

## 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 – East Re-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.

The project will include the construction of the East Re-Pump Station. The East Re-Pump Station is part of the Second Source Project, which 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. The proposed East Re-Pump Station will be constructed on approximately 17.3-acres of land. The construction of three 10-million gallon ground storage tanks, each measuring 230 feet in diameter, will be required. The site will include a Disinfection Facility, Storage Facility, two transformers, two diesel engine generators, two variable speed pumps, four constant speed pumps, and a detention pond. This Environmental Determination pertains to the East Re-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 – East Re-Pump Station (WIF #21700)

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- As per agreement with the United States Army Corps of Engineers, the West Harris County Regional Water Authority agrees to comply with the terms and conditions of the U.S. Army Corps of Engineers Nationwide Permit 12 for Utility Line Activities (USACE Project No. SWG-2012-00503);
- For any construction within a 100-year floodplain, a floodplain permit or documentation from the local floodplain administrator that no permit is required must be obtained prior to construction or clearing activities;
- 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 – East Re-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 East Re-Pump Station<sup>1</sup> portion of the Second Source Project.

#### 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 will 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 (May 2012). *Draft Environmental Assessment: WHCRWA East Re-Pump Station* (Prepared by Terracon Consultants, Inc. Consultants, Inc., for West Harris County Regional Water Authority). Received by TWDB May 09, 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 East Re-Pump Station.

### Project Description

The approximately 17.3-acre proposed project area for the East Re-Pump Station is located in the southwest portion of West Little York Road and Fairbanks North Houston Road in Houston, Harris County, Texas. The existing environment consists of pastureland with maintained grass and wooded areas. The proposed East Re-Pump Station would be constructed on the approximately 17.3-acres of land. The construction of three 10-million gallon ground storage tanks, each measuring 230 feet in diameter, will be required. The site will include a Disinfection Facility, Storage Facility, two transformers, two diesel engine generators, two variable speed pumps, four constant speed pumps, and a detention pond.

### Reviews by Regulatory Agencies and Resulting Conditions

Terracon Consultants, Inc., on behalf of WHCRWA, coordinated with the following federal and state regulatory agencies and entities for the East Re-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

The East Re-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

Terracon Consultants, Inc. initiated contact with the TPWD on February 21, 2012 and requested the review and submission of comments or recommendations for the East-West Second Source Line. On November 1, 2013, TPWD provided concurrence that the proposed project should not have significant adverse impacts to rare, threatened or endangered species, or other fish and wildlife resources.

U.S Army Corps of Engineers, Galveston District

Terracon Consultants, Inc. initiated contact with the USACE on February 21, 2012 and requested the review and submission of comments or recommendations for the East-West Second Source Line. On July 24, 2015, USACE provided a response letter (Project Number SWG-2012-00503) stating that the request to discharge fill material into 0.38 acres of wetlands adjacent to Cole Creek during the construction of the East Re-Pump Station is verified under Nationwide Permit (NWP) 39, pursuant to Section 404 of the Clean Water Act (CWA). NWP 39 authorizes discharges of dredged or fill material into non-tidal waters of the U.S. for the construction or expansion of commercial institutional building foundations and building pads and attendance features that are necessary for the use and maintenance of structures.

The following special conditions were applied to this authorization:

- 1) The permittee will purchase 0.4 mitigation units from Spellbottom Mitigation Bank prior to the start of work in the jurisdictional area.
- 2) The permittee will submit documentation to the Corps of Engineers, Chief, Compliance Section, Regulatory Branch, Galveston District, verifying that 0.4 mitigation units were purchased from Spellbottom Mitigation Bank prior to the start of work in the jurisdictional area.

According to a letter dated November 27, 2012 from Mitigation Solutions USA, WHCRWA successfully purchased 1.2 credits from Spellbottom Mitigation Bank as compensatory mitigation for the unavoidable impacts to wetlands that will result from the construction of the East Re-Pump Station. This letter indicates that WHCRWA has satisfied the conditions of the NWP 39 permit and special conditions set forth by USACE. The WIF loan is conditioned to read that WHCRWA agrees to comply with the terms and conditions of the U.S. Army Corps of Engineers Nationwide Permit 12 for Utility Line Activities (USACE Project No. SWG-2012-00503).

Texas Historical Commission

According to the Environmental Assessment for the East Re-Pump Station, coordination with the THC was initiated February 14, 2012. HRA Gray & Pape, LLC of Houston, Texas was contracted by Berg Oliver Associates, Inc. to conduct an assessment of 29 acres proposed for use by WHCRWA. Their research activities, including a site file research and review of available historic maps, were initiated on January 9, 2012. Their search uncovered one previously identified cultural resources survey that was performed on the border of the 1 mile study radius. No impacts to cultural resources should occur as a result of this project.

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

Terracon Consultants, Inc. conducted a desktop review of aerial photographs taken in 2010 to determine the prominent vegetative composition of the approximately 17.3-acre proposed project area. According to their initial assessment, the area supports mostly grasses and forbs with some shrubs and trees on the west side and northeast corner. The remainder of the proposed project area consists of a gravel roadway.

Terracon Consultants, Inc. reviewed the proposed project area for the potential for threatened or endangered species and habitat. According to their review of the USFWS Endangered Species List for Harris County and the TPWD Annotated County List of Rare species for Harris County (revised October 14, 2010), it is unlikely that the proposed project area would be regularly utilized by threatened or endangered species. A review of critical habitat data did not reveal any critical habitat within or near the project area.

A review of the TPWD's Texas Natural Diversity Database (TXNDD) was conducted by Terracon Consultants, Inc. This review revealed several occurrences of threatened and endangered species near the proposed project area. One mapped elemental occurrence of the Houston Toad (*Bufo houstonensis*), which was documented in 1976, was identified within the proposed project area. One occurrence of the Texas prairie dawn (*Hymenoxys texana*), which was documented in 1998, was mapped approximately 1 mile northeast of the proposed project area. One occurrence of the coastal gay-feather (*Liatris braceata*), which was documented in 1978, was mapped approximately 1 mile southwest of the proposed project area.

Terracon Consultants, Inc. conducted a Threatened and Endangered Species Habitat Assessment within the proposed project area on December 3, 2010. Their assessment concluded that no significant adverse effects on threatened and endangered species would occur as a result of the proposed project. Additional pedestrian surveys of the proposed project area were conducted on March 30, 2011 and February 14, 2012. No endangered or threatened species were identified during the time of the pedestrian surveys.

Terracon Consultants, Inc. initiated contact with USFWS, Clear Lake Ecological Services Field Office on February 21, 2012 and requested the review and submission of comments or recommendations for the East Re-Pump Station. 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 under authorized to do so by the Owner.

#### City of Houston

Terracon Consultants, Inc. initiated contact with the City of Houston on February 21, 2012 and requested the review and submission of comments or recommendations for the East Re-Pump Station. No adverse comments or recommendations have been received as of the date of this report.

#### North Fort Bend Water Authority

Terracon Consultants, Inc. initiated contact with NFBWA on February 21, 2012 and requested the review and submission of comments or recommendations for the East Re-Pump Station. No adverse comments or recommendations have been received as of the date of this report.

#### Harris County

Terracon Consultants, Inc. initiated contact with Harris County on February 21, 2012 and requested the review and submission of comments or recommendations for the East Re-Pump Station. No adverse comments or recommendations have been received as of the date of this report.

#### Harris-Galveston Subsidence District

Terracon Consultants, Inc. initiated contact with the Harris-Galveston Subsidence District, on behalf of WHCRWA, on February 21, 2012 requesting review and comments regarding the East Re-Pump Station. No adverse comments or recommendations have been received as of the date of this report.

#### Floodplain Administrator

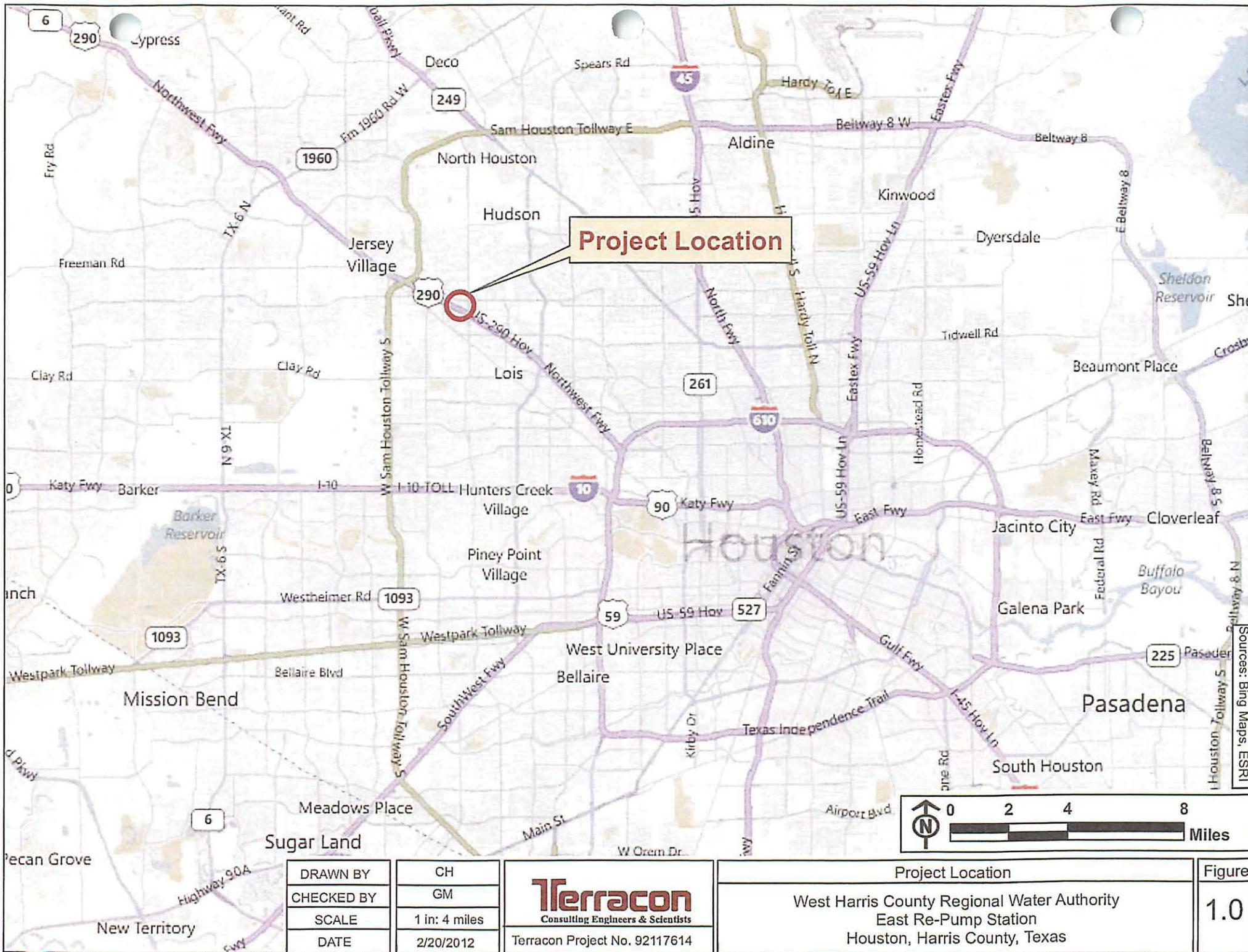
According to the FEMA Floodplain map, the East Re-Pump Station intersects the 100-year floodplain and the Floodway of Cole Creek in Harris County, Texas. Terracon Consultants, Inc. initiated contact with the City of Houston Floodplain Administrator and the Harris County Floodplain Administrator on October 26, 2015. WHCRWA will submit final plans and specifications for review to the Floodplain Administrators. The WIF loan is conditioned to read that a floodplain permit or documentation from the local floodplain administrator that no permit is required must be obtained prior to construction or clearing activities within the 100-year floodplain.

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 United States Army Corps of Engineers, the West Harris County Regional Water Authority agrees to comply with the terms and conditions of the U.S. Army Corps of Engineers Nationwide Permit 12 for Utility Line Activities (USACE Project No. SWG-2012-00503);
- For any construction within a 100-year floodplain, a floodplain permit or documentation from the local floodplain administrator that no permit is required must be obtained prior to construction or clearing activities;
- 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.

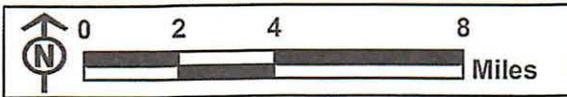


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SCALE	1 in: 4 miles
DATE	2/20/2012

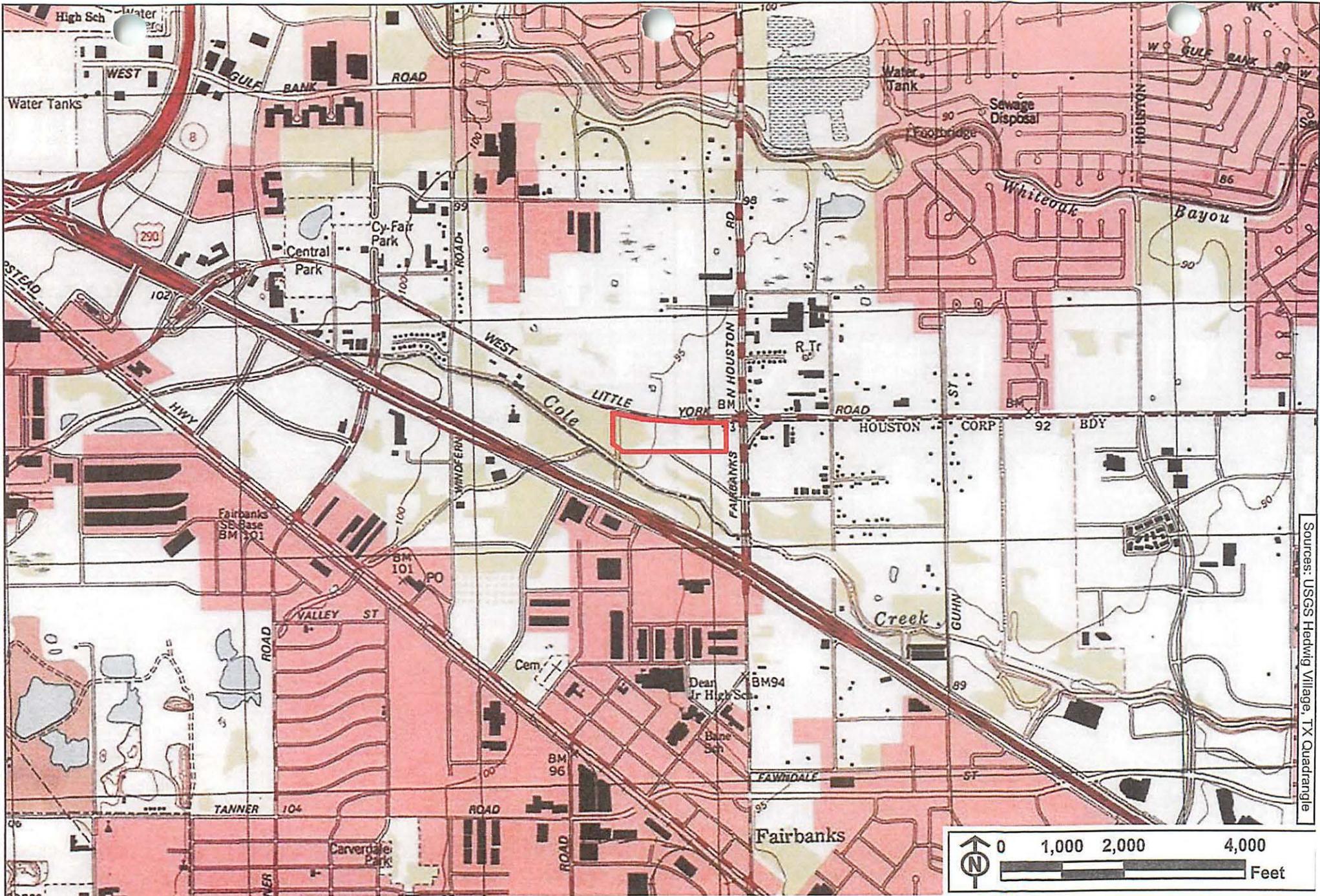
  
**Terracon**  
 Consulting Engineers & Scientists  
 Terracon Project No. 92117614

Project Location  
 West Harris County Regional Water Authority  
 East Re-Pump Station  
 Houston, Harris County, Texas

Figure  
**1.0**



Sources: Bing Maps, ESRI



Sources: USGS Hedwig Village, TX Quadrangle

**Legend**  
 Project Site

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SCALE	1 in : 2,000 ft
DATE	2/20/2012

**Terracon**  
 Consulting Engineers & Scientists  
 Terracon Project No. 92117614

Topographic Map  
 West Harris County Regional Water Authority  
 East Re-Pump Station  
 Houston, Harris County, Texas

Figure  
 2.0