



**ITEM FOR ENVIRONMENTAL COMMISSION AGENDA**

COMMISSION MEETING DATE REQUESTED:	September 19, 2018
NAME & NUMBER OF PROJECT:	Island Cove Boat Dock SP-2017-0279D
NAME OF APPLICANT OR ORGANIZATION:	David Cancioli Permit Partners
LOCATION:	4409 Island Cove
COUNCIL DISTRICT:	District #10
PROJECT FILING DATE:	July 26, 2017
DSD/ENVIRONMENTAL STAFF:	Atha Phillips, Environmental Program Coordinator (512) 974-2132, atha.phillips@austintexas.gov
WATERSHED:	Lake Austin
ORDINANCE:	Watershed Protection Ordinance
REQUEST:	Variance request is as follows: <ol style="list-style-type: none"><li>1. Placement of fill in the lake [25-8-367]</li><li>2. Cut over 4 feet (LDC 25-8-341)</li><li>3. Fill over 4 feet (LDC 25-8-342)</li></ol>
STAFF DETERMINATION:	Staff does not recommend approval for the variances.
REASONS FOR DETERMINATION:	Findings of fact have not been met.



Development Services Department  
Staff Recommendations Concerning Required Findings

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Project: Island Cove Boat Dock  
Ordinance Standard: Watershed Protection Ordinance  
Variance Request: Placement of fill in the lake [25-8-367]

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A. Land Use Commission variance determinations from Chapter 25-8-41 of the City Code:

1. The requirement will deprive the applicant of a privilege available to owners of similarly situated property with approximately contemporaneous development subject to similar code requirements.

**No, the applicant has two existing cut-in slips but is choosing to reconfigure the lot to maximize the buildable space.**

2. The variance:

- a) Is not necessitated by the scale, layout, construction method, or other design decision made by the applicant, unless the design decision provides greater overall environmental protection than is achievable without the variance;

**Yes, although the decision to relocate the boat dock slips is a choice the applicant is making, the proposed plantings will improve the floodplain health and provide a greater overall benefit than without the variance.**

- b) Is the minimum deviation from the code requirement necessary to allow a reasonable use of the property;

**No, the applicant could have utilized the existing cut-in slips.**

- c) Does not create a significant probability of harmful environmental consequences.

**Yes, although there will be initial disturbance to the shoreline, sediment controls will be in place to prevent a discharge into the lake. The floodplain restoration will improve health from poor to good.**

3. Development with the variance will result in water quality that is at least equal to the water quality achievable without the variance.  
**Yes, although there will be initial disturbance to the shoreline, sediment controls will be in place to prevent a discharge into the lake.**

B. Additional Land Use Commission variance determinations for a requirement of Section 25-8-422 (Water Quality Transition Zone), Section 25-8-452 (Water Quality Transition Zone), Article 7, Division 1 (Critical Water Quality Zone Restrictions), or Section 25-8-652 (Development Impacting Lake Austin, Lady Bird Lake, and Lake Walter E. Long):

1. The criteria for granting a variance in Subsection (A) are met;  
**Not all the criteria in Subsection (A) have been met.**
2. The requirement for which a variance is requested prevents a reasonable, economic use of the entire property;  
**No, the applicant has two existing cut-in slips but is choosing to reconfigure the lot to maximize the buildable space.**
3. The variance is the minimum deviation from the code requirement necessary to allow a reasonable, economic use of the entire property.  
**No, the applicant has two existing cut-in slips but is choosing to reconfigure the lot to maximize the buildable space.**

Staff Recommendation:

Staff does not recommend approval for the variances needed to build the proposed driveway for future development, to construct the parking lot, or cut proposed outside the footprint of the pond.



Date: 9/11/2018

Environmental Reviewer: Atha Phillips



Date: 9/11/2018

Acting Environmental Officer: Chris Herrington



Development Services Department  
Staff Recommendations Concerning Required Findings

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Project: Island Cove Boat Dock  
Ordinance Standard: Watershed Protection Ordinance  
Variance Request: Cut above 4 feet (LDC 25-8-341)

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A. Land Use Commission variance determinations from Chapter 25-8-41 of the City Code:

1. The requirement will deprive the applicant of a privilege available to owners of similarly situated property with approximately contemporaneous development subject to similar code requirements.  
**No, the applicant has two existing cut-in slips but is choosing to reconfigure the lot to maximize the buildable space.**
2. The variance:
  - a) Is not necessitated by the scale, layout, construction method, or other design decision made by the applicant, unless the design decision provides greater overall environmental protection than is achievable without the variance;  
**Yes, although the decision to relocate the boat dock slips is a choice the applicant is making, the proposed plantings will improve the floodplain health and provide a greater overall benefit than without the variance.**
  - b) Is the minimum deviation from the code requirement necessary to allow a reasonable use of the property;  
**No, the applicant could have utilized the existing cut-in slips.**
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**Yes, although there will be initial disturbance to the shoreline, sediment controls will be in place to prevent a discharge into the lake. The floodplain restoration will improve health from poor to good.**

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Date: 9/11/2018

Environmental Reviewer: Atha Phillips



Date: 9/11/2018

Acting Environmental Officer: Chris Herrington



Development Services Department  
Staff Recommendations Concerning Required Findings

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Project: Island Cove Boat Dock  
Ordinance Standard: Watershed Protection Ordinance  
Variance Request: Fill above 4 feet (LDC 25-8-342)

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A. Land Use Commission variance determinations from Chapter 25-8-41 of the City Code:

1. The requirement will deprive the applicant of a privilege available to owners of similarly situated property with approximately contemporaneous development subject to similar code requirements.  
**No, the applicant has two existing cut-in slips but is choosing to reconfigure the lot to maximize the buildable space.**
2. The variance:
  - a) Is not necessitated by the scale, layout, construction method, or other design decision made by the applicant, unless the design decision provides greater overall environmental protection than is achievable without the variance;  
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Date: 9/11/2018

Environmental Reviewer: Atha Phillips



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Acting Environmental Officer: Chris Herrington

**CITY OF AUSTIN  
ENVIRONMENTAL RESOURCE INVENTORY  
FOR THE  
0.55-ACRE 4409 ISLAND COVE TRACT**

Travis County, Texas

**Submitted to:**  
David Cancialosi  
Permit Partners, LLC  
105 West Riverside Drive #225  
Austin, TX 78704

**Prepared By:**  
aci consulting  
1001 Mopac Circle  
Austin, Texas 78746

aci Project No.: 31-15-074

June 2015



## Environmental Resource Inventory

For the City of Austin  
Related to LDC 25-8-121, City Code 30-5-121, ECM 1.3.0 & 1.10.0

The ERI is required for projects that meet one or more of the criteria listed in LDC 25-8-121(A), City Code 30-5-121(A).

1. SITE/PROJECT NAME: 0.55-acre 4409 Island Cove Tract
2. COUNTY APPRAISAL DISTRICT PROPERTY ID (#'s): 375132
3. ADDRESS/LOCATION OF PROJECT: 4409 Island Cove Austin, TX 78731
4. WATERSHED: Lake Austin (Suburban)
5. THIS SITE IS WITHIN THE (Check all that apply)
 

Edwards Aquifer Recharge Zone* (See note below) .....	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> No
Edwards Aquifer Contributing Zone* .....	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> No
Edwards Aquifer 1500 ft Verification Zone* .....	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> No
Barton Spring Zone* .....	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> No

\*(as defined by the City of Austin – LDC 25-8-2 or City Code 30-5-2)

**Note: If the property is over the Edwards Aquifer Recharge zone, the Hydrogeologic Report and karst surveys must be completed and signed by a Professional Geoscientist Licensed in the State of Texas.**

6. DOES THIS PROJECT PROPOSE FLOODPLAIN MODIFICATION?.....☒ YES\*\* ☐ NO  
If yes, then check all that apply:
 

<input type="checkbox"/> (1) The floodplain modifications proposed are necessary to protect the public health and safety;
<input checked="" type="checkbox"/> (2) The floodplain modifications proposed would provide a significant, demonstrable environmental benefit, as determined by a <b>functional assessment</b> of floodplain health as prescribed by the Environmental Criteria Manual (ECM), or
<input type="checkbox"/> (3) The floodplain modifications proposed are necessary for development allowed in the critical water <b>quality zone under LDC 25-8-261 or 25-8-262, City Code 30-5-261 or 30-5-262.</b>
<input type="checkbox"/> (4) The floodplain modifications proposed are outside of the Critical Water Quality Zone in an area determined to be in poor or fair condition by a <b>functional assessment</b> of floodplain health.

**\*\* If yes, then a functional assessment must be completed and attached to the ERI (see ECM 1.7 and Appendix X for forms and guidance) unless conditions 1 or 3 above apply.**

7. IF THE SITE IS WITHIN AN URBAN OR SUBURBAN WATERSHED, DOES THIS PROJECT PROPOSE A UTILITY LINE PARALLEL TO AND WITHIN THE CRITICAL WATER QUALITY ZONE? ..... ☐ YES\*\*\* ☒ NO

**\*\*\*If yes, then riparian restoration is required by LDC 25-8-261(E) or City Code 30-5-261(E) and a functional assessment must be completed and attached to the ERI (see ECM 1.5 and Appendix X for forms and guidance).**

8. There is a total of 0 (#'s) Critical Environmental Feature(s)(CEFs) on or within 150 feet of the project site. If CEF(s) are present, attach a detailed **DESCRIPTION** of the CEF(s), color **PHOTOGRAPHS**, the **CEF WORKSHEET** and provide **DESCRIPTIONS** of the proposed CEF buffer(s) and/or wetland mitigation. Provide the number of each type of CEFs on or within 150 feet of the site (Please provide the number of CEFs):

0 (#'s) Spring(s)/Seep(s)      0 (#'s) Point Recharge Feature(s)      0 (#'s) Bluff(s)  
0 (#'s) Canyon Rimrock(s)      0 (#'s) Wetland(s)

**Note: Standard buffers for CEFs are 150 feet, with a maximum of 300 feet for point recharge features. Except for wetlands, if the standard buffer is not provided, you must provide a written request for an administrative variance from LDC 25-8-281(C)(1) and provide written findings of fact to support your request. Request forms for administrative variances from requirements stated in LDC 25-8-281 are available from Watershed Protection Department.**

9. The following site maps are attached at the end of this report (Check all that apply and provide):

All ERI reports must include:

- ☒ **Site Specific Geologic Map with 2-ft Topography**
- ☒ **Historic Aerial Photo of the Site**
- ☒ **Site Soil Map**
- ☐ **Critical Environmental Features and Well Location Map on current Aerial Photo with 2-ft Topography**

Only if present on site (Maps can be combined):

- ☐ **Edwards Aquifer Recharge Zone with the 1500-ft Verification Zone**  
(Only if site is over or within 1500 feet the recharge zone)
- ☐ **Edwards Aquifer Contributing Zone**
- ☐ **Water Quality Transition Zone (WQTZ)**
- ☒ **Critical Water Quality Zone (CWQZ)**
- ☒ **City of Austin Fully Developed Floodplains for all water courses with up to 64-acres of drainage**

10. **HYDROGEOLOGIC REPORT** – Provide a description of site soils, topography, and site specific geology below (Attach additional sheets if needed):

**Surface Soils** on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups\*. If there is more than one soil unit on the project site, show each soil unit on the site soils map.

Soil Series Unit Names, Infiltration Characteristics & Thickness		
Soil Series Unit Name & Subgroup**	Group*	Thickness (feet)
Bh - Bergstrom soils and Urban land, 0 to 2 % slopes	B	5

**\*Soil Hydrologic Groups Definitions (Abbreviated)**

- A. Soils having a high infiltration rate when thoroughly wetted.
- B. Soils having a moderate infiltration rate when thoroughly wetted.
- C. Soils having a slow infiltration rate when thoroughly wetted.
- D. Soils having a very slow infiltration rate when thoroughly wetted.

\*\*Subgroup Classification – See Classification of Soil Series Table in County Soil Survey.

**Description of Site Topography and Drainage** *(Attach additional sheets if needed):*

According to the Austin West U.S. Geologic Survey (USGS) 7.5-Minute Topographic Quadrangle and the City of Austin 2-ft contours, the elevation within the subject area ranges from 492 to 500 feet above mean sea level. The high point within the subject area is near the northern corner and then slopes from the north to the south and the west to the east towards Lake Austin (COA 2012; USGS 1988).

(COA) City of Austin. 2012. Two Foot Topographic Lines. City of Austin: Austin, TX.

(USGS) U.S. Geologic Survey. 1988. Austin West, Texas Quadrangle. USGS - Department of the Interior: Denver, CO.

**List surface geologic units below:**

Geologic Units Exposed at Surface		
Group	Formation	Member
	Colorado River terrace deposits	First Street

**Brief description of site geology** *(Attach additional sheets if needed):*

According to the Bureau of Economic Geology, the subject area lies within the Colorado River terrace deposits - First Street (Qfs) (Rodda 1969).

The Colorado River terrace deposits - First Street is generally characterized as "mostly unconsolidated gravel, sand, silt, and clay derived from Cretaceous and per-Cretaceous rocks to the west. The gravel is mainly limestone and chert with minor amounts of igneous and metamorphic rocks...The First Street, Riverview, and Sand Beach deposits are relatively undissected and no bedrock is exposed between the units."

## Reference:

Rodda, Peter U. 1969. Geology of the Austin West quadrangle, Travis County, Texas. Bureau of Economic Geology - The University of Texas at Austin: Austin, Texas.

**Wells** – Identify all recorded and unrecorded wells on site (test holes, monitoring, water, oil, unplugged, capped and/or abandoned wells, etc.):

There are 0 (#) wells present on the project site and the locations are shown and labeled

     (#s) The wells are not in use and have been properly abandoned.

     (#s) The wells are not in use and will be properly abandoned.

     (#s) The wells are in use and comply with 16 TAC Chapter 76.

There are 0 (#s) wells that are off-site and within 150 feet of this site.

11. **THE VEGETATION REPORT** – Provide the information requested below:

**Brief description of site plant communities** *(Attach additional sheets if needed):*

See Attachment Q11-1.

There is woodland community on site .....☒ YES ☐ NO *(Check one).*

If yes, list the dominant species below:

Woodland species	
Common Name	Scientific Name
white mulberry	Morus alba
pecan	Carya illinoensis
chinese tallow	Triadica sebifera
box elder	Acer negundo
green ash	Fraxinus pennsylvanica

There is grassland/prairie/savanna on site.....☐ YES ☒ NO *(Check one).*

If yes, list the dominant species below:

Grassland/prairie/savanna species	
Common Name	Scientific Name
bermudagrass	Cynodon dactylon
king ranch bluestem	Bothriochloa ischaemum var. songarica
cedar sedge	Carex planosachys
dallisgrass	Paspalum sp.
straggler daisy	Calyptracarpus vialis

There is hydrophytic vegetation on site .....☒ YES ☐ NO *(Check one).*

If yes, list the dominant species in table below *(next page):*

Hydrophytic plant species		
Common Name	Scientific Name	Wetland Indicator Status
bald cypress	Taxodium distichum	OBL
black willow	Salix nigra	FACW

A tree survey of all trees with a diameter of at least eight inches measured four and one-half feet above natural grade level has been completed on the site.

☒ YES ☐ NO (Check one).

**12. WASTEWATER REPORT** – Provide the information requested below.

Wastewater for the site will be treated by (Check of that Apply):

- ☐ On-site system(s)  
☐ City of Austin Centralized sewage collection system  
☐ Other Centralized collection system

*Note: All sites that receive water or wastewater service from the Austin Water Utility must comply with City Code Chapter 15-12 and wells must be registered with the City of Austin*

The site sewage collection system is designed and will be constructed to in accordance to all State, County and City standard specifications.

☐ YES ☐ NO (Check one).

Calculations of the size of the drainfield or wastewater irrigation area(s) are attached at the end of this report or shown on the site plan.

☐ YES ☐ NO ☒ Not Applicable (Check one).

Wastewater lines are proposed within the Critical Water Quality Zone?

☐ YES ☒ NO (Check one). If yes, then provide justification below:

Is the project site is over the Edwards Aquifer?

☐ YES ☒ NO (Check one).

If yes, then describe the wastewater disposal systems proposed for the site, its treatment level and effects on receiving watercourses or the Edwards Aquifer.

**13. One (1) hard copy and one (1) electronic copy of the completed assessment have been provided.**

Date(s) ERI Field Assessment was performed: 06/04/2015  
Date(s)

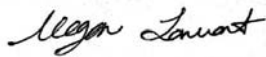
My signature certifies that to the best of my knowledge, the responses on this form accurately reflect all information requested.

Megan Lamont

512-347-9000

Print Name

Telephone



mlamont@aci-group.net

Signature

Email Address

aci Consulting

06/26/2015

Name of Company

Date

For project sites within the Edwards Aquifer Recharge Zone, my signature and seal also certifies that I am a licensed Professional Geoscientist in the State of Texas as defined by ECM 1.12.3(A).

P.G.  
Seal

**List of Attachments for the  
Environmental Resource Inventory Form**

Question 8:

Q8-1. CEF Worksheet

Q8-2. Supporting Documentation for no CEF Determination

Question 9:

Q9-1. Site Specific Geologic Map with 2-ft Topography

Q9-2. Historic Aerial Photo of the Site (1996)

Q9-3. Site Soils Map

Q9-4. Critical Water Quality Zone (CWQZ)

Q9-5. City of Austin Fully Developed Floodplains for all water courses with up to 64-  
acres of drainage

Question 10:

Q10-1. Surface Soils

Q10-2. Wells

Question 11:

Q11-1. Vegetation

Question 12:

Q12-1. Wastewater Report

## Question 8 Attachments



## City of Austin Environmental Resource Inventory - Critical Environmental Feature Worksheet

1	Project Name:	4409 Island Cove Tract
2	Project Address:	4409 Island Cove Austin, TX 78731
3	Site Visit Date:	June 4, 2015
4	Environmental Resource Inventory Date:	June 26, 2015

5	Primary Contact Name:	Megan Lamont
6	Phone Number:	512-347-9000
7	Prepared By:	Megan Lamont
8	Email Address:	mlamont@aci-group.net

9	FEATURE TYPE {Wetland,Rimrock, Bluffs,Recharge Feature,Spring}	FEATURE ID (eg S-1)	FEATURE LONGITUDE (WGS 1984 in Meters)		FEATURE LATITUDE (WGS 1984 in Meters)		WETLAND DIMENSIONS (ft)		RIMROCK/BLUFF DIMENSIONS (ft)		RECHARGE FEATURE DIMENSIONS				Springs Est. Discharge
			coordinate	notation	coordinate	notation	X	Y	Length	Avg Height	X	Y	Z	Trend	cfs
	No CEFs found on site.														

City of Austin Use Only	
CASE NUMBER:	

For rimrock, locate the midpoint of the segment that describes the feature.



For wetlands, locate the approximate centroid of the feature and the estimated area.



For a spring or seep, locate the source of groundwater that feeds a pool or stream.



**Please state the method of coordinate data collection and the approximate precision and accuracy of the points and the unit of measurement.**

<u>Method</u>		<u>Accuracy</u>
GPS	<input type="checkbox"/>	sub-meter <input type="checkbox"/>
Surveyed	<input type="checkbox"/>	meter <input type="checkbox"/>
Other	<input type="checkbox"/>	> 1 meter <input type="checkbox"/>

Professional Geologists apply seal below

## Q8-2. Supporting Documentation for Determination of no Wetland CEF

**Date Taken**

06/04/2015

**Photo #**

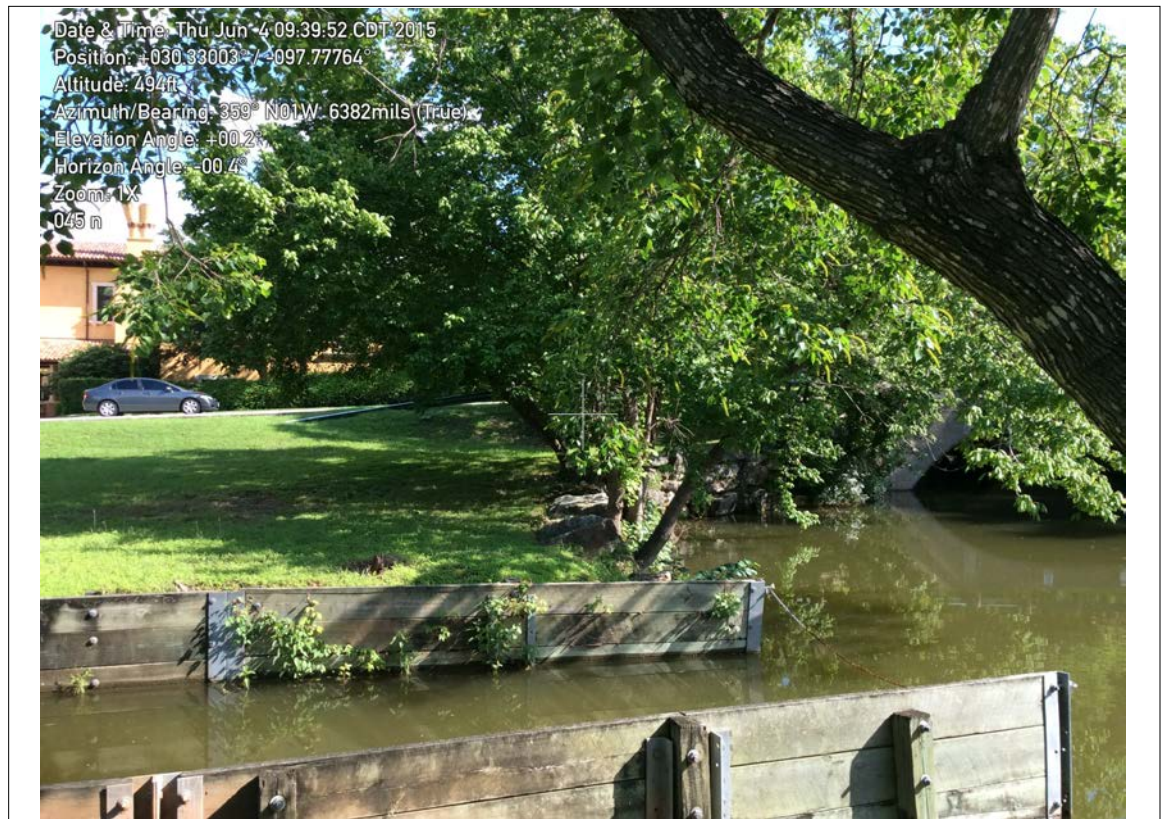
001

**Direction**

North

**Location**

4409 Island Cove



### Waypoint 045

Photo # 001 was taken from the eastern extent of the property looking north. This photo shows the typical characteristics of the subject area next to the waterfront. The majority of the ground cover vegetation includes bermudagrass, dallisgrass, and straggler daisy. Tree species include Chinese tallow and black willow.

Wetland Delineation sheets for Waypoint 045 is found on the next page.

# WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: 4409 Island Cove Tract City/County: Austin, Travis County Sampling Date: 06/04/2015  
 Applicant/Owner: \_\_\_\_\_ State: TX Sampling Point: 045  
 Investigator(s): E. Wallgren & M. Lamont Section, Township, Range: n/z  
 Landform (hillslope, terrace, etc.): flat, man-made bulkhead Local relief (concave, convex, none): - Slope (%): -  
 Subregion (LRR): Edwards Plateau Lat: 30.329915 Long: -97.777510 Datum: NAD83 – SP4203  
 Soil Map Unit Name: Bh - Bergstrom soils and Urban land, 0 to 2 percent slopes NWI classification: L1UBHh

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_ Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No X  
 Are Vegetation \_\_\_\_\_ Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: Sampling occurred approximately four days following the wettest May on record in which precipitation for the month exceeded the monthly average by approximately 17.59 inches. The vegetation within the sampling point met the criteria for hydrophytic vegetation; however, no hydric soils or wetland hydrology indicators were present. Therefore, the sampling point is not within a wetland. Corresponds with waypoint 045 and photo 001 in Q.8-2 Supporting Documentation Sheet.	

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>3 m</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80%</u> (A/B)
1. <u>Salix nigra</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Triadica sebifera</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>60</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>3 m</u> )				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>3 m</u> )				
1. <u>Cynodon dactylon</u>	<u>60</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% ____ Prevalence Index is ≤3.0 <sup>1</sup> ____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Calypocarpus vialis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Paspalum dilatatum</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>3 m</u> )				
1. <u>Vitis sp.</u>	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
% Bare Ground in Herb Stratum _____ = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)

Photo 001. Dominance test indicates the presence of hydrophytic vegetation.

## SOIL

Sampling Point: 045

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 3/2	100%					loamy clay	
5-12+	10 YR 3/4	100%					clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

- |  |  |
|--|--|
| <input type="checkbox"/> Histosol (A1)                             | <input type="checkbox"/> Sandy Gleyed Matrix (S4)      |
| <input type="checkbox"/> Histic Epipedon (A2)                      | <input type="checkbox"/> Sandy Redox (S5)              |
| <input type="checkbox"/> Black Histic (A3)                         | <input type="checkbox"/> Stripped Matrix (S6)          |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                     | <input type="checkbox"/> Loamy Mucky Mineral (F1)      |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)      |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)              | <input type="checkbox"/> Depleted Matrix (F3)          |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)         | <input type="checkbox"/> Redox Dark Surface (F6)       |
| <input type="checkbox"/> Thick Dark Surface (A12)                  | <input type="checkbox"/> Depleted Dark Surface (F7)    |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                  | <input type="checkbox"/> Redox Depressions (F8)        |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)      | <b>(MLRA 72 &amp; 73 of LRR H)</b>                     |

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- ☐ 1 cm Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16) (LRR F, G, H)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16)
- (LRRH outside of MLRA 72 & 73)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X**Remarks:**

No hydric soil indicators present.

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                           |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Aquatic Invertebrates (B13)                |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Dry-Season Water Table (C2)                |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3)                       | <b>(where not tilled)</b>   |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                 |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |   |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- (where tilled)**
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

**Field Observations:**Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
(includes capillary fringe)Wetland Hydrology Present? Yes \_\_\_\_\_ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

No wetland hydrology indicators present.



## Q8-2. Supporting Documentation for Determination of no Wetland CEF

**Date Taken**

06/04/2015

**Photo #**

002

**Direction**

West

**Location**

4409 Island Cove



### Waypoint 046

Photo # 002 was taken from the eastern extent of the property looking west. This photo shows the typical characteristics of the subject area. While some tree species are found on site the majority of the ground cover vegetation includes bermudagrass, cedar sedge, and straggler daisy.

Wetland Delineation sheets for Waypoint 046 is found on the next page.

# WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: 4409 Island Cove Tract City/County: Austin, Travis County Sampling Date: 06/04/2015  
 Applicant/Owner: \_\_\_\_\_ State: TX Sampling Point: 046  
 Investigator(s): E. Wallgren & M. Lamont Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): flat, slight slope Local relief (concave, convex, none): concave Slope (%): minimal  
 Subregion (LRR): Edwards Plateau Lat: 30.330081 Long: -97.777602 Datum: NAD83 – SP4203  
 Soil Map Unit Name: Bh - Bergstrom soils and Urban land, 0 to 2 percent slopes NWI classification: L1UBHh

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_ Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No X  
 Are Vegetation \_\_\_\_\_ Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: Sampling occurred approximately four days following the wettest May on record in which precipitation for the month exceeded the monthly average by approximately 17.59 inches. The vegetation within the sampling point met the criteria for hydrophytic vegetation; however, no hydric soils or wetland hydrology indicators were present. Therefore, the sampling point is not within a wetland. Corresponds with waypoint 046 and photo 002 in Q.8-2 Supporting Documentation Sheet.	

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>3 m</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>Taxodium distichum</u>	<u>3</u>	<u>N</u>	<u>OBL</u>	
2. <u>Triadica sebifera</u>	<u>45</u>	<u>Y</u>	<u>FAC</u>	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
3. <u>Acer negundo</u>	<u>42</u>	<u>Y</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>100</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>3 m</u> )				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% ____ Prevalence Index is ≤3.0 <sup>1</sup> ____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>3 m</u> )				
1. <u>Calypocarpus vialis</u>	<u>70</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Toxicodendron radicans</u>	<u>&lt;1</u>	<u>N</u>	<u>FACU</u>	
3. <u>Carex planostachys</u>	<u>8</u>	<u>N</u>	<u>-</u>	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
4. <u>Bothriochloa ischaemum var. songarica</u>	<u>&lt;1</u>	<u>N</u>	<u>-</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>80</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>3 m</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
% Bare Ground in Herb Stratum <u>20</u>	_____	_____	_____ = Total Cover	

Remarks: (Include photo numbers here or on a separate sheet.)

Photo 002. Dominance test indicates the presence of hydrophytic vegetation.

## SOIL

Sampling Point: 046

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10 YR 3/2	100%					loamy clay	
7-12+	10 YR 3/4	100%					clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) **(LRR F)**  
☐ 1 cm Muck (A9) **(LRR F, G, H)**  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**  
☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**

☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ High Plains Depressions (F16)  
**(MLRA 72 & 73 of LRR H)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

☐ 1 cm Muck (A9) **(LRR I, J)**  
☐ Coast Prairie Redox (A16) **(LRR F, G, H)**  
☐ Dark Surface (S7) **(LRR G)**  
☐ High Plains Depressions (F16)  
**(LRRH outside of MLRA 72 & 73)**  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (TF2)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X**Remarks:**

No hydric soil indicators present.

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)  
☐ High Water Table (A2)  
☐ Saturation (A3)  
☐ Water Marks (B1)  
☐ Sediment Deposits (B2)  
☐ Drift Deposits (B3)  
☐ Algal Mat or Crust (B4)  
☐ Iron Deposits (B5)  
☐ Inundation Visible on Aerial Imagery (B7)  
☐ Water-Stained Leaves (B9)  
☐ Salt Crust (B11)  
☐ Aquatic Invertebrates (B13)  
☐ Hydrogen Sulfide Odor (C1)  
☐ Dry-Season Water Table (C2)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where not tilled)**  
☐ Presence of Reduced Iron (C4)  
☐ Thin Muck Surface (C7)  
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)  
☐ Sparsely Vegetated Concave Surface (B8)  
☐ Drainage Patterns (B10)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where tilled)**  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Geomorphic Position (D2)  
☐ FAC-Neutral Test (D5)  
☐ Frost-Heave Hummocks (D7) **(LRR F)**

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

No wetland hydrology indicators present.

## Q8-2. Supporting Documentation for Determination of no Wetland CEF

**Date Taken**

06/04/2015

**Photo #**

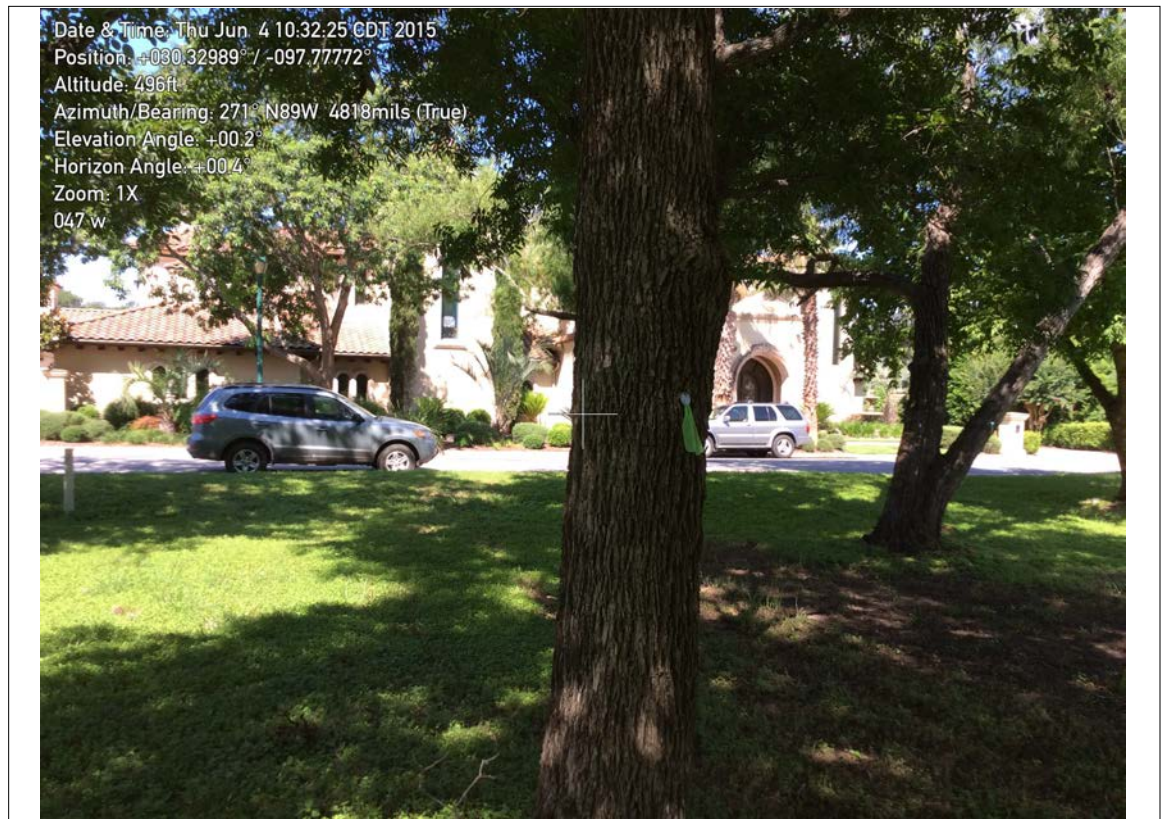
003

**Direction**

West

**Location**

4409 Island Cove



### Waypoint 047

Photo # 003 was taken from the eastern extent of the property looking west. This photo shows the typical characteristics of the subject area at this point. The majority of the ground cover vegetation includes cedar sedge and straggler daisy. Tree species near this point include pecan, green ash, white mulberry and a black willow.

Wetland Delineation sheets for Waypoint 047 is found on the next page.



# WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: 4409 Island Cove Tract City/County: Austin, Travis County Sampling Date: 06/04/2015  
 Applicant/Owner: \_\_\_\_\_ State: TX Sampling Point: 047  
 Investigator(s): E. Wallgren & M. Lamont Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): n/a Slope (%): -  
 Subregion (LRR): Edwards Plateau Lat: 30.329851 Long: -97.777793 Datum: NAD83-SP4203  
 Soil Map Unit Name: Bh - Bergstrom soils and Urban land, 0 to 2 percent slopes NWI classification: -

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_ Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No X  
 Are Vegetation \_\_\_\_\_ Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: Sampling occurred approximately four days following the wettest May on record in which precipitation for the month exceeded the monthly average by approximately 17.59 inches. The vegetation within the sampling point met the criteria for hydrophytic vegetation; however, no hydric soils or wetland hydrology indicators were present. Therefore, the sampling point is not within a wetland. Corresponds with waypoint 047 and photo 003 in Q.8-2 Supporting Documentation Sheet.	

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>10 m</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>Carya illinoensis</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Salix nigra</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
4. <u>Morus alba</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
<u>90</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10 m</u> )				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>3 m</u> )				
1. <u>Calyptocarpus vialis</u>	<u>65</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% ____ Prevalence Index is ≤3.0 <sup>1</sup> ____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Carex planostachys</u>	<u>5</u>	<u>N</u>	<u>-</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>70</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>10 m</u> )				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
% Bare Ground in Herb Stratum <u>30</u> _____ = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)

Photo 003. Dominance test indicates the presence of hydrophytic vegetation.

## SOIL

Sampling Point: 047

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12+	10 YR 3/4	100%					clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) (**LRR F**)  
☐ 1 cm Muck (A9) (**LRR F, G, H**)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)  
☐ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- ☐ 1 cm Muck (A9) (**LRRI, J**)  
☐ Coast Prairie Redox (A16) (**LRR F, G, H**)  
☐ Dark Surface (S7) (**LRR G**)  
☐ High Plains Depressions (F16) (**LRRH outside of MLRA 72 & 73**)  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (TF2)  
☐ Other (Explain in Remarks)  
<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

## Remarks:

No hydric soil indicators present.

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)  
☐ High Water Table (A2)  
☐ Saturation (A3)  
☐ Water Marks (B1)  
☐ Sediment Deposits (B2)  
☐ Drift Deposits (B3)  
☐ Algal Mat or Crust (B4)  
☐ Iron Deposits (B5)  
☐ Inundation Visible on Aerial Imagery (B7)  
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)  
☐ Aquatic Invertebrates (B13)  
☐ Hydrogen Sulfide Odor (C1)  
☐ Dry-Season Water Table (C2)  
☐ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)  
☐ Presence of Reduced Iron (C4)  
☐ Thin Muck Surface (C7)  
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)  
☐ Sparsely Vegetated Concave Surface (B8)  
☐ Drainage Patterns (B10)  
☐ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Geomorphic Position (D2)  
☐ FAC-Neutral Test (D5)  
☐ Frost-Heave Hummocks (D7) (**LRR F**)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_

Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

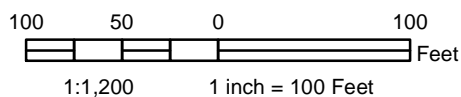
## Remarks:

No wetland hydrology indicators present.

## Question 9 Attachments



This map is intended for planning purposes only. All map data should be considered preliminary. All boundaries and designations are subject to confirmation.



Subject Area

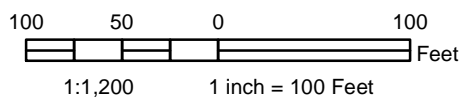






Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors

This map is intended for planning purposes only. All map data should be considered preliminary. All boundaries and designations are subject to confirmation.



Subject Area

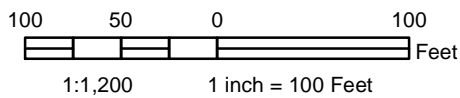










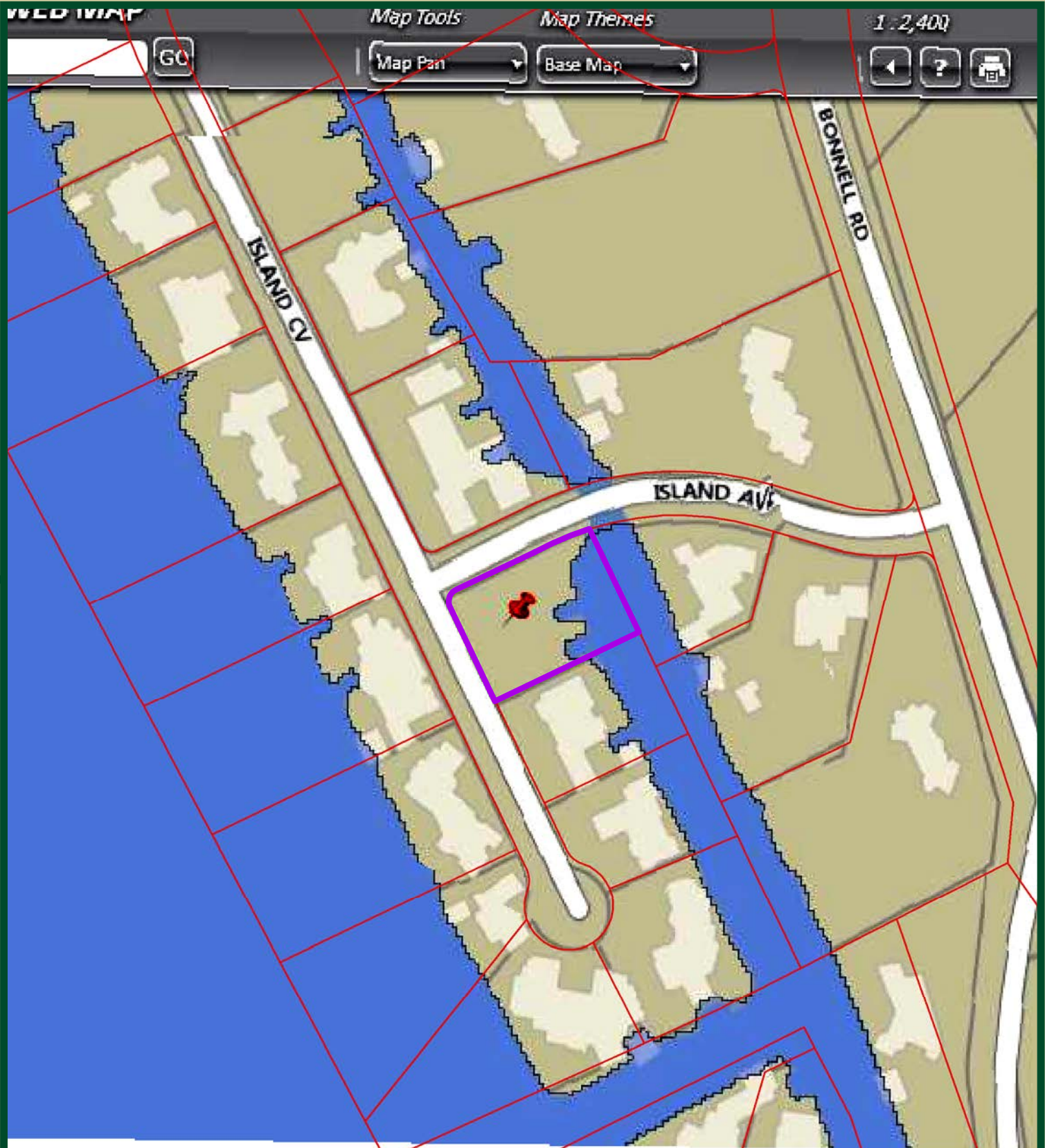
This map is intended for planning purposes only. All map data should be considered preliminary. All boundaries and designations are subject to confirmation.



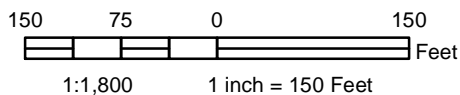
 Subject Area  
 CWQZ








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 Subject Area





## Question 10 Attachments

### Q10-1. Surface Soils

According to the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey (2015), one soil unit occurs within the subject area:

- *Bh—Bergstrom soils and Urban land, 0 to 2 percent slopes* - The Bergstrom component makes up 58 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood-plain steps on river valleys. The parent material consists of loamy alluvium of Holocene age derived from mixed sources. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is moderate. This soil is rarely flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent.

### **Reference Section:**

(USDA NRCS) United States Department of Agriculture, Natural Resource Conservation Service. 2015. Web Soil Survey. Available at: <http://websoilsurvey.nrcs.usda.gov/>. Accessed on: June 15, 2015.

#### Q10-2. Wells

No wells were identified within the subject area during field investigations by **aci consulting** personnel on June 4, 2015. Desktop review of aerial photographs and the Texas Water Development Board's web map of Well Driller's Logs (TWDB 2015) did not identify any well locations within 150 feet of the subject area.

#### **Reference Section:**

(TWDB) Texas Water Development Board. 2015. Water Information Integration and Dissemination System (WIID) Submitted Driller's Report. Accessed on June 15, 2015. Available at: [http://wiid.twdb.texas.gov/ims/www\\_drl/viewer.htm?DISCL=1&appno=1](http://wiid.twdb.texas.gov/ims/www_drl/viewer.htm?DISCL=1&appno=1)

## Question 11 Attachments

#### Q11-1. Vegetation

The subject area is within the “Live Oak-Ashe Juniper Woods” as noted on the Texas Parks and Wildlife Department “Vegetation Types of Texas” map (McMahan et al. 1984). Woods, are defined as woody plants that range from nine to 30 feet tall with closed crowns or nearly so (approximately 71 to 100 percent), a midstory is usually lacking (McMahan et al. 1984).

Vegetation identified within the subject area includes, but is not limited to: bermudagrass (*Cynodon dactylon*), straggler daisy (*Calypocarpus vialis*), dallisgrass (*Paspalum* sp.), king ranch bluestem (*Bothriochloa ischaemum* var. *songarica*), cedar sedge (*Carex planosachys*), poison ivy (*Toxicodendron radicans*), grape sp. (*Vitis* sp.), boxelder (*Acer negundo*), Chinese tallow (*Triadica sebifera*), green ash (*Fraxinus pennsylvanica*), white mulberry (*Morus alba*), black willow (*Salix nigra*), pecan (*Carya illinonensis*), and bald cypress (*Taxodium distichum*).

#### **Reference Section:**

McMahan, C.A., R.G. Frye, and K.L. Brown. 1984. The Vegetation Types of Texas.  
Texas Parks and Wildlife Department: Austin, Texas.

## Question 12 Attachments

Q12-1. Wastewater Report

The subject area does not have a wastewater/septic system on-site and the proposed project does not include a wastewater/septic system.