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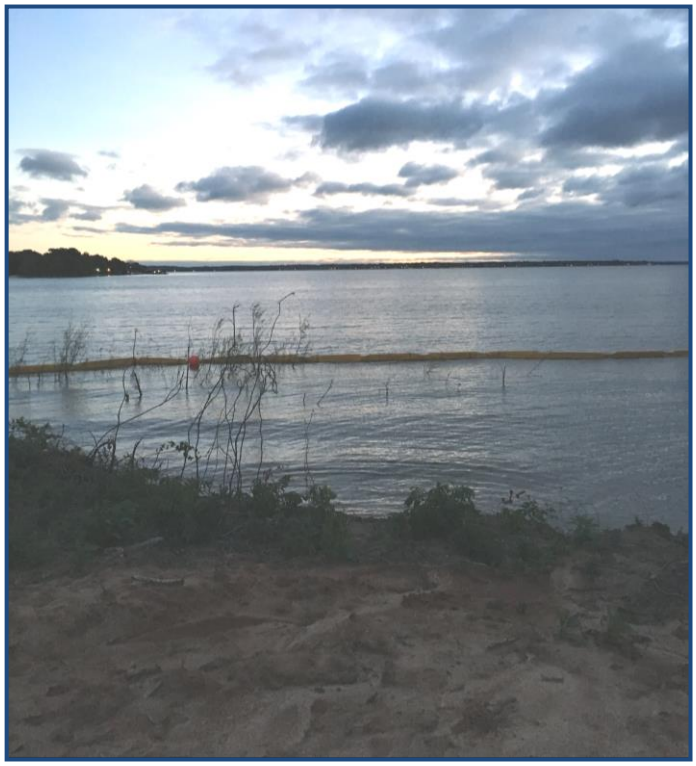

Antiquities Permit No. 7980

August 2017

AmaTerra® Environmental, Inc.

INCIDENTAL ARCHEOLOGICAL RESOURCE INVESTIGATION AT THE INTEGRATED PIPELINE PROJECT'S CEDAR CREEK RESERVOIR PUMP STATION SITE AND 41HE377, HENDERSON COUNTY, TEXAS

(REDACTED VERSION)

By

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Prepared on behalf of:

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and the

Tarrant Regional Water District

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Cover photograph:
Sunrise at the Cedar Creek Pump Station Site

ABSTRACT

Archeologists from AmaTerra Environmental, Inc. (AmaTerra), working on behalf of the Tarrant Regional Water District (TWRD) and their environmental compliance subconsultant, Freese & Nichols, Inc., conducted an emergency investigation at the previously recorded Site 41HE377 at the Cedar Creek Reservoir Pump Station in Henderson County, Texas. The investigation was conducted after a private citizen reported finding a human jaw bone along the shoreline at 41HE377 and expressed concern that the pump station, which is currently under construction, may be impacting an unrecorded cemetery.

Initially recorded in 2011, 41HE377 was documented as a thin surface scatter of prehistoric artifacts occupying the Cedar Creek reservoir's shoreline at a proposed pump station site for TRWD's Integrated Pipeline Project. The site was recommended as not eligible for the NRHP because it contained no intact deposits along the shoreline or farther inland. At the time of recording, archeologists speculated that the lithic debris along the shoreline appeared to be washing in from elsewhere in the lake through wave action.

In April 2017, archeologists inspected the pump station construction site and Site 41HE377 area for any evidence of human remains or disturbed burials and met with the informant, Bobby Wright. AmaTerra found no evidence of burials or displaced human remains. Once at the site, Mr. Wright indicated that he thought the jawbone had washed up from the reservoir when he found it two years earlier, when water was lower than its current level. He was not able to show investigators the bone because he had reburied it and could not relocate it due to landscape modifications made during construction activities at the pump station site and higher water levels. Thus, archeologists were not able to confirm its presence or that the reported bone was indeed human.

Based on the lack of any real evidence of human remains at the Cedar Creek Pump Station Site, AmaTerra recommends that continued construction at the pump station should proceed with no further cultural resource coordination required under the NHPA or the ACT. However, due to the continued potential for an unmarked cemetery somewhere under the lake, AmaTerra recommends TRWD staff conduct periodic surface inspection along the shoreline, particularly along its northeastern segment when water levels are low.

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CHAPTER 1
INTRODUCTION

On behalf of the Tarrant Regional Water District (TRWD) and their environmental compliance consultant, Freese & Nichols, Inc., AmaTerra Environmental, Inc. (AmaTerra) conducted an emergency inadvertent discovery response investigation at the Integrated Pipeline Project's (IPL's) Cedar Creek Reservoir Pump Station and site 41HE377 in Henderson County, Texas (**Figure 1**). The project is subject to Section 106 of the National Historic Preservation Act due to the need for permitting through the United States Army Corps of Engineers (USACE). The project is also subject to the Antiquities Code of Texas because it will take place on land owned by TRWD, which is considered a political subdivision of the State of Texas. Previous survey for the IPL pipeline and the Cedar Creek Pump Station occurred in 2011 under Permit No. 5826. Under that permit, Site 41HE377 was recorded but recommended as not eligible for listing in the National Register of Historic Places (NRHP) or as a State Antiquities Landmark (SAL).

The current investigation followed a private citizen's 2017 report of finding a human mandible at 41HE377. AmaTerra applied for an emergency Antiquities Permit on April 4, 2017. Permit No. 7980 was issued the following day. On April 4 and 5, 2017, Amy Goldstein, acting as project archeologist, and Noel Steinle traveled to the site to determine whether the bone was human, and whether previously unknown burials were present at the site that may have been impacted by ongoing construction for the pump station.

Currently, construction of the pump station is ongoing and involves extensive displacement of soil for both the pump station facility and its proposed intake channel into the lake (**Figure 2**). The main portion of the facility is being constructed at a formerly vegetated high point overlooking the Cedar Creek shoreline, outside the original Site 41HE377 boundary. However, deep dredging has taken place just inside the shoreline (**Figure 3**) and additional dredging to a depth of more than 20 feet out into the lake will be required for the intake channel. All of the work currently being done was designed and permitted through the USACE during the planning process.

Investigators took these factors into account when visiting the pump station site. An on-site conversation with the informant, Bobby Wright, revealed that he had found what he thought was a human mandible approximately two years prior, before pump station construction began. Mr. Wright found the jawbone along the shoreline within the boundaries of Site 41HE377 when water levels were low, and at that time he believed that it had washed up from somewhere within the lake. He reburied the bone on the terrace above the shoreline. Unfortunately, it could not be relocated during the 2017 investigations due not only to subsequent construction-related landscape modifications, but also higher water levels which changed the appearance of the landscape.

Ultimately, the investigation of 41HE377 and the pump station site did not result in the identification of any evidence of a cemetery or human remains. Moreover, without

knowing the exact location of original find, and having no photographs of it, investigators could not confirm whether the bone was human.

This report recommends that no further archeological work is required in this location and that ongoing construction should be allowed to continue. AmaTerra does recommend that TRWD staff periodically inspect the shoreline for evidence of prehistoric artifacts and human remains.

All project-generated notes, forms, and photographs will be curated at the Texas State University's Center for Archeological Studies in San Marcos, Texas.

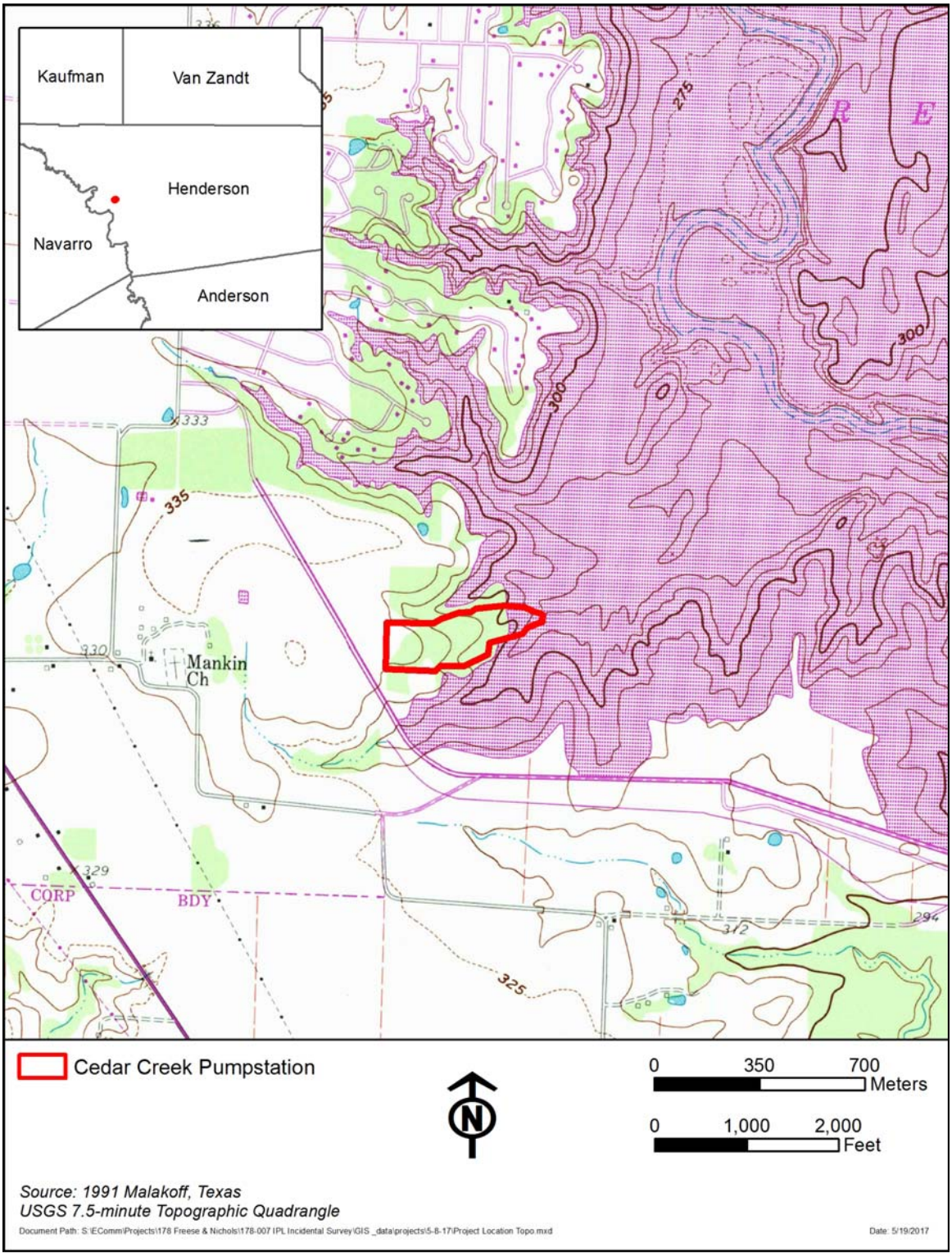

Figure 1. Project area depicted on the Malakoff, Texas USGS 7.5-minute topographic quadrangle.

Figure 2. Pump Station Schematics overlaid onto a modern aerial photograph. Bathymetric survey contours offshore are included as well (white).

Figure 3. View of the pump station site in April 2017, facing northeast.

CHAPTER 2
ENVIRONMENTAL SETTING AND CULTURAL BACKGROUND

The project location is situated at the border of the Northern Post Oak Savanna and Floodplains and Low Terraces sub-regions of the East Central Plains ecoregion (Griffith et al 2004). Within the project area, pine-hardwood forest dominated the vegetation, which in many areas has been logged and transitioned to cropland or prairie.

The geology of the project area is characterized by Pleistocene terrace deposits (Bureau of Economic Geology 1987). The soils within the vicinity of the site location are comprised of Axtell loam (1-5 percent slopes) (USDA-Natural Resources Conservation Service [USDA-NRCS] 2017). This soil consists of loam over clay and clay loam, which extends to at least 80 inches to bedrock. These soils were formed from alluvium derived from mudstone.

The Cedar Creek Pump Station occupies what was formerly a hilltop between two tributary drainages to Cedar Creek. Cedar Creek itself flowed approximately one half mile to the east and is a major tributary to the Trinity River basin (**Figure 4**). When the Cedar Creek Reservoir was impounded in 1965, the normal pool level was maintained at the 322-ft contour line (with about 4 feet of fluctuation) leaving much of the hilltop still exposed.

41HE377

Site 41HE377 was identified during initial survey of the IPL route in 2011. The site was recorded as a surface lithic scatter located along the beach at the southwest edge of the Cedar Creek Reservoir (see Figure 1). The site contained four concentrations of lithic debris and fire-cracked-rock on the surface of the exposed beach area, which appear to have either eroded out of the terrace above or washed up from inundated deposits near the shoreline (Miller et al. 2014). No bone, charcoal, pottery or other artifacts were noted during the survey. Eleven shovel tests were placed in the vicinity of the site both on the beach and on the intact wooded terrace above it, and none contained buried cultural materials (Miller et al. 2014). During its 2011 recording, archeologists hypothesized that an unknown portion of 41HE377 likely lay offshore, beyond survey access. The Texas Historical Commission (THC) concurred with a recommendation that portions of the site within the survey area were ineligible for NRHP/SAL listing in 2013 (Miller et al. 2016, THC's Archeological Sites Atlas [Atlas] 2017).

Cultural Resources Nearby

There are 16 archeological sites identified within 3.5 kilometers (2.17 miles) of 41HE377 (Atlas 2017; **Figure 5**). All 16 archeological sites located within the vicinity of 41HE377 are prehistoric sites. These sites are primarily mapped along the original cut of Cedar Creek or its tributaries. Twelve of the 16 sites are currently inundated by the Cedar Creek Reservoir. The inundated sites were all documented during surveys which occurred

between 1960 and 1963 (Atlas 2017). The majority of the sites contained lithic debris and tools, though a few sites also contained ceramics and one (41HE60) contained large stones engraved to look like heads (Atlas 2017) found within ancient gravel deposits. It is worth noting that this site, also known as the Malakoff Head Site is mapped quite close to Site 41HE377 and appears to occupy the same landform between two Cedar Creek Tributaries, albeit at a lower elevation. The Malakoff Head site has been the subject of much debate over the years about whether the carved heads are in fact real prehistoric finds, or simply part of a hoax. The consensus among professional archeologists is that at least two of the carved stone heads are modern frauds.

The Cedar Creek Reservoir was impounded in 1965 (Texas Parks and Wildlife [TPWD] 2017) prior to the implementation of the National Historic Preservation Act and the Antiquities Code of Texas.

Figure redacted due to site-sensitive content.

Figure 4. Project area on a 1960 USGS topographic map showing original landform.

Figure redacted due to site-sensitive content.

Figure 5. Cemeteries and archeological sites located around the project area.

CHAPTER 3
METHODOLOGY AND RESULTS OF FIELD INVESTIGATIONS

Examination of the project areas consisted of a 100 percent visual survey of the pump station site focusing on the portions of the shoreline not impacted by construction. During the pedestrian survey, the ground surface was examined for cultural material and features. Indications of ground disturbances were thoroughly photographed. In addition to the visual inspection of the site, archeologists met with the informant, Mr. Wright, to determine where the mandible was found and reburied.

Shovel testing was originally proposed for this investigation, but once investigators arrived at the site they determined it to be unnecessary. Construction activity on the terrace has deposited approximately one to two meters of construction fill material on the terrace, and most intact portions of 41HE377 were inundated at the time of the investigation. Project area-specific information was recorded on standardized forms during the course of this project. No artifacts were collected during this survey.

Inspection of the site revealed that ongoing construction on the pump station site had significantly impacted portions of 41HE377 and the adjacent terrace (**Figures 6** and **7**). One to two meters of construction fill had been added to the terrace and significant excavation of the east side of the peninsula has occurred to accommodate the pump station intake channel. Construction workers reported that they had not encountered subsurface cultural deposits or bone thus far during construction.

Pedestrian survey of the project area determined that portions of 41HE377 are still intact near the site's mapped northern and southern edges. A small amount of lithic debris (**Figure 8**) was identified in concentrations on the shoreline surface in these undisturbed areas. No disturbed burials or scattered human remains were encountered during the site inspection. Shovel tests were not excavated in these areas, because it was immediately evident that the artifacts were washing in from elsewhere in the lake. Moreover, shovel testing during the 2011 survey found no buried cultural material in any of the tests.

Archeologists met with the informant, Bobby Wright, on the morning of April 5 to discuss the nature of his find and to attempt to relocate his find. At that time, Mr. Wright stated that he had found a jaw bone fragment on the shoreline near the tip of the peninsula at least two years earlier and had reburied it on the terrace. He believed that it had washed up onto the shoreline from elsewhere in the lake. Mr. Wright could not identify the location where he buried the jaw bone fragment due to significant modifications to the terrace from construction activities and differing water levels; it is likely that the burial location is in the area where at least a meter of construction fill has been added. Mr. Wright did not have any photographs of his find and the bone could not be relocated, so it was not possible to confirm whether the jaw bone fragment was human.

All of the evidence to date suggests that the bone fragment washed up on the shoreline from another location in the lake. This was the opinion of Mr. Wright when he found the mandible two years ago. No other human remains have been reported at the site during construction nor were any identified during initial documentation of Site 41HE377. When Site 41HE 377 was originally recorded, 11 shovel tests placed both on the beach and on the terrace above it found no buried cultural material, and at that time investigators believed that the artifacts observed on the shoreline had also been washed up from another location within the lake.

If indeed the mandible is part of a human burial it is likely within a site eroding a from lower terrace deposit along Cedar Creek, in what is now the lake. To further explore this idea, the pump station plans and site location were overlaid onto bathymetric data for the Cedar Creek Reservoir. The bathymetry shows the pump station occupying the former hilltop over Cedar Creek and the intake channel being constructed over a sharp slope facing east. However, a significant portion of the hilltop terrace extends under the lake to the northeast and remains intact under the water (**Figure 9**). Based on topography, and based on known north-south currents within the lake, this could be where artifacts associated with Site 41HE377 are originating. If indeed an unmarked cemetery exists, the edge of this landform overlooking the Cedar Creek drainage basin would be a plausible location for it. However, this location has not been and will not be impacted by the pump station.

Figure 6. View of pump station construction from a small undisturbed portion of 41HE377 on the north side of the peninsula (facing west).

Figure 8. Overview of pump station construction from the point of the peninsula (facing west).

Figure 7. Representative artifacts observed on the surface at 41HE377.

Figure redacted due to site-sensitive content

Figure 9. Bathymetric data overlaid on a recent aerial photograph.

CHAPTER 4
CONCLUSIONS AND RECOMMENDATIONS

Under Permit No. 7980, AmaTerra archeologists conducted an emergency inadvertent discovery response at Site 41HE377 and the IPL Cedar Creek pump station site following the report of human mandible found at the site. The entire area was visually inspected and pedestrian survey was conducted along the shoreline to locate the reported find, any additional remains, or previously unknown burials that have been disturbed.

Surface artifacts were observed during the cultural resources investigation within an undisturbed portion of 41HE377, but Mr. Wright's find from two years earlier could not be relocated and no other skeletal material was observed during the investigation. Archeologists were unable to confirm whether Mr. Wright's find was a human jaw bone, but based on the inspection and conversation with Mr. Wright it is likely that the bone had washed up on the shoreline from elsewhere around the reservoir in cultural deposits which are currently inundated. Mr. Wright stated that he had reburied the bone. However, the burial site could not be relocated due to landscape modifications made during construction activities at the pump station site and higher water levels.

Because the find burial location has likely been covered with at least a meter of construction fill and no additional human remains were identified in the investigation, AmaTerra recommends that the current construction work proceed without further consultation. However, AmaTerra does recommend periodic monitoring of the shoreline at the Cedar Creek Pump Station and at 41HE377 to check whether any additional remains have been deposited along the beach through wave action.

No artifacts were collected as part of the archeological investigation. All field records created while conducting this investigation will be permanently curated and archived at the Center for Archeological Studies at Texas State University in San Marcos.

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