

## Environmental Determination

### MEMORANDUM

**TO:** File

**FROM:** Jessica Zuba, Director, Regional Water Planning and Development

**DATE:** December 2, 2015

**SUBJECT:** West Harris County Regional Water Authority  
Harris and Fort Bend Counties  
Environmental Determination  
Second Source Project – Second Source Central Pump Station  
Water Infrastructure Fund: Project 21700 (L120010)

The attached memorandum contains the staff's views regarding the environmental soundness of the Second Source Project proposed by West Harris County Regional Water Authority (WHCRWA), Harris and Fort Bend Counties, Texas. This project will utilize planning and acquisition funds from loan L120010 from the Water Infrastructure Fund (WIF). The Texas Water Development Board (TWDB) committed this loan on December 15, 2011, in the amount of \$41,965,000. WHCRWA closed the loan on March 29, 2012.

WHCRWA acquired an approximately 29.19-acre tract for the proposed Second Source Central Pump Station. The proposed 29.19-acre proposed project area is located near the intersection of Clay Road and Fry Road in west Houston, Harris County, Texas. The Second Source Central Pump Station would convey and distribute surface water from the Northeast Water Purification Plant (NEWPP) to the territory of the WHCRWA. The Second Source Central Pump Station project is part of the Second Source Project proposed by WHCRWA. The Second Source Project will construct a 40-mile water transmission pipeline across north Houston, to bring 150 Million Gallons of treated water per day to approximately 880,000 people in West Harris and Fort Bend Counties. This Environmental Determination pertains to the Second Source Central Pump Station.

Based on staff's environmental review, I have determined that no significant adverse environmental impacts should result from the proposed project discussed in the attached Environmental Determination. As required by 31 Texas Administrative Code §363.14, full consideration has been given to the views and comments of the requisite regulatory agencies and affected persons. Based on this review, the following conditions have been developed in order to ensure that this TWDB funded project is environmentally sound and will not have any adverse impacts on the quality of the human environment:

Environmental Determination

Second Source Project – Second Source Central Pump Station (WIF #21700)

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- As per agreement with the Texas Parks and Wildlife Department (TPWD Project No. ERCS-9054), and in order to ensure compliance with the Migratory Bird Treaty Act, clearing and construction activities will be avoided during the April 1 – July 15 migratory bird nesting season. If it is necessary to conduct these activities during this time period, a survey will be conducted by a qualified biologist prior to vegetation removal. All construction activities as identified above will be excluded from a minimum zone of 100 meters around any raptor nest during the period of February 1 – July 15;
- Standard emergency condition for the discovery of cultural resources; and,
- Standard emergency condition for the discovery of threatened and endangered species.

With the addition of these conditions, the specified project elements above are environmentally sound and design funds may be released once all other requirements are satisfied.

Enclosure

**TO:** Jessica Zuba, Director, Regional Water Planning and Development

**THROUGH:** Nancy Richards, Manager, Team 4 (Regions H and I)

**FROM:** Jean Devlin, Environmental Reviewer

**DATE:** December 2, 2015

**SUBJECT:** West Harris County Regional Water Authority  
Harris and Fort Bend Counties  
Environmental Determination  
Second Source Project – Second Source Central Pump Station  
Water Infrastructure Fund: Project 21700 (L120010)

Pursuant to the environmental assessment requirements of Section §363.14 of the Texas Water Development Board (TWDB) rules, I have conducted a review of the Second Source Project proposed by the West Harris County Regional Water Authority (WHCRWA), Harris and Fort Bend Counties. This project will utilize planning and acquisition funds from loan L120010 from the Water Infrastructure Fund (WIF). The Texas Water Development Board (TWDB) committed this loan on December 15, 2011, in the amount of \$41,965,000. WHCRWA closed on the loan on March 29, 2012.

The following project information can be found in the Environmental Assessment (EA) completed for the Second Source Central Pump Station<sup>1</sup>.

#### Purpose and Need

The purpose of the proposed project is to meet the requirements of the Harris-Galveston and Fort Bend Subsidence District's mandate to reduce subsidence through the reduction of ground water demands in the area. The proposed system will help WHCRWA meet their mandates by limiting ground water production throughout northwest Harris County.

#### Background

The WHCRWA Second Source Project includes the construction of 40 miles of transmission pipeline through the City of Houston and other parts of Harris County. Two pump stations will be built along the pipeline, which would convey potable water from the City of Houston's Northeast Water Purification Plant (NEWPP) to the distribution systems of the WHCRWA and North Fort Bend Water Authority (NFBWA). Projected capacity of the line is 150 million gallons per day (MGD). Initially, WHCRWA will purchase treated water from the City of Houston. Later, the Coastal Water Authority's Luce Bayou Interbasin Water Transfer Project (LBIWTP) will replace the water purchased from the City of Houston by providing surface water that would be treated in

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<sup>1</sup> West Harris County Regional Water Authority (August 2012). *Environmental Assessment: WHCRWA Second Source Central Pump Station* (Prepared by Berg Oliver Associates, Inc., for West Harris County Regional Water Authority). Received by TWDB on October 06, 2012).

the NEWPP. The LBIWTP is considered an essential related project integral to the long-term viability of WHCRWA's Second Source Project. The Second Source Project is divided into four project components: East Re-Pump Station, Second Source Central Pump Station, East-West Second Source Line, and North-South Second Source Line. This EA pertains to the Second Source Central Pump Station.

### Project Description

WHCRWA acquired an approximately 29.19-acre tract for the proposed Second Source Central Pump Station. The proposed 29.19-acre proposed project area is located near the intersection of Clay Road and Fry Road in west Houston, Harris County, Texas. The Second Source Central Pump Station would convey and distribute surface water from the NEWPP to the territory of the WHCRWA.

### Reviews by Regulatory Agencies and Resulting Conditions

Berg Oliver Associates, Inc., on behalf of WHCRWA, coordinated with the following federal and state regulatory agencies and entities for the Second Source Central Pump Station: Texas Parks and Wildlife Department (TPWD); U.S. Army Corps of Engineers, Galveston District (USACE); Texas Historical Commission (THC); U.S. Fish and Wildlife – Clear Lake Ecological Services Field Office (USFWS); City of Houston, North Fort Bend Water Authority; Harris County; and the Harris-Galveston Subsidence District. A summary of the correspondence has been provided in this report.

### Texas Parks and Wildlife Department, Sand and Gravel Permitting Coordinator

Berg Oliver Associates, Inc. initiated contact with the TPWD on May 24, 2012 and requested the review and submission of comments or recommendations for the Second Source Central Pump Station. The Second Source Central Pump Station does not intersect navigable waters or otherwise public waterways or streams, therefore a sand and gravel permit will not be required.

### Texas Parks and Wildlife Department, Wildlife Division, Wildlife Habitat Assessment Program

Berg Oliver Associates, Inc. initiated contact with the TPWD on May 24, 2012 and requested the review and submission of comments or recommendations for the Second Source Central Pump Station. TPWD responded to Berg Oliver Associates, Inc. on June 4, 2014. WHCRWA provided a response to TPWD's list of recommendations for the project on July 23, 2015.

Although loss of woody vegetation during the construction of the Second Source Central Pump Station is unavoidable, WHCRWA agrees to remove the minimum number of trees necessary to safely allow for the construction of the facility, re-designing of specific areas to avoid or minimize the effect upon individual trees or populations, and cutting trees to

leave stumps in the ground for regeneration where practicable are a few of the ways WHCRWA will work to minimize impacts to woody vegetation.

Under federal regulation, WHCRWA is required to comply with the Migratory Bird Treaty Act (MBTA), which provides year round closed season for non-game birds and prohibits the taking of migratory bird nests and eggs, except as permitted by USFWS. Measures such as additional surveys prior to construction to ensure active nests are not present would be taken prior to clearing vegetation within the project area. If construction activities must occur between April 1 and July 15, no vegetation containing active nests, eggs, or young will be removed should they be found on site. Construction activities will be excluded from a minimum zone of 100 meters around any raptor nest during the nesting season.

- Construction activities such as, but not limited to, tree felling as well as vegetation clearing, trampling, or maintenance should occur outside the April 1 – July 15 migratory bird nesting season of each year the project is authorized and lasting for the life of the project. To comply with the MTBA, the proposed site should be surveyed for migratory bird nest sites prior to construction or future maintenance activities. Since raptors nest in late winter and early spring, all construction activities as identified above should be excluded from a minimum zone of 100 meters around any raptor nest during the period of February 1 – July 15.

#### U.S Army Corps of Engineers, Galveston District

Berg Oliver Associates, Inc. initiated contact with the USACE, Galveston District on May 24, 2012 requesting review and comments regarding the Second Source Central Pump Station. A 0.33-acre abandoned irrigation ditch is located within the proposed project area for the Second Source Central Pump Station and is located north of Clay Road, West of Fry Road, in northwest Houston, Harris County, Texas. USACE provided a response letter dated February 21, 2013 (Project Number SWG-2012-00769) in response to a request that was received September 5, 2013. USACE determined that the 0.33-acre abandoned irrigation ditch located within the proposed project area for the Second Source Central Pump Station is not a water of the United States and is therefore not subject to Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. The discharge of fill material on the tract does not require a permit from USACE.

#### Texas Historical Commission

Berg Oliver Associates, Inc. contracted HRA Gray & Pape, LLC of Houston, Texas to conducted initial cultural resources background and site file research for the proposed Second Source Central Pump Station site. This initial research, which was initiated on January 9, 2012, included review of archaeological site files and architectural resource files and a review of previously conducted surveys near the proposed project area. The

preliminary research identified one previously conducted cultural resources survey that was conducted along the border of the 1 mile study radius for the project. The previous cultural resources survey was conducted by South Texas Archeological Research Surveys, LLC in 2007 for the Department of Education. The site is approximately 15.9 acres and includes the Cypress-Fairbanks ISD Elementary school. This site is located north to northwest of the proposed project area. No cultural deposits were found during this survey.

Another cultural resources survey was conducted just outside of the 1 mile study radius. This cultural resources survey was conducted by Moore Archeological Consultants, Inc. for the Harris County Flood Control District in 2007. According to the results of the survey, sixty shovel tests were excavated along 1.8 miles of Bear Creek. All shovel tests were negative for presence of cultural deposits and no further work was recommended.

Berg Oliver Associates, Inc. initiated coordination with the THC on February 14, 2012. On March 1, 2012, HRA Gray & Pape, LLC of Houston, Texas sent a letter to Mr. Mark S. Wolfe of the THC requesting concurrence of the finding from the cultural resources assessment conducted on the approximately 29.19-acre tract proposed for use by WHCRWA in Harris County. On March 19, 2012, the THC provided concurrence that no survey was required and no impacts to cultural resources are anticipated as a result of the proposed Second Source Central Pump Station.

The WIF loan is conditioned to read that if archeological sites are discovered during construction, work will cease immediately in that area and WHCRWA will notify the THC and the TWDB of the discovery. The THC and the TWDB will then proceed in accordance with the regulations of the Advisory Council on Historic Preservation (36 CFR Part 800) prior to taking any action which would affect the cultural resources.

U.S. Fish and Wildlife Service, Clear Lake Ecological Services Field Office

Berg Oliver Associates, Inc. conducted a review of the USFWS database of threatened and endangered species provided by the USFWS, Clear Lake Ecological Services Field Office. Their review indicated that the Texas prairie dawn is either known to occur or has potential habitat within the vicinity of the proposed project area.

On December 5, 2011, Berg Oliver Associates, Inc. conducted a site survey within the proposed Second Source Central Pump Station site and determined that the site does not contain suitable habitat for the Texas prairie dawn listed in Harris County, Texas. Additionally, a review of the TPWD Texas Natural Diversity Dataset (TXNDD) was performed on February 7, 2012. One Elemental Occurrence (EO) (ID#385) of the Texas prairie dawn is located approximately 2.6 miles from the proposed project area. One EO (ID #7469) of the Plains Spotted Skunk (*Spilogale putorius interrupta*) is located approximately 1.4 miles from the proposed project area. Site reconnaissance did not reveal the presence or habitat for either species; therefore no adverse effects on threatened or endangered species are anticipated as a result of the proposed project and

further USFWS coordination was not required.

Berg Oliver Associates, Inc. initiated contact with USFWS, Clear Lake Ecological Services Field Office on May 24, 2012 and requested the review and submission of comments or recommendations for the Second Source Central Pump Station site. No adverse comments or recommendations have been received as of the date of this report.

The WIF loan has been conditioned to read that if threatened or endangered species are encountered during construction, the Contractor shall immediately cease work in the area of the encounter and notify the Owner, who will immediately implement actions in accordance with the Endangered Species Act and applicable State statutes. These actions shall include reporting the encounter to the TWDB, the U.S. Fish and Wildlife Service, and the Texas Parks and Wildlife Department, obtaining any necessary approvals or permits to enable the work to continue, or implement mitigation actions. The Contractor shall not resume construction in the area of the encounter unless authorized to do so by the Owner.

#### City of Houston

Berg Oliver Associates, Inc. initiated contact with the City of Houston on May 24, 2012 and requested the review and submission of comments or recommendations for the Second Source Central Pump Station. No comments or recommendations have been received as of the date of this report.

#### North Fort Bend Water Authority

Berg Oliver Associates, Inc. initiated contact with the North Fort Bend Water Authority on May 24, 2012 and requested the review and submission of comments or recommendations for the Second Source Central Pump Station. No adverse comments or recommendations have been received as of the date of this report.

#### Harris County

Berg Oliver Associates, Inc. initiated contact with Harris County May 24, 2012 and requested the review and submission of comments or recommendations for the Second Source Central Pump Station. No adverse comments or recommendations have been received as of the date of this report.

#### Harris-Galveston Subsidence District

Berg Oliver Associates, Inc. initiated contact with the Harris-Galveston Subsidence district on May 24, 2012 and requested the review and submission of comments or recommendations for the Second Source Central Pump Station. No adverse comments or recommendations have been received as of the date of this report.

Floodplain Administrator

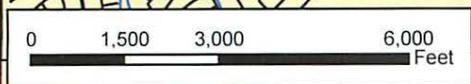
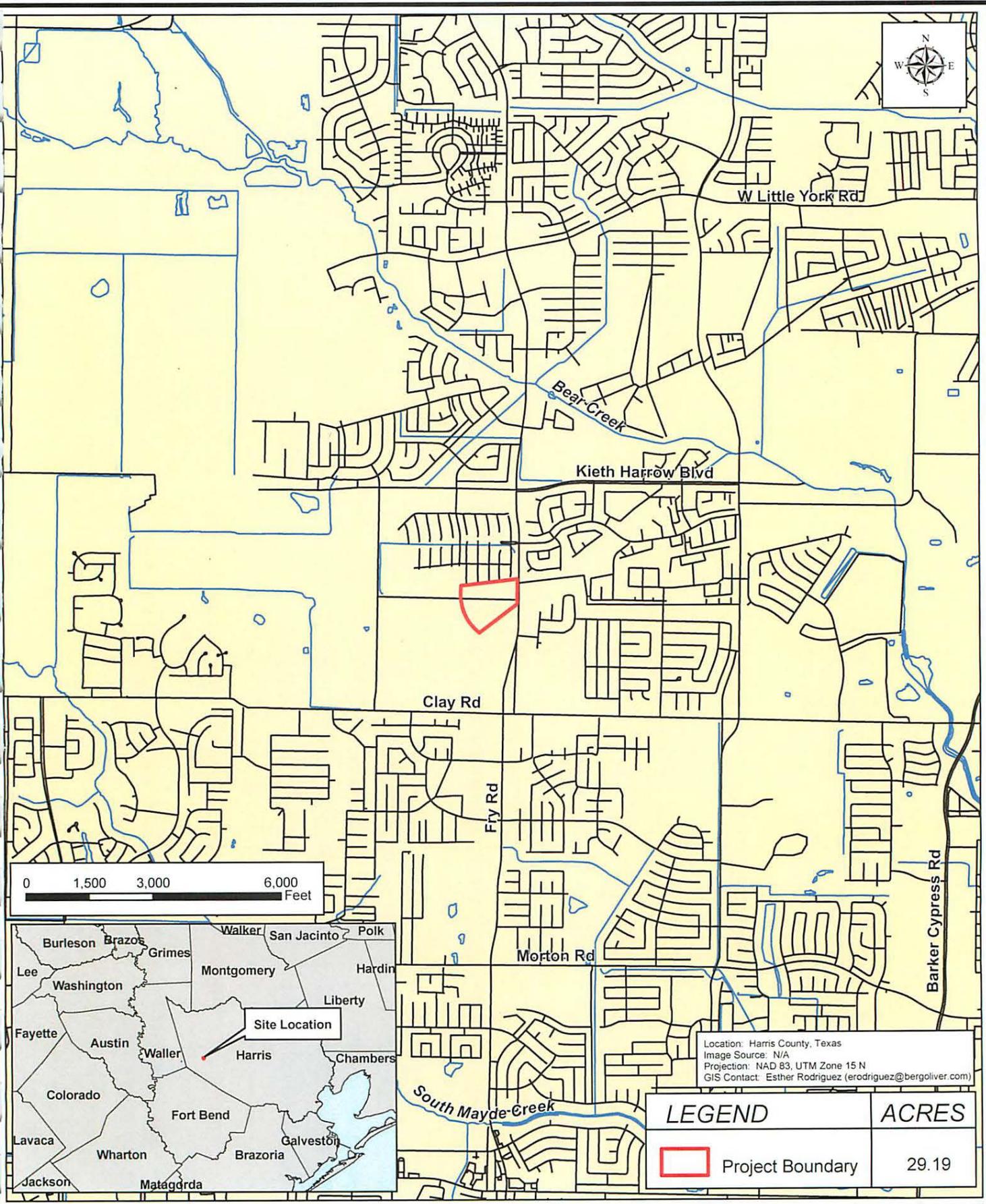
The Second Source Central Pump Station is located outside of the 100-year floodplain and therefore does not require coordination with the Local Floodplain Administrator.

Conditions and Recommendation

Full consideration has been given to the views and comments of the requisite regulatory agencies and affected persons. Based on a detailed environmental review consistent with 31 TAC §363.14, the following conditions have been developed in order to ensure that this TWDB funded project is environmentally sound and will not have any adverse impacts on the quality of the human environment:

- As per agreement with the Texas Parks and Wildlife Department (TPWD Project No. ERCS-9054), and in order to ensure compliance with the Migratory Bird Treaty Act, clearing and construction activities will be avoided during the April 1 – July 15 migratory bird nesting season. If it is necessary to conduct these activities during this time period, a survey will be conducted by a qualified biologist prior to vegetation removal. All construction activities as identified above will be excluded from a minimum zone of 100 meters around any raptor nest during the period of February 1 – July 15;
- Standard emergency condition for the discovery of cultural resources; and,
- Standard emergency condition for the discovery of threatened and endangered species.

With the addition of these conditions, I recommend that the Executive Administrator find the specified project elements above to be environmentally sound and that design funds be released once other requirements are satisfied.



Location: Harris County, Texas  
 Image Source: N/A  
 Projection: NAD 83, UTM Zone 15 N  
 GIS Contact: Esther Rodriguez (erodriguez@bergoliver.com)

LEGEND	ACRES
 Project Boundary	29.19

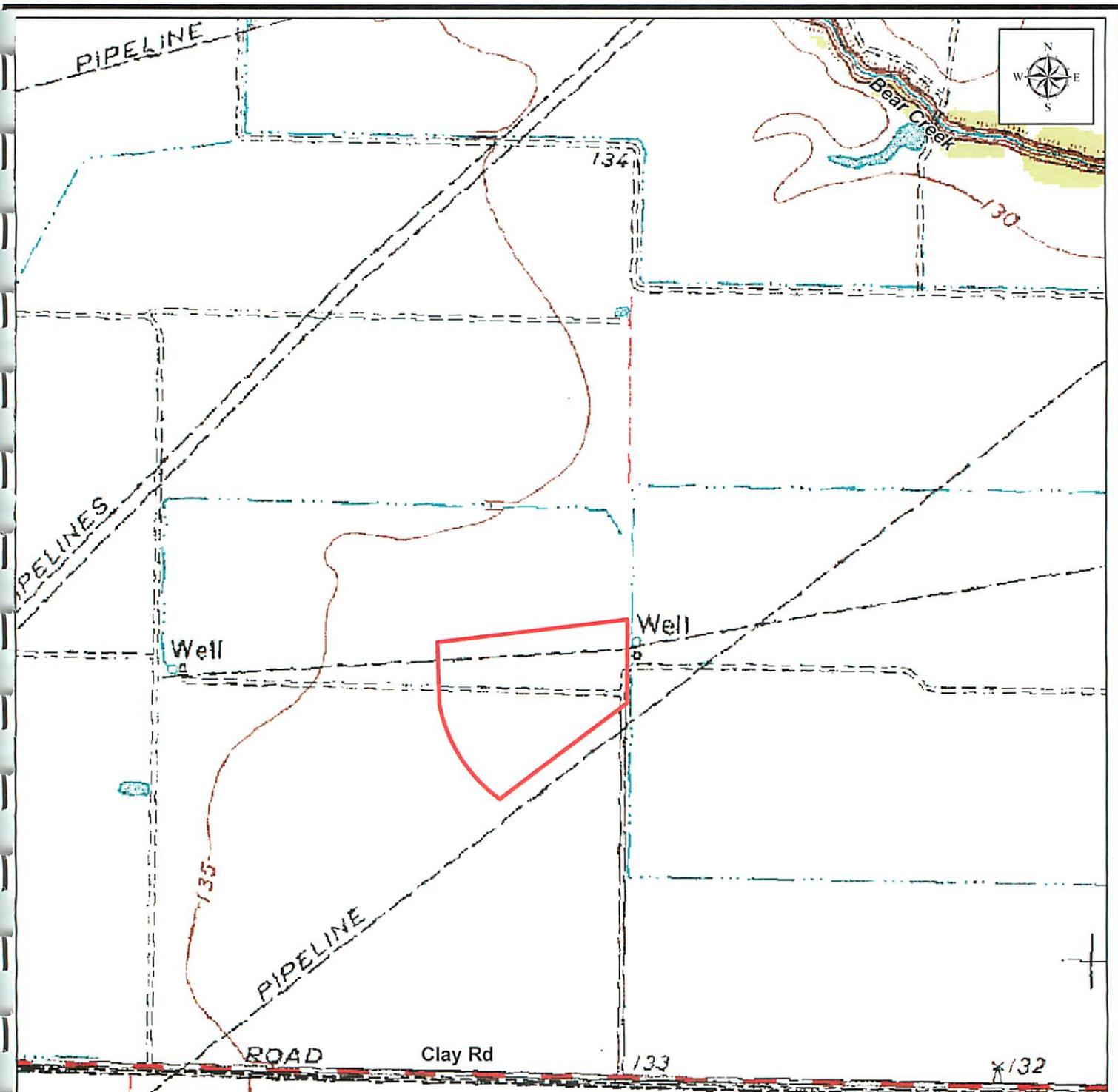
**PROJECT LOCATION AND VICINITY MAP**

Project #: 8449  
 For: Dannenbaum Engineering obo WHCRWA  
 Location: Fry Rd, north of Clay Rd  
Harris County, Texas

REVISIONS
Feb. 10, 2012 by MFR

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Location: Harris County, Texas  
 Image Source: USGS (Addicks Quadrangle)  
 Projection: NAD 83, UTM Zone 15 N  
 GIS Contact: Esther Rodriguez (erodriguez@bergoliver.com)



LEGEND	ACRES
 Project Boundary	29.19

**USGS TOPOGRAPHICAL MAP**

Project #: 8449  
 For: Dannenbaum Engineering obo WHCRWA  
 Location: Fry Rd, north of Clay Rd  
Harris County, Texas

REVISIONS
Feb. 10, 2012 by MER

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