

# Texas Water Development Board

P.O. Box 13231, 1700 N. Congress Ave.  
Austin, TX 78711-3231, [www.twdb.texas.gov](http://www.twdb.texas.gov)  
Phone (512) 463-7847, Fax (512) 475-2053

## MEMORANDUM

**TO:** File

**FROM:** T. Clay Schultz, Ph.D., Director, Regional Water Planning and Development 

**DATE:** July 25, 2016

**SUBJECT:** Hays Caldwell Public Utility Agency, Hays County  
Environmental Determination  
Hays Caldwell PUA Phase 1A Transmission Line Project  
State Water Implementation Fund for Texas: Project 51006 (L15007,  
L15036)

The attached memorandum contains staff's views regarding the environmental soundness of the Hays Caldwell PUA Phase 1A Transmission Line Project proposed by the Hays Caldwell Public Utility Agency (PUA) in Hays County, Texas. This project will utilize planning, acquisition, design, and construction funds from loans L15007 and L15036 from the State Water Implementation Fund for Texas (SWIFT). The Texas Water Development Board (TWDB) committed these loans on July 23, 2015, in the amounts of \$3,530,000 and \$3,960,000, respectively, for a total amount of \$7,490,000. The PUA closed the loans on November 20, 2015.

The proposed transmission line project involves the construction of a water supply transmission line and pump station to convey water from existing water supply infrastructure near Kyle, Texas to existing water supply infrastructure near Buda, Texas. Specifically, the proposed project will consist of: 1) approximately 29,000 linear feet of 12- to 24-inch polyvinyl chloride (PVC) or ductile iron (DI) water line, including valves and associated appurtenances; 2) a 50-foot-wide project easement (20-foot-wide permanent water line easement and 30-foot-wide temporary construction easement) and one permanent access easement; and 3) a 5.3-acre pump station site. The southern terminus of the proposed project begins at Kohler's Crossing Road near the Union Pacific Railroad tracks between the Cities of Kyle and Buda, Texas, and then proceeds north to Farm-to-Market Road (FM) 2770. The water line then follows FM 2770, crosses Onion Creek, and proceeds northwest to County Road (CR) 147 (Old Black Colony Road), where it turns west, terminating near the intersection of FM 1626 and CR 147 (see attached map).

Our Mission	:	Board Members
To provide leadership, information, education, and support for planning, financial assistance, and outreach for the conservation and responsible development of water for Texas	:	Bech Bruun, Chairman   Kathleen Jackson, Board Member   Peter Lake, Board Member
	:	Jeff Walker, Executive Administrator

Based on staff's environmental review, 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. 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:

- All coordination with Hays County Floodplain Administrator shall be complete with all permits acquired prior to construction;
- Compliance with the terms and conditions of United States Army Corps of Engineers Nationwide Permit 12 for Utility Line Activities (USACE Project No. SWF-2016-00080);
- To assure compliance with the Migratory Bird Treaty Act, if impacts to nesting migratory birds cannot be completely avoided by scheduling construction activities outside of the peak breeding season, mid-March to mid-September, then surveys for nesting migratory birds in advance of construction equipment and establishing construction buffers around native nests will be implemented;
- To assure compliance with the Endangered Species Act of 1973, as amended, a survey for the bracted twistflower (*Streptanthus bracteatus*) will be conducted by a qualified botanist during the species' mid-April to late-May flowering period, prior to construction. If the bracted twistflower or any other rare species are found, TPWD will be contacted for consultation on salvage of plants and other possible protection measures;
- 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

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**TO:** T. Clay Schultz, Ph.D., Director, Regional Water Planning and Development 

**FROM:** Lauren Dill, Environmental Reviewer, Team 6 (Regions M and N) 

**DATE:** July 25, 2016

**SUBJECT:** Environmental Summary  
Hays Caldwell Public Utility Agency, Hays County  
Hays Caldwell PUA Phase 1A Transmission Line Project  
State Water Implementation Fund for Texas: Project 51006 (L15007, L15036)

Pursuant to the environmental assessment requirements of 31 Texas Administrative Code § 363.14, Texas Water Development Board (TWDB) staff has conducted a review of the Hays Caldwell PUA Phase 1A Transmission Line Project proposed by the Hays Caldwell Public Utility Agency (PUA) in Hays County, Texas. This project will utilize planning, acquisition, design, and construction funds from loans L15007 and L15036 from the State Water Implementation Fund for Texas (SWIFT). The TWDB committed these loans on July 23, 2015, in the amounts of \$3,530,000 and \$3,960,000, respectively, for a total amount of \$7,490,000. The PUA closed the loans on November 20, 2015.

## Purpose and Need<sup>1</sup>

The purpose of the proposed project is to connect the water systems of the Cities of Kyle and Buda, Texas, two of the PUA's member entities. The City of Buda projects a water shortage beginning in 2018, in which the City's need is projected to be 152 acre-feet per year, rising to 1,041 acre-feet per year in 2023. The Hays Caldwell PUA Phase 1A Transmission Line Project is needed to address this shortage. The proposed project will allow surplus water from Kyle and San Marcos to be provided to Buda between 2018 and 2023. Starting in 2023, the Hays Caldwell PUA Phase 1A Transmission Line Project facilities will be used to deliver Carrizo-Wilcox Aquifer water into the Buda water system following the completion of subsequent phases of the PUA's regional project. The facilities will allow interim water to be sold between Kyle and Buda until the PUA's Carrizo-Wilcox Aquifer project is online in 2023.

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<sup>1</sup> Hays Caldwell Public Utility Agency (May 2016). *Environmental Data Form for the Kyle Buda Water Transmission Line and Pump Station Phase 1A* (Prepared by Hicks & Company). Received by TWDB June 6, 2016.

## Background

The Hays Caldwell Public Utility Agency was formed in 2007 under Texas Local Government Code Chapter 572 by the Cities of Buda, Kyle, and San Marcos, Texas, and the Canyon Regional Water Authority for the purpose of acquiring groundwater rights and constructing, operating, and maintaining a project to produce, treat, and transport groundwater from the Carrizo-Wilcox Aquifer to the sponsoring entities. This larger regional project is anticipated to be online in 2023.

Based on water projections, the PUA's sponsoring entities do not collectively project a water need prior to 2023; however, the City of Buda projects a water shortage beginning in 2018. In 2018, the City's need is projected to be approximately 152 acre-feet per year, rising to 1,041 acre-feet per year in 2023. The proposed SWIFT project will complete Phase 1A of the larger regional project and is projected to satisfy Buda's water demands through 2060.

## Project Description

The proposed Hays Caldwell PUA Phase 1A Transmission Line Project involves the construction of a water supply transmission line and pump station to convey water from existing water supply infrastructure near Kyle, Texas to existing water supply infrastructure near Buda, Texas. Specifically, the proposed project will consist of: 1) approximately 29,000 linear feet (approximately 5.5 miles) of 12- to 24-inch polyvinyl chloride (PVC) or ductile iron (DI) water line, including valves and associated appurtenances; 2) a 50-foot-wide project easement (20-foot-wide permanent water line easement and 30-foot-wide temporary construction easement) and one permanent access easement; and 3) a 5.3-acre pump station site. The pump station site will include vertical turbine pumps, a ground storage tank, an electrical system, instrumentation and supervisory control and data acquisition (SCADA), chlorination facilities, an electrical and chemical building, a metering station for storage tank inflow, detention and water quality ponds, heavy-duty pavement, fencing, security, lighting, and screening. The southern terminus of the proposed project begins at Kohler's Crossing Road near the Union Pacific Railroad tracks between Kyle and Buda, and then proceeds north to Farm-to-Market Road (FM) 2770. The water line then follows FM 2770, crosses Onion Creek, and proceeds northwest to County Road (CR) 147 (Old Black Colony Road), where it turns west, terminating near the intersection of FM 1626 and CR 147.

The pipeline will be installed through open-cut trenching, including where the project crosses Onion Creek and three of the four tributary crossings. Where the project intersects major roadways, the transmission line will be bored under the roads using trenchless construction methods. Additionally, at the eastern-most portion of the transmission line, where the project intersects a tributary of Onion Creek, the transmission line will be bored. The pipeline crossing at Old Black Colony Road will be installed through open-cut trenching. Depth of trenching activities for the pipeline is anticipated to range from 4 to 25 feet below ground surface. Based on the pipeline alignment length and easement width, approximately 33.2 acres will be

temporarily impacted by the pipeline construction. Including the 5.3-acre pump station site, project surface disturbance will total approximately 38.5 acres.

The total estimated project cost for Phase 1A of the project is \$12,405,000. The PUA requests funding on behalf of three of its four sponsoring entities, the Cities of Kyle and San Marcos along with the Canyon Regional Water Authority (Sponsors); the City of Buda will fund its share of the project separately and is not included in this request. The planning, acquisition, design, and construction phases of this project will be funded by the TWDB.

### Reviews by Regulatory Agencies and Resulting Conditions

On the PUA's behalf, Hicks & Company coordinated with the following federal and state regulatory agencies: Texas Parks and Wildlife Department (TPWD), Wildlife Division, Wildlife Habitat Assessment Program; United States Army Corps of Engineers (USACE), Fort Worth District; Texas Historical Commission (THC); and United States Fish and Wildlife Service (USFWS), Austin Ecological Services Field Office. In addition, the Hays County Floodplain Administrator was given an opportunity to review the Environmental Data Form. No adverse comments were received. A summary of the correspondence has been provided below.

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

The TPWD reviewed the proposed project and provided a response dated March 28, 2016 (Project No. 36285), with a variety of recommendations for the proposed project regarding general construction recommendations, impacts to vegetation/wildlife habitat, water resources, federal laws, and rare species. The TPWD received a written response from the PUA's environmental consultant dated April 11, 2016, providing responses to the TPWD's initial comments. Based on that response, the TPWD determined in an email dated April 12, 2016, that all recommendations provided by TPWD have been adequately addressed. A summary of the response furnished to TPWD is provided below.

- **General Construction Recommendations:** Sediment control fences will be used judiciously; however, complete wildlife exclusion by these sediment control fences would not be practical or feasible for this type of linear project that is typically interrupted by intersecting roads, utilities, and other infrastructure. Therefore, a balanced approach of silt fencing and common sense construction practice management will be implemented to minimize potential negative effects to wildlife. Open trenches and excavated areas will be covered and backfilled as timely as possible to promote human safety, as well as protect wildlife species. Excavated areas will be inspected for trapped wildlife prior to backfilling.
- **Impacts to Vegetation/Wildlife Habitat:** Vegetation clearing will be conducted only to the extent necessary. Clearing of individual trees will be in compliance with local tree protection ordinances. Use of drought-tolerant native plant species will be featured in post-construction revegetation efforts; however, use of non-native plant species may be

used in infrequent situations where an area may be very sensitive to erosion or unstable soil conditions that would require the need for extremely rapid vegetation stabilization. Construction contracts for revegetation will include provisions for monitoring and list performance standards for vegetation establishment success. The use of milkweed for monarch butterflies will be investigated and incorporated, if practicable.

- **Water Resources:** The decision whether to use subsurface boring rather than open-cut trenching will be determined according to engineering constraints, physical terrain requirements, and construction costs. Construction activities will avoid, to the extent practicable, riparian vegetation occurring at the crossing at Onion Creek, the unnamed tributary of Onion Creek, and the unnamed tributary of Bunton Branch to help protect water quality and preserve wildlife cover, food sources, and travel corridors. Stock piles, staging areas, and other project related sites will be located in previously disturbed areas outside of the riparian corridors to the extent practicable. Disturbed areas will be revegetated with regionally adapted native species. Best Management Practices (BMPs) will be incorporated for erosion and sediment control to comply with Texas Commission on Environmental Quality (TCEQ) Construction General Permit TXR 150000 and Clean Water Act Section 401 water quality certification and Section 404 permitting at each of the water crossings, including the Onion Creek crossing.
- **Federal Laws:**
  - **Migratory Bird Treaty Act** – If impacts to nesting migratory birds cannot be completely avoided by scheduling construction activities outside of the peak breeding season, mid-March to mid-September, then surveys for nesting migratory birds in advance of construction equipment and establishing construction buffers around native nests will be implemented.
  - **Endangered Species Act** – A survey for the bracted twistflower (*Streptanthus bracteatus*) will be conducted by a qualified botanist during the recommended flower period, and if the bracted twistflower or any other protected or rare species are found, TPWD will be contacted for consultation on salvage of plants and other possible protection measures.
- **Rare Species:**
  - Diligence will be maintained to recognize and avoid all wildlife and plants, particularly listed and/or designated species of “Greatest Conservation Need,” if encountered.
  - **Texas garter snake** (*Thamnophis sirtalis annectens*), **spot-tailed earless lizard** (*Holbrookia lacerata*), and **plains spotted skunk** (*Spilogale putorius interrupta*) – The project plans and specifications will include a construction note to avoid all occurring wildlife species by allowing them to escape from construction equipment and activities. Contractors will be informed that no wildlife species, including venomous snakes, should be picked up, killed, handled, or harmed unless the safety of workers is being compromised.

- o **Hill Country wild-mercury** (*Argythamnia aphoroides*) and **Warnock's coral-root** (*Hexalectris warnockii*) – A survey for these species will be conducted by a qualified biologist.

*United States Army Corps of Engineers, Fort Worth District*

The USACE provided a nationwide permit authorization response letter dated May 4, 2016 (Project Number SWF-2016-00080), stating that the project will involve activities subject to the requirements of Section 404 of the Clean Water Act and that the project appears to qualify for a Nationwide Permit 12 for Utility Line Activities. Provided that the permittee complies with all the terms and conditions therein, the project may proceed. The nationwide permit is valid until March 18, 2017. Furthermore, activities that have commenced, or are under contract to commence, in reliance on a nationwide permit will remain authorized provided the activity is completed within 12 months of the date of the nationwide permit's expiration, modification, or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR § 330.4(e) and 33 CFR § 330.5(c) or (d).

Four tributaries, including Onion Creek, will be intersected by the proposed project. The pipeline crossings of three of the four tributaries, including Onion Creek, will employ open-cut trenching. Disturbed areas will be returned to pre-construction contours. Direct impacts to the fourth crossing will be largely avoided by installing the pipeline via subsurface boring; however, one bore pit must be located within the ordinary high water mark of the tributary in order to complete a directional change in the subsurface alignment. The maximum diameter of the bore pit will be 15 feet, but the disturbed area will be returned to pre-construction contours.

*Texas Historical Commission*

Hicks & Company conducted a survey of the proposed project area under Antiquities Permit #7474 with investigations occurring on April 27, 2016. Hicks & Company's report (2016) concluded that the project will have no adverse effects on cultural resources. The THC provided concurrence with Hicks & Company's assessment in the form of a stamped approval dated May 23, 2016 (Tracking No. 201607015).

The SWIFT loan is conditioned to read that if archeological sites are discovered during construction, work will cease immediately in that area and the PUA 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.

*United States Fish and Wildlife Service, Austin Ecological Services Field Office*

USFWS provided a response in the form of a "no action" stamp dated April 19, 2016 on the Hicks & Company coordination letter (Consultation No. 2016-TA-321).

The SWIFT loan is conditioned to read that if threatened or endangered species are encountered during construction, work will cease immediately and the PUA will notify TWDB staff, TPWD, and the USFWS. Subsequent to notification, mitigation measures will be taken in accordance with the Endangered Species Act of 1973, as amended.

#### *Local Floodplain Administrator*

The local floodplain administrator for Hays County was given the opportunity to review the proposed project in a letter dated February 19, 2016. The Hays County Floodplain Administrator provided a response in a letter dated June 24, 2016. Based on that response, the Hays County Floodplain Administrator determined that the proposed project will be in compliance with the Hays County Floodplain Regulations; however, the PUA will need to apply for and obtain Hays County development authorizations before the start of construction.

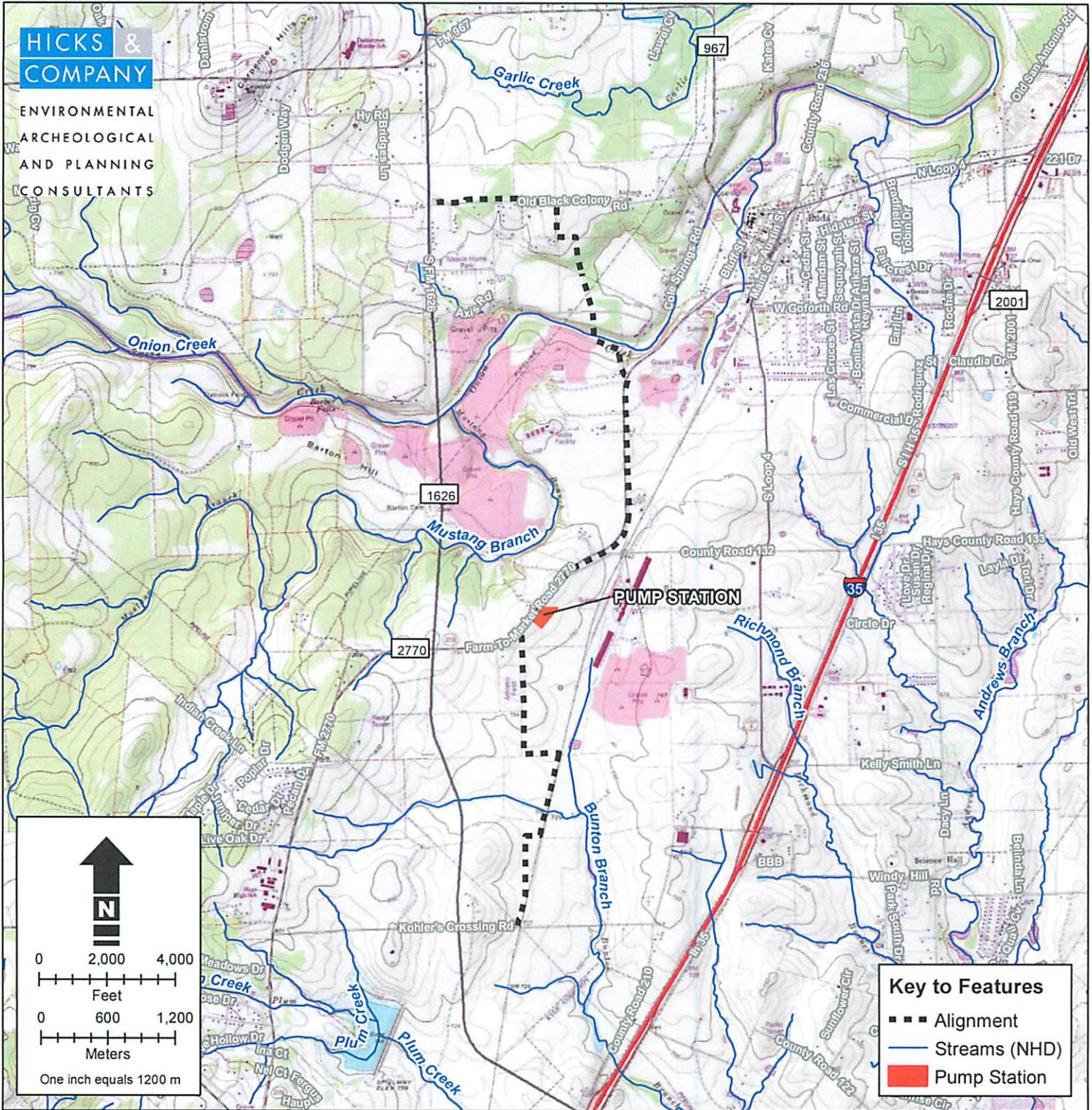
#### Conditions and Recommendation

Full consideration has been given to the views and comments of the requisite regulatory agencies. Based on a detailed environmental review consistent with 31 Texas Administrative Code § 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:

- All coordination with Hays County Floodplain Administrator shall be complete with all permits acquired prior to construction;
- Compliance with the terms and conditions of United States Army Corps of Engineers Nationwide Permit 12 for Utility Line Activities (USACE Project No. SWF-2016-00080);
- To assure compliance with the Migratory Bird Treaty Act, if impacts to nesting migratory birds cannot be completely avoided by scheduling construction activities outside of the peak breeding season, mid-March to mid-September, then surveys for nesting migratory birds in advance of construction equipment and establishing construction buffers around native nests will be implemented;
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- Standard emergency condition for the discovery of cultural resources; and
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Environmental Determination  
Hays Caldwell Public Utility Agency (51006)  
Hays Caldwell PUA Phase 1A Transmission Line Project  
July 25, 2016  
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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.



**Figure 1**  
**Project Location**  
HCUA Kyle-Buda  
Pipeline

USGS 7.5-minute Topographic Quadrangle:  
Buda (USGS# 30097-A7) and Mountain City (USGS# 30097-A8), Tx

