional areas of the tract along its perimeter on the northeast, north, and west sides, and the western portion of the tract, where a facility entrance road will connect the facilities to SH 183. The overall tract includes gently rolling upland pasture which has been invaded by oaks, cedar elms, and mesquite trees. All drainages, including Dry Creek, are generally dry.

Although prehistoric sites have been reported within and near the 130 EP Tract and artifacts have been reported as being present by the landowner, research conducted prior to field work showed that extensive brush clearing, deep root plowing, creation of earthen levees, and other disturbances had occurred within the tract and allowed ARC to conclude that if prehistoric sites had been present in this largely upland setting, they would have been surface deposits that were destroyed and spread over the ground surface. Two prehistoric sites (41CW68 and 41CW69 on Figure 1) were recorded within the tract during a 2000 survey but were not worthy of further investigation and did not warrant listing on the National Register of Historic Places (NRHP) or as State Antiquities Landmarks (SALs).

This report is written in accordance with report guidelines adopted by the Archeology Division of the Texas Historical Commission (THC) (Council of Texas Archeologists n.d.). This report presents a brief description of the natural setting of the area including the tract and study area, followed by a discussion of the culture history and previous investigations in and around the study area. A chapter on the research design and methodology employed in the investigation is followed by the results of the field investigation. The report concludes with recommendations and a list of references cited. Appendix A is a map that shows the locations of cemeteries, historic structures and sites, archaeologically significant sites, and sites having exceptional aesthetic qualities within one mile of the facility boundary. Appendix B provides artifact provenience details.

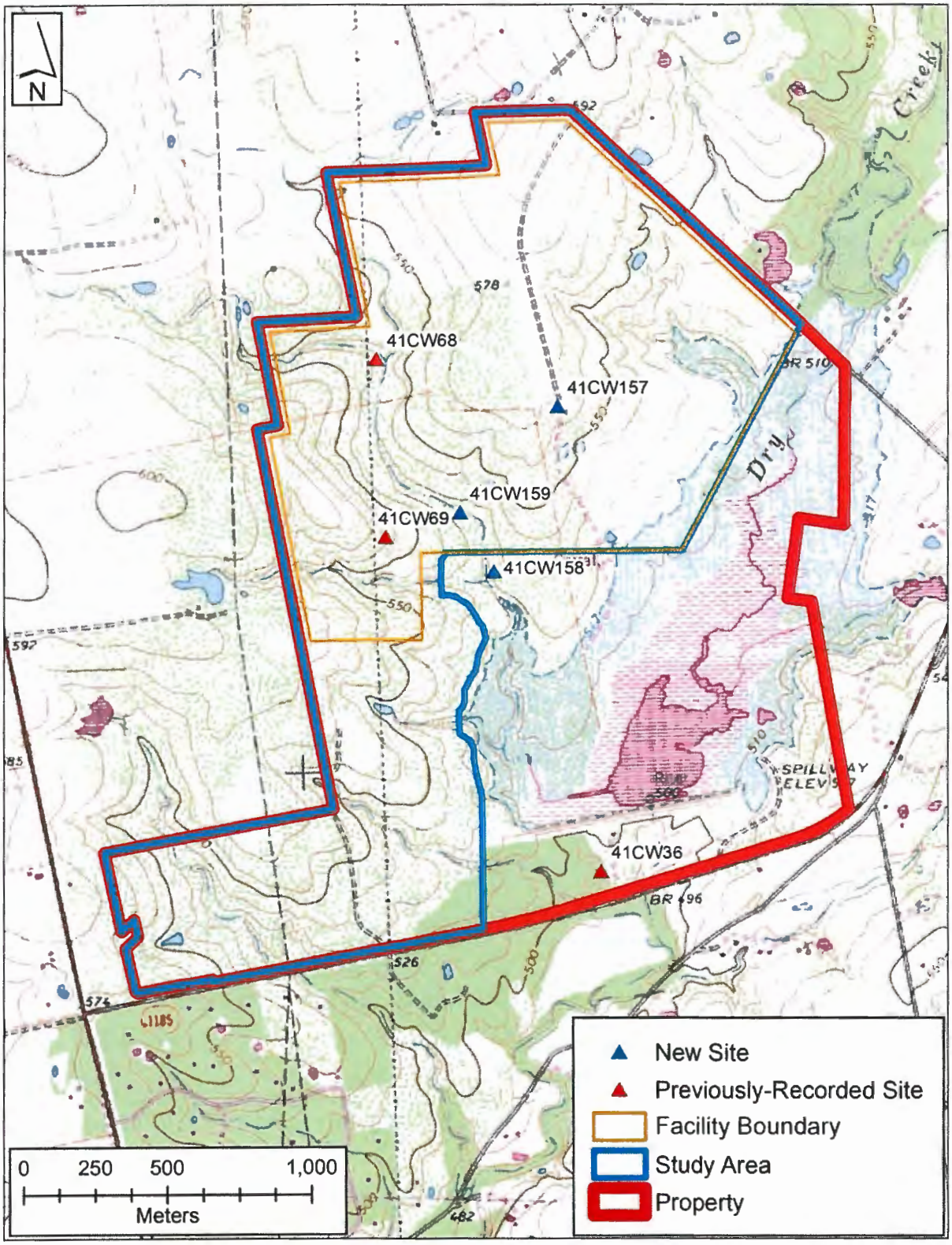

Figure 1. The 130 EP tract, study area, facility boundary, and site locations plotted on a portion of the Lockhart North, TX 7.5' USGS topographic map.

Administrative Information

Sponsor:	130 Environmental Park, LLC and Biggs and Matthews Environmental, Inc.
Review Agency:	Texas Historical Commission
Principal Investigator:	S. Alan Skinner, Ph.D.
Field Crew:	Molly A. Hall, Nick Coleman, Brett Lang, and Skinner
Fieldwork Dates:	June 4-5, July 8-12, 17-19, 2013
Project Person-days:	31
Sites Recorded:	41CW157 (historic), 41CW158 and 41CW159 (prehistoric)

NATURAL ENVIRONMENT

Caldwell County is located in the Blackland Prairie on the west and the Post Oak Savannah or the Clay Pan on the east. The 130 EP tract is included entirely within the Blackland Prairie Ecoregion of Texas (Griffith et al 2004). The Blackland is composed of deep clays and clay loams and much of the area has been farmed for generations (Lowther and Werchan 1978:1). As mapped by the Bureau of Economic Geology (1974), the study area overlies two geological formations. The Leona Formation is primarily west of Dry Creek and is a Quaternary deposit. The terrace sediments include sand, clay, and gravel. The Midway Group is to the west and north and is a deposit that includes clay, silt, and sand. No recent Quaternary alluvium is mapped in the Dry Creek valley.

Soils within the study area (Figure 2) are mapped as being included in the Heiden-Houston Black association. Two soils dominate surface coverage within the study area. These are Fett gravelly soils with 1 to 12 percent slopes and Wilson gravelly loam with 1-5 percent slopes. A layer of gravelly loam or sandy loam constitutes the A horizon of the Fett and Wilson soils and the underlying soil is clay which extends to depths of over five feet below the surface. Smaller areas of Mabank loam and Crockett fine sandy loam are also present on the ridges between the two major intermittent tributaries. A narrow strip of frequently flooded Trinity bottomland clay parallels each of the tributaries. Along the east bank of the intermittent drainage, there are strips of Heiden clay and Houston Black clay (Lowther and Werchan 1978).

Relief within the study area ranges from 504' msl near the eastern corner to 592' msl at the ridge top along CR 179 on the north central edge of the study area. Dry Creek is a second order drainage that is intersected by several first order drainages both upstream and downstream from the study area before it joins with Cottonwood Creek and then Plum Creek. No springs are shown in the Dry Creek Watershed in the vicinity of the study area, but spring-fed Lytton Springs Creek heads on the north side of the same ridge where Dry Creek heads (approximately 1.6 miles north of the study area), so it is possible that a spring may be present on the Dry Creek side of the ridge. Brune (1981:102-103) discusses Lytton Springs (located approximately three miles northeast of the study area near the present-day community of Lytton Springs) and indicates that at one time copious springs were present there, although by the early 1980s only some seeps remained; this could be a reason that prehistoric people might have visited the area. He also notes that "most of the larger springs in Caldwell County discharge from sand and gravel of the Quaternary Leona Formation. The remainder originate in the Wilcox Sand" (Brune 1981:102-103).

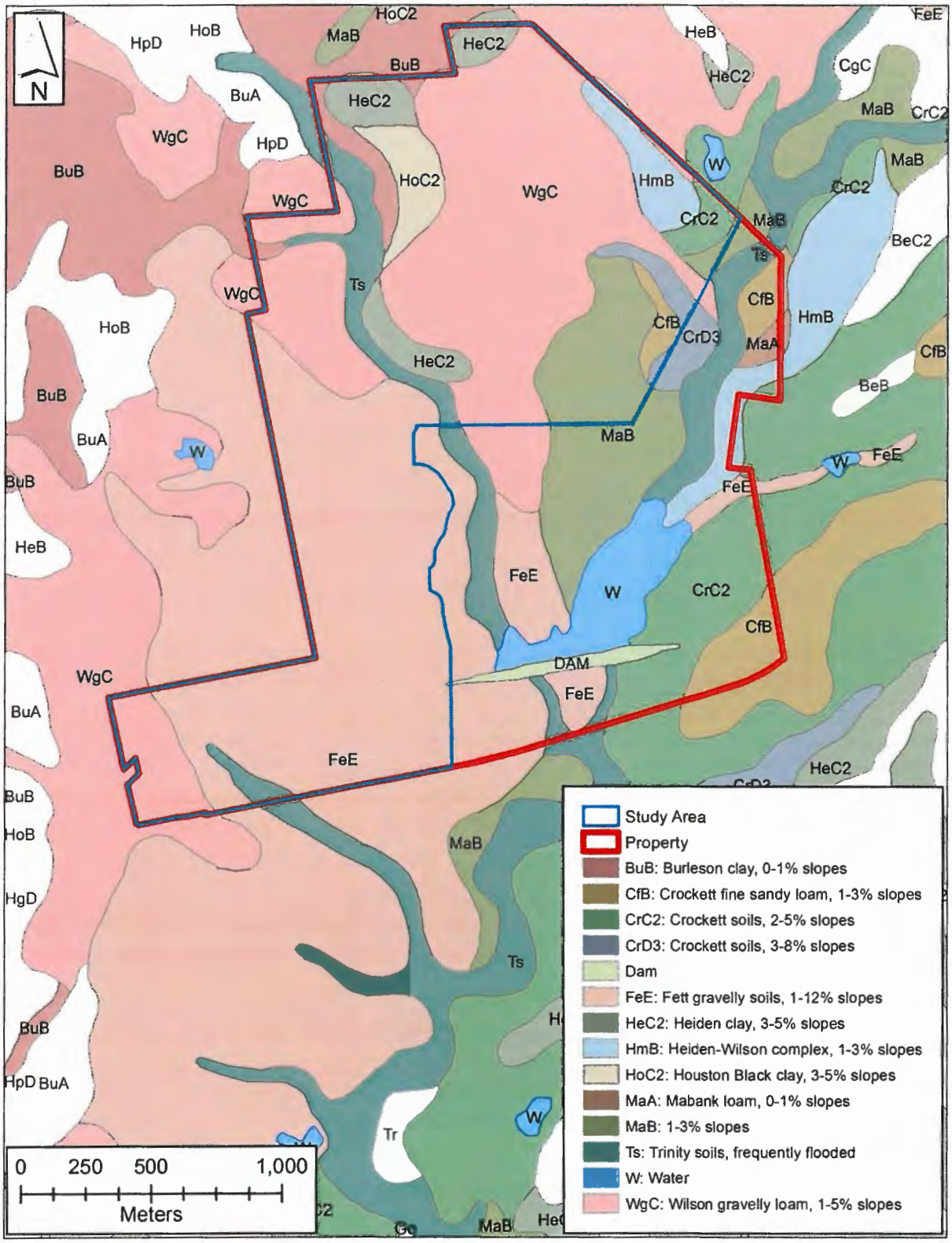

Figure 2. The 130 EP tract and study area shown plotted on a section of the Caldwell County Soils Map (Lowther and Werchan 1978).

CULTURE HISTORY

The 130 EP Tract is located within the central Texas archaeological region (Collins 1995, 2004; Story 1990; Suhm 1960; Prewitt 1981, 1985; Weir 1976). The earliest confirmed archaeology in Central Texas is termed the Paleoindian period and is defined based on the presence of fluted dart points. Bever and Meltzer (2007:Table 1) do not report the finding of any Clovis points in Caldwell County or in Guadalupe County to the south, but they do report them from the surrounding counties to the east, north, and west. No evidence of pre-Clovis occupation has been confirmed in Caldwell County. The following Central Texas culture chronology is derived from Collins (2004) and is presented below to provide the reader with a temporal framework for the culture history of the region.

Table 1. Archaeological Chronology for Central Texas (Collins 2004:Figure 3.9a).

Time Period	**Date Range**
Historic	A.D. 1750-present
Late Prehistoric	A.D. 900-1750
Late Archaic	2,000 B.C.-A.D. 900
Middle Archaic	4,000-2,000 B.C.
Early Archaic	7,000-4,000 B.C.
Paleoindian	9,500-6,000 B.C.

Megafauna became largely extinct by 8000 BC and the associated environmental changes impacted the way of life of the nomadic hunters of the Paleoindian period. As with the earliest period, the Early and Middle Archaic periods are poorly known archaeologically, but there is substantial evidence of seasonal scheduling at Late Archaic sites in central Texas. There appears to have been significant settling into small, band territories resulting in increased use of local resources. Although population density appears to have been low until the Late Archaic, by 1000 BC the number of people occupying central Texas appears to have increased. Prewitt (1981, 1985) postulates that population increases were facilitated by long-distance trade, technological innovations, and changing social relations. Burned rock features appear at Archaic sites along with a variety of dart points and other chipped stone tools. These features continue in use into the Late Prehistoric period at which time arrow points replace dart points and occasional pieces of locally made pottery occur in site deposits. Hunting and gathering continued to provide the foods needed to support the indigenous population, but there is some evidence of exchange with groups in surrounding areas.

Contacts between Native Americans and early explorers began as early as 1528 when Cabeza de Vaca arrived on the Texas Gulf Coast. Soon thereafter, European missionaries and settlers began to arrive. European diseases began to have an impact on the health of the Native Americans and ultimately the diseases, mission system, and fur trade reduced or eliminated the indigenous population. Widespread settlement along the major rivers began in earnest in the early 1800s.

Previous Investigations

Three archaeological sites (Figure 1) have been recorded in the Texas Archeological Sites Atlas (TASA) within the EP 130 Tract, and others are nearby. Two of the sites (41CW68 and 41CW69) are lithic scatters that were recorded by PBS&J, Inc. during survey of the LRCA transmission line corridor that runs north to south through the western side of the study area (Nash et al. 2000). They consist of sparse, wide-spread scatters of lithic debitage located among the surficial mantel of chert and quartzite gravel and cobbles. The recorders and the THC agreed that neither site warranted further investigation. The third site (41CW36), located outside the study area in the south central portion of the EP 130 Tract, is a chimney and house rubble concentration dated to the early 1900s, which was recorded during a survey for the All American Pipeline (Plog et al. 1989). A prehistoric site is located along US 183 near the tract and consists of several accumulations of chert and quartzite cobbles that were described as lithic scatters (TASA 2013). Additional surveys in the study area included ones done for fiber optic (Campbell et al. 1999) and petroleum lines, and also for the creation of SH 130 and the associated modification of US 183. No study was done of the Soil Conservation Survey-funded floodwater retarding structure that is in the tract, but it was built before the passage of federal environmental impact legislation. Numerous other sites (142) have been recorded in Caldwell County and several are in settings similar to parts of the study area. Most of these sites have been deemed ineligible for inclusion on the NRHP or a more thorough evaluation is recommended before a NRHP determination could be agreed upon.

Map Review

The earliest available map on which the study area has been plotted (Figure 3) is the 1880 map that was obtained from the General Land Office of the State of Texas. The map shows that the study area is situated primarily on a tract patented by Isaac Jackson but with a small area located east of Dry Creek on property patented by J.H. Bowman. Few roads and no residences are shown on the section of the map shown on the figure. The reader will note that the San Antonio Road (now known as the Old San Antonio Road) crosses the map in an east-west direction near the top of the figure.

The 130 EP Tract has been plotted on the 1911 San Marcos, Texas 30' USGS topographic map (Figure 4). A county road parallels the northeast and northwest edges of the tract. A private road is along the western edge of the main part of the tract. Two residences are shown inside the tract away from roads. A review of the map indicates that while residences tended to be located along the rural roads, the houses away from roads were situated on the crests of ridges were in well drained upland settings. Most of these houses must have obtained their drinking water from drilled wells or from cisterns that were filled with rainwater from roofs.

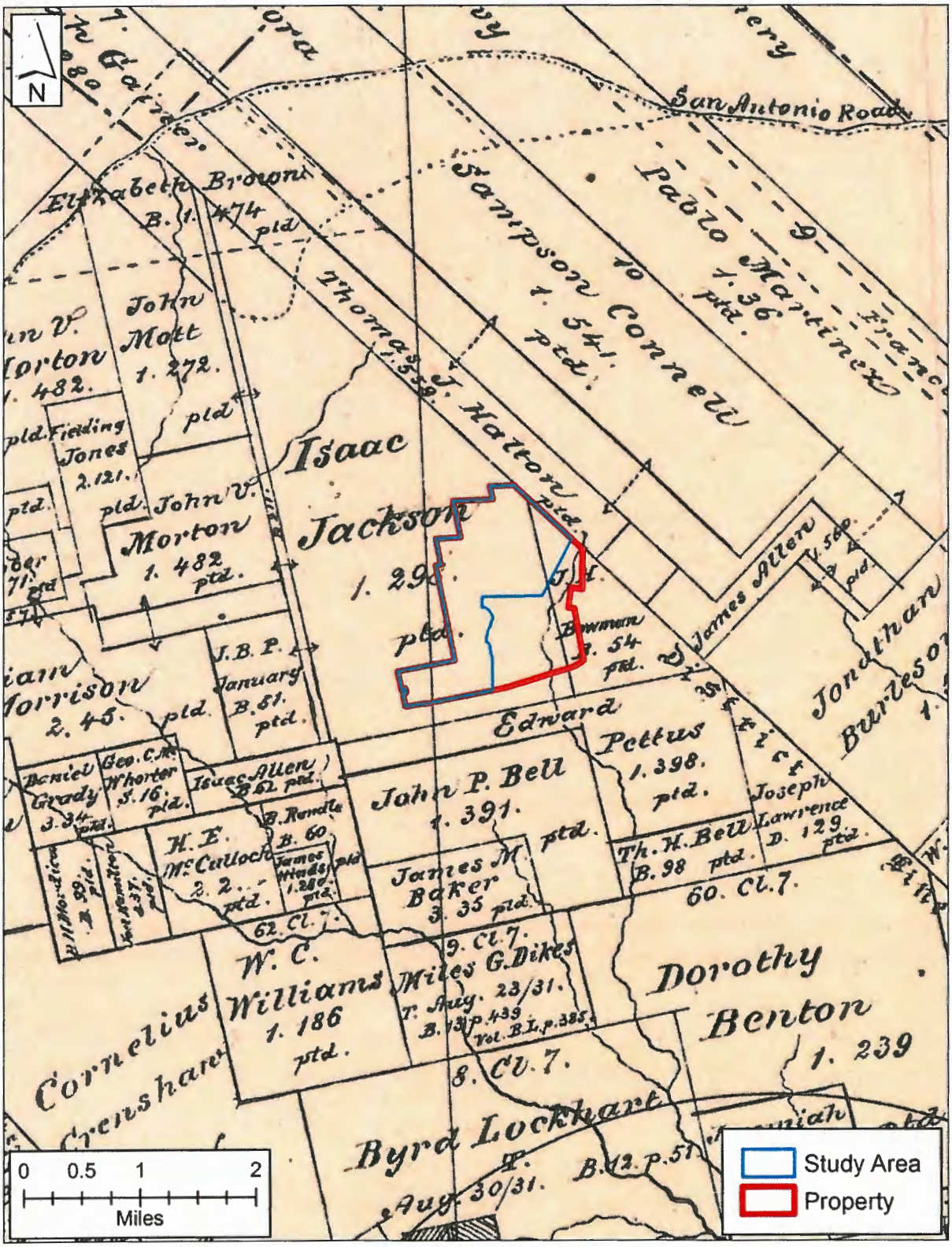

Figure 3. A portion of the 1880 Caldwell County General Land Office map on which the 130 EP tract and study area have been superimposed.

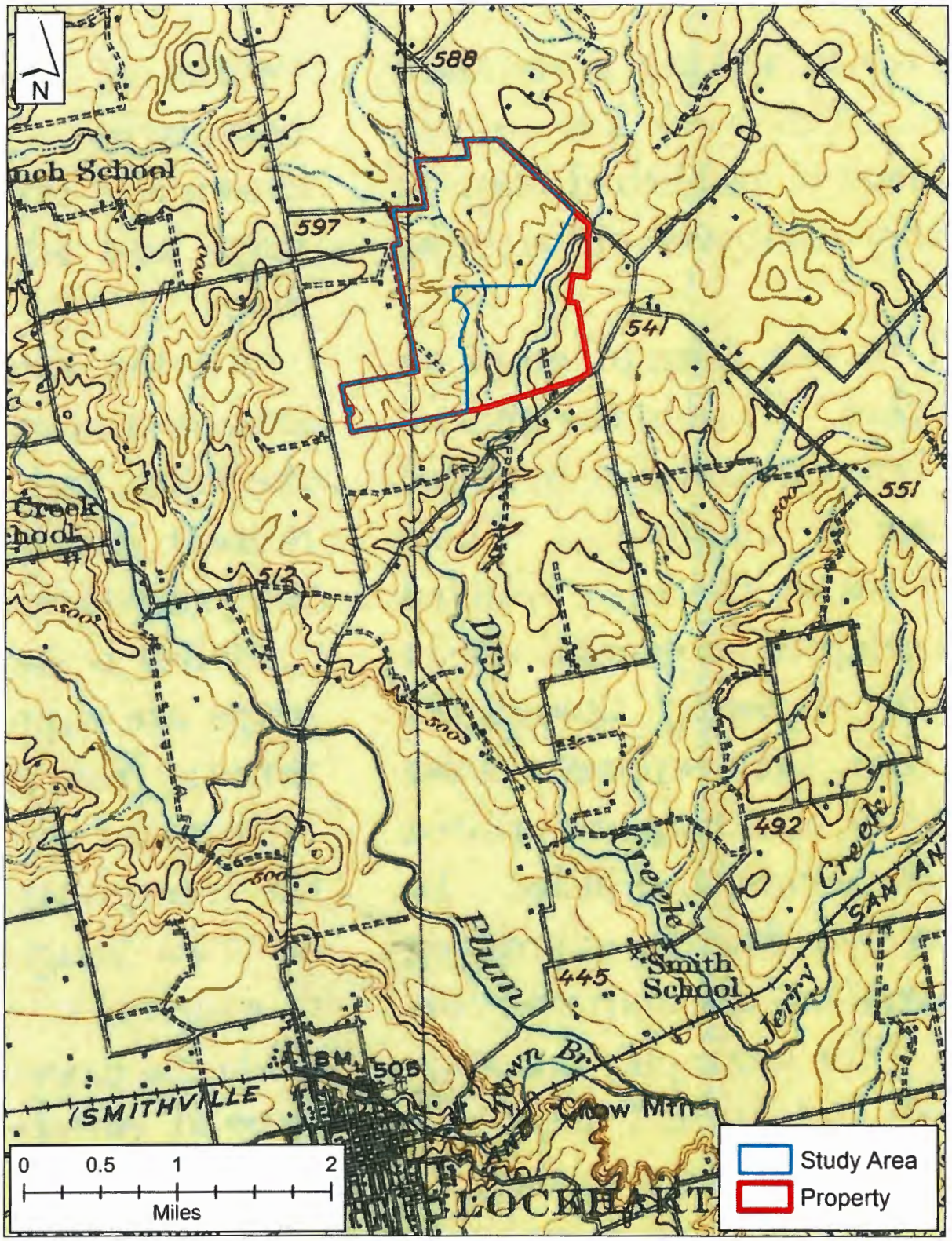

Figure 4. The 130 EP tract and study area on a portion of the 1911 San Marcos, TX 30' USGS topographic map showing Dry Creek, two residences, and adjacent roads.

The 1936 Caldwell County General Highway map (Figure 5) shows the changes within the tract in the 25 years that transpired since 1911. Two residences are shown to be present along the county road on the north edge of the tract and the structures shown on the earlier map are not mapped. A school is plotted to the east of the study area and it presumably served kids from the rural families in the surrounding area. The roadways previously shown along and near the northwestern edge of the study area were no longer mapped as county roads.

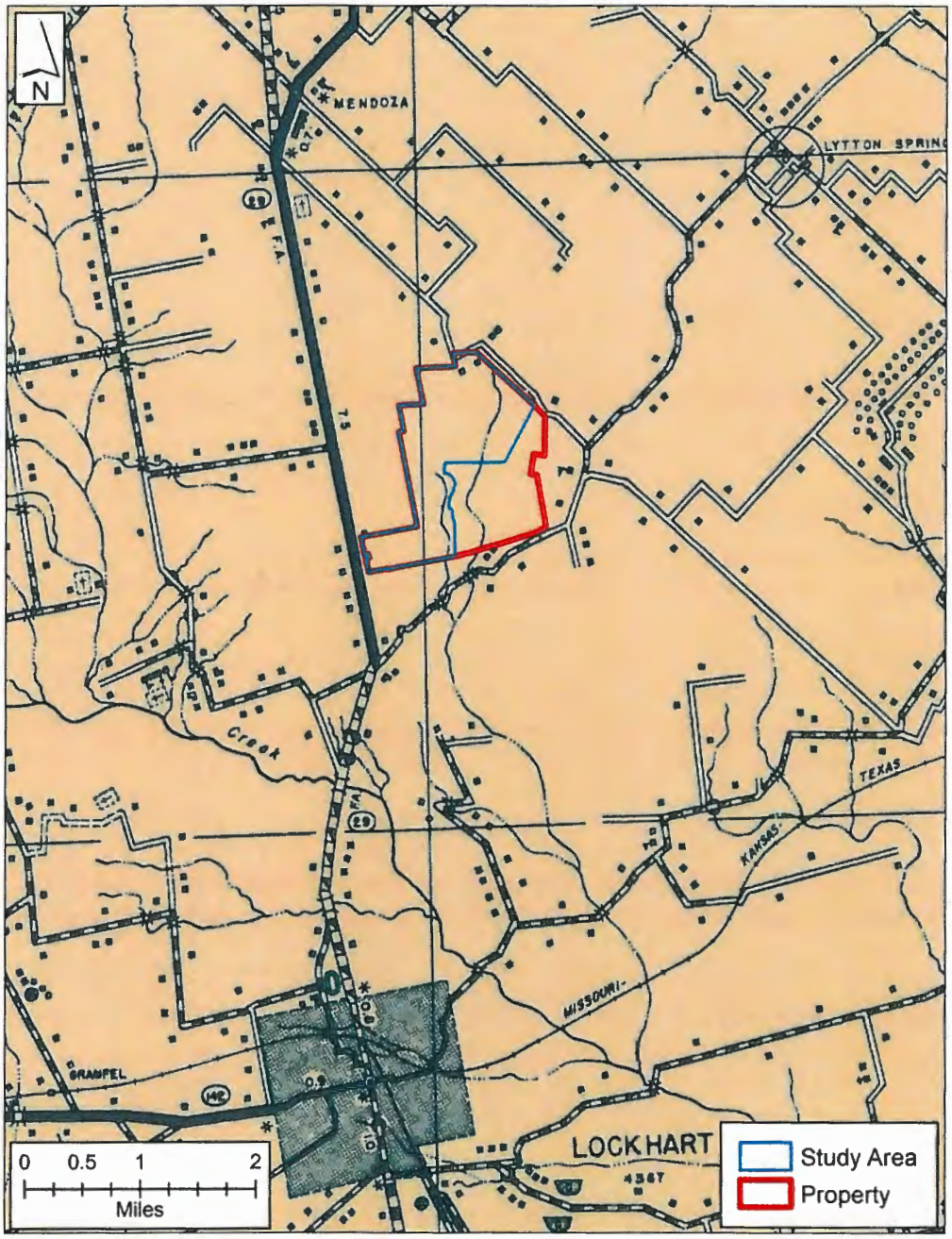

Figure 5. The 130 EP tract and study area shown on a portion of the 1936 General Highway Map of Caldwell County. Two residences are mapped along the north central edge of the tract.

By 1958, the General Highway Map of Caldwell County shows that the number of rural homes in the area surrounding the study area had dropped significantly and that the rural school was no longer present (Figure 6). A school is shown in Lytton Springs and it may have serviced those rural children or they may have gone to Lockhart. No residences are shown inside the study area, but a transmission line and a petroleum pipeline are mapped crossing through the western side of the area.

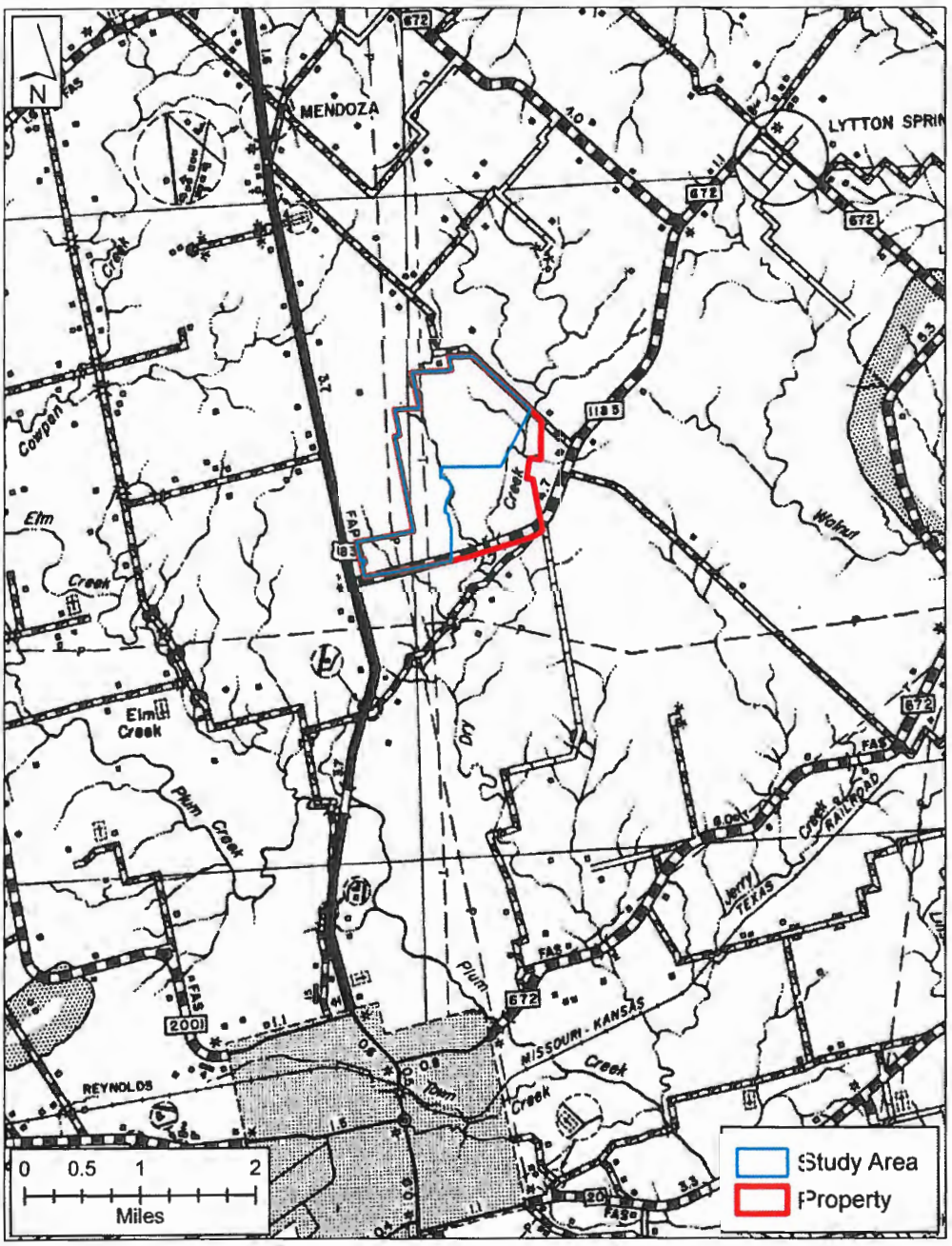

Figure 6. Few residences are shown in the area surrounding the 130 EP tract and study area while none are mapped inside it on this portion of the 1958 General Highway Map of Caldwell County.

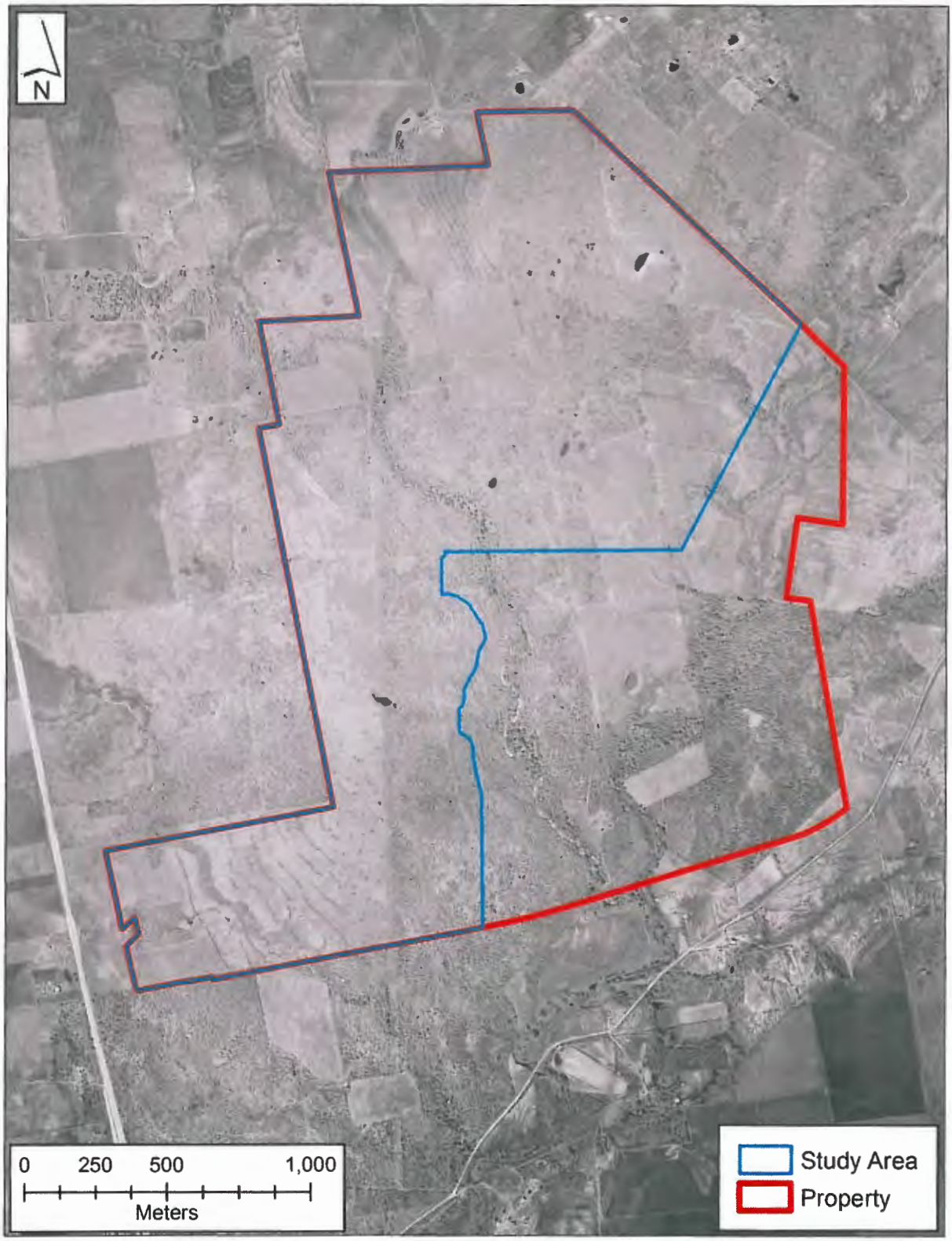

Figure 7. Aerial photograph of the 130 EP tract and study area showing ground conditions in 1954.

Figure 7 is an aerial photograph taken for the Soil Conservation Service in 1954 and shows the modification of the ground surface in the property. It is apparent that trees are largely concentrated in minor ribbons along the drainages, and that much of the land has been fenced and was being farmed or used as pasture. Earthen terraces are present in the southwest, west, and north central parts of the property. Very few large trees are indicated. A shed and apparent residence is shown in the central part of the tract just north of the seed-shaped stock tank. Almost no tree cover is present west of the transmission line that crosses the western quarter of the property.

The Soil Conservation Service dam is the most prominent new feature shown on the 1963 aerial photograph (Figure 8). Tree cover had begun to invade the no longer farmed areas west of the transmission line including the pipeline corridor. The terraces west of the transmission line are no longer apparent and have been obscured by the invasion of oak and mesquite trees along with prickly pear cactus and grasses. The terraces in the north central part of the tract were becoming obscured, but new terraces had been constructed in the east central part of the property on the ridge slope west of Dry Creek. Tree cover east of the transmission line appears to have become denser than in 1954 and the only newly cleared land appears to be associated with construction of the dam/spillway and creation of the upstream lake. FM 1185 had been constructed along the southern boundary of the study area from US 183 east to the intersection with CR 183.

Figure 1 is contemporaneous with Figure 8 and it is dominated by the newly constructed dam and spillway as well as FM 1185. The road from the north terminates at an abandoned structure that coincides with the residence/shed shown on the 1954 aerial and probably on the 1911 map. A new road extends south from the residence past the seed-shaped stock tank to a newly installed corral that coincides with an older corral that had previously been used but was not shown on earlier maps or the earlier aerial photograph. At present, almost all of the property north and west of the dam has reverted to pastures that have been invaded by mesquites or post oaks (Figure 9). Ground cover includes green briars, oak leaves, large clumps of prickly pear cactus, and sparse to dense grass. In the oak-forested area north and west of the dam, chert and quartzite cobbles litter the surface and many of the cobbles are large enough to have been knapped and made into tools. Smaller cobbles are present in the clay soils just about everywhere throughout the area, but these are generally too small to have been used as cores or as tool blanks. However, twentieth century brush clearing, deep root plowing, terrace construction, repeated mowing and possibly some plowing, have resulted in hammering on many of the cobbles. This hammering has apparently removed numerous flakes that might be classified as primary and secondary pieces, as well as the creation of single or multiple struck cobble cores.

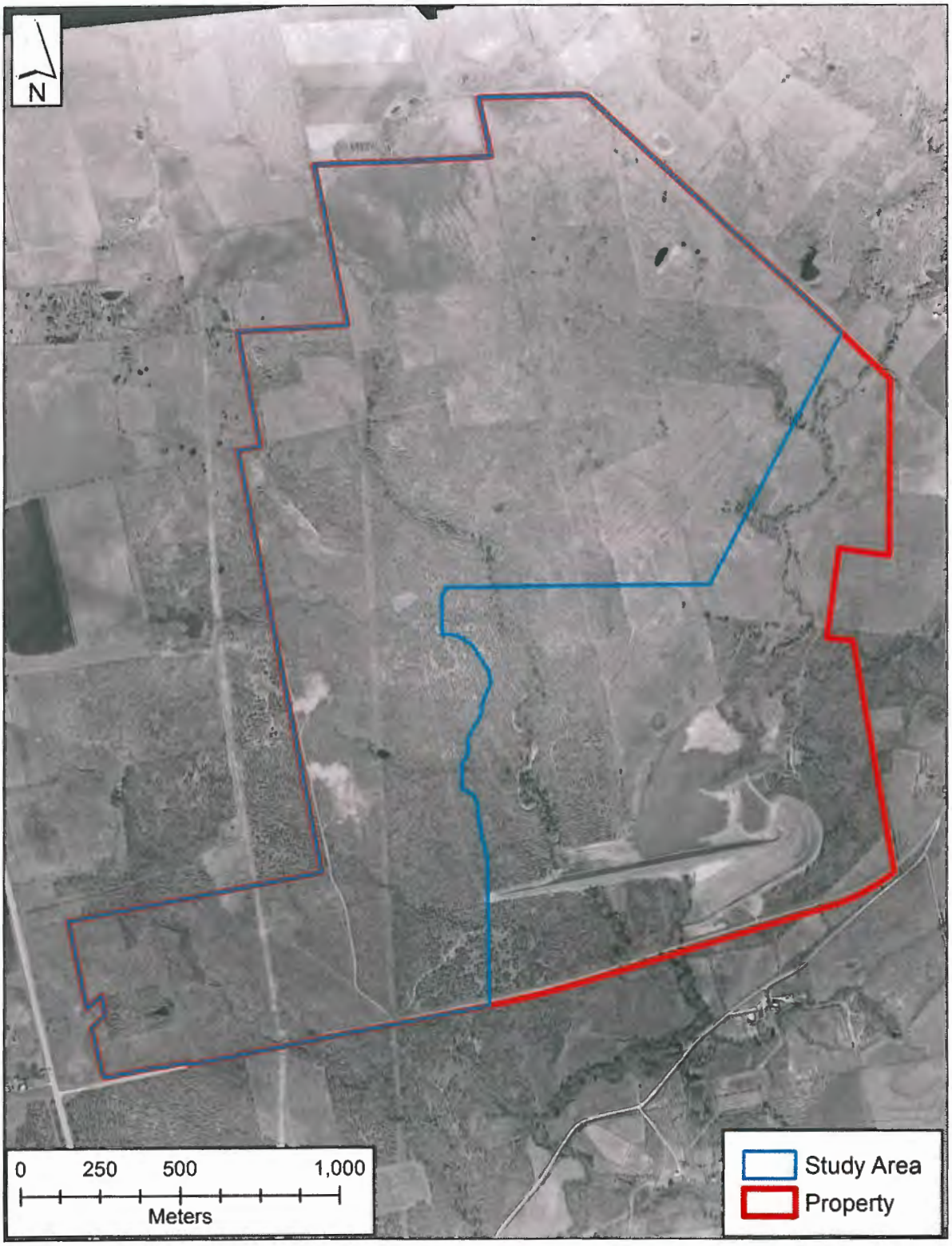

Figure 8. Aerial photograph of the 130 EP tract and study area taken in 1963, showing the flood-water retarding structure and spillway as well as new terraces and areas that have been invaded by trees.

Figure 9. Aerial photograph of the 130 EP tract and study area showing 2012 conditions.

RESEARCH DESIGN AND METHODOLOGY

Prehistoric sites have been recorded throughout Caldwell County and two undated prehistoric sites were recorded within the study area. The landowner reports finding dart points and lithic debris on the surface at unspecified locations within the tract. No evidence of Paleoindian occupation has been reported in this part of the county, nor have historic Native American sites been recorded in the area. Historic settlement by Europeans began in the second half of the 1800s and continues to the present. The following Research Design consists of two predictions that relate to the prehistoric occupation/utilization of the area and one prediction that relates to historic European occupation. These are described below and then a methodology to test these predictions follows.

Research Design

It is proposed that tool stone in the form of knappable chert cobbles (Uvalde Gravel) was gathered from the mantle of mostly well-rounded chert and quartzite gravel that covers the surface of areas mapped as Fett gravelly soils (FeE) by the Soil Conservation Service (Lowther and Werchan 1978:Sheet 7; Figure 2). The gravel is described as being abundant below the present ground surface. In the topsoil, gravel are described as being 30% of the volume in the A1 horizon, which averages nine inches thick, and 80% in the A2 horizon that is five inches thick. Gravel occurs in the A1 horizon of the Wilson gravelly loam between 0 and 15 inches below the surface and this gravel tends to be smaller than those in the Fett gravelly soils. Within the study area, the division between these two soils generally coincides with the unnamed intermittent tributary. The study area approximates the eastern extent of Uvalde gravel in the county (Byrd 1971:Locality 4-24, pp. 46). Gravel is not expected to be found on the surface of the upland ridge clays (Heiden and Houston) that occur as small areas parallel to the east side of the unnamed intermittent tributary that roughly bisects the study area. The unnamed creek joins Dry Creek just upstream from the flood control dam. Knappable gravel may be found in the bed load of the numerous intermittent tributaries, particularly those channels which have deeper deposits of frequently flooded Trinity soils. Broken bifacial tools, cores, bifaces, and lithic debris are expected to be found at site locations within the areas of Fett gravelly soils. However, these sites will be difficult to recognize due to the disturbance and gravel breakage that occurred during mid-twentieth century brush clearing and subsequent plowing and farming.

Prehistoric campsites are predicted to be present on the small but pronounced linear ridges of Heiden clay and Houston Black clay that occur along the eastern side of the unnamed intermittent tributary that drains from the northwest corner of the tract southeast into Dry Creek. On a sporadic or seasonal basis, rainwater was probably present in low spots along the channel adjacent to the clay soil ridges that parallel the frequently flooded Trinity floodplain clays. It is expected that nuts from mature oak and pecan trees were present in this protected valley setting and would have attracted deer and other edible mammals, as well as birds and reptiles. Campsites will be recognized by an abundance of lithic debris, fire-cracked gravel, chipped stone tools, and broken animal bones.

Historic residences are predicted to be present near main roadways as well as at the end of the field road that was constructed along the ridge that is situated between Dry Creek on the east and the unnamed tributary to the west. Such residences may roughly coincide with active stock tanks and may correspond to tree clusters shown on aerial photographs or to residences on early 1900 maps. It is expected that structures are likely to have been one or two-room log or frame structures constructed on wood or stone piers. Heating and cooking was done on cast iron or sheet metal stoves after they replaced wood burning fireplaces. Water would have been collected in above ground or subterranean cisterns at sites constructed in the 1800s and from drilled wells at post-1900 residences. Barns, sheds, root cellars, and corrals are likely to be present and trash accumulations are also expected near residences, roads, and drainages. Unmarked family cemeteries could be present.

Methodology

Field personnel walked the entire 809-acre study area along transects spaced no more than 50 meters apart. Personnel made notes about the ground exposure, presence of gravel, soil types, drainages, and disturbed areas. Two parallel transects were walked in the area mapped as Houston Black Clay that parallels the central drainage. Shovel tests were placed every 50 m within this area. The Houston Black Clay, which is mostly devoid of gravel, is the most likely location of intermittently occupied/seasonal campsites. Additionally, the creek channel was surveyed the full length of the study area in order to identify buried site deposits exposed in the creek banks and the gravel bed load in the channel.

All shovel tests averaged 30 cm in diameter, and were excavated to the depth of Holocene subsoil. Clay soils were manually broken and inspected, in order to determine if cultural materials were present. Soils were described on the basis of color and texture, and the Munsell Soil Color Chart was used to identify the specific soil colors in each test (Munsell Color 2009). Shovel test locations were marked with a handheld Garmin GPSmap78 receiver.

Three east-west gravel sample transects were walked in order to identify the presence and type of gravel on the surface in the various mapped soils. Circles with ½ m diameter were placed every 200 m along these transects and data about the surface gravel, including length, material, and weight were collected

When found, prehistoric and historic site deposits were to be defined using shovel tests where there is less than 30-percent ground visibility. Artifacts were generally recorded in the field and datable artifacts were collected for further analysis in order to determine site chronology and to enhance site descriptions.

RESULTS

Study Area

The fields are dominated by oak trees and cedar elms as well as a grass carpet and scattered mesquites, as seen in Figure 9. The oaks generally appear to be older than the mesquites, but almost none of the trees in obviously once cleared pastures/fields exhibited an age of over 30 years. Cobbles litter the ground surface in the oak tree-covered areas and single-struck chert cobbles or broken chert cobbles are common on the ground surface (Figure 10). Ground visibility was obscured by grass in those fields/pastures that have been invaded by mesquites.

Figure 10. Close-up of chert cobbles on eroded ground surface west of the transmission corridor. The black pen in the center of the picture provides a scale.

At the time of the survey, water was present in each of the stock tanks throughout the study area but absent from the channel of Dry Creek. Although Brune (1981) reports that springs occur in Caldwell County at the base of gravel beds, the gravel deposits within the study area are not thick enough to have served as a water reservoir that would catch and hold rainfall and then release it as seep springs.

Survey Results

The field crew walked the entire study area in 50-meter-wide east/west transects. The area mapped as Houston Black clay was considered to have high potential for prehistoric sites, so two north/south transects were walked while placing shovel tests at 50-meter intervals. These 18 shovel tests did not reveal any artifacts or features. The terracing noted on historic aerials was

obvious during survey and had a dramatic effect on the landscape as evidenced by wetlands that have formed in some of the narrow, low spots. Bare spots that are clearly visible on the 1963 aerial photograph were caused by bulldozing and mining for gravel. These areas are still clearly identifiable on the landscape and extend much farther than is indicated on the 1963 aerial. At least a kilometer-long stretch along the western fence line has been severely disturbed by these mining efforts and any prehistoric remains that may have been present are unrecognizable. The central channel is lined with cobbles and pebbles some of which have washed downslope and some of which have been eroded out of the surrounding formations as the smaller sediments wash downstream. This portion of the survey located five isolated chert bifaces and one prehistoric site (41CW159).

Several prehistoric isolates including large, mid-stage bifaces, and several large flakes were identified on the surface during survey. Only two locations had dense enough artifacts scatters to be considered sites (41CW158 and 159). These sites are described in more detail below.

Also identified during the survey were several push or scrap piles of wood and metal, but the materials all appeared to be from the mid-1900s and there were no diagnostic artifacts. These piles most likely represent the razing of fences and pens prior to farming of the various fields. A concentration of thirty sandstone slabs was found in a roadway south of the seed-shaped stock tank previously mentioned. The slabs range in size from 24 by 12 in to 8 by 9 in and have a thickness range of 3.5 to 5.5 in (Figure 11). They are lying flat in an area 12.5 ft (north-northwest/south-southeast) by 6 ft but do not form a recognizable pattern. No historic artifacts were found associated with the slabs and the clay soil contained small cobbles.

Figure 11. Sandstone slabs concentrated in a bulldozed road south of the seed-shaped stock tank. View is to the southeast.

Gravel Sample Transects

The surface gravels across the study area were inspected via 19 half-meter-diameter sampling units. The size, weight, and composition of the cobbles was recorded for each sample (Figure 12 and Table 2). Any gravel with a maximum dimension less than 8 cm is not feasibly knappable, so the material type was not identified for these cobbles. The smaller cobbles were most abundant in samples located in or on the slopes above drainages (4, 5, 7, 10, 11, 17, and 18). This is likely due to erosion of the cobbles downslope and increased exposure on the slopes as opposed to the crests. There does not appear to be any pattern regarding the ratio of chert to quartzite in relation to soil or topography. No tools or artifacts were found in any of the samples.

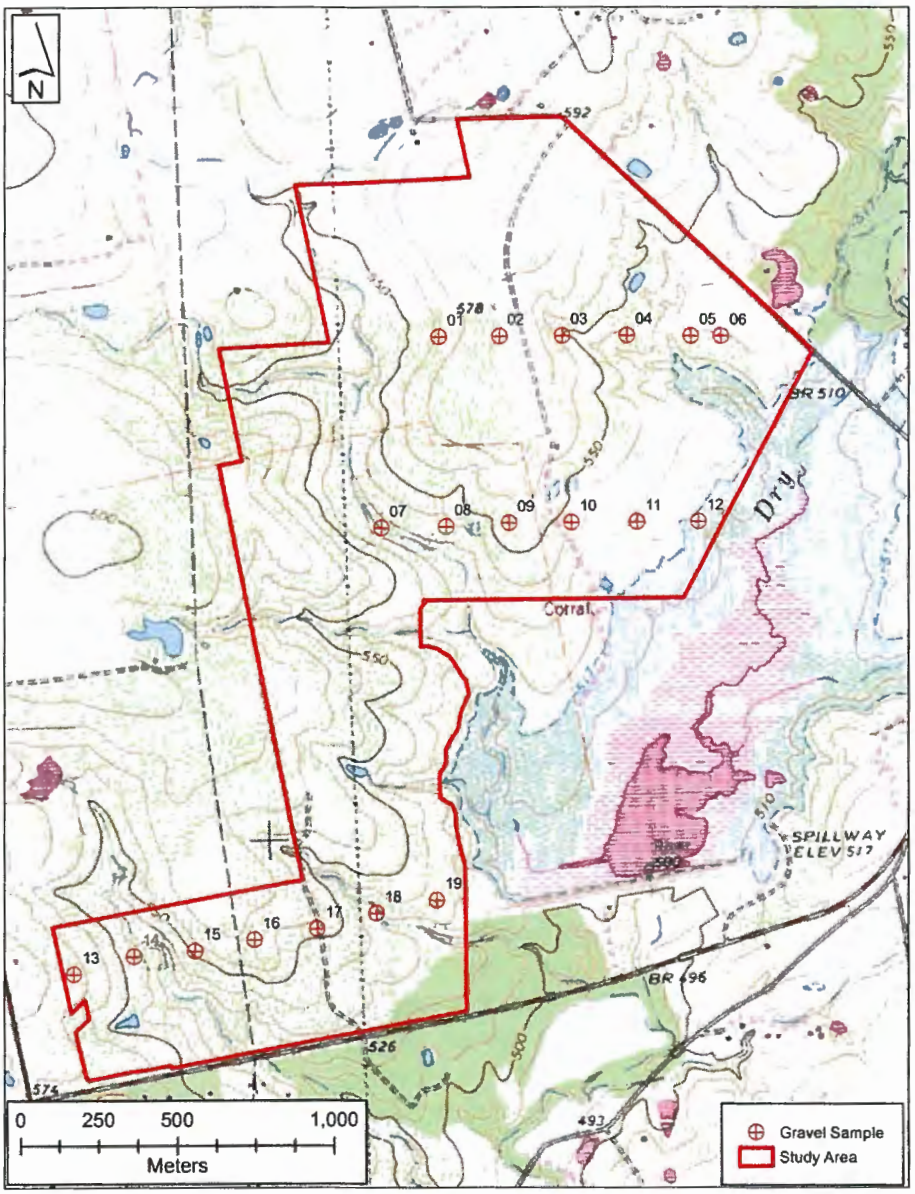

Figure 12. The 130 EP study area and gravel sample locations plotted on a portion of the Lockhart North, TX 7.5' USGS topographic map.

Table 2. Gravel Sample Descriptions.

Sample #	Soil	Quantity	Material	Size (cm)	Notes
01	Houston	1	Unidentified	0-8	ground visibility 0-15%
		0	Quartzite	8-10	
		0	Chert		
		1	Unidentified		
02	Wilson	0	Unidentified	0-8	ground visibility 0-15%
		0	Quartzite	8+	
		0	Chert		
		0	Unidentified		
03	Wilson	4	Unidentified	0-8	ground visibility 0-40%
		2	Quartzite	8-10	
		0	Chert		
		0	Unidentified		
04	Wilson	25	Unidentified	0-8	ground visibility 10-50%
		1	Quartzite	8-9	
		0	Chert		
		0	Unidentified		
05	Wilson	18	Unidentified	0-8	ground visibility 10-45%
		0	Quartzite	8+	
		0	Chert		
		0	Unidentified		
06	Heiden-Houston	0	Unidentified	0-8	ground visibility 0-30%
		0	Quartzite	8+	
		0	Chert		
		0	Unidentified		
07	Trinity	100+	Unidentified	0-8	smaller gravel includes 2 possible pieces of lithic debitage and 1 piece of petrified wood
		2	Quartzite	8-13	
		2	Chert		
		0	Unidentified		
08	Heiden	1	Unidentified	0-8	larger stones show signs of being burned-brush fire
		1	Quartzite	8-13.5	
		1	Chert		
		0	Unidentified		
09	Wilson	0	Unidentified	0-8	
		1	Quartzite	8-9.5	
		1	Chert		
		0	Unidentified		
10	Wilson	20	Unidentified	0-8	sample featured mostly quartzite
		1	Quartzite	8-8.5	
		0	Chert		
		0	Unidentified		
11	Mabank	34	Unidentified	0-8	1 possible piece of lithic debitage
		0	Quartzite	8+	
		0	Chert		
		0	Unidentified		
12	Crockett	0	Unidentified	0-8	grassy area with no gravel on surface
		0	Quartzite	8+	
		0	Chert		
		0	Unidentified		
13	Wilson	2	Unidentified	0-8	grassy; sparse, large vegetation
		1	Quartzite	8-23	
		6	Chert		
		0	Unidentified		

Sample #	Soil	Quantity	Material	Size (cm)	Notes
		2	Unidentified	0-8	
		0	Quartzite		
		0	Chert	8-10	
14	Fett	1	Unidentified		
		0	Unidentified	0-8	
		2	Quartzite		
		0	Chert	8-11	
15	Fett	1	Unidentified		
		32	Unidentified	0-8	two of the larger ones are not truly knappable
		1	Quartzite		
		1	Chert	8--9	
16	Fett	1	Unidentified		
		13	Unidentified	0-8	half of the small ones are ~3cm, while the rest are ~8cm
		0	Quartzite		
		1	Chert	8-12	
17	Fett	0	Unidentified		
		15	Unidentified	0-8	
		1	Quartzite		
		0	Chert	8-13	
18	Fett	0	Unidentified		
		1	Unidentified	0-8	
		0	Quartzite		
		0	Chert	8+	
19	Fett	0	Unidentified		

Sites

Three archaeological sites were located during the survey, including 41CW159, which is outside the study area but still within the 130 EP Tract. The sites are described below.

41CW157

The Hunter Site consists of a rock chimney, associated rock fall, rock-lined cistern, and trash scatter. The predominant feature at the site is a partially collapsed stone chimney and associated rubble. The rocks that make up this feature are roughly shaped, dark brown sandstone blocks (Figure 13). The remaining portion of the chimney includes mortared sandstone blocks and smaller chinking rocks and extends vertically out of the pile 4.5 feet. This pillar was the northwest corner of the stone chimney. Several sandstone rocks may represent piers on which the foundation of a log cabin could have been placed. Furthermore, a large rectangular sandstone slab located at the mouth of the fireplace was likely a hearth stone. No wooden superstructure was observed associated with the rocks and an apparent cistern depression was noted near the estimated southeast corner of the one room structure. A thin scatter of historic artifacts was noted on the surface 10 to 15 feet from the structure in all directions. Un-faced commercially made bricks (Figure 14) were the most common artifacts found on the surface, but undecorated clear glass was common, as well. All surface artifacts were mapped in place and collected for analysis.

Figure 13. The rock chimney prior to excavation, looking northwest.

Figure 14. Un-faced commercial bricks from the surface of 41CW157.

The rock fireplace and chimney have a footprint that is 3 ft deep and 6 ft wide with the opening to the south (Figure 15 and Figure 17). The walls and hearth are made of roughly-shaped sandstone blocks that are very dark grayish brown (10YR3/2) in color and contain lighter-

colored sand. The chimney walls consist of rocks that are mortared together to create a wall that averages 10-11 in thick. Much of the mortar has eroded away; it only remains between existing rocks of the chimney wall. The chimney stands 43.5 in above the hearth surface and the hearth surface is roughly 12 in above the adjacent ground surface. The chimney fall surrounds the remnant of the standing chimney and covers an area 4 ft to the south, 9 ft to the north, 5 ft to the east, and 6 ft to the west. Based on this fall area and the size of the rocks, the chimney is estimated to have been 10-12 ft tall. The rocks that make up the chimney are not present naturally in the immediate area but were quarried and shaped for this purpose. Rock chimneys are typically associated with log residences constructed prior to 1900 (Jordan 1978), but it is possible that a frame structure was built in conjunction with the rock chimney, as was done at the Redwine Site in Collin County (Davis et al. 2012).

The interesting feature of the chimney fall is a thick sandstone slab that may have been a hearth stone (Figure 15). The slab is 53 in long, 16 in wide, and 6 in thick and could not have been lifted into place by a single person. The sandstone is thinly laminated, well cemented, and is light yellowish brown (10YR6/4) in color.

The northeast side of a cistern collar is preserved in the wall of a 3-foot-deep hole located 25 feet southeast of the hearth base (Figure 16). The cistern has an interior diameter of 30-36 in. No mortar was noted between the light yellowish brown sandstone blocks that make up the rock-lining, nor was any mortar apparent on the inner surface of the remaining wall section. Rock, soil, and metal trash had been used to fill the cistern, but no excavation or probing was done in the cistern fill.

A trash accumulation of broken bottle glass, plain white ceramics, and metal fragments is located 50 feet southwest of the chimney. Scattered pieces of bottle glass and whiteware were noted on the surface north of the house within a distance of 20-25 feet. Systematic shovel testing began south of the chimney opening and was continued at five-foot intervals until artifacts were no longer found (Figure 17and Table 3). Further testing was conducted to the east, west, and north until it was apparent that the artifact scatter no longer existed or had dropped off to an average of a single artifact per test unit. No clear floor or habitation zone was found during shovel testing.

Hand-dug test units were placed outside the east and west walls of the chimney. The unit along the west wall measured 33 in north/south by 19 in east/west. The unit along the east wall measured 32 in north/south by 16 in east west. Two units were excavated inside the chimney fill in order to recover artifact samples and to describe the collapse process. The western unit within the chimney measured 30 in east/west by 57 in north/south and terminated on the north and west sides at the chimney wall. The eastern unit measured 25 in east/west and 46 in north/south. The edges of this unit correlated with the chimney walls on the north and east sides, while the south side was bound by the large hearth stone. All the units were excavated to 20-25 cm below the present-day ground surface, which is below the lowest course of rocks in the chimney base. Pack rats had collected various pieces of metal, glass, ceramics, animal bones, and other artifacts in their nests. Nests were also found surrounding the hearth stone, but the fill in the chimney floor had little pack rat debris. Chunks of mortar, pieces of chinking rock, and larger rock blocks were found in the areas outside the chimney.

Figure 15. The stone chimney, hearth stone, and partially excavated test units at 41CW157, facing north.

Figure 16. The northeast side of the stone-lined cistern collar is in place below the level of the present ground surface. The fragment of T. V. Allis buckthorn barbed wire is visible entwined with a stick along the east edge of the cistern.

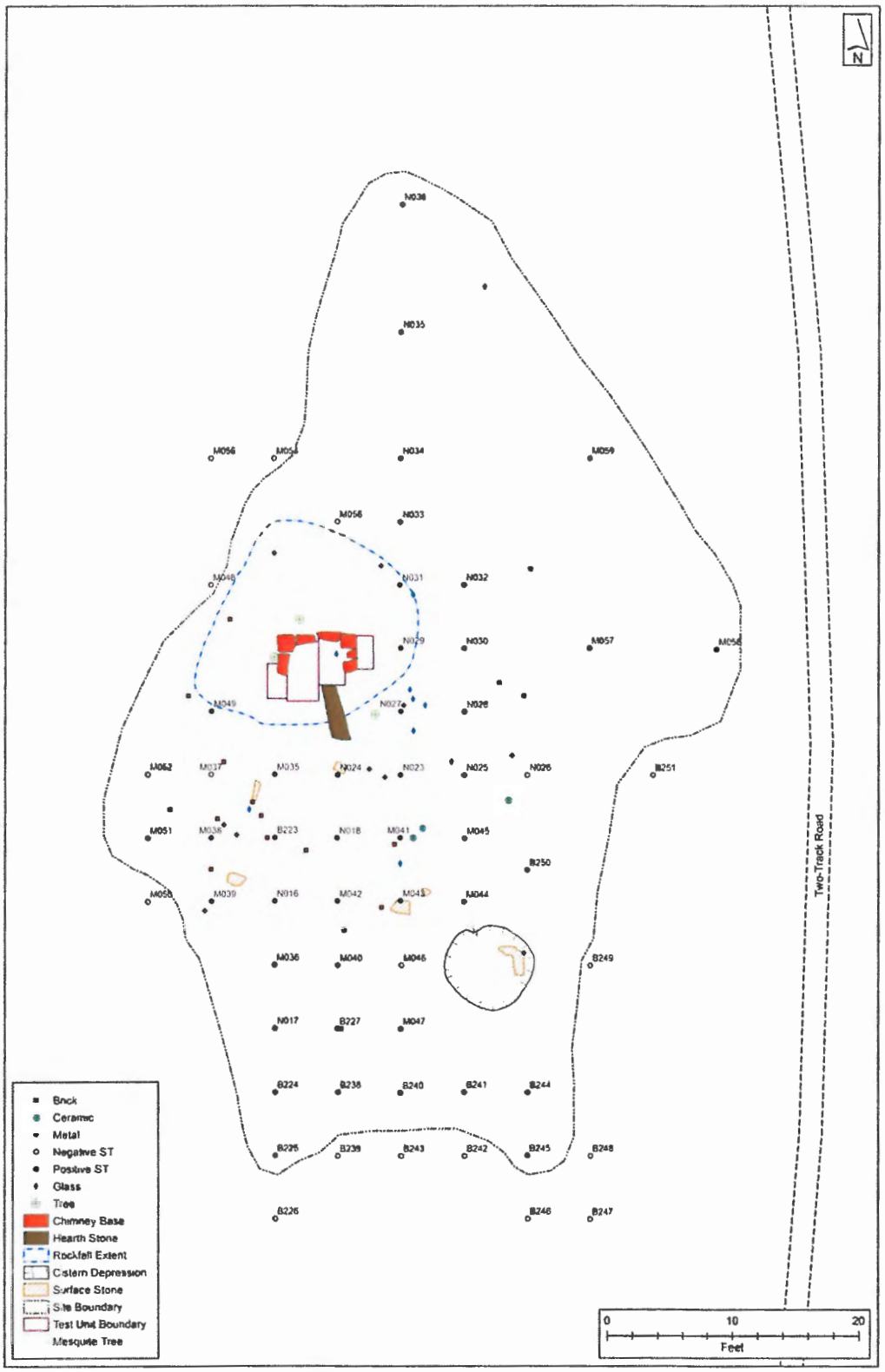

Figure 17. Plan map of 41CW157 showing structural remains, shovel tests, test units, and surface artifacts.

Table 3. 41CW157 Shovel Test Descriptions.

ST#	Depth (cm)	Matrix Description	Comments/Artifacts
M035	0-22 22+	Dark grayish brown (10YR4/2) sandy loam Gravel	0-10: metal, glass, ceramic
M036	0-17 17+	Very dark gray (10YR3/1) sandy loam Gravel	0-10: nails, glass 10-20: nails, glass
M038	0-10 10+	Very dark gray (10YR3/1) sandy loam Gravel	0-10: nails, metal, glass
M039	0-10 10+	Very dark gray (10YR3/1) sandy loam Gravel	0-10: glass, ceramic, nails
M040	0-15 15+	Very dark grayish brown (10YR3/2) sandy loam Gravel	0-10: glass, nail
M041	0-15 15+	Very dark grayish brown (10YR3/2) sandy loam Gravel	0-10: glass
N016	0-35 35+	Very dark grayish brown (10YR3/2) dry loam, with 2-3% gravel Gravel	0-10: whiteware, metal, glass, nails, ceramics 10-20: metal, nails, glass
N017	0-20 20+	Dark gray (10YR4/1) loam, with 20-25% gravel Gravel	0-10: glass, metal
N018	0-30 30+	Very dark grayish brown (10YR3/2) dry loam, with 5-10% gravel Gravel	0-10: whiteware, glass, metal, nail, glass marble 10-20: glass, whiteware, metal, bone, brick 20-30: glass, metal, nails, shell button
B223	0-20 20-40 40+	Dark grayish brown (10YR4/2) sandy loam, with gravel Very dark grayish brown (10YR3/2) sandy loam with gravel Gravel	0-10: glass, ceramic 10-20: glass, ceramic, metal 20-30: glass, ceramic
B224	0-15 15+	Dark grayish brown (10YR4/2) sandy loam, with gravel Gravel	0-10: glass
B225	0-10 10-15 15+	Very dark grayish brown (10YR3/2) sandy loam, with gravel Very dark brown (10YR2/2) clay/clay loam, with gravel Gravel	0-10: glass
B227	0-10 10+	Dark grayish brown (10YR4/2) sandy loam, with 80% gravel Gravel	0-10: glass
M042	0-30 30+	Very dark brown (10YR2/2) clay, with 70% gravel Gravel	0-10: ceramics, metal pin 10-20: ceramics, nail
M043	0-15 15+	Very dark grayish brown (10YR3/2) clay, with 80% gravel Gravel	0-10: brick 10-20: glass
M044	0-15 15+	Very dark grayish brown (10YR3/2) clay, with 80% gravel Gravel	10-20: glass
M045	0-23 23+	Very dark grayish brown (10YR3/2) clay Gravel	10-20: glass
M047	0-16 16+	Very dark brown (10YR2/2) clay Gravel	10-20: glass
M049	0-17 17+	Very dark brown (10YR2/2) clay loam, with 90% gravel Gravel	10-20: glass, ceramic
M051	0-20 20+	Black (10YR2/1) loam Gravel	10-20: glass
M057	0-17 17+	Very dark brown (10YR2/2) loam, with 80% gravel Gravel	0-10: glass
M058	0-12 12+	Very dark grayish brown (10YR3/2) loam Gravel	0-10: glass
M059	0-10 10+	Very dark grayish brown (10YR3/2) loam Gravel	0-10: ceramic
N023	0-25 25+	Very dark grayish brown (10YR3/2) loam, with gravel Gravel	0-10: nail 10-20: metal, glass
N024	0-12 12-24 24+	Very dark grayish brown (10YR3/2) loam, with gravel Very dark grayish brown (10YR3/2) loam, with gravel Gravel	0-10: metal, glass, whiteware, nail 10-20: nail, glass, ceramic 20-30: glass

ST#	Depth (cm)	Matrix Description	Comments/Artifacts
N025	0-12 12+	Very dark gray (10YR3/1) loam, with abundant gravel Gravel	0-10: glass, nail
N026	0-16 16+	Very dark grayish brown (10YR3/2) loam, with abundant gravel Gravel	0-10: glass, wire, stoneware
N028	0-8 8+	Very dark gray (10YR3/1) loam, with abundant gravel Gravel	0-10: glass, metal, wire, nail
N029	0-11 11+	Very dark gray (10YR3/1) loam, with abundant gravel Gravel	0-10: glass, mortar from chimney
N030	0-15 15+	Very dark gray (10YR3/1) loam, with abundant gravel Gravel	0-10: glass
N031	0-13 13+	Very dark gray (10YR3/1) loam, with abundant gravel Gravel	0-10: glass, metal
N032	0-15 15+	Very dark gray (10YR3/1) loam, with abundant gravel Gravel	0-10: glass, metal, nail
N033	0-13 13+	Very dark grayish brown (10YR3/2) loam, with abundant gravel Gravel	0-10: glass, metal, wire, nails
N034	0-8 8+	Very dark grayish brown (10YR3/2) loam, with abundant gravel Gravel	0-10:clear glass, metal, whiteware
N035	0-9 9+	Very dark grayish brown (10YR3/2) loam, with abundant gravel Gravel	0-10: glass, stoneware
N036	0-8 8+	Very dark grayish brown (10YR3/2) loam, with abundant gravel Gravel	0-10: whiteware
B238	0-20 20+	Very dark brown (10YR2/2) clay loam, with 30% gravel Gravel	0-10: nail
B240	0-25 25+	Very dark brown (10YR2/2) clay loam, with 40% gravel Gravel	0-10: glass, ceramic
B241	0-25 25+	Very dark brown (10YR2/2) clay loam, with 40% gravel Gravel	0-10: glass, metal, ceramic
B244	0-25 25+	Very dark brown (10YR2/2) sandy loam, with 50% gravel Gravel	0-10: glass, metal
B245	0-15 15+	Very dark brown (10YR2/2) sandy loam, with 50% gravel Gravel	0-10: nail
B250	0-20 20+	Very dark brown (10YR2/2) sandy loam, with 40% gravel Gravel	0-10: glass, metal

The artifacts recovered from the surface, shovel tests, and hearth test units helped to identify the occupation period of the structure as the late 1800s through early to mid-1900s. Almost 100 pieces of ceramics, mostly whiteware, were found (Figure 20). Some pieces of porcelain and glazed stoneware were also identified (Figures 20 and 21). Some of the whiteware and porcelain fragments exhibited decorative techniques including painting, decal, molded relief, and applied designs. None of these sherds can be definitively assigned to ceramic types, such as pearlware, which is generally identified by an overall blueish cast and dates to as late as the 1860s (Price 1979:14). Unfortunately, no makers' marks could be identified to help narrow the time period. One glass marble and one ceramic marble were found (Figure 22). Ceramic marbles were common until the 1920s (Zapata 1997: 108). Additionally, two two-hole, shell buttons were found (Figure 23); utilitarian buttons made of shell became common after 1855. Based on the lack of design, both buttons are likely made from fresh water shell (Luscomb 2006:177).

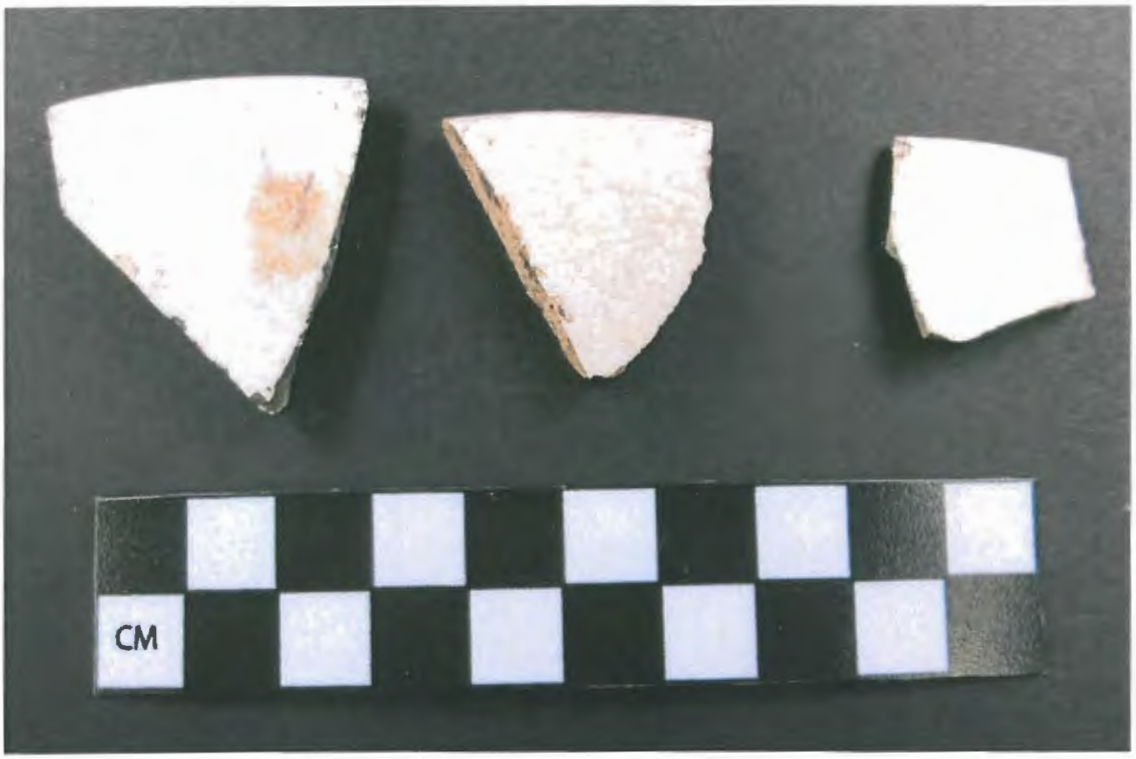

Figure 18. White ware rims from shovel tests. The artifact on the right is decorated with model relief.

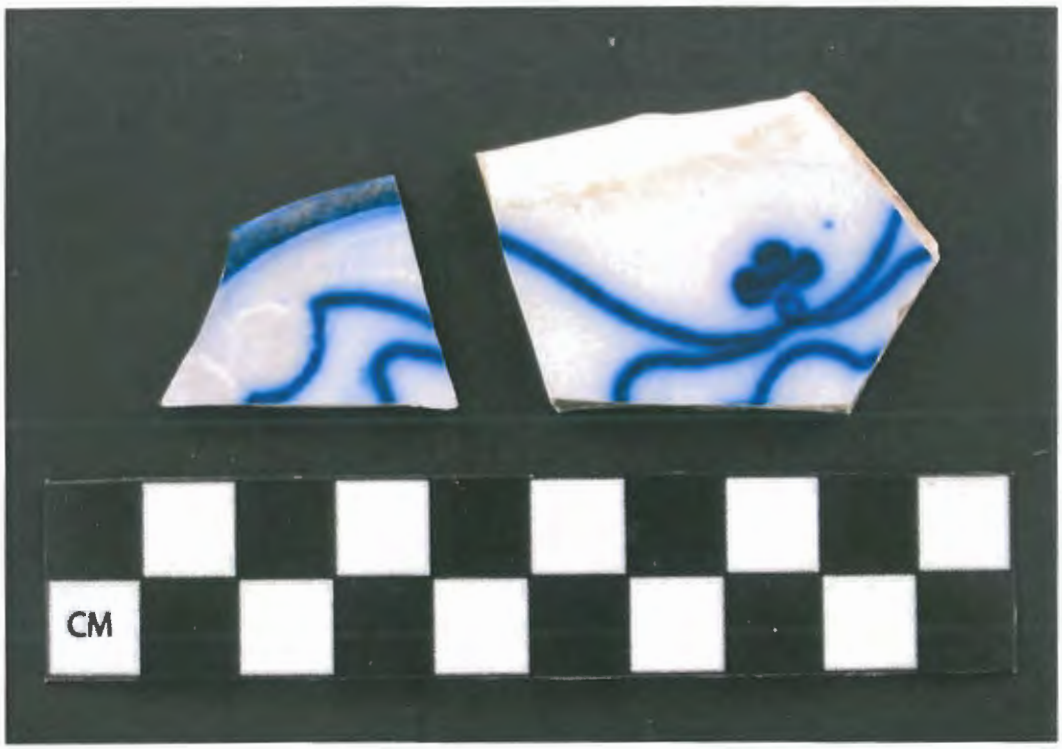

Figure 19. White ware rim and body fragments with blue painted design from shovel test.

Figure 20. White ware and porcelain fragments. From left to right: white ware base sherd with "DEN/CHINA" stamp on base, white ware rim sherd with floral decal, porcelain body sherd with floral decal.

Figure 21. Pink porcelain doll leg from west side of the hearth.

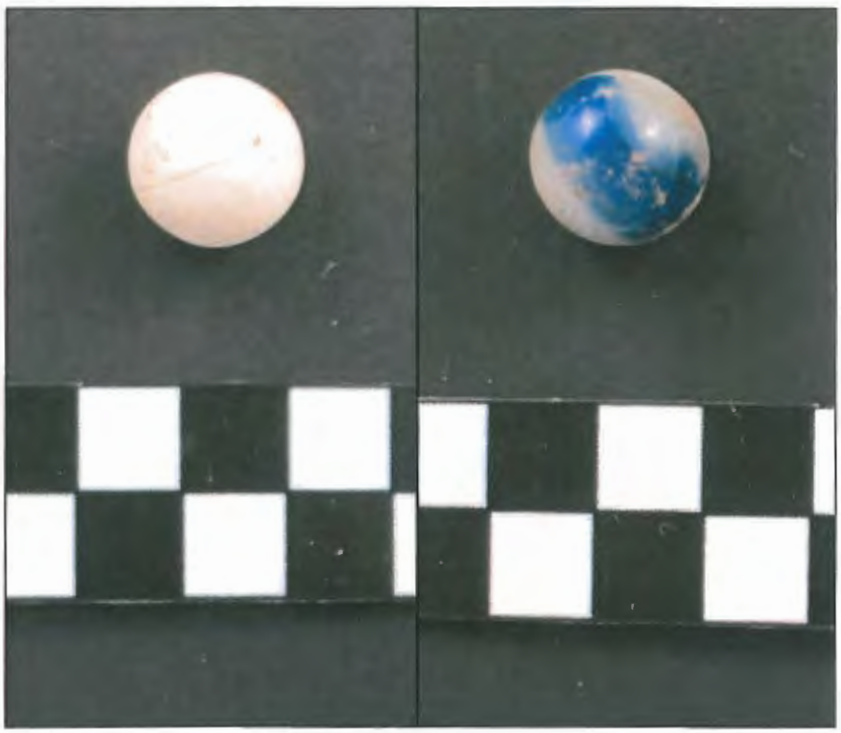

Figure 22. Ceramic marble from hearth test unit (left) and Glass marble from shovel test. Scale is in centimeters (right).

Figure 23. Shell buttons from hearth unit (left) and shovel test (right). Scale is in centimeters.

Metal artifacts recovered from the site are mostly not diagnostic and include a hoe blade, fence staple, bolts, blunt-nosed scissors, tool parts, and metal scraps. A piece of T. V. Allis buckthorn barbed wire, which dates from 1881 was found on the surface of the cistern (Figure 16 and 24). A $1^{1}/_{8}$ in brass straight pin and an expended .38 caliber slug were found in the excavation and both post-date 1890 (Jay C. Blaine, personal communication 2013). Twenty-nine wire nails and 18 square-cut nails were identified from across the site. The square-cut to wire nail ratio may indicate that the house was originally built with square-cut nails but was maintained for a longer period using wire nails. By the 1890s, square-cut nails accounted for 15% of nail production in the United States (Adams 2002: 72).

Figure 24. T. V. Allis buckthorn barbed wire from the surface of the cistern.

Of the 184 pieces of vessel glass recovered at the site, 144 (78%) were clear. The rest of the fragments were of milk, amber, sun-colored amethyst, pink Depression, cobalt, Coke, olive, sapphire, and light green Depression glass (Figure 25). Sun-colored amethyst glass was commonly used until the end of World War I, when clear glass became the dominant glass type for vessels and containers. Milk glass was commonly used in cosmetic bottles from the 1890s to the mid-twentieth century (Lindsey 2012). A Coke bottle base fragment had a 1932 manufacture date and "LOCKHART/TEX." embossed on the base (Figure 26). A cobalt bottle neck with bead finish and congruent seam and a snuff bottle with congruent seam were found in the NW hearth test unit (Figure 27).

Moir's model (1988) was used for identifying and dating the window pane glass recovered from the site. The assemblage consisted of 126 possible window glass fragments; thickness ranged from 0.99 mm to 3.34 mm with a mean of 2.35 mm. Using Moir's model, the window glass recovered from the site may date as early as 1860. In an attempt to narrow the date range of the earlier occupation, the thicker glass (dating to post-1920s) was removed from the sample. This resulted in a mean thickness of 2.06 mm, suggesting the site was likely occupied from 1880 to 1890.

Figure 25. Vessel glass fragments from shovel tests and hearth units at 41CW157 (left to right/top to bottom: clear, sapphire, milk, light green with floral pattern, pink, sun-colored amethyst, olive, and amber).

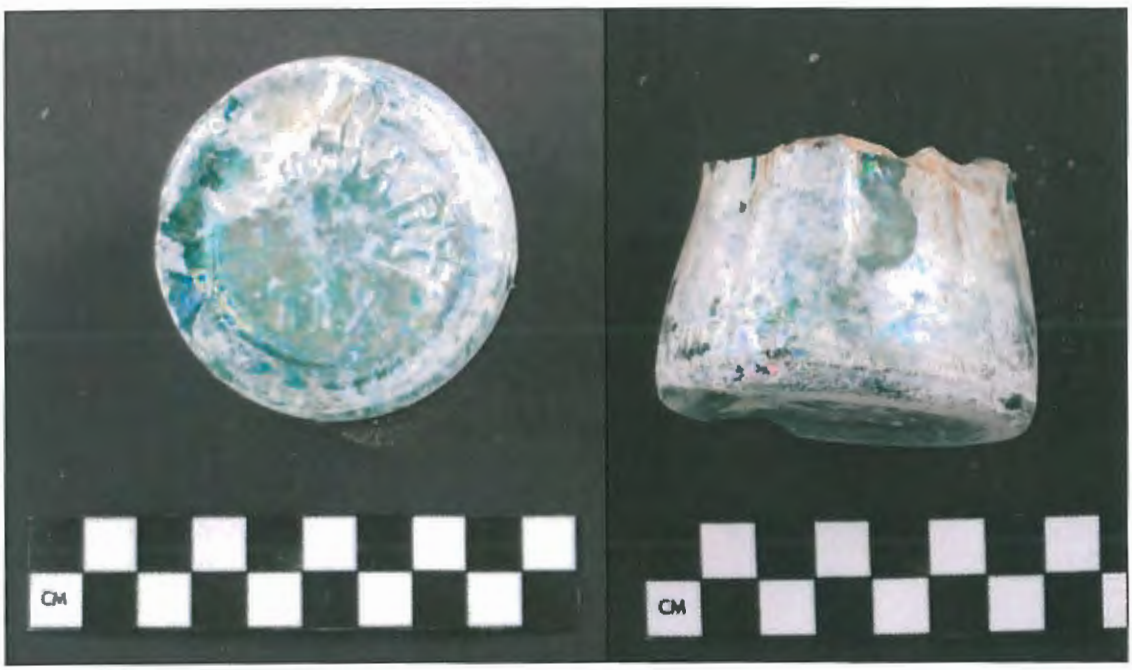

Figure 26. Coke bottle base with "LOCKHART TEX." embossed on base from hearth fill.

Figure 27. Cobalt bottle neck with bead finish and congruent seam (left) and amber snuff bottle with congruent seam (right) from hearth fill.

This site is located on a property that is currently owned by Cathy Moore Hunter, and has been in the Moore family since 1945 (Caldwell County Deed Records [CCDR] Vol. 211:611). W. D. Moore, Jr. purchased the property from E. B. and Louisa Medaris, who had been in possession of the property since 1942 (CCDR Vol. 202:409), when Sam J. Kelley sold the property. Kelley had attained the land from Isaac and Louiza Jackson in 1874 (CCDR Vol. R:291). Jackson acquired the land from the Republic of Texas in 1848 (Texas General Land Office, File 000298). The site is most likely associated with the Jackson or Kelley families, since they owned the property between 1848 and 1942.

41CW158

The site is located along a tributary of Dry Creek. Despite being mapped within frequently-flooded soils, flooding is likely rare, judging by the lack of soil accumulation along the creek and the presence of gravel on the ground surface. The area is thickly wooded, with post and blackjack oaks, mesquite, and greenbrier. Terrain is level.

The site is a small lithic scatter, which likely represents a short term occupation. Artifacts at the site include approximately 30 pieces of lithic debitage (flakes and shatter, mostly secondary and tertiary), two crude bifaces, and two tested cobbles. Material was primarily chert, but some fine-grained quartzite was present. It would appear that the site was used for procurement of the surface gravel and production of lithic tools. The site has little potential to yield information on prehistoric lifeways or environment.

41CW159

The site is located in a thickly-wooded area along an intermittent tributary of Dry Creek, with which it has its confluence approximately 1 km to the southeast. The area likely floods relatively infrequently, judging by the lack of soil accumulation adjacent to the channel, and the presence of gravel on the ground surface. Terrain along the drainage is fairly level. Vegetation consists of post oaks, mesquites, blackjack oaks, honey locusts, greenbrier, and sparse grasses. Ground visibility ranges from 40 to 90 percent, due to sparse ground cover of fallen leaves.

41CW159 consists of a surficial scatter of artifacts, with an assemblage indicating a temporary camp. Artifacts at the site include approximately 100 pieces of lithic debitage (flakes, chips, shatter, tested cobbles), two crude bifaces, a few pieces of FCR, a Bulverde dart preform and a Gower dart point preform (Turner et al. 2011). Most of the flakes are secondary and tertiary, but there are some primary flakes. Abundant lithic debitage indicates that the site was primarily used for chipped stone tool production, and possible procurement of the area's lithic resources (surface mantle of chert and quartzite gravel). Bulverde and Gower dart point preforms would place the site in the Early to Middle Archaic. The site deposit has little integrity and offers no insight into prehistoric lifeways or environment.

Conclusions

The study area has been affected by plowing, mining, and terracing for decades. The potential for prehistoric sites was hypothesized to be low. No prehistoric campsites were found on the ridges mapped as Houston Black clay, though it had been predicted this was the area with the highest potential for camp sites. Though there is a significant amount of gravel present on the surface, gravel sampling shows that much of it is too small to be knappable. A dozen isolated, chipped stone artifacts were found on the surface in the western portion of the study area and two sites were identified. Both sites are scatters of artifacts with no stratigraphy and no potential to offer insight into prehistoric lifeways or environment.

Based on the sandstone block chimney and the rock-lined cistern, it is likely that these features are associated with a residence that was constructed in the late 1800s. The presence of square-cut nails and relatively thin window glass supports this conclusion. The chimney probably was part of a one-room residence that was made of logs or cut lumber and was built sometime after the Civil War. Water would have been collected in gutters and directed into the subterranean cistern. It is possible that a root cellar could be associated with the house, but the present day vegetation may have obscured its depression or it may have been purposefully filled in. Based on the abundance of artifacts that date to the early 1900s, it is likely that the structure was continually inhabited through the first part of the 20th century and that repairs were made to the structure at that time as indicated by wire nails and thicker window glass.

RECOMMENDATIONS

The purpose of this investigation was to determine if significant cultural resources are present within the proposed 130 EP study area in Caldwell County, Texas. Two prehistoric artifact scatters (41CW158 and 41CW159) and one historic residence (41CW157) were recorded. These sites are not recommended eligible for listing on the NRHP nor to be designated as SALs. The prehistoric sites are not recommended due to the lack of features and structures, their surficial natures, and their inability to yield information about past lifeways or environments. The historic site was thoroughly recorded and shovel tests were placed across the site at 5-foot intervals. The artifacts recovered indicate that the site was occupied from the late 1800s through the early to mid-1900s and, therefore, the site does not represent a singular slice in time. Most of the artifacts recovered, including clear glass and whiteware ceramics, were in use for a broad time range. This site is also not recommended as eligible for listing on the NRHP nor to be designated as a SAL because of the reasons listed above.

AR Consultants, Inc. concludes that further cultural resource investigations are unwarranted within the proposed study area. However, if buried cultural materials are discovered during construction, the Archeology Division of the Texas Historical Commission should be notified.

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APPENDIX A

SITES WITHIN ONE MILE OF THE FACILTY BOUNDARY

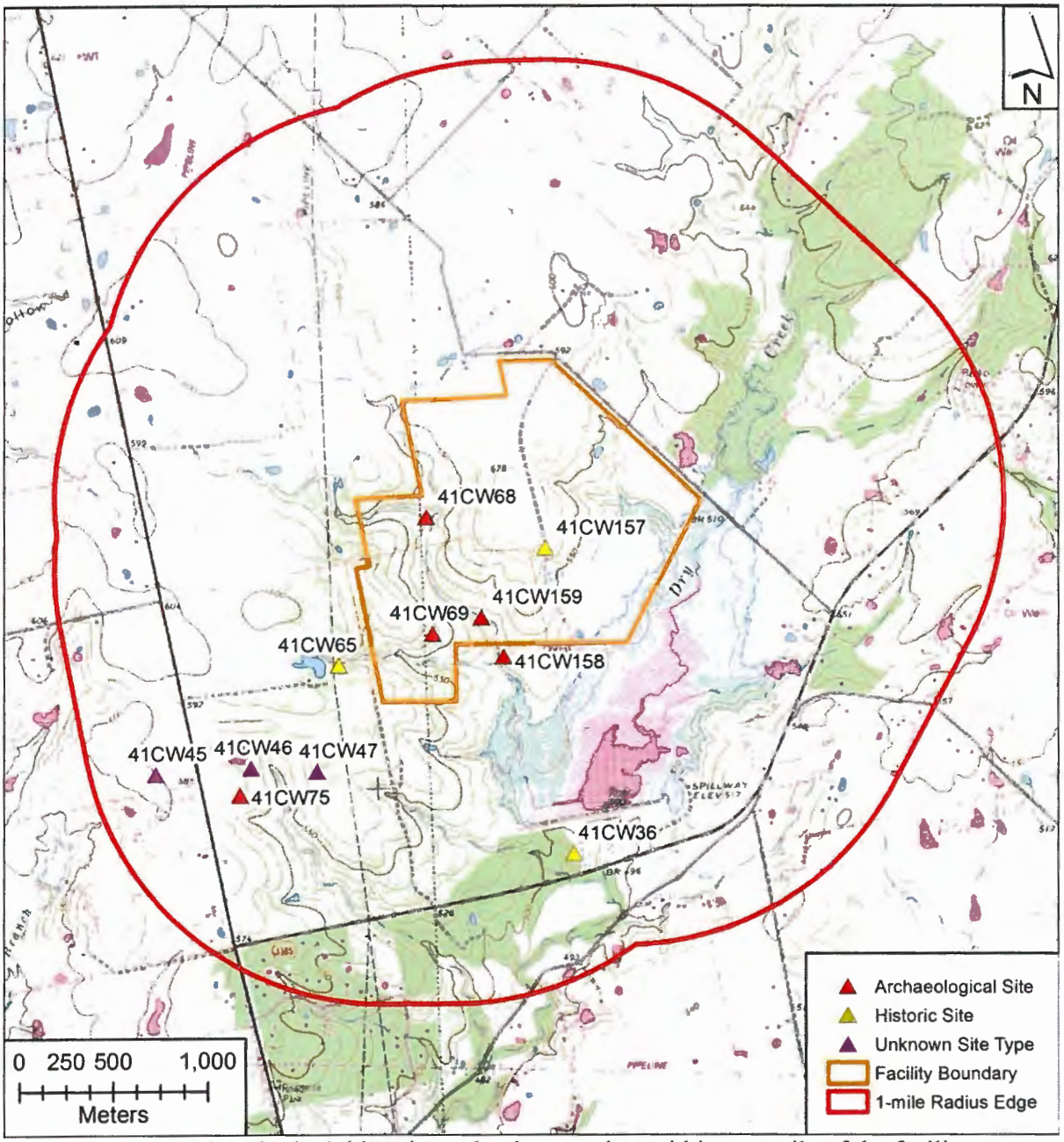


Figure 17. Archaeological, historic, and unknown sites within one mile of the facility boundary shown on a portion of the Lockhart North, TX 7.5' USGS topographic map (TASA 2013).

Note: There are no cemeteries, historically significant sites, archaeologically significant sites, or sites having exceptional aesthetic quality within one mile of the facility boundary.

APPENDIX B

ARTIFACT PROVENIENCE TABLE

Unit*	Depth* (cm below ground surface)	Glass												Ceramic				Metal										Other				
		Flat (Possibly Window)	Clear Vessel	Depression	Amber	Sun-colored amethyst	Cobalt	Sapphire	Olive	Milk	Coke	Other (Knob or Pull)	Other (Marble)	Stoneware	Whiteware	Porcelain	Marble	Wire Nail	Square-cut Nail	Bolt	Fence Staple	Bottle Cap	Scissors	Straight Pin	Bullet	Wire Fragments	Metal Fragment	Shell Button	Rubber Gasket	Unmodified Bone/Shell	Brick Fragment	Slate
Surface		6	22							1	1	1			5																17	
Shovel Tests																																
B223	0-10	9	2												1																	
	10-20	6	6		1									1	1				2													
	20-30	1	2												1																	
B224	0-10	2																														
B225	0-10		1																													
B227	0-10		1																													
B238	0-10																	1														
B240	0-10		1												1																	
B241	0-10		1																	1												
	10-20														1																	
B244	0-10	1																1		1												
B245	0-10																	1														
B250	0-10	1	2																		1											
B252	0-10	1	4												1			1								5						
M035	0-10	1	4												3																	
M036	0-10	13	4			1												2	3													
	10-20	3																	2													
M038	0-10	5	3	1														1	2								1					
M039	0-10	1			1										3			1														
M040	0-10	2	3															1														
M041	0-10		1	1																												
M042	10-20														10									1							1	
	20-30															1		1														
M043	0-10																														1	
	10-20	2	2															1														
M044	10-20									1																						
M045	10-20				1																											
M047	10-20		3																													
M048	10-20	2	1													3																
M051	10-20	16																														
M057	0-10		1																													
M058	0-10		1																													

Unit*	Depth* (cm below ground surface)	Glass												Ceramic				Metal										Other				
		Flat (Possibly Window)	Clear Vessel	Depression	Amber	Sun-colored amethyst	Cobalt	Sapphire	Olive	Milk	Coke	Other (Knob or Pull)	Other (Marble)	Stoneware	Whiteware	Porcelain	Marble	Wire Nail	Square-cut Nail	Bolt	Fence Staple	Bottle Cap	Scissors	Straight Pin	Bullet	Wire Fragments	Metal Fragment	Shell Button	Rubber Gasket	Unmodified Bone/Shell	Brick Fragment	Slate
M059	0-10													1		2																
N016	0-10	4	1		2										2			5	3								30					
	10-20	1	1															1								1	9					
N017	0-10	1																									1					
N018	10-20	6	1							1			1		4	1			1								16			1	1	
	20-30	1	1			1												2									6	1				
N023	0-10																	1														
	10-20	1	2																								2					
N024	0-10	9								1								1									7					
	10-20	2																1												1		
	20-30	2																														
N025	0-10	2																	1													
N027	0-10		5															1								1						
N028	0-10		3															1	1							1	1					
N029	0-10		1																													
N030	0-10		2																													
N031	0-10	2	1																			1										
N032	0-10	1								1									1								2					
N033	0-10		1							1						1		2								1	13					
N034	0-10		1			1									1											1						
N035	0-10	4	1		1			1						1																		
N036	0-10														1																	
Hearth Testing																																
Front & Hearth Floor		9	5	1											8	2			1	1												
Hearth Fill											2																			6		
Hearth-East side		3	36	1	1					2				1	2	2			1				1		1		2			4		
Hearth-West side			9		3		1								9	12				1									1	1	1	
NE Hearth		1	1	1						2				1	1																	
NW Hearth		6	4		1	1	1		1					1	7	2	1	3		2								1		2	1	4
Totals		127	141	5	11	4	2	1	1	10	3	1	1	6	62	26	1	29	18	6	1	1	1	1	1	10	90	2	1	15	22	4

*Units and levels with no artifacts are not represented in this table.

130 ENVIRONMENTAL PARK

APPENDIX IIG
TPDES PERMIT

Technically Complete October 28, 2014

Texas Pollutant Discharge Elimination System (TPDES)
Certification Statement

Mr. Richard A. Hyde, P.E.
Executive Director
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

RE: 130 Environmental Park
TCEQ Permit Application No. MSW 2383

Dear Mr. Hyde:

130 Environmental Park, LLC will obtain Texas Pollutant Discharge Elimination System (TPDES) permit coverage for the 130 Environmental Park in accordance with 30 TAC §330.61(k)(3), prior to commencement of activity regulated under TPDES.

ATTEST:
130 Environmental Park, LLC

Ernest Kaufmann
President and Manager of 130 Environmental Park, LLC

SWORN TO AND SUBSCRIBED BEFORE ME by Ernest Kaufmann on this 7th day of November, 2014, which witness my hand and seal of office.

Notary Public, State of Georgia

Joy Hammonds
Printed Name

My Commission Expires: Jan 8, 2017

JOY HAMMONDS
NOTARY PUBLIC
CHEROKEE CO., GEORGIA
MY COMMISSION EXPIRES
JAN. 8 2017

130 ENVIRONMENTAL PARK

APPENDIX IIH
FEDERAL AVIATION ADMINISTRATION DOCUMENTATION

Technically Complete October 28, 2014

U.S. Department
of Transportation
Federal Aviation Administration

Federal Aviation Administration
Southwest Region, Airports Division
Safety and Standards Branch

2601 Meacham Boulevard
Fort Worth, Texas 76137

December 26, 2013

Mr. Kenneth J. Welch
Principal Engineer
Biggs and Mathews Environmental
1700 Robert Road, Suite 100
Mansfield, TX 76063

Subject: 130 Environmental Park
Proposed Type I Municipal Solid Waste Landfill

FAA File No. 13-014-TX

This letter is in response to your August 30, 2013, request for the identification of any public use airports within our 5 and 6 mile criteria restricting landfills near airports. Based on the information provided, the proposed 130 Environmental Park Landfill will be located in Caldwell County, Texas, with a maximum elevation of approximately 736 feet above mean sea level which is approximately 158 feet above existing mid-point average ground level.

Using the coordinates provided of 29 58' 43.75"N and 97 39' 24.76"W, we determined that there are no privately owned or publically owned public use airports within our 6 statute mile criteria for new Municipal Solid Waste Landfills. Our records indicate that the two closest public use airports are Lockhart (50R) located approximately 9 miles/8NM from the threshold of Runway 18. The second airport is San Marcos Municipal (HYI) located 14 miles/12NM from the threshold of Runway 17.

This proposed site has been assigned our file No. 13-014-TX. Please refer to this number in any future correspondence regarding this site. Thank you for coordinating this project with us. If there are any questions, you can contact me at 817-222-5621or bill.mitchell@faa.gov.

Sincerely,

William Mitchell
Lead Airport Certification Safety Inspector
Airports Division

cc: Municipal Solid Waste Permits Section
Waste Permits Division
Texas Commission on Environmental Quality
P.O. Pox 13087
Austin, TX 78711-3087

Texas Department of Transportation
Division of Aviation
125 East 11th Street
Austin, TX 78701-2483

Mr. Chris Shoulders
Supervisor Obstruction Evaluation
AJV-15

BIGGS & MATHEWS ENVIRONMENTAL
Consulting Engineers • Hydrogeologists
Mansfield • Wichita Falls

August 30, 2013

Mr. Joseph G. Washington
Airports Division
Safety and Standards Branch, ASW-623
U.S. Department of Transportation
Federal Aviation Administration
2601 Meacham Boulevard
Fort Worth, Texas 76137

Re: 130 Environmental Park
130 Environmental Park, LLC
Proposed Permit Application
Documentation of Coordination Relating to Airport Safety

Dear Mr. Washington:

On behalf of 130 Environmental Park, LLC, Biggs & Mathews Environmental is preparing a permit application for 130 Environmental Park, located in Caldwell County, Texas. Texas Commission on Environmental Quality rules (30 TAC §330.61(i)(5)) require documentation of coordination with the Federal Aviation Administration.

The location of 130 Environmental Park is shown on Drawing 1 – Detailed Highway Map. The site coordinates are 29° 58' 43.75" north latitude and 97° 39' 24.76" west longitude. The facility location is shown on the attached Drawing 3 – FAA Airport Location Map that uses the FAA Sectional Aeronautical Chart San Antonio, 91st Edition, dated May 2, 2013. The proposed facility is a Type I municipal solid waste landfill with a proposed maximum elevation of approximately 736 feet above mean sea level, which is approximately 158 feet above the existing mid-point average ground elevation (578 feet above mean sea level) of the site as shown on the attached Drawing 1 – General Topographic Map.

Please indicate in writing if the facility is (1) located within 10,000 feet of any public airport runway used by turbojet aircraft, (2) within 5,000 feet of any public airport runway used by only piston-type aircraft, and (3) advise us of the locations of public-use airports within a five-mile radius of the site, if any. Also please confirm that there are no General Aviation Airports as defined in H.R. Bill 1000, Section 503, within a six-mile radius of the existing facility.

Please call or e-mail me at 817-563-1144 or kwelch@biggsandmathews.com if you have any questions or need additional information.

Sincerely,

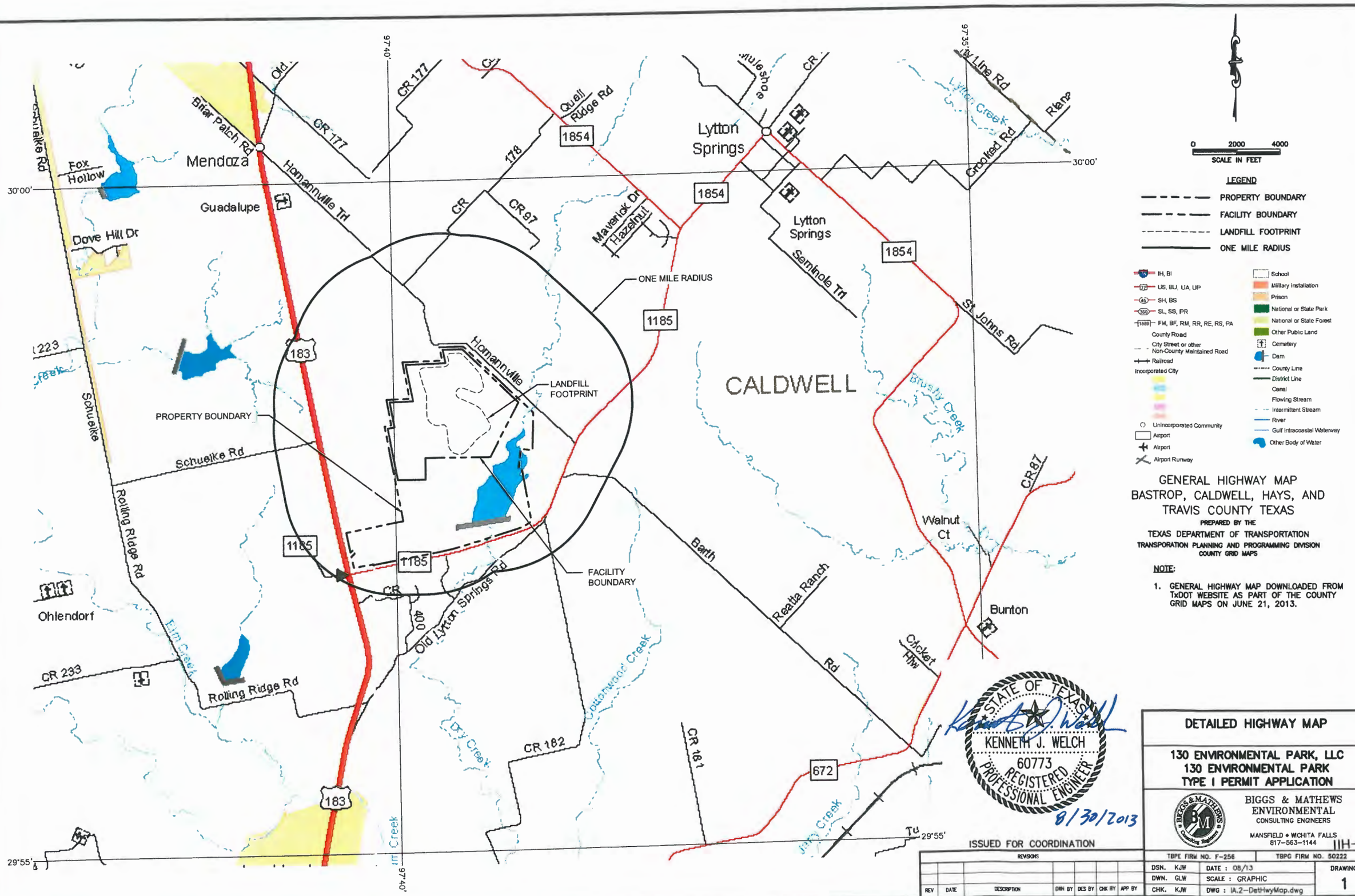
BIGGS & MATHEWS ENVIRONMENTAL, INC.

Kenneth J. Welch, P.E.
Principal Engineer

Attachments: Drawing 1 – Detailed Highway Map
Drawing 2 – General Topographic Map
Drawing 3 – FAA Airport Location Map

cc: Mr. Ernest Kaufmann, President and Manager of 130 Environmental Park, LLC

M:\PROJ\129\06\102\FAA COORDLTR.DOCX



0 2000 4000
SCALE IN FEET

LEGEND

- PROPERTY BOUNDARY
- FACILITY BOUNDARY
- LANDFILL FOOTPRINT
- ONE MILE RADIUS

IH, BI
US, BU, UA, UP
SH, BS
SL, SS, PR
FM, BF, RM, RR, RE, RS, PA
County Road
City Street or other Non-County Maintained Road
Railroad
Incorporated City
Unincorporated Community
Airport
Airport
Airport Runway
School
Military Installation
Prison
National or State Park
National or State Forest
Other Public Land
Cemetery
Dam
County Line
District Line
Canal
Flowing Stream
Intermittent Stream
River
Gulf Intracoastal Waterway
Other Body of Water

GENERAL HIGHWAY MAP
BASTROP, CALDWELL, HAYS, AND TRAVIS COUNTY TEXAS

PREPARED BY THE
TEXAS DEPARTMENT OF TRANSPORTATION
TRANSPORATION PLANNING AND PROGRAMMING DIVISION
COUNTY GRID MAPS

NOTE:

1. GENERAL HIGHWAY MAP DOWNLOADED FROM TxDOT WEBSITE AS PART OF THE COUNTY GRID MAPS ON JUNE 21, 2013.

STATE OF TEXAS
KENNETH J. WELCH
60773
REGISTERED
PROFESSIONAL ENGINEER
8/30/2013

ISSUED FOR COORDINATION

REVISIONS						
REV	DATE	DESCRIPTION	DRN BY	DES BY	CHK BY	APP BY

DETAILED HIGHWAY MAP

130 ENVIRONMENTAL PARK, LLC
130 ENVIRONMENTAL PARK
TYPE I PERMIT APPLICATION

BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD • WICHITA FALLS
817-563-1144

IIH-2

TBPE FIRM NO. F-256		TBPG FIRM NO. 50222
DSN. KJW	DATE : 08/13	DRAWING 1
DWN. GLW	SCALE : GRAPHIC	
CHK. KJW	DWG : IA.2-DetHwyMap.dwg	

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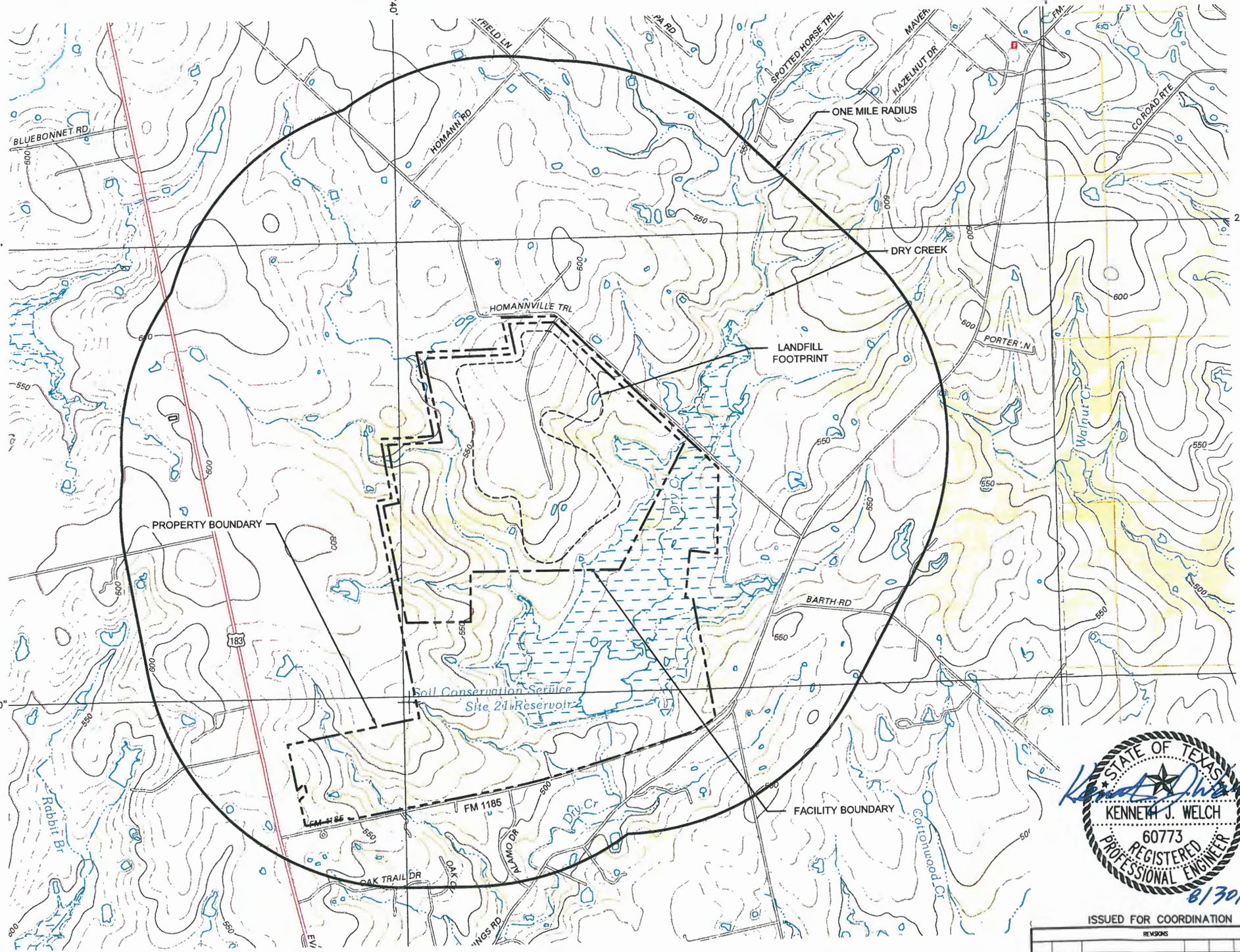


0 1000 2000
SCALE IN FEET

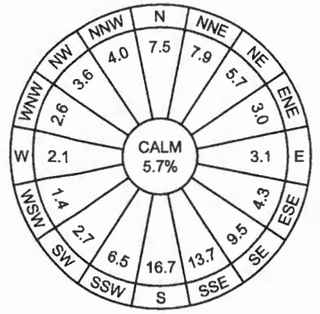
LEGEND

- PROPERTY BOUNDARY
- FACILITY BOUNDARY
- LANDFILL FOOTPRINT
- ONE MILE RADIUS
- SURFACE WATER BODY OR OTHER WATER

NOTE:

1. TOPOGRAPHIC BASE MAP IS US TOPO 2013 OF 7.5 MINUTE QUADRANGLE LOCKHART NORTH, TX AND DALE, TX DOWNLOADED FROM USGS WEBSITE ON JUNE 10, 2013. IMAGERY DATE IS MAY 2010.

WIND ROSE
SOURCE: TCEQ PUBLIC WIND ROSE
ANNUAL 1984–1992



WIND ROSE REPRESENTS AVERAGE PERCENT OF TIME WIND BLOWS FROM EACH OF THE 16 COMPASS POINTS SHOWN.

STATE OF TEXAS
KENNETH J. WELCH
60773
REGISTERED PROFESSIONAL ENGINEER
8/30/2013

ISSUED FOR COORDINATION

REVISIONS					
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

GENERAL TOPOGRAPHIC MAP

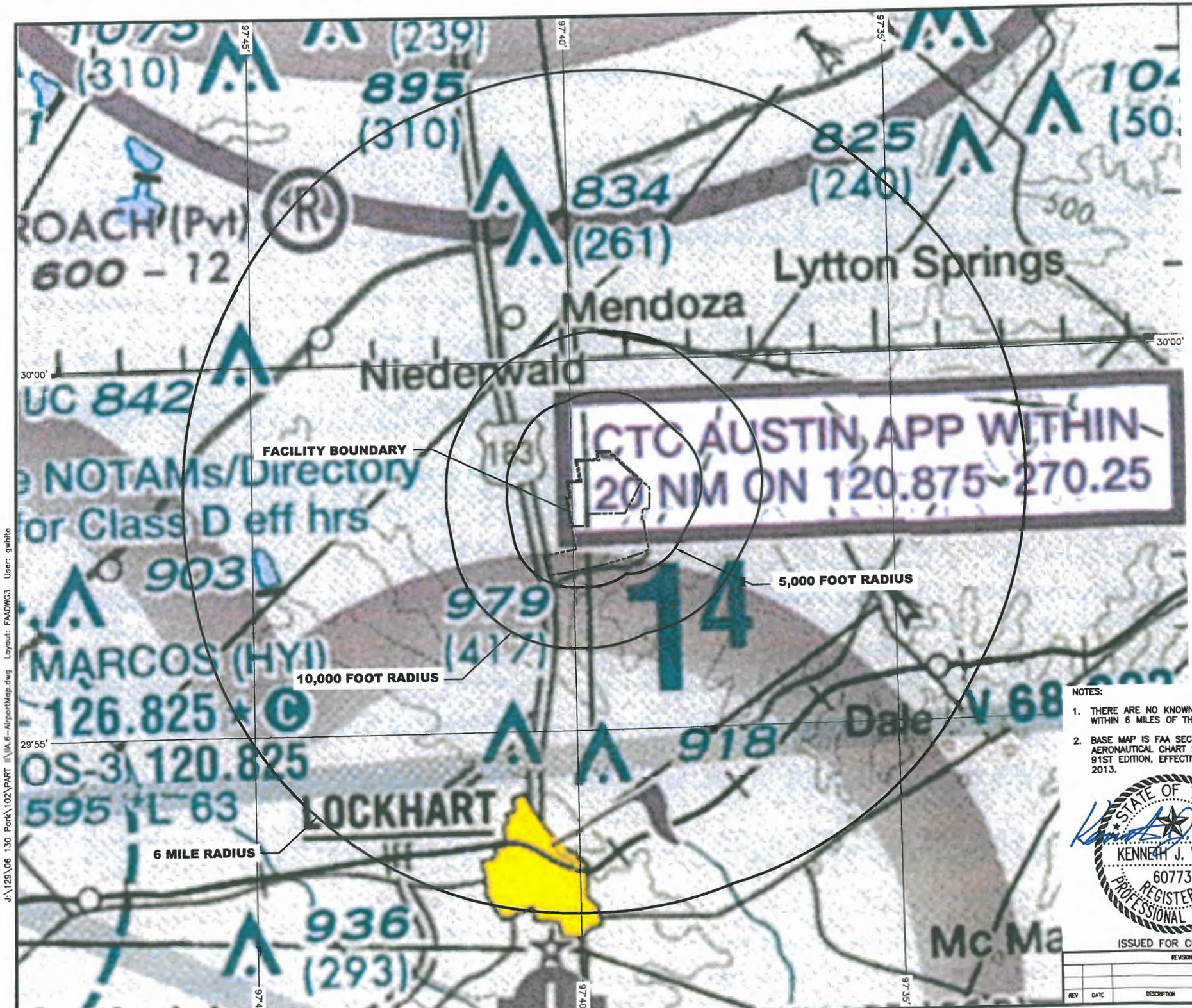
130 ENVIRONMENTAL PARK, LLC
130 ENVIRONMENTAL PARK
TYPE I PERMIT APPLICATION

BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD ◆ WICHITA FALLS
817-563-1144
TBPE FIRM NO. F-256 TBPG FIRM NO. 50222

DSN. KJW	DATE : 08/13	DRAWING 2
DWN. GLW	SCALE : GRAPHIC	
CHK. KJW	DWG : IIA.2-GenTopo.dwg	

IIH-3

J:\129\06 130 Park\102\PART II\IIA.2-GenTopo.dwg Layout: FAADWG2 User: gwhite



0 4,000 8,000
SCALE IN FEET

LEGEND

PROPERTY BOUNDARY

FACILITY BOUNDARY

AIRPORTS

Other than hard-surfaced runways

Seaplane Base

Hard-surfaced runways 1500 ft. to 8069 ft. in length

Hard-surfaced runways greater than 8069 ft. or some multiple runways less than 8069 ft.

Open dot within hard-surfaced runway configuration indicates approximate VOR, VOR-DME, or VORTAC location.

All recognizable hard-surfaced runways, including those closed, are shown for visual identification. Airports may be public or private.

TOPOGRAPHIC INFORMATION

Power Transmission Line

Aerial Cable

Lookout Tower
618 (Elevation Base of Tower)

OBSTRUCTIONS

1000 ft. and higher AGL

Below 1000 ft. AGL

Group Obstruction

Obstruction with high-intensity lights; may operate part-time.

2049 — Elevation of the top above mean sea level
(1149) — Height above ground
UC — Under construction or reported; position and elevation unverified

NOTES:

1. THERE ARE NO KNOWN AIRPORTS WITHIN 6 MILES OF THE FACILITY.
2. BASE MAP IS FAA SECTIONAL AERONAUTICAL CHART SAN ANTONIO, 91ST EDITION, EFFECTIVE MAY 2, 2013.

STATE OF TEXAS
KENNETH J. WELCH
60773
REGISTERED
PROFESSIONAL ENGINEER
8/30/2013

ISSUED FOR COORDINATION

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

FAA AIRPORT LOCATION MAP

130 ENVIRONMENTAL PARK, LLC
130 ENVIRONMENTAL PARK
TYPE I PERMIT APPLICATION

BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD • WICHITA FALLS
817-563-1144
TBPE FIRM NO. F-256 TBPG FIRM NO. 50222

IIH-4

DSN. KJW	DATE : 08/13		DRAWING
DWN. GLW	SCALE : GRAPHIC		3
CHK. KJW	DWG : IIA.6–AirportMap.dwg		

J:\129\06 130 Park\102\PART II\IIA.6–AirportMap.dwg Layout: FAADWG3 User: gwhite

130 ENVIRONMENTAL PARK

APPENDIX III
CAPITAL AREA COUNCIL OF GOVERNMENTS DOCUMENTATION

Technically Complete October 28, 2014

Solid Waste Advisory Committee (SWAC) | Summary Minutes

9 a.m. Thursday, May 22, 2014
CAPCOG Pecan Room
6800 Burleson Road
Building 310, Suite 165
Austin, TX 78744

Member Attendance

Present (16)

Commissioner Joe Don Dockery, **Chair,** *Burnet County*
Mr. Richard McHale, **Vice Chair,** *City of Austin*
Mr. Adam Mathews, Progressive Waste Solutions, *Private Industry*
Commissioner Tom Muras, *Fayette County*
Mr. Joey Crumley, *Educational Representative*
Mr. Gerry Acuna, *City of Austin*
Mr. Jeff Hauff, *Hays County*
Commissioner Maurice Pitts, *Lee County,* Executive Committee Liaison
Mr. Pete Correa, *Williamson County*
Mr. Steve Jacobs, Waste Management, *Private Industry*
Mr. Jon White, *Travis County*
Ms. Melinda Mallia, *Travis County*
Commissioner Ron Wilson, *Llano County*
Mr. Phillip Merino, *Bastrop County*
Ms. Leah Gibson, *Hays County*
Commissioner Joe Roland, *Caldwell County*

CAPCOG Staff

Ms. Betty Voights, Executive Director
Mr. Mark Sweeney, Director of Regional Services
Ms. Kate Barrett, Administrative Assistant
Mr. Ken May, Solid Waste Program Manager
Mr. Layne Duesterhaus, Regional Environmental Coordinator

Absent (6)

Commissioner Paul Granberg, Blanco County
Dr. Tina Marie Cade, *Citizen/Environmental Representative*
Mr. Jack Ranney, *At-Large Member w/HHW Expertise*
Ms. Yessenia Pena, *Texas Commission on Environmental Quality, Non-voting Member*
Ms. Cheryl Untermeyer, *Texas Commission on Environmental Quality, Non-voting Member*

Call to Order – 9:12 a.m. with a quorum.

1. **Opening Remarks by Commissioner Dockery, Chair**

   Commissioner Dockery welcomed everyone. Ken May went over general hospitality details.

2. **Consider Approval of April 17, 2014 Meeting Minutes**
   Commissioner Dockery, Chair

   Commissioner Dockery requested consideration of the minutes.

   A motion and a second were made to accept the minutes as written. The motion passed unanimously.

3. **Private Industry Vacancy Selection**
   Mr. Ken May, Solid Waste Program Manager

   Mr. May stated that Mr. Brian Chesson of Republic Services was approved by the Executive Committee to serve in one of the two open private industry representative seats, but because Mr. Chesson is no longer employed at Republic Services, he is no longer eligible to serve.

   The two vacancies were open to be filled by the two nominees, Mr. Adam Gregory of Texas Disposal Systems and Mr. Matthew Smith of Hill Country Recycling. A motion and a second were made to accept both nominees. Both nominees were approved unanimously by the SWAC. Each will be recommended to the Executive Committee for consideration to fill the two vacant private industry SWAC seats at the first opportunity and is currently targeted for the August meeting.

4. **Overview of Processes and Procedures for Conformance Review**
   Mr. Ken May, Solid Waste Program Manager

   Mr. May explained the process of reviewing the conformance of the 130 Environmental Park application against the goals and objectives identified in the Regional Solid Waste Management Plan, and reminded the SWAC they had elected to solicit a Conformance Review Subcommittee to peer review the Conformance Review Checklist responses and to make recommendation to the SWAC. Mr. May stated that the decisions of the Conformance Review Subcommittee would be shared later on the agenda, after presentations from both Green Group Holdings and the Environmental Protection in the Interest of Caldwell County (EPICC) group, questions and answers from the SWAC, and public comment.

   No discussion of the conformance review process occurred.

5. **Presentation in support of the proposed 130 Environmental Park, LLC municipal solid waste landfill: Mr. David Green, Vice President, Green Group Holdings (GGH) [30 minutes]**

   Commissioner Dockery asked that questions be held until the question and answer item on the agenda.

Mr. Green, of GGH gave a 30 minute presentation in support of the proposed 130 Environmental Park, LLC municipal solid waste landfill.

6. **Presentation in opposition to the proposed 130 Environmental Park, LLC municipal solid waste landfill: Opposing Party Presentation by Mr. Byron Friedrich, Environmental Protection in the Interest of Caldwell County (EPICC) [30 minutes]**

Mr. Friedrich, of EPICC gave a 30 minute presentation in opposition to the proposed 130 Environmental Park, LLC municipal solid waste landfill.

7. **Questions and Answers on Agenda Item No.'s 4 & 5**
Commissioner Dockery, Chair

Commissioner Dockery called the meeting back to order at 10:28 AM after a 10 minute break. Commissioner Dockery asked that questions only be asked by members of the SWAC during this time, and opened the floor for questions and answers.

Mr. Pete Correa, Williamson County, asked GGH about the ownership of the property, road maintenance, and where the waste for the landfill will originate.

Commissioner Pitts, Lee County, asked GGH about their past business dealings with landfills they sold soon after opening, and if the same scenario will void the commitments GGH outlined in their Host Agreement with Caldwell County. Mr. Green GGH, answered that the Turkey Run facility, in Meriwether County, GA, was developed with the intent to sell it, and that after it was permitted it was sold to Waste Management. Mr. Green explained that the Host Agreement offered Caldwell County, like the agreement they had with Meriwether County is, by its terms, binding to any future proprietors of the environmental park property. The Host Agreement also provides that the environmental track record of any future proprietor come under review before purchase.

Commissioner Muras, Fayette County, asked GGH about the sturdiness of the landfill against back-to-back 100 year storm water events. Mr. Green, GGH, answered they are installing two times the required storm water controls that Texas Commission on Environmental Quality (TCEQ) requires.

Mr. Jon White, Travis County, asked Green Group Holdings about the need of a development permit from Caldwell County. Mr. Green answered that GGH has already promised compliance with any local development rules and ordinances.

Mr. Joey Crumley, Educational Representative, asked GGH about the nature of their agreement with Caldwell County to limit the size of their landfill property. Mr. Green answered that in the draft host agreement, it was written that the size of the property never exceed 250 acres. Mr. Crumley also asked about the runoff from the landfill truck wash area and if GGH will ever accept waste from Mexico. Mr. Green answered that the wash area will be part of the general runoff of the site and that GGH does not intend to accept waste from Mexico at this facility.

Ms. Melinda Mallia, Travis County, asked about GGH measures to control loose trash and runoff. Mr. Green answered that all trucks coming into the site will be required to have tarps covering their load. He also mentioned that mobile and stationary wind screens will be in place to control wind-blow trash, and that workers will be regularly cleaning up trash around the site.

Commissioner Dockery, Chair, Burnet County, asked GGH if the litter abatement measures are listed in the host agreement with Caldwell County. Mr. Green answered yes.

Mr. Jon White, Travis County, asked about enforcement of the host agreement measures in the absence of a capability to carry out the host agreement. Mr. Green answered that GGH will complete measures in the host agreement as soon as possible, and that he is open to ideas on keeping the host agreement in place. Mr. White followed up by asking Mr. Green about the "discretionary language" in the host agreement. Mr. Green assured him that GGH is committed to carrying out the measures in the host agreement. Mr. White asked if Mr. Green could justify a need for this facility. Mr. White explained that GGH's market research justified a $40 million dollar investment in this facility, based on a need for the landfill. Mr. White feels that the data provided by the opposition regarding lack of need for another landfill is "distorted." Mr. Friedrich of EPICC commented that the capacity of the AACOG and CAPCOG regions are considerable, and that there is another landfill being proposed 30 miles south of Lockhart.

Ms. Betty Voights, CAPCOG, asked Mr. Green to address the effects of the landfill runoff on aquifers. Mr. Green assured the SWAC that the site will have a "significant over-design" of storm water runoff capacity and that GGH is conscious of the water flow from the site. Mr. Friedrich of EPICC expressed concerns for the close proximity of the landfill to Plum Creek and that the facility is likely to not withstand rain events for very long.

Commissioner Roland, Caldwell County, asked Mr. Green if any waste will be freighted in by rail. Mr. Green answered no.

Commissioner Pitts, Lee County, asked EPICC if they have tried to make any presentation to the TCEQ. Mr. Friedrich answered that the TCEQ does not typically allow any such presentation to be made.

Mr. Joey Crumley, Educational Representative, asked if Type 4 waste will be accepted at the landfill. Mr. Green answered yes. Mr. Crumley mentioned that the local area will need to rely on the landfill to accept waste generated from disasters.

8. **Public Comments pertaining to the proposed landfill from the speaker sign in sheet Commissioner Dockery, Chair**

Commissioner Dockery welcomed those who signed up to give a 3 minute public comment to give their comment at this time.

Public comment was given by six residents of Caldwell County, as well as an attorney for GGH. Five of the six residents of Caldwell County were members of EPICC and voiced opposition to the landfill proposition, the sixth speaker was Commissioner Roland, Caldwell County

At the end of the public comment period, Commissioner Dockery opened item 7 back for GGH to answer a question of how many residences and establishments, within a one mile radius of the proposed landfill, will be affected by the landfill. GGH answered that, according to their studies, 126 residences and 5 commercial establishments will be affected.

Mr. White, Travis County, asked if the one mile measurement was from the boundaries of the property or from the landfill location. Mr. Green answered that the one mile measurement was taken from the boundaries of the property.

Commissioner Muras, Fayette County, asked if GGH would have enough soil capacity on site to provide soil cover for the landfill. Mr. Green answered yes, they will have a positive soil balance.

Mr. Green went on to mention that a "property value protection plan" is available to residents who live within one mile of the footprint of the landfill who decide to sell their property within 10 years of the development of the facility. Mr. White asked if this is provided in the host agreement. Mr. Green answered yes.

9. Review and Consideration of the SWAC Conformance Review Subcommittee Recommendation Mr. Ken May, CAPCOG

Mr. May handed out paper copies of the Conformance Review Subcommittee's recommendations and identified that the Subcommittee's recommendation was unanimous and they recommend the application is in conformance with the Regional Solid Waste Master Plan.

Commissioner Dockery, Chair, read the recommendations and stated different options for approving, disapproving, or tabling the proposal.

Mr. White, Travis County, continued discussion on the proposal by stating that there is a need for the landfill, that both the proponents and the opponents of the proposal made good cases, and that the host agreement needs to be enforced going into the future.

Commissioner Roland and Mr. Correa gave statements of disapproval, explaining definite threats to human health.

Commissioner Dockery, Chair, opened the approval of the proposal to a vote from the SWAC by show of hands.

Nine of the 15 present SWAC members voted to approve the proposal, with three voting against, and three abstaining from a vote.

SWAC members in favor of the proposal were Mr. Joey Crumley, Ms. Leah Gibson, Mr. Jeff Hauff, Mr. Jon White, Ms. Melinda Mallia, Mr. Richard McHale, Mr. Phillip Merino, Commissioner Tom Murras, and Commissioner Maurice Pitts.

SWAC members voting against the proposal were Commissioner Joe Roland, Commissioner Ron Wilson, and Mr. Pete Correa.

SWAC members abstaining from a vote were Mr. Adam Mathews, Mr. Steve Jacobs, and Commissioner Dockery.

Commissioner Dockery, Chair, stated that the SWAC's recommendations will be sent to the Executive Committee for their consideration.

10. **Solid Waste Program Implementation Projects Update**
Mr. Ken May, CAPCOG

Mr. May stated that the CAPCOG Executive Committee approved the funding for the implementation projects as recommended by the SWAC, with the understanding that there was only funding available for ten of the 14 eligible proposals. The approval and the recommendations are being sent to the TCEQ for their approval. The TCEQ will send their approval or disapproval by July 1st.

11. **Other Items of Interest and Next SWAC Meeting Date**
Commissioner Dockery, Chair

Mr. May asked Commissioner Pitts to speak on his testimony to the House Appropriations Committee concerning CAPCOG's funding for implementation projects. Commissioner Pitts was thanked for his efforts.

Mr. May mentioned that the recommendations for the new SWAC private industry representatives and the recommendations for the 130 Environmental Park proposal will not reach the Executive Committee until their July or August meeting

Mr. Jeff Hauff, Hays County, mentioned that Texas State University and Hays County partnered for a successful Electronic Waste collection event in April, to which Hays County contributed 13,000 pounds of e-waste.

Mr. May stated that the Solid Waste program is receiving extra monies from the Department of Homeland Security for a development of a Regional Disaster Debris Management Plan.

Commissioner Roland, Caldwell County, thanked the SWAC for their time and consideration of the 130 Environmental Park proposals.

It was decided by the SWAC that the next SWAC meeting will be held on September 11, 2014.

12. **Adjourn**
Commissioner Dockery, Chair

A motion was made and seconded to adjourn at 11:39 AM.

BIGGS & MATHEWS ENVIRONMENTAL
Consulting Engineers • Hydrogeologists
Mansfield • Wichita Falls

February 12, 2014

Ken May
Solid Waste Program Manager
Capital Area Council of Governments
6800 Burleson Road
Building 130, Ste. 165
Austin, Texas 78744

Re: 130 Environmental Park, LLC
130 Environmental Park, Caldwell County, Texas
Type I Permit Application – Review Request for Conformance with the CAPCOG Regional Solid Waste Management Plan

Dear Mr. May:

130 Environmental Park, LLC initially submitted a permit application in support of a land use only determination for the 130 Environmental Park in northern Caldwell County to the Texas Commission on Environmental Quality (TCEQ) in September 2013. Consistent with §330.61(p), Part I and II of the land use only determination permit application was also submitted to the Capital Area Council of Governments (CAPCOG) for review of conformance with the Regional Solid Waste Management Plan. 130 Environmental Park is submitting revised Parts I and II, to reflect the filing of Parts III and IV, to TCEQ.

In accordance with 30 TAC §330.61(p), we are submitting Parts I and II of the application to the CAPCOG for review of the proposed 130 Environmental Park for conformance with the CAPCOG Regional Solid Waste Management Plan. As recently discussed, Part I and Part II attached have been revised to respond to the first TCEQ technical comment letter and to incorporate updates associated with the filing of Part III and Part IV. Please replace the previous submittal with the attached volume for your compliance review.

Please call or e-mail me at 940-766-0156 or kdm@bmiwf.com if you have any questions or need additional information.

Sincerely,

BIGGS & MATHEWS ENVIRONMENTAL
TBPE No. F-256 • TBPG No. 50222

Kerry D. Maroney, P.E. – Biggs & Mathews, Inc. (F-834)
Principal Engineer

Attachments: Volume 1 – Parts I and II, Type I Application, MSW Permit No. 2383

cc: Mr. Ernest Kaufmann, President and Manager of 130 Environmental Park, LLC

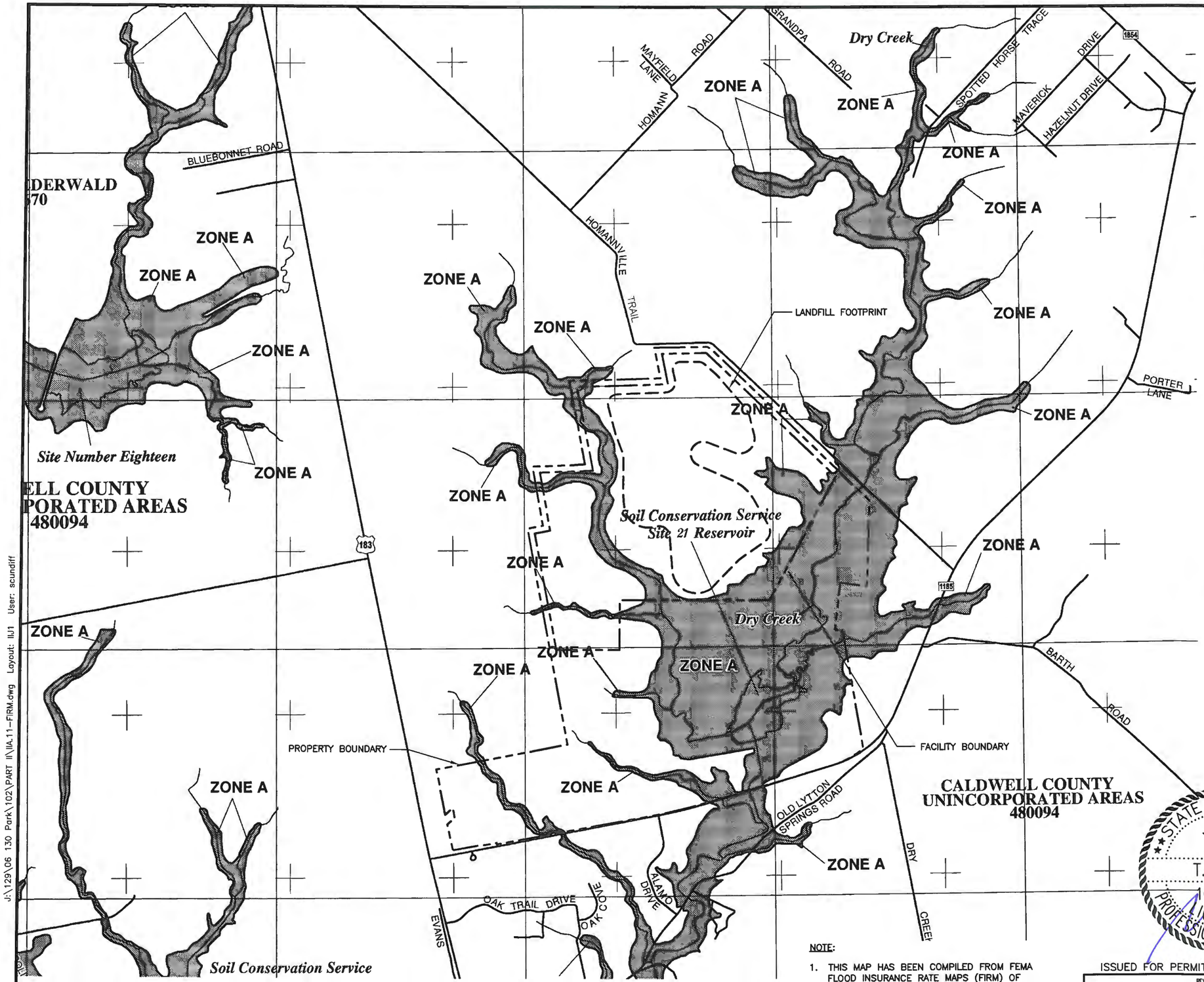
M:\Proj\129\06\101\P\CAPCOG Cover Letter Type I.docx

1700 Robert Road, Suite 100 • Mansfield, Texas 76063 • Phone: 817-563-1144 • Fax: 817-563-1224

130 ENVIRONMENTAL PARK

APPENDIX IIJ
FLOODPLAIN DOCUMENTATION

Technically Complete October 28, 2014



0 1000 2000
SCALE IN FEET

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

PROPERTY BOUNDARY

FACILITY BOUNDARY

LANDFILL FOOTPRINT

NOTE:

1. THIS MAP HAS BEEN COMPILED FROM FEMA FLOOD INSURANCE RATE MAPS (FIRM) OF CALDWELL COUNTY, TEXAS AND UNINCORPORATED AREAS COMMUNITY PANELS:

48055C0125E EFFECTIVE DATE: 6-19-2012

11-6-14

STATE OF TEXAS
T. Traw
103797
LICENSED
PROFESSIONAL ENGINEER

ISSUED FOR PERMITTING PURPOSES ONLY

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
–	10/28/14	TECHNICALLY COMPLETE	GLW	TLT	TLT	TLT

FLOOD INSURANCE RATE MAP (FIRM)

130 ENVIRONMENTAL PARK, LLC
130 ENVIRONMENTAL PARK
TYPE I PERMIT APPLICATION

BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD • WICHITA FALLS
817-563-1144

TBPE FIRM NO. F-256 | TBPG FIRM NO. 50222

DSN. TLT | DATE : 08/13
DWN. GLW | SCALE : GRAPHIC
CHK. TLT | DWG : IIA.11-FIRM.dwg

DRAWING IIJ.1

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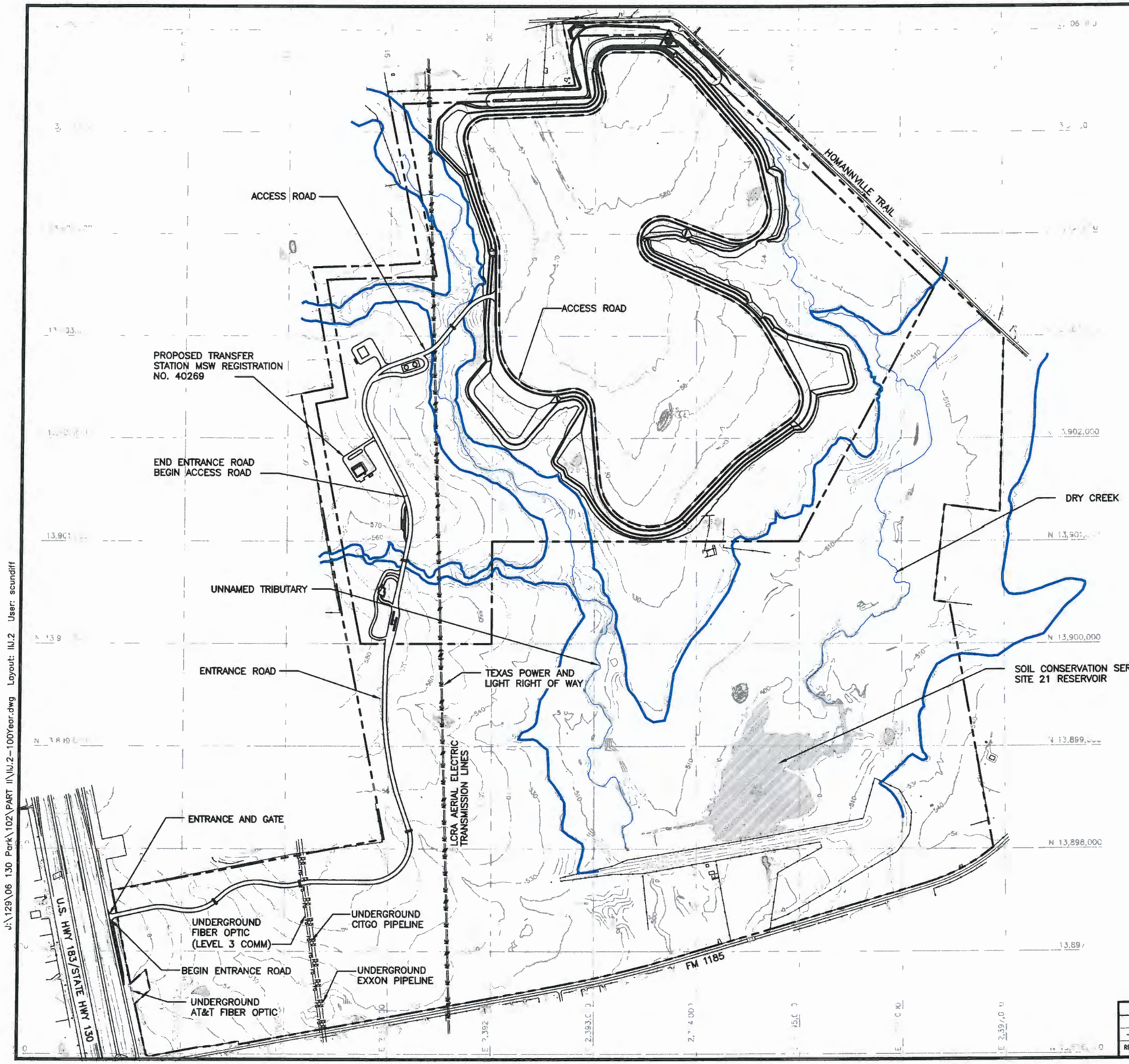


LEGEND

- PROPERTY BOUNDARY
- FACILITY BOUNDARY
- LANDFILL FOOTPRINT
- SITE BENCHMARK
- 510 EXISTING 10' CONTOUR
- N 6753000 STATE PLANE GRID
- 100 YEAR FLOODPLAIN

NOTES:

1. CONTOURS AND ELEVATIONS PROVIDED BY DALLAS AERIAL SERVICE FROM AERIAL PHOTOGRAPHY FLOWN MAY 13, 2013. HORIZONTAL DATUM IS TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (NAD 83). ELEVATIONS ARE RELATIVE TO NAVD88 – GEOID 12A.
2. PROPERTY BOUNDARY, FACILITY BOUNDARY, EASEMENT LOCATIONS, AND PERMANENT BENCHMARK PROVIDED BY HODDE & HODDE LAND SURVEYING, INC.
3. REFER TO PART III, ATTACHMENT C2 – FLOOD CONTROL STUDY FOR FLOODPLAIN MODELING TO DETERMINE LIMITS OF 100 – YEAR FLOODPLAIN.

11-6-14

STATE OF TEXAS
T. Traw
103197
LICENSED
PROFESSIONAL ENGINEER

ISSUED FOR PERMITTING PURPOSES ONLY

REVISIONS							
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY	
–	10/28/14	TECHNICALLY COMPLETE	GLW	TLT	TLT	TLT	

100–YEAR FLOODPLAIN

130 ENVIRONMENTAL PARK, LLC
130 ENVIRONMENTAL PARK
TYPE I PERMIT APPLICATION

BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD ◆ WICHITA FALLS
817–563–1144

TBPE FIRM NO. F–256 | TBPG FIRM NO. 50222

DSN. TLT | DATE : 1/14
DWN. GLW | SCALE : GRAPHIC
CHK. TLT | DWG : IIJ.2–100Year.dwg

DRAWING IIJ.2

J:\129\06 130 Park\102\PART II\IIJ.2–100Year.dwg Layout: IIJ.2 User: scundiff

130 ENVIRONMENTAL PARK

APPENDIX IIK
LOCATION RESTRICTION CERTIFICATIONS

Technically Complete October 28, 2014

CONTENTS

LOCATION RESTRICTION
CERTIFICATION OF COMPLIANCE
EASEMENTS AND BUFFER ZONES

General Site Information:

Site:	130 Environmental Park
Site Location:	Caldwell County, Texas
TCEQ Permit Application No.:	MSW 2383

Statement of Compliance:

I, Kerry D. Maroney, P.E., certify that the site indicated above will be in compliance with the Easements and Buffer Zones Location Restriction, as stated in 30 TAC §330.543 – Easements and Buffer Zones.

Firm:	Biggs & Mathews, Inc.
Address:	2500 Brook Avenue Wichita Falls, TX 76301
Signature, Seal, and Date	STATE OF TEXAS K.D. MARONEY 44639 LICENSED PROFESSIONAL ENGINEER 11/6/14 Biggs & Mathews, Inc. Firm Registration No. F-834

Supporting documentation is provided in Part II, Appendix IIA – Maps and Drawings, Drawing IIA.12 – Facility Site Plan.

Owner/Operator of Site:

Owner/Operator:	130 Environmental Park, LLC
Address:	132 Riverstone Terrace, Suite 103 Canton, GA 30183
Official's Name and Title:	Ernest Kaufmann, President and Manager of 130 Environmental Park, LLC
Signature:	
Date:	11-7-14

LOCATION RESTRICTION
CERTIFICATION OF COMPLIANCE
AIRPORT SAFETY

General Site Information:

Site:	130 Environmental Park
Site Location:	Caldwell County, Texas
TCEQ Permit Application No.:	MSW 2383

Statement of Compliance:

I, Kerry D. Maroney, P.E., certify that the site indicated above will be in compliance with the Airport Safety Location Restriction, as stated in 30 TAC §330.545 – Airport Safety.

Firm:	Biggs & Mathews, Inc.
Address:	2500 Brook Avenue Wichita Falls, TX 76301
Signature, Seal, and Date	

STATE OF TEXAS
K.D. MARONEY
44639
LICENSED
PROFESSIONAL ENGINEER

11/6/14

Biggs & Mathews, Inc.
Firm Registration No. F-834

Supporting documentation is provided in Part II, Section 9.2 – Airport Impact; and Part II, Appendix IIH – Federal Aviation Administration Documentation.

Owner/Operator of Site:

Owner/Operator:	130 Environmental Park, LLC
Address:	132 Riverstone Terrace, Suite 103 Canton, GA 30183
Official's Name and Title:	Ernest Kaufmann, President and Manager of 130 Environmental Park, LLC
Signature:	
Date:	11-7-14

LOCATION RESTRICTION
CERTIFICATION OF COMPLIANCE
FLOODPLAINS

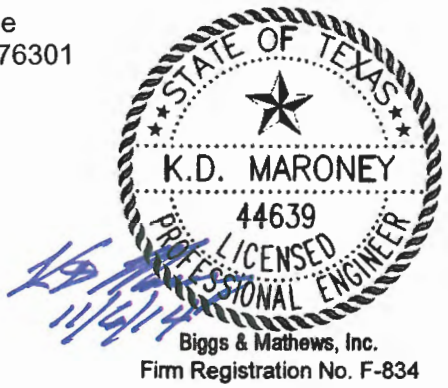
General Site Information:

Site:	130 Environmental Park
Site Location:	Caldwell County, Texas
TCEQ Permit Application No.:	MSW 2383

Statement of Compliance:

I, Kerry D. Maroney, P.E., certify that the site indicated above will be in compliance with the Floodplains Location Restriction, as stated in 30 TAC §330.547 – Floodplains.

Firm:	Biggs & Mathews, Inc.
Address:	2500 Brook Avenue Wichita Falls, TX 76301
Signature, Seal, and Date	



Biggs & Mathews, Inc.
Firm Registration No. F-834

Supporting documentation is referenced in Part II, Section 13.1 – Floodplains; Part II, Appendix IIA – Maps and Drawings, Drawings IIA.11 and IIA.21.

Owner/Operator of Site:

Owner/Operator:	130 Environmental Park, LLC
Address:	132 Riverstone Terrace, Suite 103 Canton, GA 30183
Official's Name and Title:	Ernest Kaufmann, President and Manager of 130 Environmental Park, LLC
Signature:	Ernest Kaufmann
Date:	11-7-14

LOCATION RESTRICTION
CERTIFICATION OF COMPLIANCE
GROUNDWATER

General Site Information:

Site:	130 Environmental Park
Site Location:	Caldwell County, Texas
TCEQ Permit Application No.:	MSW 2383

Statement of Compliance:

I, John Michael Snyder, P.G., certify that the site indicated above will be in compliance with the Groundwater Location Restriction, as stated in 30 TAC §330.549 – Groundwater.

Firm:	Biggs & Mathews Environmental, Inc.
Address:	1700 Robert Road, Suite 100 Mansfield, TX 76063
Signature, Seal, and Date	STATE OF TEXAS JOHN MICHAEL SNYDER GEOLOGY 595 LICENSED PROFESSIONAL GEOSCIENTIST 11-6-2014

Biggs & Mathews Environmental, Inc.
Firm Registration No. 50222

Supporting documentation related to aquifers beneath the facility is provided in Part II, Section 11.1 – Groundwater and Section 11.2 – Regional Aquifers.

Owner/Operator of Site:

Owner/Operator:	130 Environmental Park, LLC
Address:	132 Riverstone Terrace, Suite 103 Canton, GA 30183
Official's Name and Title:	Ernest Kaufmann, President and Manager of 130 Environmental Park, LLC
Signature:	Ernest Kaufmann
Date:	11-7-14

LOCATION RESTRICTION
CERTIFICATION OF COMPLIANCE
ENDANGERED OR THREATENED SPECIES

General Site Information:

Site:	130 Environmental Park
Site Location:	Caldwell County, Texas
TCEQ Permit Application No.:	MSW 2383

Statement of Compliance:

I, Russell Marusak, certify that the site indicated above will be in compliance with the Endangered or Threatened Species Location Restriction, as stated in 30 TAC §330.551 – Endangered or Threatened Species.

Firm:	Halff Associates, Inc.
Address:	1201 North Bowser Road Richardson, TX 75081
Signature, Seal, and Date	11-03-14

Supporting documentation is provided in Part II, Section 14 – Endangered and Threatened Species; and Part II, Appendix IIE – Endangered or Threatened Species Documentation.

Owner/Operator of Site:

Owner/Operator:	130 Environmental Park, LLC
Address:	132 Riverstone Terrace, Suite 103 Canton, GA 30183
Official's Name and Title:	Ernest Kaufmann, President and Manager of 130 Environmental Park, LLC
Signature:	
Date:	11-7-14

LOCATION RESTRICTION
CERTIFICATION OF COMPLIANCE
WETLANDS

General Site Information:

Site:	130 Environmental Park
Site Location:	Caldwell County, Texas
TCEQ Permit Application No.:	MSW 2383

Statement of Compliance:

I, Russell Marusak, certify that the site indicated above will be in compliance with the Wetlands Location Restriction, as stated in 30 TAC §330.553 – Wetlands.

Firm:	Halff Associates, Inc.
Address:	1201 North Bowser Road Richardson, TX 75081
Signature, Seal, and Date	11-03-14

Supporting documentation is provided in Part II, Section 13.2 – Wetlands; and Part II, Appendix IID – Wetlands Documentation.

Owner/Operator of Site:

Owner/Operator:	130 Environmental Park, LLC
Address:	132 Riverstone Terrace, Suite 103 Canton, GA 30183
Official's Name and Title:	Ernest Kaufmann, President and Manager of 130 Environmental Park, LLC
Signature:	
Date:	11-7-14

LOCATION RESTRICTION
CERTIFICATION OF COMPLIANCE
FAULT AREAS

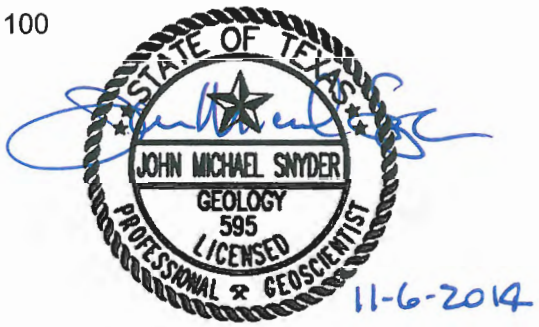
General Site Information:

Site:	130 Environmental Park
Site Location:	Caldwell County, Texas
TCEQ Permit Application No.:	MSW 2383

Statement of Compliance:

I, John Michael Snyder, P.G., certify that the site indicated above will be in compliance with the Fault Areas Location Restriction, as stated in 30 TAC §330.555 – Fault Areas.

Firm:	Biggs & Mathews Environmental, Inc.
Address:	1700 Robert Road, Suite 100 Mansfield, TX 76063
Signature, Seal, and Date	



Biggs & Mathews Environmental, Inc.
Firm Registration No. 50222

Supporting documentation is provided in Part II, Section 10.4 – Fault Areas.

Owner/Operator of Site:

Owner/Operator:	130 Environmental Park, LLC
Address:	132 Riverstone Terrace, Suite 103 Canton, GA 30183
Official's Name and Title:	Ernest Kaufmann, President and Manager of 130 Environmental Park, LLC
Signature:	
Date:	11-7-14

LOCATION RESTRICTION
CERTIFICATION OF COMPLIANCE
SEISMIC IMPACT ZONES

General Site Information:

Site:	130 Environmental Park
Site Location:	Caldwell County, Texas
TCEQ Permit Application No.:	MSW 2383

Statement of Compliance:

I, John Michael Snyder, P.G., certify that the site indicated above will be in compliance with the Seismic Impact Zones Location Restriction, as stated in 30 TAC §330.557 – Seismic Impact Zones.

Firm:	Biggs & Mathews Environmental, Inc.
Address:	1700 Robert Road, Suite 100 Mansfield, TX 76063
Signature, Seal, and Date	

11-6-2014

Biggs & Mathews Environmental, Inc.
Firm Registration No. 50222

Supporting documentation is provided in Part II, Section 10.5 – Seismic Impact Zones and Drawing IIA.10 – Seismic Impact Zone.

Owner/Operator of Site:

Owner/Operator:	130 Environmental Park, LLC
Address:	132 Riverstone Terrace, Suite 103 Canton, GA 30183
Official's Name and Title:	Ernest Kaufmann, President and Manager of 130 Environmental Park, LLC
Signature:	
Date:	11-7-14

LOCATION RESTRICTION
CERTIFICATION OF COMPLIANCE
UNSTABLE AREAS

General Site Information:

Site:	130 Environmental Park
Site Location:	Caldwell County, Texas
TCEQ Permit Application No.:	MSW 2383

Statement of Compliance:

I, Gregory W. Adams, P.E., certify that the site indicated above will be in compliance with the Unstable Areas Location Restriction, as stated in 30 TAC §330.559 – Unstable Areas.

Firm:	Biggs & Mathews Environmental, Inc.
Address:	1700 Robert Road, Suite 100 Mansfield, TX 76063
Signature, Seal, and Date	STATE OF TEXAS GREGORY W. ADAMS 73356 LICENSED PROFESSIONAL ENGINEER 11/6/2014

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

Supporting documentation is provided in Part II, Section 10.6 – Unstable Areas.

Owner/Operator of Site:

Owner/Operator:	130 Environmental Park, LLC
Address:	132 Riverstone Terrace, Suite 103 Canton, GA 30183
Official's Name and Title:	Ernest Kaufmann, President and Manager of 130 Environmental Park, LLC
Signature:	
Date:	11-7-14

LOCATION RESTRICTION
CERTIFICATION OF COMPLIANCE
COASTAL AREAS

General Site Information:

Site:	130 Environmental Park
Site Location:	Caldwell County, Texas
TCEQ Permit Application No.:	MSW 2383

Statement of Compliance:

I, Kerry D. Maroney, P.E., certify that the site indicated above will be in compliance with the Coastal Areas Location Restriction, as stated in 30 TAC §330.561 – Coastal Areas, because the proposed facility will not be located on a barrier island or peninsula or within 1,000 feet of an area subject to active coastal shoreline erosion.

Firm:	Biggs & Mathews, Inc.
Address:	2500 Brook Avenue Wichita Falls, TX 76301
Signature, Seal, and Date	STATE OF TEXAS K.D. MARONEY 44639 LICENSED PROFESSIONAL ENGINEER 11/6/14 Biggs & Mathews, Inc. Firm Registration No. F-834

Owner/Operator of Site:

Owner/Operator:	130 Environmental Park, LLC
Address:	132 Riverstone Terrace, Suite 103 Canton, GA 30183
Official's Name and Title:	Ernest Kaufmann, President and Manager of 130 Environmental Park, LLC
Signature:	Ernest Kaufmann
Date:	11-7-14

LOCATION RESTRICTION
CERTIFICATION OF COMPLIANCE
TYPE I AND TYPE IV LANDFILL PERMIT ISSUANCE PROHIBITED

General Site Information:

Site:	130 Environmental Park
Site Location:	Caldwell County, Texas
TCEQ Permit Application No.:	MSW 2383

Statement of Compliance:

I, Kerry D. Maroney, P.E., certify that the site indicated above will be in compliance with the Type I and Type IV Landfill Permit Issuance Prohibited Location Restriction, as stated in 30 TAC §330.563 – Type I and Type IV Landfill Permit Issuance Prohibited, because the proposed site is not located in a county that is adjacent to the Gulf of Mexico or a county with a population of more than 3.3 million.

Firm:	Biggs & Mathews, Inc.
Address:	2500 Brook Avenue Wichita Falls, TX 76301
Signature, Seal, and Date	STATE OF TEXAS K.D. MARONEY 44639 LICENSED PROFESSIONAL ENGINEER 11/6/14 Biggs & Mathews, Inc. Firm Registration No. F-834

Owner/Operator of Site:

Owner/Operator:	130 Environmental Park, LLC
Address:	132 Riverstone Terrace, Suite 103 Canton, GA 30183
Official's Name and Title:	Ernest Kaufmann, President and Manager of 130 Environmental Park, LLC
Signature:	Ernest Kaufmann
Date:	11-7-14