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Central Texas Archaeological Resources
Report of Investigations 4002
Project Number 2014002
Antiquities Permit Number 7003

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Principal Investigator,
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Texas Antiquities Permit Number 7003

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Management Summary

Archaeologists from Central Texas Archaeological Resources (CTAR), on behalf of the City of Ballinger, Runnels County, Texas, conducted an intensive areal archaeological survey with deep mechanical testing within the boundaries of a proposed Waste Water Treatment Plant (WWTP) Expansion, located in Ballinger, Runnels County, Texas on August 24-25, 2014. The proposed WWTP expansion was funded by a Texas Community Development Block Grant (TxCDBG) and therefore, subject to the Antiquities Code of Texas. The city's current treatment plant in Ballinger was nearing it capacity and was required by the Texas Commission on Environmental Quality (TCEQ) to expand its capabilities in order to meet its future needs. The project design would increase the overall size of the treatment plant, meeting the TCEQ mandate. The survey area was on public property currently owned by the City of Ballinger, Texas.

The location of the proposed new retention ponds were the Area of Potential Effects (APE) for the survey. The APE contained approximately 8.21 hectares (20.3 acres). All field work was conducted in accordance with the Texas Historical Commission (THC) and the Council of Texas Archaeologists' (CTA) survey standards as outlined in 13 TAC 26.5(35), 13 TAC 26.20(1), and 13 TAC 26,20(2). The archaeological survey was conducted by Principal Investigator, Katherine Turner-Pearson, MA, RPA on August 24-25, 2014. A total of seven shovel tests were excavated to depths of 42-60 centimeters below the surface (cmbs). Archaeologists placed five backhoe trenches within the APE of approximately 6.5 meters (m) x 2.15 m in surface size and 2.0 m in depth. No archaeological sites or cultural remains were revealed during the shovel tests or mechanical testing; however, one archaeological site was discovered during the pedestrian survey. The site, 41RN277, was a surface lithic scatter believed to be archaic in age. The site was disturbed with no diagnostic artifacts, and did not meet the National Register of Historic Places' eligibility requirements. Archaeologists recommended that the project proceed as planned.

Project and site documentation will be curated at the Texas Archaeological Research Laboratory (TARL) in Austin, Texas, and a copy of this report will be filed with the THC in Austin and the CTAR offices in Woodway, Texas.

Introduction and Project Description

Archaeologists from Central Texas Archaeological Resources (CTAR), on behalf of the City of Ballinger, Runnels County, Texas, conducted an intensive areal archaeological survey with deep mechanical testing within the boundaries of a proposed Waste Water Treatment Plant (WWTP) Expansion, located in Ballinger, Runnels County, Texas on August 24-25, 2014 (Figure 1). The proposed WWTP expansion was funded by a Texas Community Development Block Grant (TxCDBG) and therefore, subject to the Antiquities Code of Texas (see Attachment A). The city's current treatment plant in Ballinger was nearing its capacity and was required by the Texas Commission on Environmental Quality (TCEQ) to expand its capabilities in order to meet its future needs. The project would increase the overall size of the treatment plant in order to meet the TCEQ mandate.

The City of Ballinger proposed the construction of a new retention pond adjacent to the original treatment plant facilities in order to fulfill the TCEQ requirements (Figure 2). The city proposed the construction of one sewage treatment pond utilizing approximately 5,000 tons of rip-rap and the installation of approximately 365.76 linear meters (1,200 linear feet) of piping, values, and all associated appurtenances. The total area of potential effects (APE) was 8.21 hectares (20.3 acres) with the depth of impacts between 1.22

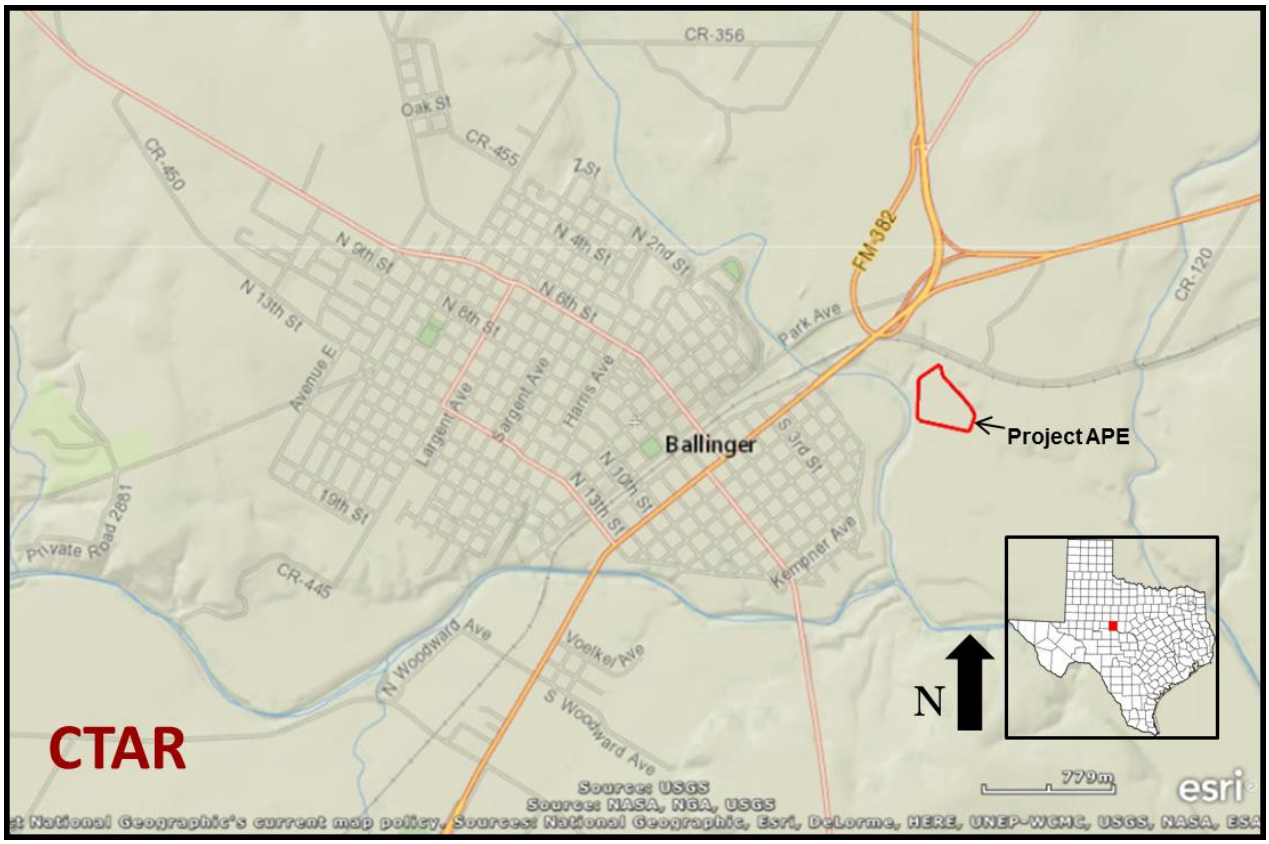


Figure 1. Location of Project in Ballinger, Runnels County, Texas *(Map Source USGS, 2014)*

meters (m) to 1.52 m (4 – 5 feet [ft.]). Some areas would have a 1.22 m to 1.52 m (4 – 5

ft.) increase in elevation composed of added material.

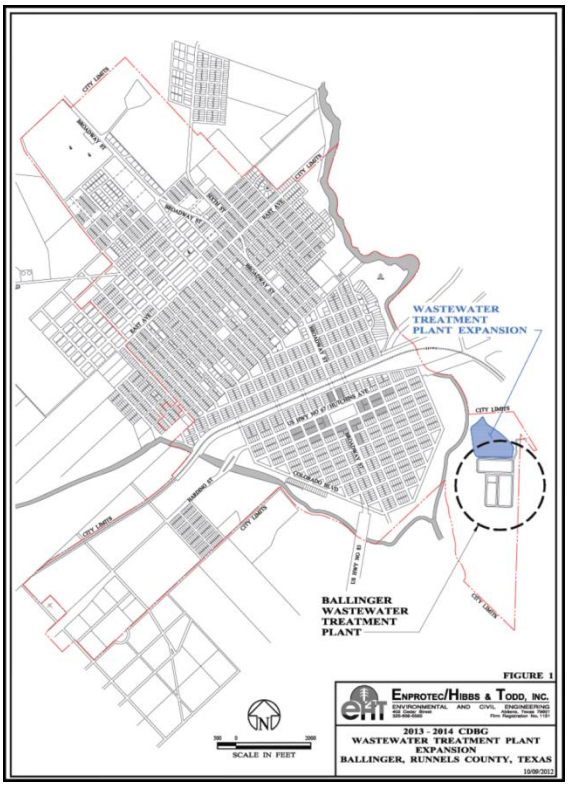


Figure 2. Ballinger WWTP Location

USGS Quadrangle References

The project lies within the U.S. Geological Survey (USGS) 7.5-Minute quadrangle map of Ballinger, Tex [3199-323] (Figure 1).

Project Setting

Geology

The geologic formations of the project area are Permian in age, with the main portion Quaternary flood plain and terrace alluvium. The other portion consists of Lueders limestone, undifferentiated, which is part of the Wichita group along with some beds of Leonard age formations (Moore 1958).

The physiographic features within the project area are terrace deposits of Pleistocene and Holocene sands, Holocene alluvium sand deposits, and Clear Fork Group Permian mudstone and sandstone of the Leonard soil series (U.S. Geological Survey 2014).

Exhibit 1. One of the Current WWTP Retention Ponds

Topography and Drainage

The City of Ballinger is located in Runnels County, immediately above the confluence of the Colorado River and Elm Creek, with the majority of the city nestled between the two streams. The city of San Angelo is located 58 kilometers (km) (36 miles) southwest.

The project APE is located on the east side of Elm Creek immediately above its confluence with the Colorado River (Figure 1).

Located in northwest Texas, Runnels County is defined by the Colorado River and

its tributaries. In the Ballinger area, the main tributary is Elm Creek, with the primary watershed the Colorado River. The Colorado River flows southeast across the lower third of Runnels County terminating at the Concho River. The bottom lands of the Colorado are generally steep, narrow bluffs along the larger bends of the river, with wide floodplain horizons opposite. The relief on the north side of the Colorado consists of a greater relief than the areas to the south. The best geologic sections of the Permian rocks found in the county are found along the Colorado River bluffs (Beede and Waite 1918).

The surface elevation at the site is approximately 497 m (1631 ft.) above mean sea level (amsl).

Soils

The soils in the project APE are predominantly Spur loam, a loamy alluvium of Holocene age, with a small amount of Bukreek loam (1 to 3 percent slopes) and Mereta clay loam (1 to 3 percent slopes) along the far north and northeast portions (National Cooperative Soil Survey 2003, 2013, 2013).

The *Spur* soil series consists of very deep, well drained, moderately permeable soils. They are nearly level to very gently sloping, with slopes ranging from 0 to 2 percent. They are formed in loamy alluvial sediments on nearly level and gently sloping flood plains in the Central Rolling Red Plains (National Cooperative Soil Survey 2003). A typical profile contains an A horizon from 0 to15 inches of brown (7.5YR 4/2) clay loam, with a moderate medium granular structure that is hard and friable with many fine roots and many fine to medium pores. The A horizon is followed by a Bk1 horizon from 15 to 38 inches of brown (7.5YR 5/4) clay loam. It is of a moderate fine subangular blocky and moderate fine granular structure. This is followed by a Bk2 horizon 38 to 50 inches in depth. It is a brown (7.5YR 5/4) clay loam, with a moderate fine subangular blocky structure. Next is a Bk3 that is 50 to 60 inches deep. It is a light reddish brown (5YR 6/4) clay loam, with a weak fine subangular blocky structure (National Cooperative Soil Survey 2003).

The *Bukreek* soil series consists of very deep, well drained, moderately permeable soils that formed in the loamy alluvium of the Quaternary age. These soils occur on very gently sloping terraces on dissected plains. The slopes range from 0 to 3 percent. Bukreek soils are fine-loamy, mixed, superactive, thermic Typic Paleustolls and are often cultivated. A typical horizon contains an Ap horizon from 0 to 23 cm (0 to 9 in) of reddish brown (5YR 4/3) loam, that is of a weak fine granular structure. The A horizon is followed by a Bt1 from 23 to 41 cm (9 to 16 in) in depth of reddish brown (5YR 4/3) sandy clay loam. Beneath the Bt1 horizon is a Bt2 horizon from 41 to 81 cm (16 to 32 in) that is a reddish brown (5YR 4/4) sandy clay loam. The Bt2 is followed by a Bt3 from 81 to 122 cm (32 to 48 in) of yellowish red (5YR 5/6) sandy clay loam that is of a moderate medium subangular blocky structure. Below the Bt3 is a Btk1 from122 to 168 cm (48 to 66 in). It is a red (2.5YR 5/6) sandy clay loam, that is of a moderate coarse subangular blocky structure. Next is a Btk2 horizon from168 to

226 cm (66 to 89 in) of red (2.5YR 5/6) loam. It is of a weak coarse subangular blocky structure that is hard and friable. The final horizon is a Btk3 from 226 to 259 cm (89 to 102 in) that is a red (2.5YR 5/6) loam. It is of a weak coarse subangular blocky structure that is hard and friable (National Cooperative Soil Survey 2013).

The *Mereta* Soil Series consists of an Ap horizon from 0 to 12 cm (0 to 5 in) of dark grayish brown (10YR 4/2) clay loam that is of a weak fine granular structure. The Ap horizon is followed by a Bw1 horizon from 12 to 28 cm (5 to 11 in) in depth. It is of a moderate fine subangular blocky structure. Next is a Bw2 horizon 28 to 48 cm (11 to 19 in) in depth of a brown (7.5YR 4/3) clay loam that is a moderate fine subangular blocky structure which is followed by a Bkkm horizon 48 to 58 cm (19 to 23 in)in depth. It is a pinkish white (7.5YR 8/2) caliche that is strongly cemented and platy. Next in depth is a BCkk horizon 58 to 102 cm (23 to 40 in) deep consisting of a pink (7.5YR 8/4) loam, that is massive; soft, and friable. The final horizon is a BCk horizon from 102 to 152 cm (40 to 60 in) in depth of a light brown (7.5YR 6/4) clay loam, that is massive, soft, and friable (National Cooperative Soil Survey 2013).

Flora and Fauna

The average high in Ballinger is 77 degrees Fahrenheit (F) and the average low is 52.1 degrees F, with an overall average temperature of 64.9 degrees F. The average precipitation is 61.09 cm (24.05 inches) (U.S. Climate data 2014).

The county is located largely in the Rolling Plains of North Central Texas, with its southeastern portion in the Edwards Plateau (Texas Parks and Wildlife 2014). This positions it on the edge of Blair's Kansan and Balconian Biotic Provinces (Blair 1950).

Flora in the county includes Little bluestem (warm season perennial), Texas wintergrass (cool season perennial), crabgrass (warm season annual), and rescuegrass (cool season annual) grasses; forbs such as bluebonnets (cool season annual), native sunflowers (warm season annual), Engelmanndaisy (cool season perennial), and Maximillian sunflower (warm season perennial), and trees that include cedar elm, Texas ash, post oak, cottonwood, pecan, and willow. Common shrubs are coralberry, skunkbush sumac, elbowbush, and Mexican buckeye, and grape, Carolina snailseed, white honeysuckle, greenbriar, and poison ivy vines (Texas Parks and Wildlife 2014).

Located in north central Texas are four big game species that include White-tailed deer (Odocoileus virginianus), Mule deer (Odocoileus hemionus), Pronghorn (Antilocapra americana), and Javelina (Tayassu tajacu). Upland game includes Bobwhites (Colinus virginianus), Scaled Quail (Callipepla squamata), Rio Grande Turkey (Meleagris gallapavo), Mourning Doves (Zenaida macroura), White-winged Doves (Zenadia asiatica), Squirrels (Sciurus niger), and Rabbits (Sylvilagus floridanus). Furbearing Mammals include American badger (Taxidea taxus), American beaver (Castor canadensis), gray fox (Urocyon cirereoargenteus), red fox (Vulpes vulpes),

mink (Mustela vison), muskrat (Ondatra zibethicus), nutria (Myocastor coypus), Virginia opossum (Didelphis virginiana), raccoon (Procyon lotor), ring-tail (Bassariscus astutus), western spotted skunk (Spilogale gracilis), eastern spotted skunk (S. putorius), striped skunk (Mephitis mephitis), and the common hog-nosed skunk (Conepatus mesoleucus). Other birds include Pheasants (Phasianus colchicus) and Migratory Upland Game Birds including three species of Teal (blue-winged teal [Anas discors], green-winged teal [A. crecca], and cinnamon teal [A. cyanoptera], Geese (white-fronted [Anser albifrons], snow [Chen caerulescens], and Canada geese [Branta Canadensis]), and Sandhill Cranes (Grus canadensis) (Texas Parks and Wildlife 2014).

Background Research

A review of the Texas Archeological Sites Atlas (Texas Historical Commission 2014) indicates one documented archaeological site, one archaeological survey, and three state historic properties located within 1,000 m of the project boundary, and are shown on (Figure 4). Site 41RN194, located 410 m southwest of the project along the banks of Elm Creek is an archaic camp site. The site was discovered in 1986 in connection with the construction of the current Ballinger waste water treatment facility, which makes it especially significant to the current project. The site report offers little information other than it had one un-named diagnostic artifact, burned rock, and freshwater clam shells found within a linear series of hearths that ran parallel to the stream channel. According to the report, it was not a series of burned rock middens. The report also indicates that a large portion of the site remains on private property (Guffee 1986).

An aerial survey of the current Ballinger WWTP boundaries was conducted immediately south of the current project APE. While no date of the survey was noted, it most likely occurred in 1986, around the time of the discovery of site 41RN194. A TDHPT linear survey is also located to the southwest of the project area (Texas Historical Commission 2014).

The Lynn-Hathaway Building (Texas Historical Landmark 3151) is located 200 m west of the project at the corner of 8th and Hutchins in downtown Ballinger. The German Methodist Church and First Fire Station (Texas Historic Landmark 2174) is located 870 m west of the project APE at 420 Strong Street, and the Colorado River Ferry Crossing (Texas Historic Landmark 976) is located 1.07 kilometers (km) from the project at the south end of 8th Street (Texas Historical Commission 2014).

No known archaeological sites or surveys are located within the proposed project boundaries.

Research Design

Based on the findings presented above and the initial recommendations from the THC, CTAR recommended they conduct an intensive areal pedestrian survey combined with deep mechanical testing, within the boundaries of the proposed WWTP project APE. The survey would meet or exceed the THC's and the Council of Texas

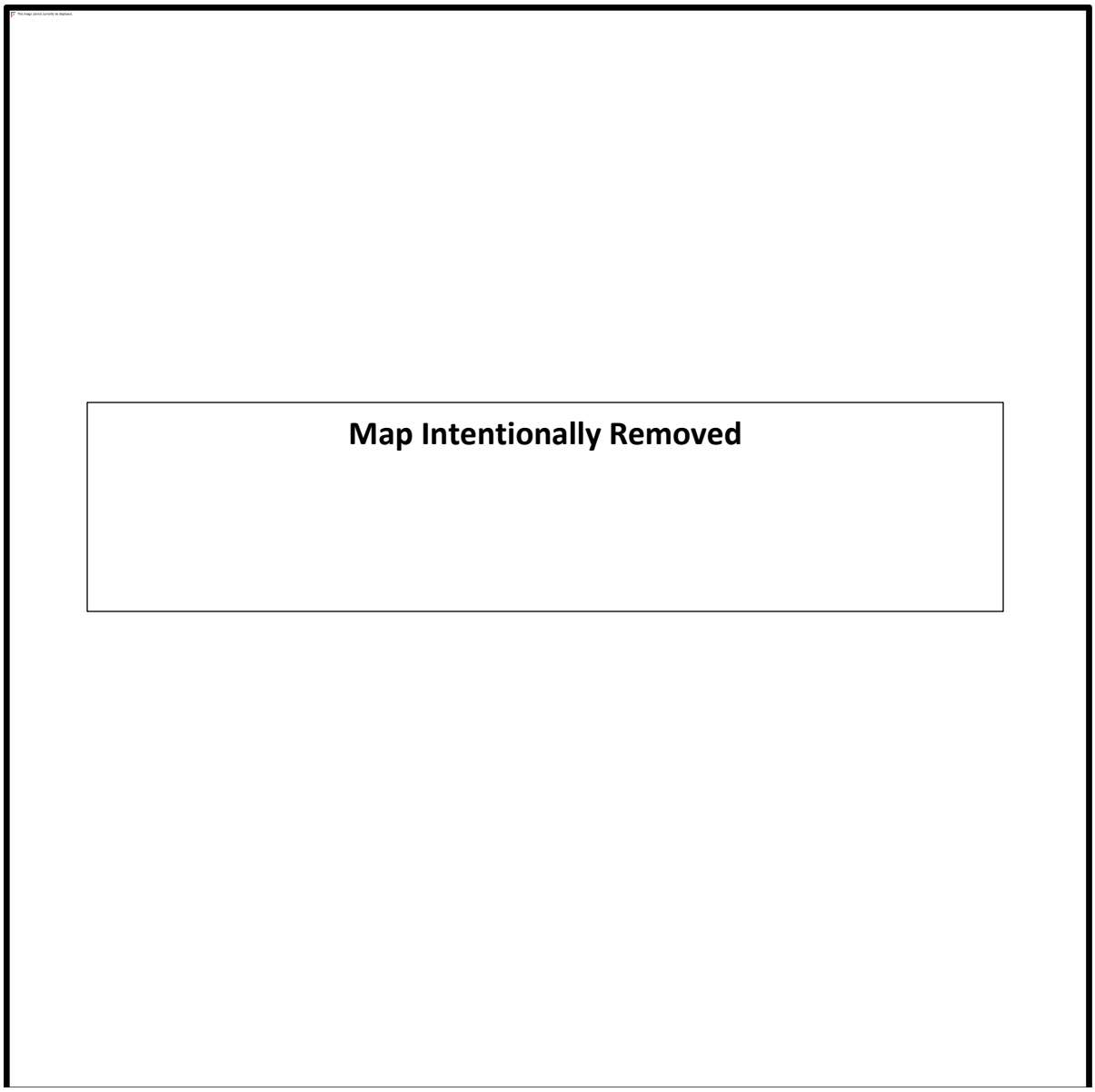


Figure 3. Known Archaeological Sites, Surveys, and Historical Markers within 1,000 Meters of the Project APE

Archaeologists' (CTA) guidelines for areal surveys of between 11 and 100 acres, with a minimum of five shovel tests within the APE, combined with four to five backhoe trenches due to the excessive depth of the proposed impacts (the backhoe trenches would replace five of the usually recommended ten shovel tests). The exact number and placement of the shovel tests and backhoe trenches would be decided in the field based on the environmental and geological conditions encountered at the time of the survey.

Additionally, all structures 50 years or older within the project APE or along the APE parameter would be identified, photographed, and included in the Final Report of Investigations.

All the field work performed would meet or exceed the minimum standards as identified by the CTA and the THC and would comply

with applicable standards as defined or referenced in 13 TAC 26.20 and THC policy. If alternative methods were necessary, the report would provide explicit, plausible justification for deviation from those standards. All shovel tests would be a minimum of 30-x-30 cm in size, and would extend to an adequate depth to examine the stratigraphic sequence at each testing locale. The shovel tests would not extend below 100 cm. Each shovel test would be excavated in 20-cm arbitrary levels, and all soil would be screened through one-quarter-inch mesh hardware cloth. All backhoe trench excavations would be monitored by a professional archaeologist. All backhoe excavations would be examined by a geoarchaeologist for cultural activity and buried paleosols. All soil horizons would be identified and recorded for inclusion into the Final Report of Investigations.

It was determined that only diagnostic artifacts discovered would be collected during the survey, and any collected artifacts would be temporarily housed during curation at the CTAR laboratory in Woodway, Texas and permanently housed at the Texas Archeological Research Laboratory (TARL).

All archaeological fieldwork for the project would be conducted by trained archaeologists from CTAR who fulfilled the CTA's professional requirements for archaeologists and the *Secretary of the Interior's Professional Qualifications and Standards for Historic Preservation Projects* (Department of the Interior, Archaeology and Historic Preservation: *Secretary of the Interior's Standards and Guidelines*). Fieldwork would be supervised by a Registered Professional Archaeologist who meets or exceeds the *Secretary of the Interior's Standards for Principal Investigators*. It was also stated that in the event that human remains were encountered during the survey, the THC, Public Management, Inc., and the City of Ballinger will be notified immediately, and all investigations in the immediate area would cease until written notice from the THC.

Exhibit 2. Principal Investigator and Geoarchaeologist MA, RPA Examines BT-1

Field Methodology

The survey was conducted on August 24-25, 2014 by Principal Investigator Katherine Turner-Pearson, MA, RPA. On the first day of the survey she met with Steve Nixon, the Operations Manager for the City of Ballinger, who discussed the background of the project area. According to Nixon, just beyond the northeast portion of the project APE and within the fenced area of the WWTP, is the city's previous landfill, which is now a large grass covered hill. At the bottom of the hill, and within the project APE is a pond that was most likely created as a borrow-pit during the covering of the city dump and the subsequent construction

of the surrounding road. The pond and the adjacent low-lying area around it had been greatly disturbed and thus were not included in the current survey as any archaeological sites located within these areas would most likely be destroyed.

At the time of survey, portions of the project APE were abnormally green with overgrown grasses due to recent rains. However, these areas were predominately in the previously disturbed and low lying areas. The upper and undisturbed areas bore thin patches of native grasses and scrub trees with 80-90 percent ground visibility.

Exhibit 3. Excavation of Backhoe Trench by the City of Ballinger

The undisturbed portion of the APE was surveyed first, utilizing 60 meter (m) transects due to the optimal visibility. Shovel tests were placed in areas which suggested a high probability of having a buried site. One criterion for shovel testing was locations of surface lithic debris in order to determine if there was a shallowly buried site that was washing out of the slope. A total of seven shovel tests were placed within the APE. The locations of the shovel tests are shown on Figure 4. None of the shovel tests uncovered any cultural remains or other indicators of buried archaeological sites.

Exhibit 4. Backhoe Trench BT-4

After the completion of the pedestrian survey, a series of five backhoe trenches were placed in the upper, undisturbed area of the project APE to determine if there were any deeply buried archaeological sites (Figure 4). The soil in this area is slated to be removed during the construction of the new retention pond. The City of Ballinger provided the backhoe and the operator for the survey and Principal Investigator and geoarchaeologist Katherine Turner-Pearson, MA, RPA inspected the trenches and recorded the soil horizons. The five backhoe trenches varied in size, but all were approximately 6.5 m long, 2.15 m wide, and 2.0 m deep. Two of the backhoe trenches were placed near, and just outside areas that had surface debitage or artifacts, and all of the trenches spanned the upper ridge of the site which was deemed to have the greatest potential for intact buried archaeological sites.

Figure 4. Locations of Shovel Tests and Backhoe Trenches

Project APE
Shovel Tests
Backhoe Trenches

Results of Investigations

During the pedestrian survey one new archaeological site was discovered. The site was a lithic scatter of unknown age located along the downward slope of the high, undisturbed area of the APE (Figure 5). The artifacts observed included scrapers and chert flakes with heavy patinas and desert varnish. Subsequent shovel tests in the area failed to produce any buried artifacts or indications of cultural remains. No diagnostics were observed, and no artifacts were collected. Due to the heavy patina and desert varnish, the site was most likely archaic or older in age. The site was given a field number of Ballinger 8141 and later the official trinomial of 41RN277.

Seven shovel tests were placed within the project APE. The shovel tests were a minimum of 30-x-30 cm in width and 50-60 cm in depth. The shovel tests were excavated in 10 cm arbitrary levels. Soils within the shovel tests were sifted through one quarter inch mesh hardware cloth and sorted for cultural remains. The soil horizons within the tests were observed for color and type. No cultural remains or artifacts were detected during the shovel testing, however a buried A-Horizon was located in Shovel Test-1 (ST-1) and Shovel Test 7 (ST-7). A map of the locations of the shovel tests are shown on Figure 4 and a summary of the horizons from the tests are shown on Table 1.

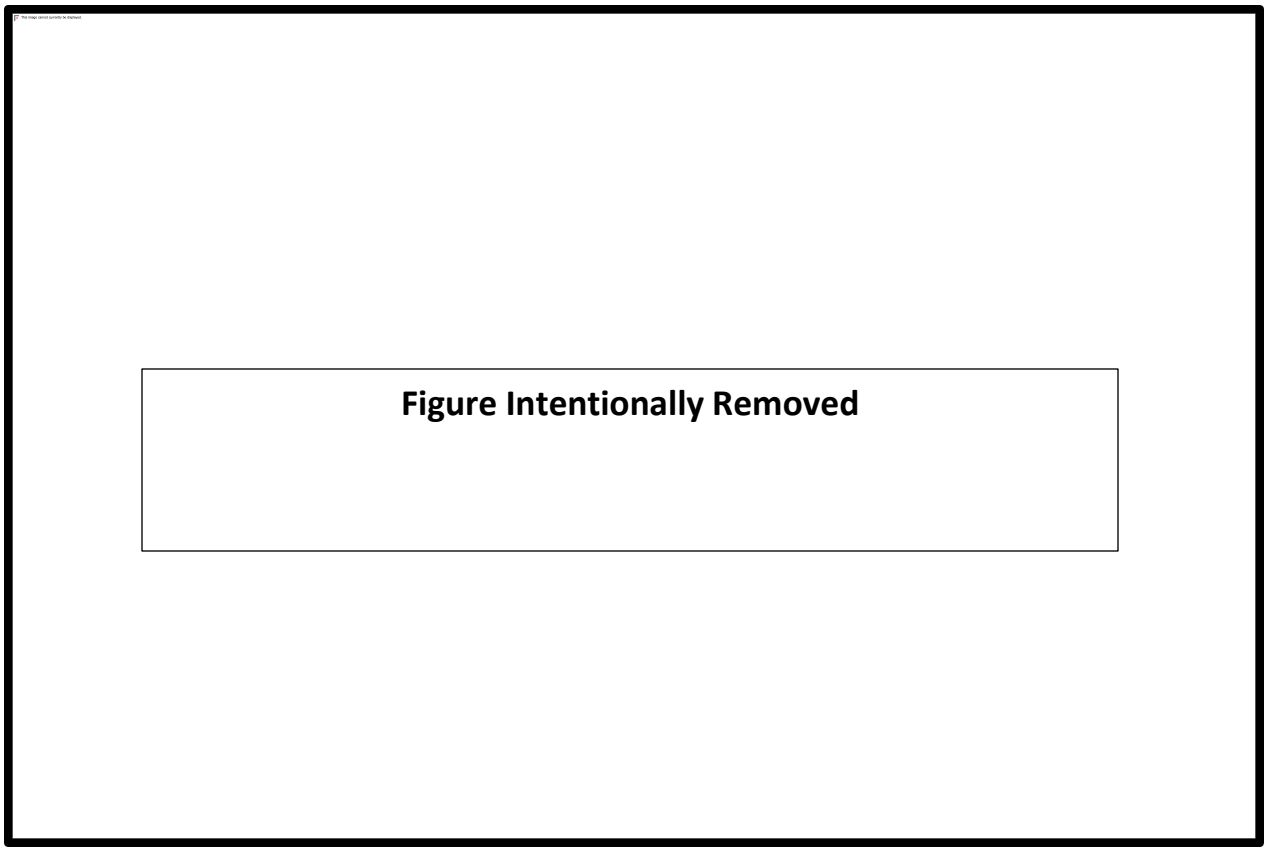
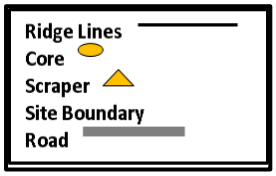


Figure 5. Location of Lithic Scatter, Archaeological Site 41RN277



The backhoe trenches showed a complex geomorphology of the two meandering streams near the project APE. The alluvial floodplain sediments included alluvial soils of various ages (based on soil colors and types), as well as deposits of both large and small gravels, indicating high velocity flood movements in the area in the past. The horizons varied greatly among the backhoe trenches indicating the streams cut through older deposits, and rerouted the stream channels numerous times throughout its history. These movements make it hard to predict the likelihood of deeply buried archaeological sites or remains. While neither buried cultural remains were observed in either the shovel tests or the backhoe trenches, it is still possible that there are buried sites or cultural remains in areas outside the testing. A buried A-Horizon was located in Backhoe Trench 5 (BT-5), suggesting that the area in close proximity to the backhoe trench may be a good candidate for containing a buried archaeological site, even though no site was observed. A summary of the backhoe trenches is shown on Table 2.

All buildings within and immediately adjacent to the project APE were examined for historic age and significance. No historic age buildings were located within the project APE, and none were located immediately adjacent to the APE. A farm adjoining the WWTP included a modern manufactured home with metal out-buildings and barns of recent age.

Table 1. Summary of Shovel Tests Excavated during the Ballinger WWTP Survey

Shovel Test	*Depth Below Surface (cm)*	*Soil Color*	*Soil Texture*
ST-1	0-8	10 YR 4/4 dark yellowish brown	Sandy clay loam
	8-46	5 YR 2.5/1 black	Clay loam
	46-52	5 YR 3/4 dark reddish brown	Clay loam
ST-2	0-10	5 YR 3/2 dark reddish brown	Clay sandy loam
	10-42	5 YR 2.5/2 dark reddish brown	Clay sandy loam w/ small gravel
	42-50	5 YR 4/6 yellowish red	Clay sandy loam w/small gravel
ST-3 In lithic scatter area	0-38	2.5 YR 3/4 dark reddish brown	Sandy clay loam
	38-50	2.5 YR 5/6 red	Clay sandy loam w/ small gravel
ST-4	0-18	5 YR 4/6 yellowish red	Sandy loam
	18-44	5 YR 4/4 reddish brown	Clay sandy loam hard w/ gravels
ST-5	0-11	5 YR 4/6 yellowish red	Sandy loam
	11-45	5 YR 4/4 reddish brown	Clay sandy loam
	45-50	2.5 YR 4/8 red	Clay sandy loam hard w/gravel
ST-6	0-20	5 YR 4/6 yellowish red	Sandy loam
	20-48	5 YR 4/4 reddish brown	Clay sandy loam w/ gravels
ST-7	0-11	10 YR 4/4 dark yellowish brown	Sandy clay loam
	11-52	5 YR 2.5/1 black	Clay loam
	52-60	5 YR ¾ dark reddish brown	Clay loam

Exhibit 5. Artifact with Desert Varnish from Site 41RN277

Exhibit 6. Scrapper with Heavy Patina

A local landmark consisting of an oversized Christian cross can be observed from the project APE, however the cross is of a modern construction, and not historic in age. Appropriately named "The Cross," it can be seen for many miles around the City of Ballinger. Erected in 1993 by Jim and Doris Studer, the landmark stands 100 ft. tall and is tip to tip 70 ft. wide in its arms. The visible portion weighs 50 tons and it has another 100 tons of attached material buried beneath it for balance. The Cross is open to the public 24 hours a day and is lit at night.

The grounds around the structure have a scenic view, and include walkways, a small

Chapel, a St. Frances Shrine and the shrine to Our Lady "of Guadalupe" (The First National Bank of Ballinger 2014). The survey did not locate any other buildings adjacent to the project APE. Photos of the buildings surrounding the project APE are located in Attachment B.

Table 2. Summary of the Backhoe Trenches Excavated During the Ballinger WWTP Project

Backhoe Trench	*Length X Width (meters)*	*Depth Below Surface (cm)*	*Soil Color*	*Soil Texture*
BT-1	6.22 x 2.64	0-10	7.5 YR 5/6 strong brown	Sandy loam
		10-23	7.5 YR 3/2 dark brown	Sandy clay loam
		23-39	5 YR 3/4 dark reddish brown	Clay sandy loam
		39-78	5 YR 4/6 yellowish red	Clay sandy loam
		78-84	5 YR 4/4 reddish brown	Clay sandy loam
		84-147	5 YR 4/6 yellowish red	Clay sandy loam w/ few calcium carbonates
		147-200	2.5 YR 4/6 red	Clay sandy loam w/ many calcium carbonates
BT-2	6.16 x 2.7	0-14	5 YR 4/6 yellowish red	Sandy loam
		14-73	5 YR 4/4 reddish brown	Clay sandy loam hard w/ charcoal
		73-103	2.5 YR 4/8 red	Clay sandy loam hard w/ gravels
		103-137	2.5 YR 5/8 red	Clay sandy loam hard
		137-203	2.5 YR 6/8 light red	Clay sandy loam w/ calcium carbonates
BT-3	6.0 x 2.18	0-40	2.5 YR 3/4 dark reddish brown	Sandy clay loam
		40-90	2.5 YR 5/6 red	Clay sandy loam w/ small gravel
		90-171	2.5 YR 6/8 light red	Sandy clay loam w/ gravel and calcium bonds
		171-218	2.5 YR 6/8 light red	Sandy clay loam hard w/ large gravel and calcium carbonates
BT-4	5.64 x 2.0	0-9	5 YR 3/2 dark reddish brown	Clay sandy loam
		9-44	5 YR 2.5/2 dark reddish brown	Clay sandy loam w/ few gravels
		44-85	5 YR 4/6 yellowish red	Clay sandy loam w/ many gravels
		85-200	2.5 YR 5/8 red	Clay sandy loam w/ massive gravels
BT-5	7.32 x 2.15	0-9	10 YR 4/4 dark yellowish brown	Sandy clay loam
		9-49	5 YR 2.5/1 black	Clay loam
		49-88	5 YR 3/4 dark reddish brown	Clay loam
		88-147	2.5 YR 4/8 red	Clay loam w/ few calcium carbonates
		147-180	2.5 YR 4/8 red	Clay loam w/ many calcium carbonates

Summary

Approximately 8.21 hectares (20.3 acres) were surveyed, and seven shovel tests and five backhoe trenches were excavated by CTAR in preparation for the WWTP improvements for the City of Ballinger in Runnels County, Texas. All the shovel tests and backhoe trench excavations were negative. One surface archaeological site, 41RN277, was discovered during the pedestrian portion of the survey, but no diagnostic artifacts were observed and no temporal date was indicated. However, the amount of desert varnish and patina on the artifacts suggests an Archaic age for the site. No artifacts were collected.

One backhoe trench and two shovel tests revealed buried paleosols, though no cultural remains were found in association with them. None of the buildings adjacent to the project APE were of historic significance, and a section of the APE was already disturbed during the construction of the original WWTP and city landfill.

Recommendations

During the pedestrian survey CTAR identified one archaeological site, 41RN277. The site was a lithic scatter along a downward sloping ridge with evidence of frequent run-off erosion. Based on the desert varnish on the surface of the artifacts, the site appears to have been exposed for a very long time, and is no longer completely in sitú. The site does not appear to offer any significant research potential and is not unique compared to other similar sites in the county. It is the opinion of the Principal Investigator that the site does not meet the National Register of Historic Places' eligibility requirements as set forth in 36 CFR 60.4 – Criteria of Eligibility, or that it may merit designation as a State Archeological Landmark, as outlined in 13 TAC 26.8, Criteria for Evaluating Archeological Sites.

The results of the shovel tests and backhoe trenches revealed buried paleosols, but no cultural remains or archaeological sites; therefore, it is recommended that the WWTP project be allowed to proceed. However, in the event that unanticipated archaeological materials, historic or prehistoric, are encountered during the construction phase of the proposed project, work in the immediate area must cease and the THC notified of these findings. *In the event that human remains are encountered at any time during the construction, all work and activities in the area must cease, the area protected, and the THC notified immediately.* The records from this survey will be curated at the TARL and the THC in Austin, Texas.

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APPENDIX A
Letter from the Texas Historical Commission to the City of Ballinger

TEXAS HISTORICAL COMMISSION
real places telling real stories

April 18, 2014

Todd Cave
Public Management
P.O. Box 75976
Dallas, TX 75379

Re: Project review under Section 106 of the National Historic Preservation Act of 1966
LRGV00361A
New treatment pond at Ballinger Sewage Treatment Plant, Runnells County (TDA/HUD)

Dear Mr. Cave:

Thank you for your correspondence describing the above referenced project. This letter serves as comment on the proposed federal undertaking from the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission. As the state agency responsible for administering the Antiquities Code of Texas, these comments also provide recommendations on compliance with state antiquities laws and regulations.

The review staff, led by Bill Martin, has examined our records and finds that the proposed expansion area for the new treatment pond has never been surveyed by a professional archeologist. We believe that this area has the potential to contain intact archeological deposits, based on the fact that a site was found during the original survey for the existing plant. The project area should be surveyed by a professional archeologist prior to initiation of ground disturbance.

The work should meet the minimum archeological survey standards posted on-line at www.thc.state.tx.us. A report of investigations should be produced in conformance with the Secretary of the Interior's Guidelines for Archaeology and Historic Preservation, and submitted to this office for review. In addition, any buildings 50 years old or older that are located on or adjacent to the tract should be documented with photographs and included in the report. You may obtain lists of most professional archeologists in Texas on-line at: www.c-tx-arch.org or www.rpanet.org. Please note that other potentially qualified archeologists not included on these lists may be used. Since the work will occur within city property, an Antiquities permit must be obtained from this office prior to conducting the fieldwork.

Thank you for your cooperation in this federal review process, and for your efforts to preserve the irreplaceable heritage of Texas. **If you have any questions concerning our review or if we can be of further assistance, please contact Bill Martin at 512/463-5867.**

Sincerely,

for
Mark Wolfe, State Historic Preservation Officer

MW/wam

APPENDIX B

(Buildings Adjacent to Project APE)

View of "The Cross" (in Background) from the Project APE (looking east).

Close-up of "The Cross" from Project APE.

Buildings Located on the Farm Adjacent to the Project APE.

Buildings on Farm Adjacent to Project APE.

Barn on Farm Adjacent to the Project APE.

APPENDIX C

Texas Historical Commission

TexSite Form