Addenda to Variance Application

West Harbour Marina
SP-2018-0221C

Environmental Commission
February 6, 2019

1. Notice of Intent (NOI) for Regional General Permit 8 Request
2. U.S. Army Corps of Engineers Verification

DESCO
ENVIRONMENTAL CONSULTANTS
26902 Nichols Sawmill, Magnolia, Texas 77355 www.descoenv.com

September 17, 2018

Ms. Katie Roeder
U.S. Army Corps of Engineers
Regulatory Division, CESWF-PER-R
P.O. Box 17300
Fort Worth, TX 76102-0300

RE: Pre-Construction Notification for Regional General Permit 8 Request
SWF-2018-00267
G4 Interests LLC
West Harbour Marina
2503 Westlake Drive
Austin, Texas 78704

Dear Ms. Roeder,

Our client, G4 Interests LLC (G4 Interests) is proposing development of their West Harbour Marina Project (SWF-2018-00267), located at 2503 Westlake Drive, Austin, TX 78104. The legal description of this property is as follows: 2.4710AC OF LOT 35-36 & 40X200'ADJ ABD ST LAKE SHORE ADDN, and the Travis County Appraisal District Property ID is 120973. The property is located on the east side of Westlake Drive, abutting Lake Austin. Proposed development within the site will consist of installation of a new coffer wall along the existing shoreline, demolition of two boat docks, dredging of the boat dock cove (422 cubic yards of material), and installation of two new boat docks in a very similar footprint to the current boat docks. The project is tentatively scheduled to begin as early as November 1, 2018 and construction will take approximately two to six months. G4 Interests is currently coordinating with the City of Austin to obtain authorization for the project.

G4 Interests contracted DESCO Environmental Consultants, LP (DESCO) to conduct a determination of waters of the U.S., including wetlands, of the property and assist with any necessary U.S. Army Corps of Engineers (USACE) permitting. DESCO wetland biologists conducted the determination on March 8 and August 16, 2018 in accordance with USACE standards. DESCO determined that two fringe wetlands abutting Lake Austin are present on the property totaling 0.015 acres. After communications with Katie Roeder it was determined that a Mitigation and/or Restoration plan was not needed for the proposed project due to the small size of these fringe wetlands.

DESCO believes that Regional General Permit 8 (RGP 8) authorization from the U.S. Army Corps of Engineers is required for the proposed dredging and construction at the property for the following reasons:

1. DESCO believes that the 0.015 acres of fringe wetland on the property are jurisdictional because they abut Lake Austin, which drains into the Colorado River and ultimately drains into Matagorda Bay.
2. G4 Interests is proposing dredging/excavation below the ordinary high water mark (OHWM) of the property cove connected to Lake Austin.
3. Two new boat docks are proposed in a very similar footprint to the current boat docks.

Before dredging of the boat dock cove, a new coffer wall will be installed around the property shoreline. The coffer wall will be installed along the current shoreline, and no loss of waters of the U.S. (Lake Austin) will occur in this process. Once the coffer wall is installed, a turbidity curtain will be installed across the boat dock cove as a best management practice to prevent suspended solids from construction activities from exiting the cove (Plan Sheet 4 of 11). After the turbidity curtain is installed demolition of the current boat docks and dredging of the cove will commence.

Dredging will be accomplished using a long reach excavator and/or a land based suction dredge. The material excavated will be placed within the project site above the OHWM in the areas noted on the Plan Sheet 4 of 11. These two placement areas will be constructed of reinforced silt fence/filter fabric. The placement areas, dredge material, and all dewatering waters will adhere to all RGP 8 and associated Texas Commission on Environmental Quality (TCEQ) certification requirements. Best Management practices will including protecting the current construction area sod/planting temporary vegetation (erosion control), post-project revegetation (post-construction total suspended solids control), and all effluent from contained disposal areas will not exceed a total suspended solid level of 300 mg/l.

DESCO would like to request authorization to conduct the above-described development under RGP 8 (Boat Ramps and Minor Facilities) on behalf of G4 Interests. We have provided the following information with this pre-construction notification for your review:

- Project vicinity map
- Plan Sheets including current shoreline/boat docks, construction plans including proposed coffer wall/boat docks/material placement areas, and dredge cross sections/calculations
- Wetland delineation report prepared by DESCO for West Harbour Marina, 2503 Westlake Drive

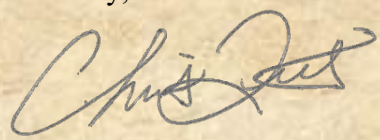
There were no threatened or endangered species or suitable habitat present on or immediately adjacent the property at the time of DESCO's wetland delineation field visit. Similarly, there were no known cultural resources on the property and Jimmy Barrera (USACE Regulatory Archeologist/Project Manager) did not see any Section 106 concerns for the project in an August 24, 2018 communication.

Contact Information for G4 Interests LLC is as follows:

Mark Kristen
2503 Westlake Dr
Austin, Texas 78704
979-412-0324

If you have any questions or need additional information to process this request, please do not hesitate to contact me at 281-252-9799 or clittle@descoenv.com.

Sincerely,



Chris Little
Agent for G4 Interests LLC

enclosures

cc: Janis J. Smith, P.E., Janis Smith Consulting, LLC

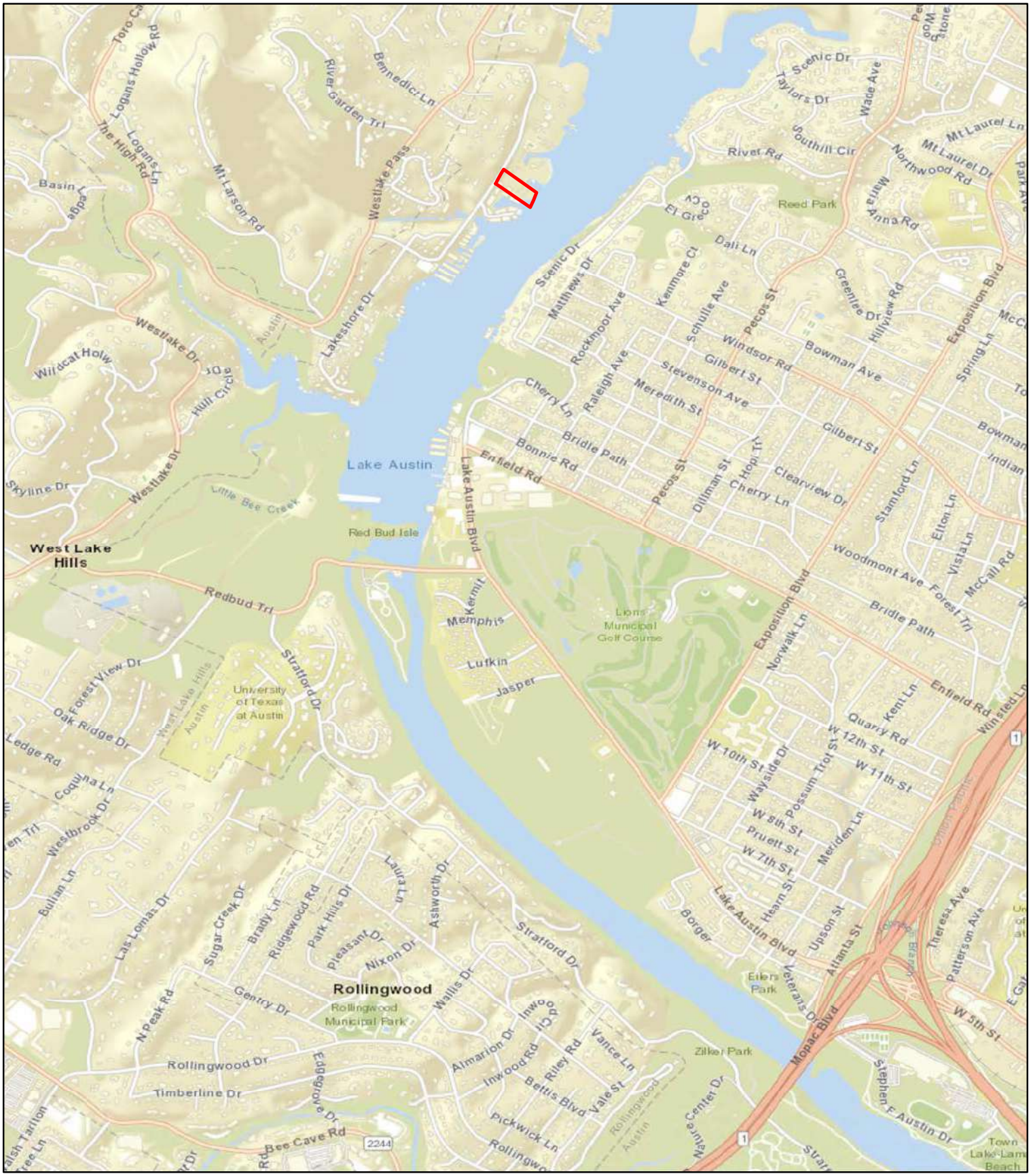


Figure 1: Project Vicinity Map

West Harbour Marina

2503 Westlake Drive

Travis County, Texas

Legend

Parcel of Interest (CoA)

N

1:20,000

DESCO

Map Base: ESRI World Streetmap
Map Datum: NAD 1983 UTM Zone 14N, meters
Map Date: August 27, 2018

0 0.125 0.25 0.5 Miles

Wetland Delineation Report
West Harbour Marina
2503 Westlake Drive
Travis County, Texas

September 7, 2018

Prepared for:

Permit Partners LLC
105 W. Riverside Drive, Suite 225
Austin, Texas 78704

By:

DESCO Environmental Consultants, LP
26902 Nichols Sawmill Road
Magnolia, Texas 77355

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LIST OF APPENDICES

1.0 INTRODUCTION

Permit Partners contracted DESCO Environmental Consultants, LP (DESCO) to conduct a jurisdictional delineation of waters of the U.S., including wetlands, of the property located at 2503 Westlake Dr, Austin, TX. The property is located on the west side of Austin, Texas, on the western shore of Lake Austin. It is within Federal Emergency Management Agency (FEMA) flood zone X (500 year floodplain). The property and surrounding areas are residential. The property has two boat houses located in the cove on the property.

DESCO conducted the jurisdictional delineation on March 8 and August 16, 2018 in accordance with U.S. Army Corps of Engineers (USACE) standards. This report documents findings of the delineation and depicts the locations of potential jurisdictional waters of the U.S., including wetlands, within the assessment area.

A vicinity map, maps representing the boundaries of wetlands, as well as FEMA flood hazard zones identified on the assessment area are included in **Appendix A**. **Appendix B** contains USACE Wetland Determination Data Forms. **Appendix C** includes photos depicting conditions observed at the property and each sample point.

2.0 METHODOLOGY

DESCO biologist, Chris Little, conducted field investigations on March 8 and August 16, 2018 to determine and document the presence/absence of wetlands and waters of the U.S. within the assessment area.

Wetland delineations were conducted in accordance with the methodology detailed in the *Corps of Engineers Wetland Delineation Manual* (1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)* (2010). Prior to conducting the delineations, DESCO researched potential wetland locations and extents within the vicinity of the assessment area, using existing information from National Wetlands Inventory (NWI) maps, National Hydrography Dataset (NHD), and Natural Resources Conservation Services (NRCS) information, as well as United States Geological Survey (USGS) topographic maps, and recent color infrared aerial photography.

Based on the 1987 *Corps of Engineers Wetland Delineation Manual*, wetlands must possess three essential characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each is summarized below, along with the methodology used by DESCO for evaluation.

Hydrophytic Vegetation

In order for the vegetation to be considered hydrophytic (wet), the prevalent vegetation must be adapted to areas having hydrologic and soil conditions unique to wetlands. By definition, hydrophytic species, due to morphological, physiological, and/or reproductive adaptation(s), have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions.

DESCO observed, identified, and recorded species from each stratum of the vegetation community. The indicator status of each species was obtained from the USACE Cold Regions Research and Engineering Laboratory (CRREL) *Great Plains 2016 Regional Wetland Plant List* (Lichvar, et al. 2016). DESCO determined whether or not vegetation was hydrophytic at each sample point location based on the percentage of species that were listed as facultative (FAC) or wetter.

Hydric Soils

A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

DESCO dug soil pits at each sample point location and recorded indicators of hydric soils. DESCO determined presence/absence of hydric soils using the following USACE guidance documents for soil evaluation: the *Corps of Engineers Wetland Delineation Manual* (*1987*), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region* (2010), *Field Indicators of Hydric Soils in the United States, Version 6.0* (2006), and the *Soil Survey of Travis County, Texas* (1974).

Wetland Hydrology

As defined by the *Corps of Engineers Wetland Delineation Manual* (1987), the term "wetland hydrology" encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season. Areas with evident characteristics of wetland hydrology are those where the presence of water has an overriding influence on characteristics of vegetation and soils due to anaerobic and reducing conditions. In order to meet the wetland hydrology criterion, a sample location must contain one primary indicator or two secondary indicators.

DESCO observed and recorded indicators of wetland hydrology to determine presence/absence at each sample point location.

DESCO classified an area as a wetland if all three above-described criteria were determined to be present. Delineation of wetland/upland boundaries within the assessment area was conducted in accordance with USACE Regulatory Guidance Letters 05-05, 07-01, 07-02, and 08-02.

The maps prepared for this report are intended to accurately reflect the locations and sizes of wetlands and waterbodies encountered during the jurisdictional delineation. They are not intended to represent a boundary survey or to be used for any purpose other than evaluating the locations and sizes of wetlands and/or water bodies within the assessment area.

3.0 DATA

3.1 General Site Conditions

The assessment area is located on the west side of Austin, Texas, on the western shoreline of Lake Austin. Residential use is the primary land use of the property and adjacent areas. Lake

Austin is on the Colorado River and flows generally northwest to southeast, ends at the Tom Miller Dam, and then becomes the principal inflow for Lady Bird Lake.

Vegetation occurring on the property is maintained landscaping dominated by St. Augustine grass (*Stenotaphrum secundatum*), bald cypress (*Taxodium distichum*), Montezuma cypress (*Taxodium mucronatum*), Chinese tallow (*Triadica sebifera*), and pecan (*Carya illinoinensis*). The vegetation in **Wetlands 1 and 2** are dominated by St. Augustine grass, Chinese tallow, and bald cypress. The upland communities on the property are dominated by St. Augustine grass, Chinese tallow, and pecan.

The assessment area contains two mapped soil types according to the NRCS *Soil Survey of Travis County, Texas*. Below are abbreviated descriptions of each soil as described by the NRCS.

HdE—Hardeman soils and Urban land, 3 to 12 percent slopes: The Hardeman component makes up 72 percent of the map unit. Slopes are 3 to 12 percent. This component is on stream terraces on river valleys. The parent material consists of mixed loamy alluvium of Quaternary age and/or loamy eolian deposits of Quaternary age. 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 high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded or ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This soil does not meet hydric criteria.

TeF—Tarrant soils and Urban land, 18 to 40 percent slopes: The Tarrant, PE >44 component makes up 80 percent of the map unit. Slopes are 18 to 40 percent. This component is on undulating plains on dissected plateaus. The parent material consists of residuum weathered from limestone. Depth to a root restrictive layer, bedrock, lithic, is 6 to 20 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded or ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 5 percent. This soil does not meet hydric criteria.

The general topography of the assessment area can be characterized as gently sloped to the east, towards Lake Austin. Rainfall runoff from the site percolates downward through the well drained soils and flows east across the surface into Lake Austin.

3.2 Sample Point SP01

DESCO established this sample point in a fringe wetland habitat (**Wetland 1**) on the southeastern boundary of the property abutting Lake Austin. Data collected at this sample point contains hydrophytic vegetation, hydric soils, and wetland hydrology.

Vegetation

The vegetation community at this sample point location is dominated by St. Augustin grass, bald cypress, Chinese tallow, and common buttonbush (*Cephalanthus occidentalis*). All (4 out of 4) of the dominant species are FAC or wetter. The prevalence test is less than a value of 3.0 (2.727).

This sample point meets hydrophytic vegetation criteria because both the dominance and prevalence tests pass.

Soils
The soil profile at this sample point exhibits a matrix chroma of 3 from a depth of 0 to 4 inches and a chroma of 2 from 4 to 18 inches with 5 percent redoximorphic features observed from a depth of 4 to 18 inches. This soil profile possesses the sandy redox (S5) hydric soil indicator.

Hydrology
Primary wetland hydrology indicator of saturation (A3) along with secondary indicator of FAC-neutral test (D5) are present at this sample point. These indicators are sufficient to meet the wetland hydrology criteria.

3.3 Sample Point SP02

DESCO established this sample point in an upland habitat west of **Wetland 1**. Data collected at this sample point contains hydrophytic vegetation but does not exhibit hydric soils and wetland hydrology indicators.

Vegetation
St. Augustine grass and Chinese tallow are the dominant species at this ample point. All (3 out of 3) of the dominant species are FAC or wetter. The prevalence test is less than a value of 3.0 (2.962). This sample point meets the hydrophytic vegetation criteria because both the dominance and prevalence tests pass.

Soils
The soil profile at this sample point exhibits a matrix chroma of 3 from a depth of 0 to 8 inches and a chroma of 2 from 8 to 22 inches with 5 percent redoximorphic features observed from a depth of 8 to 22 inches. This soil profile does not exhibit any of the hydric soil indicators.

Hydrology
Hydrologic indicators are not present at this sample point location.

4.0 RESULTS OF THE PRELIMINARY JURISDICTIONAL DELINEATION

DESCO biologists identified two fringe wetland areas (**Wetland 1 and 2**) within the assessment area as a result of wetland delineation efforts. **Wetland 1** is 0.009 acres (136 feet by 3 feet) in size and **Wetland 2** is 0.006 acres (88 feet by 3 feet). DESCO believes that **Wetland 1 and 2** are potentially jurisdictional because they abut Lake Austin, a dammed portion of the Colorado River.

5.0 SUMMARY

Two potentially jurisdictional fringe wetlands totaling 0.015 acres and abutting Lake Austin are present within the property (**Wetland 1 and 2**). **Wetland 1** is 0.009 acres in size and **Wetland 2** is 0.006 acres in size.

Minor facility construction and dredging in Lake Austin may require permitting through the USACE. This type of construction can typically be authorized under Regional General Permit (RGP) 8, provided that all general and special conditions of RGP 8 can be adhered to. A Pre-Construction Notification (PCN) would be required for this authorization.

A jurisdictional determination can only be made by the USACE. DESCO is qualified to perform field investigations, collect data in a prescribed manner, and submit it to the USACE along with recommendations; however, it is the USACE that makes the final determination. Impacts to jurisdictional wetlands and/or waters of the U.S. require prior authorization by the USACE under Sections 401 and 404 of the Clean Water Act.

6.0 REFERENCES

Lichvar, R.W., D.L Banks, W.N. Kirchner, and N.C. Melvin. 2016. Great Plains, 2016 Regional Wetland Plant list. Phytoneuron 2016-30: 1-17. Published 28 April 2016.

Munsell Color. 2000. Munsell Soil Color Charts. Gretag Macbeth. New Windsor, NY.

USACE/Environmental Laboratory. 2010. *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual*: *Great Plains Region Version 2.0.* ERDC/EL TR-10-1, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

USDA, NRCS. 2006. *Field Indicators of Hydric Soils in the United States, Version 6.0.* G.W. Hurt, L.M. Vasilas.

USDA, NRCS. 2016. Soil Survey Staff. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed August 16, 2018.

Werchan, L. E., Lowther, A.C., and Ramsey, R. N. 1974. *Soil Survey of Travis County, Texas.* United States Department of Agriculture, Soil Conservation Service, in cooperation with the Texas Agricultural Experiment Station.

APPENDIX A

Delineated Wetlands and Waters of the U.S. Maps (Natural Color, Color Infrared, USGS Topographic, and FEMA Maps)

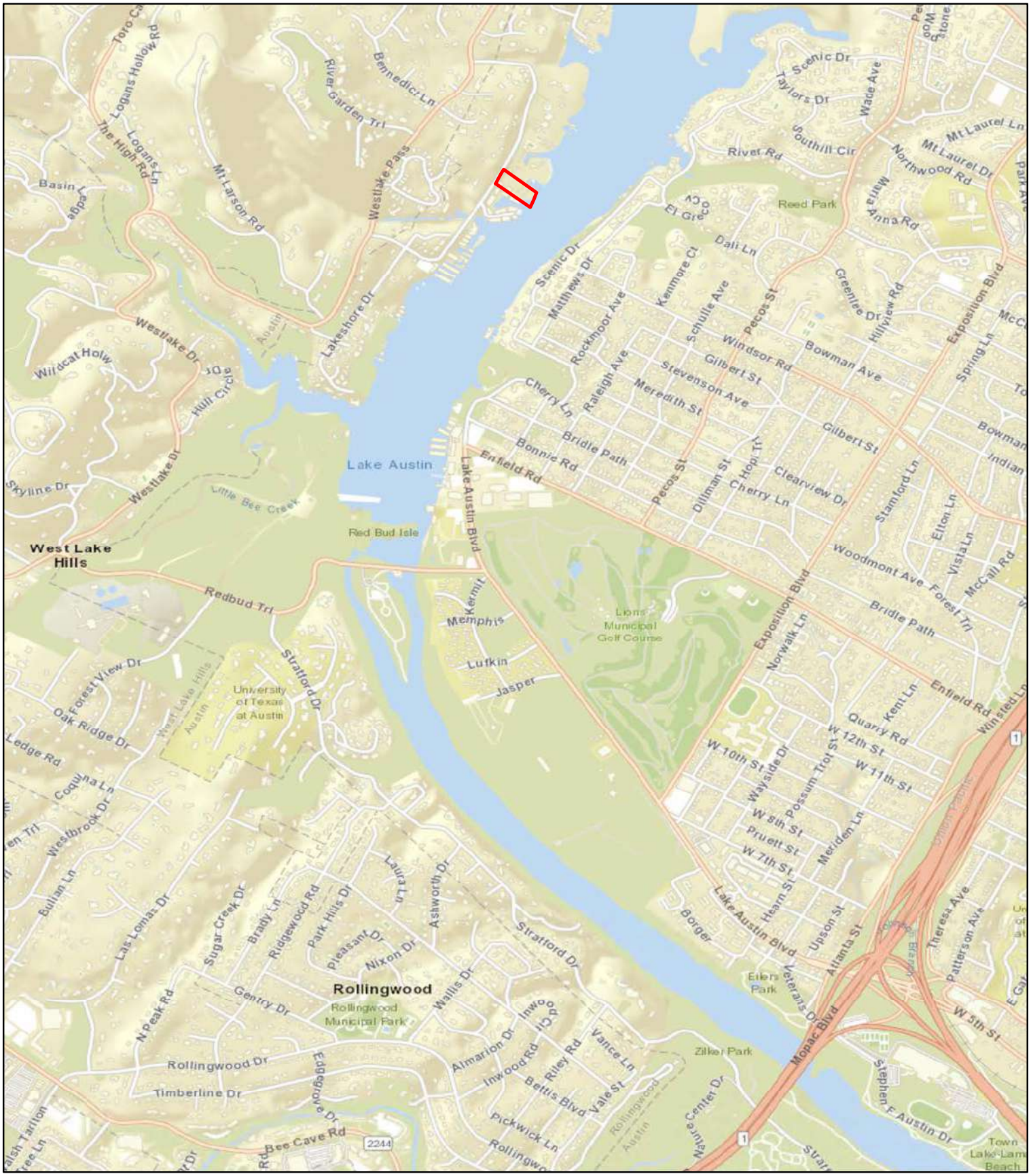

Figure 1: Project Vicinity Map

West Harbour Marina

2503 Westlake Drive

Travis County, Texas

Legend

Parcel of Interest (CoA)

N

1:20,000

DESCO

Map Base: ESRI World Streetmap
Map Datum: NAD 1983 UTM Zone 14N, meters
Map Date: August 27, 2018

0 0.125 0.25 0.5 Miles

Figure 2: Wetland Delineation Data - Natural Color Map
West Harbour Marina
2503 Westlake Drive

Travis County, Texas

Legend

- Sample Points
- Fringe Wetlands - 0.015 acres
- Parcel of Interest (CoA)

Map Base: 2016 NC Aerial Imagery from TNRIS
Map Datum: NAD 1983 UTM Zone 14N, meters
Map Date: August 27, 2018

N

1:1,200

DESCO

0 25 50 100 Feet

Figure 2: Wetland Delineation Data - Color Infrared Map
West Harbour Marina
2503 Westlake Drive

Travis County, Texas

Legend

- Sample Points
- Fringe Wetlands - 0.015 acres
- Parcel of Interest (CoA)

Map Base: 2016 CIR Aerial Imagery from TNRIS
Map Datum: NAD 1983 UTM Zone 14N, meters
Map Date: August 27, 2018

N

1:1,200

DESCO

0 25 50 100 Feet

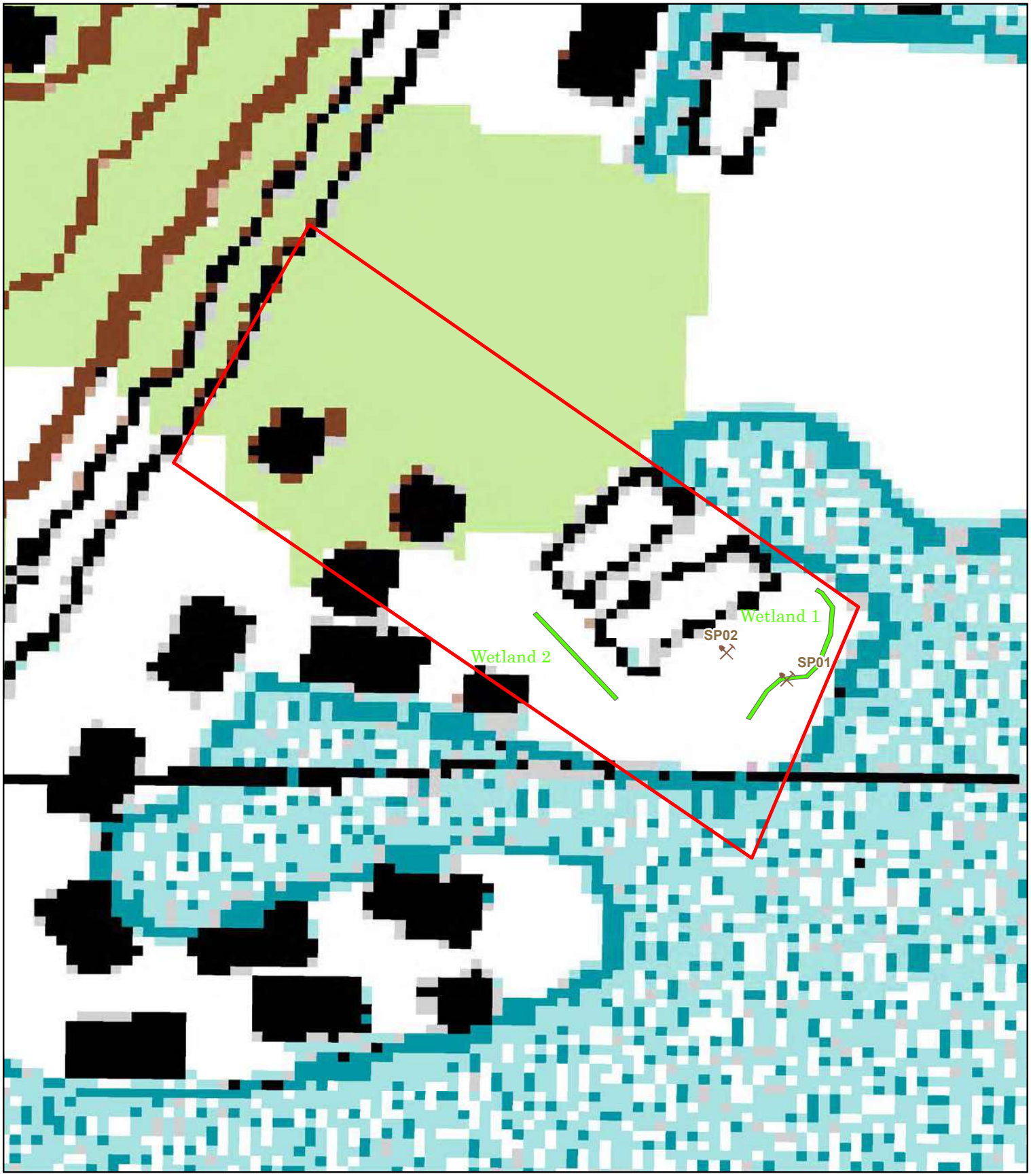

Figure 4: Wetland Delineation Data - DRG Topo Map
West Harbour Marina
2503 Westlake Drive

Travis County, Texas

Legend

- Sample Points
- Fringe Wetlands - 0.015 acres
- Parcel of Interest (CoA)

Map Base: 1:24K DRG Topo from TNRIS
Map Datum: NAD 1983 UTM Zone 14N, meters
Map Date: August 27, 2018

N

1:1,200

DESCO

0 25 50 100 Feet

Legend

- Sample Points
- Fringe Wetlands - 0.015 acres
- Parcel of Interest (CoA)

FEMA NFHL

- 0.2 PCT Annual Chance Flood Hazard
- 1 PCT Annual Chance Flood Hazard
- Area of Minimal Flood Hazard

Figure 5: Wetland Delineation Data with FEMA Data - Color Infrared Map
West Harbour Marina
2503 Westlake Drive

Travis County, Texas

Map Base: 2016 CIR Aerial Imagery from TNRIS
Map Datum: NAD 1983 UTM Zone 14N, meters
Map Date: August 27, 2018

N

1:1,200

DESCO

0 25 50 100 Feet

APPENDIX B

USACE Wetland Data Forms

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: 2503 Westlake Drive, Austin, TX City/County: Travis County Sampling Date: 8/16/18

Applicant/Owner: West Harbour Marina State: TX Sampling Point: SP01

Investigator(s): Chris Little Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): LRR I Lat: 30.305111 Long: -97.781340 Datum: NAD83UTMZ14N

Soil Map Unit Name: Hardeman soils and Urban land, 3 to 12 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

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 X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

Sample point is located adjacent to Lake Austin on a landscaped property dominated by St. Augustine grass (Stenonotaphrum secundatum).

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Taxodium distichum	10	Yes	OBL
2. Triadica sebifera	2	No	FAC
3.			
4.			
	12	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. Triadica sebifera	2	Yes	FAC
2. Cephalanthus occidentalis	1	Yes	OBL
3.			
4.			
5.			
	3	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Stenotaphrum secundatum	90	Yes	FAC
2. Iris sp.	2	No	OBL
3. Hydrocotyle umbellata	2	No	OBL
4. Clematis crispa	1	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	0	x 2 =	0
FAC species	95	x 3 =	285
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		300 (B)

Prevalence Index = B/A = 2.727

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: SP01

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/3	100					sandy loam	
4-18	10YR 6/2	95	10YR 5/8	5	C	M	sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ 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)
- X 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[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X 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)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

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

Water Table Present? Yes X No _____ Depth (inches): 12

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 10

Wetland Hydrology Present? **Yes** X **No** _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: 2503 Westlake Drive, Austin, TX City/County: Travis County Sampling Date: 8/16/18

Applicant/Owner: West Harbour Marina State: TX Sampling Point: SP02

Investigator(s): Chris Little Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): LRR I Lat: 30.305170 Long: -97.781471 Datum: NAD83UTMZ14N

Soil Map Unit Name: Hardeman soils and Urban land, 3 to 12 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

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 X No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____ No X	
Wetland Hydrology Present?	Yes _____ No X	

Remarks:

Sample point is located adjacent to Lake Austin on a landscaped property dominated by St. Augustine grass (Stenonotaphrum secundatum).

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Triadica sebifera	5	Yes	FAC
2.			
3.			
4.			
	5	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. Triadica sebifera	3	Yes	FAC
2.			
3.			
4.			
5.			
	3	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Stenotaphrum secundatum	95	Yes	FAC
2. Hydrocotyle umbellata	2	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	97	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum 3

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	2	x 1 =	2
FACW species	0	x 2 =	0
FAC species	103	x 3 =	309
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	105 (A)		311 (B)

Prevalence Index = B/A = 2.962

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: SP02

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/3	100					sandy loam	
8-14	10YR 6/2	95	10YR 5/8	5			sandy loam	
14-22	10YR 6/2	95	10YR 5/8	5			silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ 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[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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? (includes capillary fringe) Yes X No _____ Depth (inches): 21

Wetland Hydrology Present? Yes X No _____

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

Remarks:

APPENDIX C

Project Photographs

West Harbour Marina:2503 Westlake Drive - Wetland Delineation Photos

Photo 1: Front of the property adjacent to Westlake Drive. Photo was taken from the driveway facing southeast.

Photo 2: Photo was taken from the driveway facing southwest, down Westlake Drive.

Photo 3: Photo was taken from the central portion of the property, facing west toward the residence buildings.

Photo 4: Photo was taken on the central portion of the property, facing east towards the boat slips.

Photo 5: Photo was taken on the southeastern portion of the property, facing northwest towards SP02 in upland habitat and the boat slips.

Photo 6: Photo was taken of Wetland 1 and SP01 on the southeastern portion of the property, facing northeast down the fringe wetland shoreline.

Photo 7: Photo was taken of Wetland 2 on the southeastern portion of the property, facing northwest towards Westlake Drive with fringe wetland shoreline on the right side of the photo.

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, FORT WORTH DISTRICT
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

November 19, 2018

Regulatory Division

SUBJECT: Project Number SWF-2018-00267, West Harbour Docks

Marc Kristen
3201 Westlake drive
Austin, Texas 78746

Dear Mr. Smith:

This letter is in regard to information received July 11, 2018, and subsequent submittal(s) dated September 26, 2018, concerning a proposal by G4 Interests LLC, to reconstruct an existing cluster dock located in the City of Austin, Travis County, Texas. This project has been assigned Project Number SWF-2018-00267. Please include this number in all future correspondence concerning this project.

Under Section 404 of the Clean Water Act the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged and fill material into waters of the United States, including wetlands. USACE responsibility under Section 10 of the Rivers and Harbors Act of 1899 is to regulate any work in, or affecting, navigable waters of the United States. Based on the description of the proposed work, and other information available to us, we have determined this project will involve activities subject to the requirements of Section 404.

We have determined that the discharge of dredged or fill materials into waters of the United States associated with this project is authorized by Regional General Permit CESWF-15-RGP-8 for Boat Ramps and Minor Facilities (copy enclosed). To use this permit, the permittee must ensure the work is in compliance with the specifications and conditions listed on the enclosure and the special condition(s) listed below.

1. Prior to the initiation of any work authorized by this permit, floating turbidity screens with weighted skirts that extend to within 1 ft. of the bottom shall be placed around the project. The screens shall be maintained and shall remain in place for the duration of the project. The permittee shall be responsible for ensuring that turbidity control devices are inspected daily and maintained in good working order.

The following measures shall be taken by the permittee if turbidity levels may violate Texas Water Quality Standards:

a. Immediately cease all work contributing to the water quality violation.

b. Stabilize all soils contributing to the violation, modify the work procedures that were responsible for the violation, and install more turbidity containment devices and repair any non-functioning turbidity containment devices.

2. There shall be no storage or stockpiling of tools, equipment, excavated/dredged material, etc. within Waters of the U.S. All cleared/excavated material and any other type of debris shall be removed from Waters of the U.S. within 14 days of completion of the work authorized in this permit.

3. Best management practices (BMP's) for erosion control shall be implemented and maintained at all times around sediment disposal areas to prevent siltation and turbid discharges that may violate Texas Water Quality Standards. Methods shall include, but are not limited to the use of staked hay bales, staked filter cloth, sodding, seeding, and mulching. The permittee shall be responsible for ensuring that erosion control devices / procedures are inspected and maintained daily during activities authorized by this permit until all areas that were disturbed during the project are sufficiently stabilized to prevent erosion, siltation, and turbid discharges.

4. The permittee shall implement best management practices to reduce the risk of transferring invasive plant and animal species to or from project sites. Information concerning state specific lists and threats can be found at: http://www.invasivespeciesinfo.gov/unitedstates/tx.shtml. Best management practices can be found at: http://www.invasivespeciesinfo.gov/toolkit/prevention.shtml. Known zebra mussel waters can be found at: http://nas.er.usgs.gov/queries/zmbyst.asp.

Failure to comply with these specifications and conditions invalidates the authorization and may result in a violation.

The regional general permit expires five years from the date of publication, unless the permit is modified, revoked, or extended prior to that date. Activities that have commenced or are under contract to commence in reliance upon this regional general permit will remain authorized provided the activity is completed within 12 months of the date of this 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.

USACE review of this project also addressed its effects on threatened and endangered species. Based on the information provided, we have determined the project will not affect any species listed as threatened or endangered by the U.S. Fish and Wildlife Service within our permit area. However, please note that you are responsible for meeting the requirements of the condition of this regional general permit on endangered species.

This permit should not be considered as an approval of the design features of any activity authorized or an implication that such construction is considered adequate for the purpose intended. It does not authorize any damage to private property, invasion of property rights, or any infringement of federal, state, or local laws or regulations.

Thank you for your interest in our nation's water resources. If you have any questions concerning our regulatory program, please refer to our website at http://www.swf.usace.army.mil/missions/regulatory or contact Ms. Katie Roeder at the address above or telephone 817-886-1740 and refer to your assigned project number.

Please help the regulatory program improve its service by completing the survey on the following website: http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey

Sincerely,

ORIGINAL SIGNED

Stephen L Brooks
Chief, Regulatory Division

Enclosures

Copies furnished (without enclosures):

Desco Environmental Consultants
c/o Chris Little
26902 Nichols Sawmill
Magnolia, Texas 77355