E-3: Jurisdictional Determination Supplement Report

UPPER TRINITY
REGIONAL WATER DISTRICT

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June 22, 2017

Mr. Chandler Peter
Project Manager, Technical Specialist
Fort Worth District
U.S. Army Corps of Engineers
819 Taylor Street, Room 3A37
P.O. Box 17300
Fort Worth, Texas 76102-0300

Re: Supplemental Report in Support of Request for AJD for proposed Lake Ralph Hall project
North Sulphur River, Fannin County, Texas
Project Number SWF-2003-00336

Dear Mr. Peter:

As requested in your email dated April 17, 2017 and further discussed during the May 3, 2017 meeting, the Upper Trinity Regional Water District (UTRWD) has completed the additional work to support its March 29, 2017 request for an approved jurisdictional determination (AJD) for the proposed Lake Ralph Hall project. Accordingly, enclosed please find a Supplemental Report in support of this AJD request. This Report summarizes the extent of additional work conducted along with supporting field documentation, a comprehensive listing of all delineated aquatic resources, mapbooks of the delineated aquatic resources, wetland determination data forms, and photographs. As noted, this Supplemental Report is intended to clarify and further supplement UTRWD's request for an AJD.

We appreciate your effort to expedite review and final determination of this AJD request and your ongoing efforts to complete the Draft Environmental Impact Statement for the proposed Lake Ralph Hall project. If you have any questions regarding this submittal, please contact Larry Patterson at (972)-219-1228 or lpatterson@utrwd.com.

Sincerely,

Thomas E. Taylor
Executive Director

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Enclosures: Supplemental Report in Support of Request for Approved Jurisdictional Determination of Waters of the United States for the proposed Lake Ralph Hall project, dated June 21, 2017

cc: Larry N. Patterson, P.E. w/enclosures
Edward M. Motley, BCEE, P.E. w/enclosures
Lake Ralph Hall Project File

SUPPLEMENTAL REPORT IN SUPPORT OF REQUEST FOR APPROVED JURISDICTIONAL DETERMINATION OF WATERS OF THE UNITED STATES

Proposed Lake Ralph Hall

Fannin County, Texas

USACE Project No.: SWF-2003-00336

APPLICANT:

Upper Trinity Regional Water District

UPPER TRINITY
REGIONAL WATER DISTRICT

June 21, 2017

By_____

Prepared by:

ALAN PLUMMER ASSOCIATES, INC.
ENVIRONMENTAL ENGINEERS • DESIGNERS • SCIENTISTS

Supplemental Report in Support of Request
for Approved Jurisdictional Determination of Waters of the United States
for the Proposed Lake Ralph Hall, Fannin County, Texas
US Army Corps of Engineers Project No.: SWF-2003-00336

1. Purpose

A letter, dated March 29, 2017, requesting an approved jurisdictional determination (AJD) for the portion of the proposed Lake Ralph Hall project site located in Fannin County, Texas was submitted by the Upper Trinity Regional Water District (UTRWD) to the U.S. Army Corps of Engineers (USACE). The purpose of this Supplemental Report is to respond to the USACE's request for additional information in support of UTRWD's request and to update and document the current conditions of aquatic resources within the proposed Lake Ralph Hall project area as well as to document aquatic resources within areas identified for potential mitigation. The previous documentation of aquatic resources was published in a Preliminary Jurisdictional Determination (PJD) report dated October 26, 2006.

Since the 2006 PJD report, the assessment area has experienced physical and administrative changes. These modifications include land use alterations by current land-owners; continued erosion and degradation of area streams; U.S. Army Corps of Engineer's guidance documents (subsequent to 2006); and design refinements associated with the dam/embankment structure, spillway system, intake structure and pump station, recent LIDAR data, and the addition of the mitigation assessment area.

The approximately 13,094-acre assessment area documented in this Supplemental Report includes:

- The 7,568-acre reservoir with a conservation pool set at elevation 551 feet above mean sea level;
- Embankment structure (dam);
- Spillway system;
- Intake structure and pump station;
- Project boundary representing +/- 560-feet elevation; and
- Area(s) identified as potential mitigation lands located downstream of dam to FM 904.

2. Methods

The 2006 PJD report utilized the following datasets:

- Aerial photographs flown 2003-2005
- US Geological Survey (USGS) topographic maps
    - Farmersville, Greenville NW, Celeste, Pike, Wolfe City, Gober, Ladonia, Honey Grove and Dodd city quadrangles
- Soil Survey Fannin County
- National Wetlands Inventory maps

- National Hydrography Dataset
- Field investigations conducted in 2005

For this Supplemental Report, the following datasets were utilized to identify and address modifications to the 2006 PJD report:

- Aerial photographs from 2014, 2015, and 2016
    - 2014 and 2016 Aerial photographs from the USDA Farm Service Agency's National Agricultural Inventory Program (1-meter resolution)
    - 2015 Texas Orthoimagery Project (0.5-meter resolution)
- Google Earth™ imagery from 1995, 2008, 2010, 2011, 2012, 2014, and 2015
    - Aquatic resource data converted to KMZ file structure for review in Google Earth

The higher resolution aerial photographs from 2014-2016 compared to those used in the 2006 PJD report facilitated in refinements of the previously identified (delineated) aquatic resources as well as identification in modifications to aquatic resources within the project area (erosional features, impoundments, etc.). These refinements to the delineated aquatic resources were performed as a "desktop" evaluation.

To ground-truth observations from the desktop evaluation, field investigations were performed May 30 through June 2, 2017 to assess a representative sample area of portions of the 13,094-acre assessment area. These "on the ground" assessments aided in verification of identified aquatic resources from the desktop evaluation as well as to map the limits of potential waters of the U.S.[1] identified both from the desktop evaluation and in the field. As an example, 14 of the 47 mapped on-channel ponds within the assessment area representing approximately 29.7 percent were investigated in the field. Lacustrine "fringe" wetland areas associated with the 14 on-channel ponds assessed in the field were observed and recorded in the field. The lacustrine wetlands, predominantly herbaceous emergent wetlands, represented approximately 3.4 acres of the 23.8 acres of the 14 on-channel ponds assessed or approximately 14.3 percent of the assessed on-channel pond acreage. This percentage of fringe wetlands was used to estimate the lacustrine wetland area associated with the total delineated area of on-channel impoundments within the assessment area that would be considered as hydraulically and hydrologically connected to waters of the U.S.

To refine mapping, waypoints recorded during the 2017 field investigation were cross-referenced with topographic maps (both LIDAR generated and USGS topographic maps) and aerial photographs to accurately determine the limits of waters of the U.S. within specific areas assessed for this Supplemental Report. In order to quantify the entire footprint for the proposed reservoir, Geographic Information System (GIS) technologies, specifically ESRI's ARCGIS 10.2, were used to identify various spectral signatures associated with the 2014, 2015, and 2016 aerial photographs. The signatures from the verified aquatic resources were then crossed-reference to comparable resources within inaccessible tracts to determine the limits of the

[1] Aquatic resources were recorded using a Garmin GPSMAP 78s with sub-3 meter accuracy; field tested to 5 feet accuracy.

aquatic resources for the entirety of the 13,094-acre assessment area; thereby, delineating the limits of aquatic resources for the entire Supplemental Report assessment area.

3. Results

As documented in the 2006 PJD report, historical channelization of the North Sulphur River and major tributaries has resulted in excessive erosion within the entirety of the North Sulphur River watershed. The consequence of this channelization is greatly enlarged channels with capacities to contain and convey greater than the 100-year flood flows. Accordingly, the stream channels within the 13,094 assessment area, to include the North Sulphur River, do not exhibit a floodplain – the stream channels do not overbank even in the most severe rain events. Therefore, wetland areas identified within the 13,094-acre assessment area, except for fringe lacustrine wetlands associated with on-channel impoundments, are not hydraulically or hydrologically connected to any stream channels. Approximately 3.8 acres of isolated forested wetlands were identified within the Supplemental Report assessment area. However, these wetlands do not contribute to the chemical, physical, and biological integrity of waters of the U.S. Consequently, the wetlands identified within the 13,094-acre assessment area, aside from those associated with on-channel lacustrine fringe wetlands, should be considered "isolated" and not subject to Section 404 of the Clean Water Act. The following tables summarize the delineated aquatic resources observed within the 13,094-acre assessment area.

Table 1: Summary of Delineated Stream Channels Within Assessment Area

Within Conservation Pool, Embankment, Spillway of Lake Ralph Hall		
Category	**Description**	**Linear Feet**
Stream Channel	Ephemeral 0.5 - 2.0' wide North Side	26,835
Stream Channel	Ephemeral 2.5 - 5.0' wide - North Side	88,309
Stream Channel	Ephemeral 6 - 15' wide - North Side	55,023
Stream Channel	Ephemeral 16 - 25' wide - North Side	3,949
Stream Channel	Ephemeral >25' wide - North Side	78,764
Stream Channel	Ephemeral 0.5 - 2.0' wide South Side	19,769
Stream Channel	Ephemeral 2.5 - 5.0' wide - South Side	66,967
Stream Channel	Ephemeral 6 - 15' wide - South Side	92,155
Stream Channel	Ephemeral 16 - 25' wide - South Side	5,321
Stream Channel	Ephemeral >25' wide - South Side	8,396
Stream Channel	Intermittent - North Sulphur River @ SH34	55,570
Sub-Total Channels		**501,058**

Outside Conservation Pool, Embankment, Spillway but within Assessment Area		
Category	**Description**	**Linear Feet**
Stream Channel	Ephemeral 0.5 - 2.0' wide North Side	11,513
Stream Channel	Ephemeral 0.5 - 2.0' wide North Side - Baker Creek Tribs	2,639
Stream Channel	Ephemeral 2.5 - 5.0' wide - North Side	22,872
Stream Channel	Ephemeral 2.5 - 5.0' wide - North side - Baker Creek Tribs	5,171
Stream Channel	Ephemeral 6 - 15' wide - North Side	13,037
Stream Channel	Ephemeral 16 - 25' wide - North Side	2,463
Stream Channel	Ephemeral >25' wide - North Side	11,897
Stream Channel	Ephemeral 0.5 - 2.0' wide South Side	22,690
Stream Channel	Ephemeral 2.5 - 5.0' wide - South Side	49,968
Stream Channel	Ephemeral 6 - 15' wide - South Side	37,535
Stream Channel	Ephemeral 16 - 25' wide - South Side	0
Stream Channel	Ephemeral >25' wide - South Side	0
Stream Channel	Intermittent - North Sulphur River - downstream of dam (FM 904)	6,387
Stream Channel	Intermittent - North Sulphur River - upstream of pool (FM 38)	3,689
Sub-Total Channels		**189,860**

Total Channels		**690,918**

TABLE 2: ON-CHANNEL PONDS (OCPs) SUMMARY

	ACRES	NUMBER	LOCATION
SUBTOTAL	56.19	33	CONSERVATION POOL (CP), DAM, SPILLWAY
SUBTOTAL	13.69	14	OUTSIDE CP, DAM, SPILLWAY
TOTAL	69.89	47	WITHIN ASSESSMENT AREA

Range in size from 0.04 acre to 23.8 acres

SIZE BREAKDOWN	
Small Ponds (≤ 1 acre):	32
Ponds (>1 acre but ≤ 5 acres):	13
Lakes (>5 acres but ≤500 acres):	2

Total # Within Assessment Area	Total # Assessed	Percentage of Total Assessed	Total Acreage of OCPs within Assessment Area	Total Acreage Assessed	Percentage of Total Acreage Assessed
47	14	29.7	69.9	23.8	34.0
Total # Within Conservation Pool/Dam/Spillway Area	# Assessed	Percentage of # Within Conservation Pool/Dam/Spillway Area Assessed	Total Acreage of OCPs within Conservation Pool/Dam/Spillway Area	Acreage of OCPs Assessed within Conservation Pool/Dam/Spillway Area	Percentage of Acreage within Conservation Pool/Dam/Spillway Area Assessed
33	13	39.4	56.2	21.4	38.1

Calculated Area of Lacustrine Fringe Wetlands

3.4 acres identified for 23.8 acres of 14 on-channel ponds field assessed = 14.3 percent
14.3 percent of 69.9 acres of 47 on-channel ponds within assessment area = 10 acres

TABLE 3: UPLAND PONDS (UPs) SUMMARY

	ACRES	NUMBER	LOCATION
SUBTOTAL	52.37	115	CONSERVATION POOL/DAM/SPILLWAY
SUBTOTAL	30.63	97	OUTSIDE CP/DAM/SPILLWAY
TOTAL	83.00	212	WITHIN ASSESSSMENT AREA

Range in size from 0.02 acre to 3.26 acres

SIZE BREAKDOWN	
Small Ponds (< 1 acre):	194
Ponds (>1 acre but < 5 acres):	18
Lakes (>5 acres but <500 acres):	0

TABLE 3: UPLAND PONDS SUMMARY (CONT.)

Total # Within Assessment Area	Total # Assessed	Percentage of Total Assessed	Total Acreage of UPs within Assessment Area	Total Acreage Assessed	Percentage of Total Acreage Assessed
212	20	9.4	83.0	23.2	28

Total # Within Conservation Pool/Dam/Spill way Area	# Assessed	Percentage of # Within Conservation Pool/Dam/Spill way Area Assessed	Total Acreage of UPs within Conservation Pool/Dam/Spill way Area	Acreage of UPs Assessed within Conservation Pool/Dam/Spill way Area	Percentage of Acreage within Conservation Pool/Dam/Spill way Area Assessed
115	10	8.7	52.4	13.2	25.2

A comprehensive summary of all delineated aquatic resources within the 13,094-acre assessment area is provided in Appendix A. Within Appendix A, summary tables detail the following aquatic resources:

- Streams
- Open waters
    - On-channel impoundments
    - Upland, isolated ponds[2]
- Isolated forested wetlands

Mapbooks of the delineated aquatic resources are included in Appendix B. The mapbooks detail the following aquatic resources delineated within the 13,094-acre assessment area:

- Overall Aquatic Resources Delineated
- Delineated Streams
- Delineated Open Waters
    - On-channel impoundments
    - Upland, isolated ponds
- Delineated Isolated Forested Wetlands

Wetland determination data forms for delineated but isolated aquatic resources are included in Appendix C with a mapbook showing the location of the wetland determination sampling points. Photographs of the resources recorded along the numerous sampling locations are included with the data forms. Finally, additional photographs from the 2017 on-site investigation of the open water aquatic resources within the 13,094-acre assessment area are provided in Appendix D.

[2] Ponds or open waters typically used for livestock.

APPENDIX A

AQUATIC RESOURCE SUMMARY TABLES

TABLE A-1: COMPREHENSIVE LISTING OF STREAM CHANNELS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Width at OHWM (feet)	AQUATIC_RESOURCE	Category	Classification	LOCATION	Length (L.F.)
NSR	135.0	NORTH SULPHUR RIVER	>25'	Intermittent	CONSERVATION POOL, DAM, SPILLWAY	12,727
NSR	65.0	NORTH SULPHUR RIVER	>25'	Intermittent	OUTSIDE CP, DAM, SPILLWAY	3,689
NSR	150.0	NORTH SULPHUR RIVER	>25'	Intermittent	OUTSIDE CP, DAM, SPILLWAY	6,387
NSR	150.0	NORTH SULPHUR RIVER	>25'	Intermittent	CONSERVATION POOL, DAM, SPILLWAY	692
NSR	65.0	NORTH SULPHUR RIVER	>25'	Intermittent	CONSERVATION POOL, DAM, SPILLWAY	5,089
NSR	85.0	NORTH SULPHUR RIVER	>25'	Intermittent	CONSERVATION POOL, DAM, SPILLWAY	7,330
NSR	85.0	NORTH SULPHUR RIVER	>25'	Intermittent	CONSERVATION POOL, DAM, SPILLWAY	14,183
NSR	100.0	NORTH SULPHUR RIVER	>25'	Intermittent	CONSERVATION POOL, DAM, SPILLWAY	12,880
NSR	150.0	NORTH SULPHUR RIVER	>25'	Intermittent	CONSERVATION POOL, DAM, SPILLWAY	2,668
N1	85.0	STREAM N1 - MERRILL CREEK	>25'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	24,057
N1	50.0	STREAM N1 - MERRILL CREEK	>25'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	521
N1-TRIB1	4.0	TRIBUTARY 1 TO MERRILL CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	3,171
N1-TRIB1	4.0	TRIBUTARY 1 TO MERRILL CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	514
N1-TRIB1	4.0	TRIBUTARY 1 TO MERRILL CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	878
N1-TRIB10	2.0	TRIBUTARY 10 TO MERRILL CREEK	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	782
N1-TRIB10	1.0	TRIBUTARY 10 TO MERRILL CREEK	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	171
N1-TRIB11	5.0	TRIBUTARY 11 TO MERRILL CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	3,020
N1-TRIB11-A1	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	850
N1-TRIB12	3.5	TRIBUTARY 12 TO MERRILL CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,503
N1-TRIB12	2.0	TRIBUTARY 12 TO MERRILL CREEK	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	103
N1-TRIB13	2.0	TRIBUTARY 13 TO MERRILL CREEK	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,826
N1-TRIB13	2.0	TRIBUTARY 13 TO MERRILL CREEK	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	85
N1-TRIB13	5.0	TRIBUTARY 13 TO MERRILL CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	758
N1-TRIB14	5.0	TRIBUTARY 14 TO MERRILL CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,797
N1-TRIB14	3.0	TRIBUTARY 14 TO MERRILL CREEK	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	362
N1-TRIB14-A1	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	202
N1-TRIB14-A1	1.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	246
N1-TRIB15	15.0	TRIBUTARY 15 TO MERRILL CREEK	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	3,412
N1-TRIB15	11.0	TRIBUTARY 15 TO MERRILL CREEK	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	919
N1-TRIB15-A1	8.0	SECONDARY TRIBUTARY	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	909
N1-TRIB15-A2	5.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	437
N1-TRIB15-A3	5.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	215
N1-TRIB15-A4	4.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	172

TABLE A-1: COMPREHENSIVE LISTING OF STREAM CHANNELS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Width at OHWM (feet)	AQUATIC_RESOURCE	Category	Classification	LOCATION	Length (L.F.)
N1-TRIB15-A5	5.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	294
N1-TRIB15-A6	6.0	SECONDARY TRIBUTARY	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	507
N1-TRIB15-A6	5.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	137
N1-TRIB16	15.0	TRIBUTARY 15 TO MERRILL CREEK	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	3,380
N1-TRIB16-A1	4.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	173
N1-TRIB16-A1	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	556
N1-TRIB16-A2	4.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	541
N1-TRIB16-A2	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	209
N1-TRIB16-A3	6.0	SECONDARY TRIBUTARY	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	572
N1-TRIB16-A3	4.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	756
N1-TRIB17	4.0	TRIBUTARY 17 TO MERRILL CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	906
N1-TRIB17	3.0	TRIBUTARY 17 TO MERRILL CREEK	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,325
N1-TRIB17-A1	4.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	273
N1-TRIB18	4.0	TRIBUTARY 18 TO MERRILL CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	242
N1-TRIB19	6.0	TRIBUTARY 19 TO MERRILL CREEK	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	518
N1-TRIB19	5.0	TRIBUTARY 19 TO MERRILL CREEK	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,379
N1-TRIB19-A1	5.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	281
N1-TRIB1-A1	4.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,519
N1-TRIB1-A1	4.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	629
N1-TRIB1-A2	2.5	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	346
N1-TRIB1-A4	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	126
N1-TRIB2	1.5	TRIBUTARY 2 TO MERRILL CREEK	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	793
N1-TRIB20	4.0	TRIBUTARY 20 TO MERRILL CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	56
N1-TRIB20	2.0	TRIBUTARY 20 TO MERRILL CREEK	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	144
N1-TRIB21	10.0	TRIBUTARY 21 TO MERRILL CREEK	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	207
N1-TRIB21	8.0	TRIBUTARY 21 TO MERRILL CREEK	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	698
N1-TRIB3	5.0	TRIBUTARY 3 TO MERRILL CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,965
N1-TRIB3	5.0	TRIBUTARY 3 TO MERRILL CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	521
N1-TRIB3	1.0	TRIBUTARY 3 TO MERRILL CREEK	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	390
N1-TRIB4	1.5	TRIBUTARY 4 TO MERRILL CREEK	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,361
N1-TRIB4	1.5	TRIBUTARY 4 TO MERRILL CREEK	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	639
N1-TRIB5	1.0	TRIBUTARY 5 TO MERRILL CREEK	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	667
N1-TRIB6	4.0	TRIBUTARY 6 TO MERRILL CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,393

TABLE A-1: COMPREHENSIVE LISTING OF STREAM CHANNELS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Width at OHWM (feet)	AQUATIC_RESOURCE	Category	Classification	LOCATION	Length (L.F.)
N1-TRIB6	6.0	TRIBUTARY 6 TO MERRILL CREEK	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,365
N1-TRIB6	2.0	TRIBUTARY 6 TO MERRILL CREEK	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	367
N1-TRIB6	2.0	TRIBUTARY 9 TO MERRILL CREEK	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	86
N1-TRIB6-A1	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	443
N1-TRIB6-A1	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	487
N1-TRIB6-A2	5.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,999
N1-TRIB6-A3	3.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	866
N1-TRIB7	4.0	TRIBUTARY 7 TO MERRILL CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,532
N1-TRIB7-A1	3.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,059
N1-TRIB8	1.0	TRIBUTARY 8 TO MERRILL CREEK	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	356
N1-TRIB9	11.0	TRIBUTARY 9 TO MERRILL CREEK	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,053
N1-TRIB9	3.0	TRIBUTARY 9 TO MERRILL CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	4,486
N1-TRIB9	3.0	TRIBUTARY 9 TO MERRILL CREEK	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,253
N1-TRIB9-A1	5.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,250
N1-TRIB9-A1	5.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	415
N1-TRIB9-A2	4.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	973
N1-TRIB9-A3	3.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	502
N1-TRIB9-A4	3.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	462
N1-TRIB9-A5	1.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	304
N1-TRIB9-A6	1.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	289
N1-TRIB9-A6	1.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	264
N2	4.0	STREAM N2 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	199
N2	4.0	STREAM N2 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	442
N3	6.0	STREAM N3 - FMR NSR	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	924
N4	2.5	STREAM N4 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,676
N4	2.5	STREAM N4 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,030
N4	2.5	STREAM N4 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,207
N5	2.5	STREAM N5 - FMR NSR	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,840
N6	3.0	STREAM N6 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	939
N6	8.0	STREAM N6 - UNNAMED	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	5,427
N6	3.0	STREAM N6 - UNNAMED	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,851
N6	15.0	STREAM N6 - UNNAMED	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,255
N6	15.0	STREAM N6 - UNNAMED	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,021

TABLE A-1: COMPREHENSIVE LISTING OF STREAM CHANNELS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Width at OHWM (feet)	AQUATIC_RESOURCE	Category	Classification	LOCATION	Length (L.F.)
N6	5.0	STREAM N6 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,152
N6-TRIB1	4.0	TRIBUTARY 1 TO STREAM N6	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,594
N6-TRIB1	2.0	TRIBUTARY 1 TO STREAM N6	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,180
N6-TRIB1	2.0	TRIBUTARY 1 TO STREAM N6	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	481
N6-TRIB1	2.0	TRIBUTARY 1 TO STREAM N6	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	945
N6-TRIB1	8.0	TRIBUTARY 1 TO STREAM N6	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,356
N6-TRIB1-A1	2.0	TRIB A1 TO TRIB 1 OF N6	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	137
N6-TRIB1-A3	4.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	3,015
N6-TRIB2	2.0	TRIBUTARY 2 TO STREAM N6	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,188
N6-TRIB2	2.0	TRIBUTARY 2 TO STREAM N6	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	441
N6-TRIB3	2.0	TRIBUTARY 3 TO STREAM N6	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	891
N6-TRIB4	1.0	TRIBUTARY 4 TO STREAM N6	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	581
N6-TRIB4	1.0	TRIBUTARY 4 TO STREAM N6	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	519
N6-TRIB5	2.0	TRIBUTARY 5 TO STREAM N6	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	550
N6-TRIB5	2.5	TRIBUTARY 5 TO STREAM N6	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	358
N6-TRIB5-A1	1.0	TRIB A1 TO TRIB 5 OF S-N6	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	205
N7	6.0	STREAM N7 - FMR BRALLEY POOL	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	3,859
N7-TRIB1	1.5	TRIBUTARY 1 TO STREAM N7	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	512
N8	80.0	STREAM N8 - BRALLEY POOL	>25'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	18,514
N8	50.0	STREAM N8 - BRALLEY POOL	>25'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	2,250
N8-TRIB1	2.0	TRIBUTARY 1 TO BRALLEY POOL	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	485
N8-TRIB1	8.0	TRIBUTARY 1 TO BRALLEY POOL	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	448
N8-TRIB1	5.0	TRIBUTARY 1 TO BRALLEY POOL	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	446
N8-TRIB10	2.0	TRIBUTARY 10 TO BRALLEY POOL	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	454
N8-TRIB10	2.0	TRIBUTARY 10 TO BRALLEY POOL	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	650
N8-TRIB10-A1	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	396
N8-TRIB11	2.0	TRIBUTARY 11 TO BRALLEY POOL	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	123
N8-TRIB2	6.0	TRIBUTARY 2 TO BRALLEY POOL	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,043
N8-TRIB2	3.0	TRIBUTARY 2 TO BRALLEY POOL	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	812
N8-TRIB3	5.0	TRIBUTARY 3 TO BRALLEY POOL	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,450
N8-TRIB3	5.0	TRIBUTARY 3 TO BRALLEY POOL	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	137
N8-TRIB3	5.0	TRIBUTARY 3 TO BRALLEY POOL	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	189
N8-TRIB4	5.0	TRIBUTARY 8 TO BRALLEY POOL	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	351

TABLE A-1: COMPREHENSIVE LISTING OF STREAM CHANNELS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Width at OHWM (feet)	AQUATIC_RESOURCE	Category	Classification	LOCATION	Length (L.F.)
N8-TRIB5	4.0	TRIBUTARY 5 TO BRALLEY POOL	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,659
N8-TRIB5	4.0	TRIBUTARY 5 TO BRALLEY POOL	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	812
N8-TRIB5	4.0	TRIBUTARY 5 TO BRALLEY POOL	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	753
N8-TRIB5-A1	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	423
N8-TRIB6	5.0	TRIBUTARY 6 TO BRALLEY POOL	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,509
N8-TRIB6	3.0	TRIBUTARY 6 TO BRALLEY POOL	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	269
N8-TRIB7	2.0	TRIBUTARY 7 TO BRALLEY POOL	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	557
N8-TRIB8	5.0	TRIBUTARY 8 TO BRALLEY POOL	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	297
N8-TRIB8	5.0	TRIBUTARY 8 TO BRALLEY POOL	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	140
N8-TRIB9	4.0	TRIBUTARY 9 TO BRALLEY POOL	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	935
N10	5.0	STREAM N10 - LEGGETS BRANCH	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	5,632
N10	5.0	STREAM N10 - LEGGETS BRANCH	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	2,754
N10	12.0	STREAM N10 - LEGGETS BRANCH	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,797
N10-TRIB1	3.0	TRIBUTARY 1 TO LEGGETS BRANCH	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,100
N10-TRIB1	3.0	TRIBUTARY 1 TO LEGGETS BRANCH	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	535
N10-TRIB2	5.0	TRIBUTARY 2 TO LEGGETS BRANCH	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,545
N10-TRIB2	5.0	TRIBUTARY 2 TO LEGGETS BRANCH	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	431
N10-TRIB3	3.0	TIRBUTARY 3 TO LEGGETS BRANCH	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	934
N11	5.0	STREAM N11 - FMR DAVIS CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	3,470
N12	15.0	STREAM N12 - DAVIS CREEK	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	10,152
N12	15.0	STREAM N12 - DAVIS CREEK	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	2,079
N12	65.0	STREAM N12 - DAVIS CREEK	>25'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	5,435
N12-TRIB1	3.0	TRIBUTARY 1 TO DAVIS CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	680
N12-TRIB2	3.0	TRIBUTARY 2 TO DAVIS CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,403
N12-TRIB2	2.0	TRIBUTARY 2 TO DAVIS CREEK	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	992
N12-TRIB3	3.0	TRIBUTARY 3 TO DAVIS CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	599
N12-TRIB3	1.5	TRIBUTARY 3 TO DAVIS CREEK	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	759
N12-TRIB4	2.0	TRIBUTARY 4 TO DAVIS CREEK	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	717
N12-TRIB5	3.0	TRIBUTARY 5 TO DAVIS CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	206
N12-TRIB5	5.0	TRIBUTARY 5 TO DAVIS CREEK	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	612
N12-TRIB6	1.0	TRIBUTARY 6 TO DAVIS CREEK	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	165
N12-TRIB7	3.0	TRIBUTARY 7 TO DAVIS CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	457
N12-TRIB7	3.0	TRIBUTARY 7 TO DAVIS CREEK	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	139

TABLE A-1: COMPREHENSIVE LISTING OF STREAM CHANNELS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Width at OHWM (feet)	AQUATIC_RESOURCE	Category	Classification	LOCATION	Length (L.F.)
N12-TRIB8	15.0	TRIBUTARY 8 TO DAVIS CREEK	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,350
N12-TRIB8	15.0	TRIBUTARY 8 TO DAVIS CREEK	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,575
N12-TRIB8-A1	5.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	169
N12-TRIB8-A1	5.0	TRIBUTARY 8 TO DAVIS CREEK	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	506
N12-TRIB9	5.0	TRIBUTARY 9 TO DAVIS CREEK	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	193
N13	5.0	STREAM N13 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,840
N13-TRIB1	0.5	TRIBUTARY 1 TO STREAM 13	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	456
N14	5.0	STREAM N14 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,578
N15	40.0	STREAM N15 - PICKLE CREEK	>25'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	12,176
N15	15.0	STREAM N15 - PICKLE CREEK	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,925
N15	25.0	STREAM N15 - PICKLE CREEK	>25'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,324
N15-TRIB1	5.0	TRIBUTARY 1 TO PICKLE CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	3,861
N15-TRIB1	2.0	TRIBUTARY 1 TO PICKLE CREEK	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,007
N15-TRIB1	4.0	TRIBUTARY 1 TO PICKLE CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,154
N15-TRIB1	2.0	TRIBUTARY 1 TO PICKLE CREEK	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,689
N15-TRIB1-A1	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,623
N15-TRIB1-A2	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,244
N15-TRIB2	3.0	TRIBUTARY 2 TO PICKLE CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	849
N15-TRIB2	3.0	TRIBUTARY 2 TO PICKLE CREEK	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	594
N15-TRIB3	2.0	TRIBUTARY 3 TO PICKLE CREEK	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	46
N15-TRIB3	2.0	TRIBUTARY 3 TO PICKLE CREEK	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,304
N15-TRIB4	6.0	TRIBUTARY 4 TO PICKLE CREEK	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	769
N15-TRIB4-A1	4.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	390
N16	9.0	STREAM N16 - FMR NSR	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,408
N17	5.0	STREAM N17 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	176
N17	5.0	STREAM N17 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	915
N17	5.0	STREAM N17 - UNNAMED	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,037
N17-TRIB1	1.0	TRIBUTARY 1 TO N17	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	226
N18-TRIB3	2.0	TRIBUTARY 3 TO BRUSHY CREEK	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	298
N18	95.0	STREAM N18 - BRUSHY CREEK	>25'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	9,474
N18	35.0	STREAM N18 - BRUSHY CREEK	>25'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	3,574
N18	40.0	STREAM N18 - BRUSHY CREEK	>25'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,612
N18-TRIB1	0.5	TRIBUTARY 1 TO BRUSHY CREEK	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	452

TABLE A-1: COMPREHENSIVE LISTING OF STREAM CHANNELS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Width at OHWM (feet)	AQUATIC_RESOURCE	Category	Classification	LOCATION	Length (L.F.)
N18-TRIB2	1.0	TRIBUTARY 2 TO BRUSHY CREEK	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,501
N18-TRIB2-A1	0.5	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	272
N18-TRIB4	3.0	TRIBUTARY 4 TO BRUSHY CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,222
N18-TRIB5	55.0	N18-TRIB5 - POT CREEK	>25'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,614
N18-TRIB5	40.0	N18-TRIB5 - POT CREEK	>25'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	2,855
N18-TRIB5-A1	5.0	TRIBUTARY 1 TO POT CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,146
N18-TRIB5-A1	6.0	TRIBUTARY 1 TO POT CREEK	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	2,280
N18-TRIB6	2.0	TRIBUTARY 6 TO POT CREEK	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	272
N18-TRIB7	4.0	TRIBUTARY 7 TO POT CREEK	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	97
N19	3.5	STREAM N19 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	918
N20	15.0	STREAM N20 - FMR NSR	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	3,042
N20	5.0	STREAM N20 - FMR NSR	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,830
N20	8.0	STREAM N20 - FMR NSR	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	3,042
N20-TRIB1	3.0	TRIBUTARY 1 TO STREAM N20	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,288
N20-TRIB1	5.0	TRIBUTARY 1 TO STREAM N20	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	2,182
N20-TRIB1-A1	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	166
N21	8.0	STREAM N21 - FMR NSR	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,300
N21	8.0	STREAM N21 - FMR NSR	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	801
N22	25.0	STREAM N22 - BEAR CREEK	16-25'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	3,949
N22	25.0	STREAM N22 - BEAR CREEK	16-25'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	2,463
N22-TRIB1	3.0	TRIBUTARY 1 TO BEAR CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	182
N22-TRIB1	2.0	TRIBUTARY 1 TO BEAR CREEK	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	608
N22-TRIB2	7.0	TRIBUTARY 2 TO BEAR CREEK	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,676
N22-TRIB2	6.0	TRIBUTARY 2 TO BEAR CREEK	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,726
N22-TRIB3	5.0	TRIBUTARY 3 TO BEAR CREEK	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	226
N23	45.0	STREAM N23 - ALLEN CREEK	>25'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,557
N23	45.0	STREAM N23 - ALLEN CREEK	>25'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	2,697
N24	10.0	STREAM N24 - UNNAMED	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	266
S1	15.0	STREAM S1 - FMR NSR	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,483
S1	15.0	STREAM S1 - FMR BAKER CREEK	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,448
S1-TRIB1	4.0	TRIBUTARY 1 TO STREAM S1	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,768
S2	15.0	STREAM S2 - FRM NSR	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,166
S2	15.0	STREAM S2 - FRM NSR	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	3,955

TABLE A-1: COMPREHENSIVE LISTING OF STREAM CHANNELS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Width at OHWM (feet)	AQUATIC_RESOURCE	Category	Classification	LOCATION	Length (L.F.)
S2-TRIB1	6.0	TRIBUTARY 1 TO S2	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	5,676
S2-TRIB1	6.0	TRIBUTARY 1 TO S2	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,642
S2-TRIB1	15.0	TRIBUTARY 1 TO S2 (FMR NSR)	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,163
S2-TRIB1-A1	5.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,833
S2-TRIB1-A2	5.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,261
S2-TRIB1-A3	5.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,848
S2-TRIB1-A4	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	967
S2-TRIB1-A5	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	384
S2-TRIB1-A6	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	158
S2-TRIB2	5.0	TRIBUTARY 2 TO S2	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	8,398
S2-TRIB2-A1	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	702
S2-TRIB2-A2	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	671
S2-TRIB2-A3	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,574
S2-TRIB2-A4	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	747
S2-TRIB3	10.0	TRIBUTARY 3 TO S2	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	10,645
S2-TRIB3	10.0	TRIBUTARY 3 TO S2	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	172
S2-TRIB3-A1	8.0	SECONDARY TRIB (FMR NSR)	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	247
S2-TRIB3-A10	2.5	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	10,645
S2-TRIB3-A2	6.0	SECONDARY TRIB (FMR NSR)	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	598
S2-TRIB3-A3	8.0	SECONDARY TRIB (FMR NSR)	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	210
S2-TRIB3-A4	10.0	HEDRICK BRANCH- S2-TRIB3-A4	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	7,884
S2-TRIB3-A4	6.0	HEDRICK BRANCH- S2-TRIB3-A4	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	532
S2-TRIB3-A4	2.0	HEDRICK BRANCH	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,163
S2-TRIB3-A4	2.0	HEDRICK BRANCH	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	461
S2-TRIB3-A4-TribA	2.0	TRIBUTARY TO HEDRICK BRANCH	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,202
S2-TRIB3-A4-TribA	1.0	TRIBUTARY TO HEDRICK BRANCH	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	99
S2-TRIB3-A4-TribB	2.0	TRIBUTARY TO HEDRICK BRANCH	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	355
S2-TRIB3-A4-TribB	1.0	TRIBUTARY TO HEDRICK BRANCH	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	210
S2-TRIB3-A4-TribB	1.0	TRIBUTARY TO HEDRICK BRANCH	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	334
S2-TRIB3-A4-TribC	3.0	TRIBUTARY TO HEDRICK BRANCH	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	446
S2-TRIB3-A4-TribC	2.0	TRIBUTARY TO HEDRICK BRANCH	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	240
S2-TRIB3-A4-TribD	2.0	TRIBUTARY TO HEDRICK BRANCH	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	116
S2-TRIB3-A4-TribD	2.0	TRIBUTARY TO HEDRICK BRANCH	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	292

TABLE A-1: COMPREHENSIVE LISTING OF STREAM CHANNELS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Width at OHWM (feet)	AQUATIC_RESOURCE	Category	Classification	LOCATION	Length (L.F.)
S2-TRIB3-A4-TribE	2.0	TRIBUTARY TO HEDRICK BRANCH	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	401
S2-TRIB3-A4-TribE	2.0	TRIBUTARY TO HEDRICK BRANCH	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	112
S2-TRIB3-A5	5.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	4,152
S2-TRIB3-A5-TribA	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	574
S2-TRIB3-A5-TribB	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	697
S2-TRIB3-a6	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,209
S2-TRIB3-A7	5.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	2,280
S2-TRIB3-A8	3.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	762
S2-TRIB3-A9	0.5	TRIBUTARY TO HEDRICK BRANCH	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	58
S2-TRIB3-A9	2.5	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	367
S4	5.0	STREAM S4 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	5,497
S4	2.5	STREAM S4 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	326
S4	2.0	STREAM S4 - UNNAMED	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	589
S4	10.0	STREAM S4 - FRM NSR	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,665
S4-TRIB1	10.0	TRIBUTARY 1 TO S4 (FMR NSR)	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,853
S4-TRIB2	6.0	TRIBUTARY 2 TO S4	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,403
S4-TRIB3	4.0	TRIBUTARY 3 TO S4	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,078
S4-TRIB3	3.0	TRIBUTARY 3 TO S4	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,496
S4-TRIB3	2.0	TRIBUTARY 3 TO S4	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	359
S4-TRIB4	2.0	TRIBUTARY 4 TO S4	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	601
S5	2.0	STREAM S5 - FMR NSR	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	864
S6	6.0	STREAM S6 - FMR NSR	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,262
S7	6.0	STREAM S7 - FMR NSR	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	656
S8	15.0	STREAM S8 - UNNAMED	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,970
S8	3.0	STREAM S8 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	3,457
S8	2.0	STREAM S8 - UNNAMED	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	515
S8	5.0	STREAM S8 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,139
S8-TRIB1	2.5	TRIBUTARY 1 TO S8	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,106
S8-TRIB1	2.5	TRIBUTARY 1 TO S8	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	121
S8-TRIB2	2.0	TRIBUTARY 2 TO S8	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	602
S8-TRIB3	2.0	TRIBUTARY 3 TO S8	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	170
S8-TRIB3	2.0	TRIBUTARY 3 TO S8	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	501
S8-TRIB4	2.0	TRIBUTARY 4 TO S8	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	830

TABLE A-1: COMPREHENSIVE LISTING OF STREAM CHANNELS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Width at OHWM (feet)	AQUATIC_RESOURCE	Category	Classification	LOCATION	Length (L.F.)
S8-TRIB4	2.0	TRIBUTARY 4 TO S8	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	307
S8-TRIB4-A1	1.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	161
S8-TRIB4-A1	1.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	123
S8-TRIB4-A2	1.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	288
S8-TRIB5	2.0	TRIBUTARY 5 TO S8	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	922
S8-TRIB6	0.5	TRIBUTARY 6 TO S8	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	214
S8-TRIB6	0.5	TRIBUTARY 6 TO S8	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	132
S8-TRIB7	2.0	TRIBUTARY 8 TO S8	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	348
S8-TRIB7	2.0	TRIBUTARY 8 TO S8	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	356
S9	15.0	STREAM 9 - UNNAMED	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	5,197
S9	5.0	STREAM 9 - UNNAMED	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,085
S9	5.0	STREAM 9 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	3,034
S9-TRIB1	2.0	TRIBUTARY 1 TO S9	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	309
S10	11.0	STREAM S10 - FMR NSR	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	6,658
S10-TRIB1	5.0	TRIBUTARY 1 TO S10	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	7,271
S10-TRIB1	5.0	TRIBUTARY 1 TO S10	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	899
S10-TRIB1-A1	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	890
S10-TRIB1-A1	0.5	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	421
S10-TRIB1-A2	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	359
S10-TRIB1-A2	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,150
S10-TRIB2	1.5	TRIBUTARY 2 TO S10	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,705
S11	6.0	STREAM S11 - FMR BRALLEY POOL	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	345
S12	11.0	STREAM S12 - UNNAMED	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	6,304
S12	5.0	STREAM S12 - UNNAMED	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,801
S12	5.0	STREAM S12 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	6,304
S12	8.0	STREAM S12 - UNNAMED	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	6,304
S12-TRIB1	6.0	TRIBUTARY 1 TO S12	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	599
S12-TRIB2	11.0	TRIBUTARY 2 TO S12- FMR NSR	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	919
S12-TRIB3	3.0	TRIBUTARY 3 TO S12	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,285
S12-TRIB3-A1	1.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	388
S12-TRIB3-A2	0.5	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	249
S12-TRIB4	5.0	TRIBUTARY 4 TO S12	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,698
S12-TRIB4	2.0	TRIBUTARY 4 TO S12	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	540

TABLE A-1: COMPREHENSIVE LISTING OF STREAM CHANNELS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Width at OHWM (feet)	AQUATIC_RESOURCE	Category	Classification	LOCATION	Length (L.F.)
S12-TRIB5	0.5	TRIBUTARY 5 TO S12	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	920
S12-TRIB5	0.5	TRIBUTARY 5 TO S12	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	780
S12-TRIB5-A1	0.5	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	213
S12-TRIB6	0.5	TRIBUTARY 6 TO S12	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	415
S12-TRIB6	0.5	TRIBUTARY 6 TO S12	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	619
S12-TRIB7	2.5	TRIBUTARY 7 TO S12	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	938
S12-TRIB7-A1	0.5	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,042
S12-TRIB7-A2	1.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	253
S12-TRIB7-A3	0.5	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	156
S13	5.0	STREAM S13 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	750
S14	10.0	STREAM S14 - FMR NSR	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	3,629
S14-TRIB1	8.0	TRIB 1 TO S14- FMR LEGGETS BR	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,336
S15	10.0	STREAM S15 - FMR NSR	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	7,294
S15-TRIB1	5.0	TRIBUTARY 1 TO S15	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	5,502
S15-TRIB1	2.0	TRIBUTARY 1 TO S15	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	175
S15-TRIB1	2.0	TRIBUTARY 1 TO S15	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	83
S15-TRIB1	2.0	TRIBUTARY 1 TO S15	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	676
S15-TRIB1-A1	4.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,790
S15-TRIB1-A1	2.5	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,346
S15-TRIB2	4.0	TRIBUTARY 2 TO S15	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,010
S15-TRIB2	6.0	TRIBUTARY 2 TO S15	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	896
S15-TRIB2-A1	6.0	SECONDARY TRIBUTARY	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	6,660
S15-TRIB2-A1	5.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,391
S15-TRIB2-A2	4.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	367
S15-TRIB2-A2	4.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	790
S15-TRIB2-A3	2.5	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	408
S15-TRIB3	2.0	TRIBUTARY 3 TO S15	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	5,257
S15-TRIB3	2.0	TRIBUTARY 3 TO S15	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	942
S15-TRIB3-A1	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	190
S15-TRIB4	5.0	TRIB 4 TO S15- FMR DAVIS CREEK	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,037
S16	40.0	STREAM S16 - UNNAMED	>25'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	7,810
S16	10.0	STREAM S16 - UNNAMED	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,310
S16	8.0	STREAM S16 - UNNAMED	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,071

TABLE A-1: COMPREHENSIVE LISTING OF STREAM CHANNELS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Width at OHWM (feet)	AQUATIC_RESOURCE	Category	Classification	LOCATION	Length (L.F.)
S16	25.0	STREAM S16 - UNNAMED	16-25'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,151
S16-TRIB1	8.0	TRIB 1 TO S16 - FMR NSR	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,619
S16-TRIB2	8.0	TRIB 2 TO S16 - FMR NSR	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,832
S16-TRIB3	3.0	TRIBUTARY 3 TO S16	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,177
S16-TRIB3	5.0	TRIBUTARY 3 TO S16	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	316
S16-TRIB3-A1	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	165
S16-TRIB3-A1	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	345
S16-TRIB3-A2	1.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	128
S16-TRIB4	5.0	TRIBUTARY 4 TO S16	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,423
S16-TRIB4	5.0	TRIBUTARY 4 TO S16	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	112
S16-TRIB4-A1	5.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	140
S16-TRIB5	2.0	TRIBUTARY 5 TO S16	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	224
S16-TRIB5	2.0	TRIBUTARY 5 TO S16	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	562
S16-TRIB6	5.0	TRIBUTARY 6 TO S16	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	883
S16-TRIB6	5.0	TRIBUTARY 6 TO S16	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	435
S16-TRIB6-A1	3.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	117
S16-TRIB6-A1	3.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	47
S16-TRIB7	5.0	TRIBUTARY 7 TO S16	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,592
S16-TRIB7	5.0	TRIBUTARY 7 TO S16	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	523
S16-TRIB7-A1	3.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	211
S16-TRIB7-A1	3.0	SECONDARY TRIBUTARY	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	154
S16-TRIB8	10.0	TRIBUTARY 8 TO S16	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	847
S16-TRIB8	10.0	TRIBUTARY 8 TO S16	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	520
S16-TRIB8-A1	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	161
S16-TRIB9	4.0	TRIBUTARY 9 TO S16	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	144
S17	5.0	STREAM S17 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,507
S18	5.0	STREAM S18 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,764
S18	5.0	STREAM S18 - UNNAMED	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	927
S18-TRIB1	2.0	TRIBUTARY 1 TO S18	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	160
S19	12.0	STREAM S19 - UNNAMED	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	8,197
S19	12.0	STREAM S19 - UNNAMED	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	884
S19	12.0	STREAM S19 - UNNAMED	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,221
S19	4.0	STREAM S19 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	631

TABLE A-1: COMPREHENSIVE LISTING OF STREAM CHANNELS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Width at OHWM (feet)	AQUATIC_RESOURCE	Category	Classification	LOCATION	Length (L.F.)
S19-TRIB1	4.0	TRIBUTARY 1 TO S19	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	108
S19-TRIB1	4.0	TRIBUTARY 1 TO S19	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	498
S19-TRIB1-A1	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	63
S19-TRIB2	4.0	TRIBUTARY 2 TO S19	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	249
S19-TRIB2	2.5	TRIBUTARY 2 TO S19	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	93
S19-TRIB2-A1	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	143
S19-TRIB3	4.0	TRIBUTARY 3 TO S19	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	282
S19-TRIB4	5.0	TRIBUTARY 4 TO S19	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	255
S19-TRIB5	10.0	TRIBUTARY 5 TO S19	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	663
S20	12.0	STREAM S20 - FMR NSR	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	4,451
S20-TRIB1	8.0	TRIB 1 TO S20 - FMR NSR	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	967
S21	5.0	STREAM S21 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	3,683
S21	5.0	STREAM S21 - UNNAMED	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,727
S21	15.0	STREAM S21 - UNNAMED	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	897
S21	40.0	STREAM S21 - UNNAMED	>25'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	586
S21	25.0	STREAM S21 - UNNAMED	16-25'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	440
S21-TRIB1	4.0	TRIBUTARY 1 TO S21	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,469
S21-TRIB1	2.0	TRIBUTARY 1 TO S21	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,022
S21-TRIB1	8.0	TRIBUTARY 1 TO S21	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	226
S21-TRIB1	2.0	TRIBUTARY 1 TO S21	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	420
S21-TRIB1-A1	2.0	SECONDARY TRIBUTARY	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	275
S21-TRIB2	4.0	TRIBUTARY 2 TO S21	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	518
S22	8.0	STREAM S22 - UNNAMED	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	1,551
S22	5.0	STREAM S22 - UNNAMED	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,366
S22	22.0	STREAM S22 - UNNAMED	16-25'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	958
S22	15.0	STREAM S22 - UNNAMED	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	904
S22-TRIB1	5.0	TRIBUTARY 1 TO S22	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	144
S22-TRIB2	3.0	TRIBUTARY 2 TO S22	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	263
S23	4.0	STREAM S23 - UNNAMED	2.5-5'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	298
S24	2.0	STREAM S24 - UNNAMED	0.5-2'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	130
S24	2.0	STREAM S24 - UNNAMED	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	143
S25	22.0	STREAM S25 - LONG CREEK	16-25'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	2,772
S25	15.0	STREAM S25 - LONG CREEK	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	3,092

TABLE A-1: COMPREHENSIVE LISTING OF STREAM CHANNELS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Width at OHWM (feet)	AQUATIC_RESOURCE	Category	Classification	LOCATION	Length (L.F.)
S25-TRIB1	5.0	TRIBUTARY 1 TO S25	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	194
S26	15.0	STREAM S26 - UNNAMED	6-15'	Ephemeral	CONSERVATION POOL, DAM, SPILLWAY	633
S26	15.0	STREAM S26 - UNNAMED	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,922
S26-TRIB1	12.0	TRIBUTARY 1 TO S26	6-15'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	110
S27	2.0	STREAM S27 - UNNAMED	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	176
T1-BAKER	2.0	TRIBUTARY 1 TO BAKER CREEK	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	888
T2-BAKER	5.0	TRIBUTARY 2 TO BAKER CREEK	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	2,455
T2-BAKER	5.0	TRIBUTARY 2 TO BAKER CREEK	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	541
T3-BAKER	5.0	TRIBUTARY 3 TO BAKER CREEK	2.5-5'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	2,175
T3-TRIB1	2.0	TRIBUTARY 1 TO T3 (BAKER)	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	1,422
T3-TRIB2	2.0	TRIBUTARY 2 TO T3 (BAKER)	0.5-2'	Ephemeral	OUTSIDE CP, DAM, SPILLWAY	330

Notes:

1. Secondary Tributaries are headwater streams; all tributaries to the North Sulphur River are ephemeral.
2. Category refers to the categorical breakdown used for the functional assessment.
3. Streams identified as location "CONSERVATION POOL, DAM, SPILLWAY" are those that will be impacted by the proposed reservoir; those identified as "OUTSIDE CP, DAM, SPILL are located outside the direct impact or proposed inundation zone.

TABLE A-2: COMPREHENSIVE LISTING OF ON-CHANNEL PONDS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	ACRES	CLASSIFICATION	LOCATION	FIELD ASSESSED
OCP-1	0.23	ON-CHANNEL	OUTSIDE CP, DAM, SPILLWAY	
OCP-2	1.39	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	YES
OCP-3	1.25	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	YES
OCP-4	1.34	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	YES
OCP-5	0.92	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	YES
OCP-6	0.43	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-7	0.30	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-8	0.89	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	YES
OCP-9	0.29	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-10	2.89	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	YES
OCP-11	0.26	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	YES
OCP-12	1.08	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-13	2.02	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	YES
OCP-14	0.66	ON-CHANNEL	OUTSIDE CP, DAM, SPILLWAY	
OCP-15	0.04	ON-CHANNEL	OUTSIDE CP, DAM, SPILLWAY	
OCP-16	23.80	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-17	7.98	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	YES
OCP-18	0.28	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-19	0.35	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	YES
OCP-20	0.36	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-21	0.77	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-22	0.04	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-23	2.44	ON-CHANNEL	OUTSIDE CP, DAM, SPILLWAY	YES
OCP-24	2.73	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-25	0.09	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-26	1.44	ON-CHANNEL	OUTSIDE CP, DAM, SPILLWAY	
OCP-27	0.67	ON-CHANNEL	OUTSIDE CP, DAM, SPILLWAY	

OCP-28	0.04	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-29	0.35	ON-CHANNEL	OUTSIDE CP, DAM, SPILLWAY	
OCP-30	0.49	ON-CHANNEL	OUTSIDE CP, DAM, SPILLWAY	
OCP-31	0.12	ON-CHANNEL	OUTSIDE CP, DAM, SPILLWAY	
OCP-32	0.91	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	YES
OCP-33	0.87	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	YES
OCP-34	0.05	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-35	2.10	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-36	0.82	ON-CHANNEL	OUTSIDE CP, DAM, SPILLWAY	
OCP-37	0.17	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-38	0.23	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-39	0.20	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-40	0.25	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-41	0.06	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-42	0.29	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-43	1.57	ON-CHANNEL	CONSERVATION POOL, DAM, SPILLWAY	
OCP-44	0.40	ON-CHANNEL	OUTSIDE CP, DAM, SPILLWAY	
OCP-45	4.23	ON-CHANNEL	OUTSIDE CP, DAM, SPILLWAY	
OCP-46	0.07	ON-CHANNEL	OUTSIDE CP, DAM, SPILLWAY	
OCP-47	1.73	ON-CHANNEL	OUTSIDE CP, DAM, SPILLWAY	

TABLE A-3: COMPREHENSIVE LISTING OF UPLAND PONDS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Area	ACRES	CLASSIFICATION	LOCATION	FIELD ASSESSED
UP-1	5749.93289366662	0.13	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-2	14776.10593564570	0.34	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-3	6084.60531711844	0.14	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-4	7667.42748722571	0.18	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-5	5445.17498596262	0.13	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-6	44374.52643744630	1.02	UPLAND	OUTSIDE CP, DAM, SPILLWAY	YES
UP-7	44067.57979549830	1.01	UPLAND	OUTSIDE CP, DAM, SPILLWAY	YES
UP-8	65287.76828248820	1.50	UPLAND	OUTSIDE CP, DAM, SPILLWAY	YES
UP-9	5363.57710456971	0.12	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-10	7795.15740680175	0.18	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-11	2643.19015284152	0.06	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-12	5226.20293474051	0.12	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-13	41168.29833695940	0.95	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-14	5477.45276976329	0.13	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-15	12659.92091193530	0.29	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-16	7330.57549689765	0.17	UPLAND	OUTSIDE CP, DAM, SPILLWAY	YES
UP-17	24395.24800907620	0.56	UPLAND	OUTSIDE CP, DAM, SPILLWAY	YES
UP-18	27391.15975638290	0.63	UPLAND	OUTSIDE CP, DAM, SPILLWAY	YES
UP-19	52907.92946536180	1.21	UPLAND	OUTSIDE CP, DAM, SPILLWAY	YES
UP-20	9902.35635071872	0.23	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-21	15111.06680104190	0.35	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-22	46527.35755966390	1.07	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-23	797.58196692705	0.02	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-24	8495.21629000281	0.20	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-25	6549.82883570092	0.15	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-26	4559.62026730517	0.10	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-27	3521.52381836461	0.08	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	

TABLE A-3: COMPREHENSIVE LISTING OF UPLAND PONDS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Area	ACRES	CLASSIFICATION	LOCATION	FIELD ASSESSED
UP-28	2166.55304437921	0.05	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-29	3035.48077934727	0.07	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-30	61766.50101570330	1.42	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	YES
UP-31	10336.68453382850	0.24	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-32	12104.72091771350	0.28	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-33	5710.68774594861	0.13	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-34	12279.67661202560	0.28	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-35	14643.16593454710	0.34	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-36	14385.73938026280	0.33	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP37	55021.50954727790	1.26	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-38	20590.62828086940	0.47	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-39	19561.69056842070	0.45	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-40	6455.81216071296	0.15	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-41	17048.07932788080	0.39	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-42	14969.51168506640	0.34	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-43	36354.11922479710	0.83	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-44	21445.17359571030	0.49	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-45	9180.99893449469	0.21	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-46	1103.39855550765	0.03	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-47	19170.67856177910	0.44	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-48	2299.15519237406	0.05	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-49	85001.84472518930	1.95	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-50	4137.24645104530	0.09	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-51	6348.52350473545	0.15	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-52	3863.23936248110	0.09	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-53	9630.02998032100	0.22	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-54	4658.89157283163	0.11	UPLAND	OUTSIDE CP, DAM, SPILLWAY	

TABLE A-3: COMPREHENSIVE LISTING OF UPLAND PONDS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Area	ACRES	CLASSIFICATION	LOCATION	FIELD ASSESSED
UP-55	3936.40216217252	0.09	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-56	8199.42546201255	0.19	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-57	6845.73533303709	0.16	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-58	20274.16587430800	0.47	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-59	3183.47904889830	0.07	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-60	10623.76889474000	0.24	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-61	2653.67452166423	0.06	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-62	5787.51623979779	0.13	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-63	11898.73175653820	0.27	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-64	18118.49831442040	0.42	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-65	75580.65070826670	1.74	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	YES
UP-66	12613.58579890770	0.29	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	YES
UP-67	139318.06422272500	3.20	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	YES
UP-68	30755.94007771960	0.71	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-69	118404.81492646900	2.72	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-70	141835.79253150500	3.26	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	YES
UP-71	21789.36291595860	0.50	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-72	30024.69678235630	0.69	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-73	17143.04601182540	0.39	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-74	20834.37788618280	0.48	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-75	16576.56575557130	0.38	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-76	9010.26669794560	0.21	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-77	8454.17375371381	0.19	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-78	18478.28610318230	0.42	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-79	55001.29285508770	1.26	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	YES
UP-80	40401.63517133800	0.93	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	YES
UP-81	24265.07158389500	0.56	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	

TABLE A-3: COMPREHENSIVE LISTING OF UPLAND PONDS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Area	ACRES	CLASSIFICATION	LOCATION	FIELD ASSESSED
UP-82	18550.96426231230	0.43	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-83	18478.47302847120	0.42	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-84	5844.00883298352	0.13	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-85	10355.89554570770	0.24	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-86	5170.39830100300	0.12	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-87	5401.63816966830	0.12	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-88	15936.36359196550	0.37	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-89	45857.66978273610	1.05	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-90	10965.39600756480	0.25	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-91	36241.31267953610	0.83	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-92	3786.61994385967	0.09	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-93	17185.08394543650	0.39	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-94	11604.22947008530	0.27	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-95	11891.00590485030	0.27	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-96	17665.12722604030	0.41	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-97	10728.32036732410	0.25	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-98	8289.64952167681	0.19	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-99	39083.10400375720	0.90	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-100	8347.63399821775	0.19	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-101	5266.05464633046	0.12	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-102	4354.98639745040	0.10	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-103	4021.79587792762	0.09	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-104	4798.10881939080	0.11	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-105	3459.42001635279	0.08	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-106	11768.16047437200	0.27	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-107	6105.62331010071	0.14	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-108	2832.77661245773	0.07	UPLAND	OUTSIDE CP, DAM, SPILLWAY	

TABLE A-3: COMPREHENSIVE LISTING OF UPLAND PONDS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Area	ACRES	CLASSIFICATION	LOCATION	FIELD ASSESSED
UP-109	7052.05191829185	0.16	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-110	8194.71238320045	0.19	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-111	4110.84931272125	0.09	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-112	4810.11951610585	0.11	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-113	7424.49241898459	0.17	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-114	6283.01295944616	0.14	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-115	5345.78404822542	0.12	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-116	23374.28116171110	0.54	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-117	111064.03917599500	2.55	UPLAND	OUTSIDE CP, DAM, SPILLWAY	YES
UP-118	6343.53955999261	0.15	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-119	1397.41525163971	0.03	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-120	3897.22299127545	0.09	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-121	5807.40017322037	0.13	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-122	15656.61709553440	0.36	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-123	20356.44269192610	0.47	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-124	16667.22191647740	0.38	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-125	12752.32958181670	0.29	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-126	7957.79173974480	0.18	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-127	12810.60518978430	0.29	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-128	17230.78086344470	0.40	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-129	10874.46351666530	0.25	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-130	113763.45818804600	2.61	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-131	3247.51574886974	0.07	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-132	37105.84872792770	0.85	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-133	4862.23489564972	0.11	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-134	7698.36699848759	0.18	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-135	20985.62569117680	0.48	UPLAND	OUTSIDE CP, DAM, SPILLWAY	

TABLE A-3: COMPREHENSIVE LISTING OF UPLAND PONDS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Area	ACRES	CLASSIFICATION	LOCATION	FIELD ASSESSED
UP-136	17021.25520376360	0.39	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-137	6550.40534372715	0.15	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-138	10047.14439513660	0.23	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-139	9039.54669314232	0.21	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-140	13637.30271152800	0.31	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-141	22417.53855222470	0.51	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-142	10207.16536974260	0.23	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-143	7439.02116688766	0.17	UPLAND	OUTSIDE CP, DAM, SPILLWAY	YES
UP-144	5119.84231584078	0.12	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-145	16469.97398403580	0.38	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-146	14736.25650770240	0.34	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-147	6047.08084001727	0.14	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-148	2668.79230187115	0.06	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-149	8437.40580385029	0.19	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-150	6289.61301144133	0.14	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-151	4888.92101482900	0.11	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-152	35600.09409247170	0.82	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	YES
UP-153	27720.25236598170	0.64	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-154	7160.29294855238	0.16	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-155	53881.45848935600	1.24	UPLAND	OUTSIDE CP, DAM, SPILLWAY	YES
UP-156	3939.21043664444	0.09	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-157	20751.92739753650	0.48	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-158	9985.24540552999	0.23	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-159	3736.21591783283	0.09	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-160	29329.89575577390	0.67	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-161	3073.94361451410	0.07	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-162	8281.96735182690	0.19	UPLAND	OUTSIDE CP, DAM, SPILLWAY	

TABLE A-3: COMPREHENSIVE LISTING OF UPLAND PONDS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Area	ACRES	CLASSIFICATION	LOCATION	FIELD ASSESSED
UP-163	9835.77990840870	0.23	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-164	19545.81027028590	0.45	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-165	6542.04904715384	0.15	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-166	21269.03972328630	0.49	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-167	10652.93861573870	0.24	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-168	9642.29917074536	0.22	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	YES
UP-169	8663.92643204764	0.20	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-170	9964.32312719102	0.23	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-171	19247.05821770120	0.44	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-172	2044.50787395755	0.05	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-173	6372.06907281436	0.15	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-174	6909.98575295682	0.16	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-175	3134.09413745102	0.07	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-176	21212.67650165310	0.49	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-177	26594.00323073780	0.61	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-178	14828.91422201880	0.34	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-179	15976.15008071030	0.37	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-180	84402.45109275030	1.94	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-181	6217.56364225019	0.14	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-182	7702.00377304686	0.18	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-183	3914.01837309213	0.09	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-184	3606.38512229550	0.08	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-185	7021.77707892329	0.16	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-186	8201.61545048703	0.19	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-187	7947.64568713224	0.18	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-188	13104.04289911410	0.30	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-189	8160.57438649750	0.19	UPLAND	OUTSIDE CP, DAM, SPILLWAY	

TABLE A-3: COMPREHENSIVE LISTING OF UPLAND PONDS FOR PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION ASSESSMENT AREA

ID_NAME	Area	ACRES	CLASSIFICATION	LOCATION	FIELD ASSESSED
UP-190	10198.50191368740	0.23	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-191	3824.14907030134	0.09	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-192	1337.50624657386	0.03	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-193	11815.25335188270	0.27	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-194	4410.15219154655	0.10	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-195	8515.65792981320	0.20	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-196	6223.09084206837	0.14	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-197	4378.14482794999	0.10	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-198	13909.68330520210	0.32	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-199	10582.61482636130	0.24	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-200	11184.30844984010	0.26	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-201	25508.96048843180	0.59	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-202	7357.88909610137	0.17	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-203	7969.55461077115	0.18	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-204	15773.49419408670	0.36	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-205	8418.02173846706	0.19	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-206	11038.13115218060	0.25	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-207	2069.01868681123	0.05	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	YES
UP-208	13112.45451321330	0.30	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-209	851.00082011049	0.02	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-210	12970.03148441680	0.30	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	
UP-211	11123.23078719850	0.26	UPLAND	OUTSIDE CP, DAM, SPILLWAY	
UP-212	18086.88422204470	0.42	UPLAND	CONSERVATION POOL, DAM, SPILLWAY	

TABLE A-4: NON-JURISDICTIONAL FORESTED WETLANDS

NAME	Acres	Location
FW-1	0.85	Embankment/Assessment Area
FW-2	0.09	Conservation Pool
FW-3	0.06	Conservation Pool
FW-4	0.06	Conservation Pool
FW-5	0.02	Conservation Pool
FW-6	0.05	Conservation Pool
FW-7	0.10	Conservation Pool
FW-8	0.01	Conservation Pool
FW-9	0.09	Conservation Pool
FW-10	0.38	Conservation Pool
FW-11	0.04	Conservation Pool
FW-12	0.39	Conservation Pool
FW-13	1.17	Conservation Pool
FW-14	0.01	Conservation Pool
FW-15	0.01	Conservation Pool
FW-16	0.03	Conservation Pool
FW-17	0.02	Conservation Pool
FW-18	0.11	Conservation Pool
FW-19	0.01	Conservation Pool
FW-20	0.03	Conservation Pool
FW-21	0.01	Conservation Pool
FW-22	0.01	Conservation Pool
FW-23	0.05	Conservation Pool
FW-24	0.04	Conservation Pool
FW-25	0.14	Conservation Pool
FW-26	0.03	Conservation Pool
TOTAL	3.80	

MAPBOOK

OVERALL AQUATIC RESOURCES

STREAM LOCATION
- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE
- ON-CHANNEL IMPOUNDMENT
- UPLAND POND

- FORESTED WETLANDS
- SJD ASSESSMENT AREA
- CONSERVATION POOL

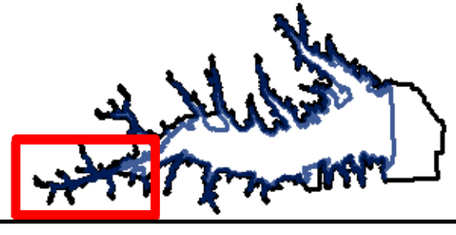

FIGURE 1: AQUATIC RESOURCES
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
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1,300 650 0 Feet

STREAM LOCATION

- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE

- ON-CHANNEL IMPOUNDMENT
- UPLAND POND

- FORESTED WETLANDS
- SJD ASSESSMENT AREA
- CONSERVATION POOL

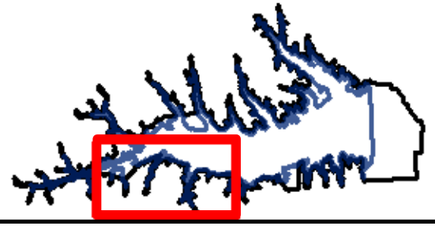

FIGURE 2: AQUATIC RESOURCES
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
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1,300 650 0 Feet

STREAM LOCATION

- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE

- ON-CHANNEL IMPOUNDMENT
- UPLAND POND

- FORESTED WETLANDS
- SJD ASSESSMENT AREA
- CONSERVATION POOL

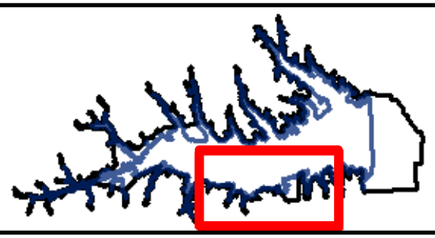

FIGURE 3: AQUATIC RESOURCES
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
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1,300 650 0 Feet

STREAM LOCATION
- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE
- ON-CHANNEL IMPOUNDMENT
- UPLAND POND

- FORESTED WETLANDS
- SJD ASSESSMENT AREA
- CONSERVATION POOL

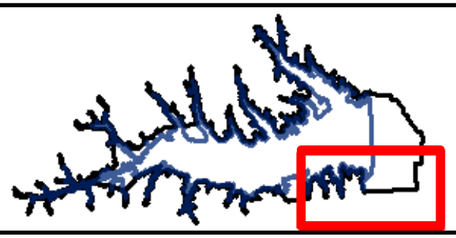

FIGURE 4: AQUATIC RESOURCES
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
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Date: 6/15/2017

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1,300 650 0 Feet

STREAM LOCATION

- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE

- ON-CHANNEL IMPOUNDMENT
- UPLAND POND

- FORESTED WETLANDS
- SJD ASSESSMENT AREA
- CONSERVATION POOL

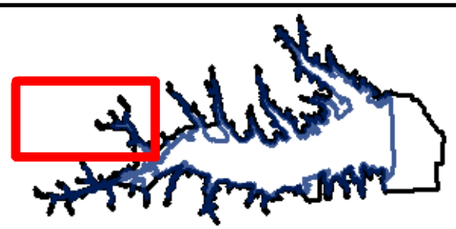

FIGURE 5: AQUATIC RESOURCES
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

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1,300 650 0 Feet

STREAM LOCATION

- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE

- ON-CHANNEL IMPOUNDMENT
- UPLAND POND

- FORESTED WETLANDS
- SJD ASSESSMENT AREA
- CONSERVATION POOL

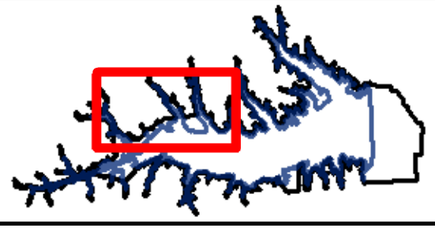

FIGURE 6: AQUATIC RESOURCES
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

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1,300 650 0 Feet

STREAM LOCATION
- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE
- ON-CHANNEL IMPOUNDMENT
- UPLAND POND

- FORESTED WETLANDS
- SJD ASSESSMENT AREA
- CONSERVATION POOL

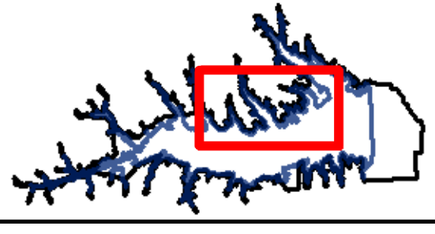

FIGURE 7: AQUATIC RESOURCES
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
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1,300 650 0 Feet

STREAM LOCATION
- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE
- ON-CHANNEL IMPOUNDMENT
- UPLAND POND

- FORESTED WETLANDS
- SJD ASSESSMENT AREA
- CONSERVATION POOL

FIGURE 8: AQUATIC RESOURCES
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

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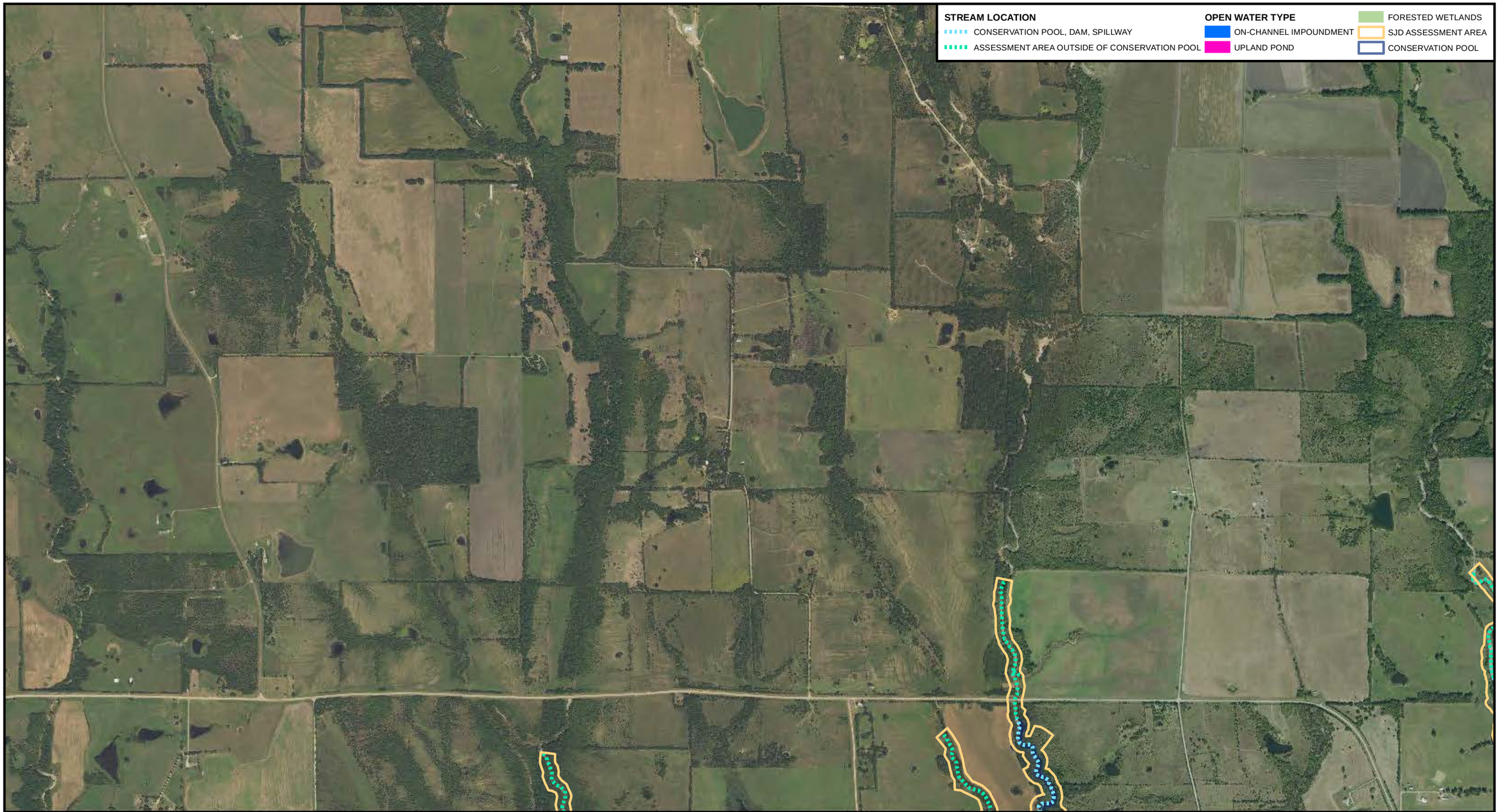

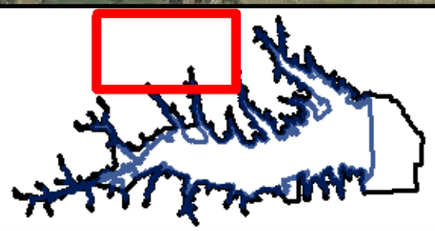

FIGURE 9: AQUATIC RESOURCES
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

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1,300 650 0 Feet

STREAM LOCATION
- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE
- ON-CHANNEL IMPOUNDMENT
- UPLAND POND

- FORESTED WETLANDS
- SJD ASSESSMENT AREA
- CONSERVATION POOL

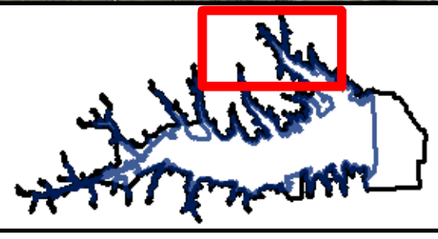

FIGURE 10: AQUATIC RESOURCES
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

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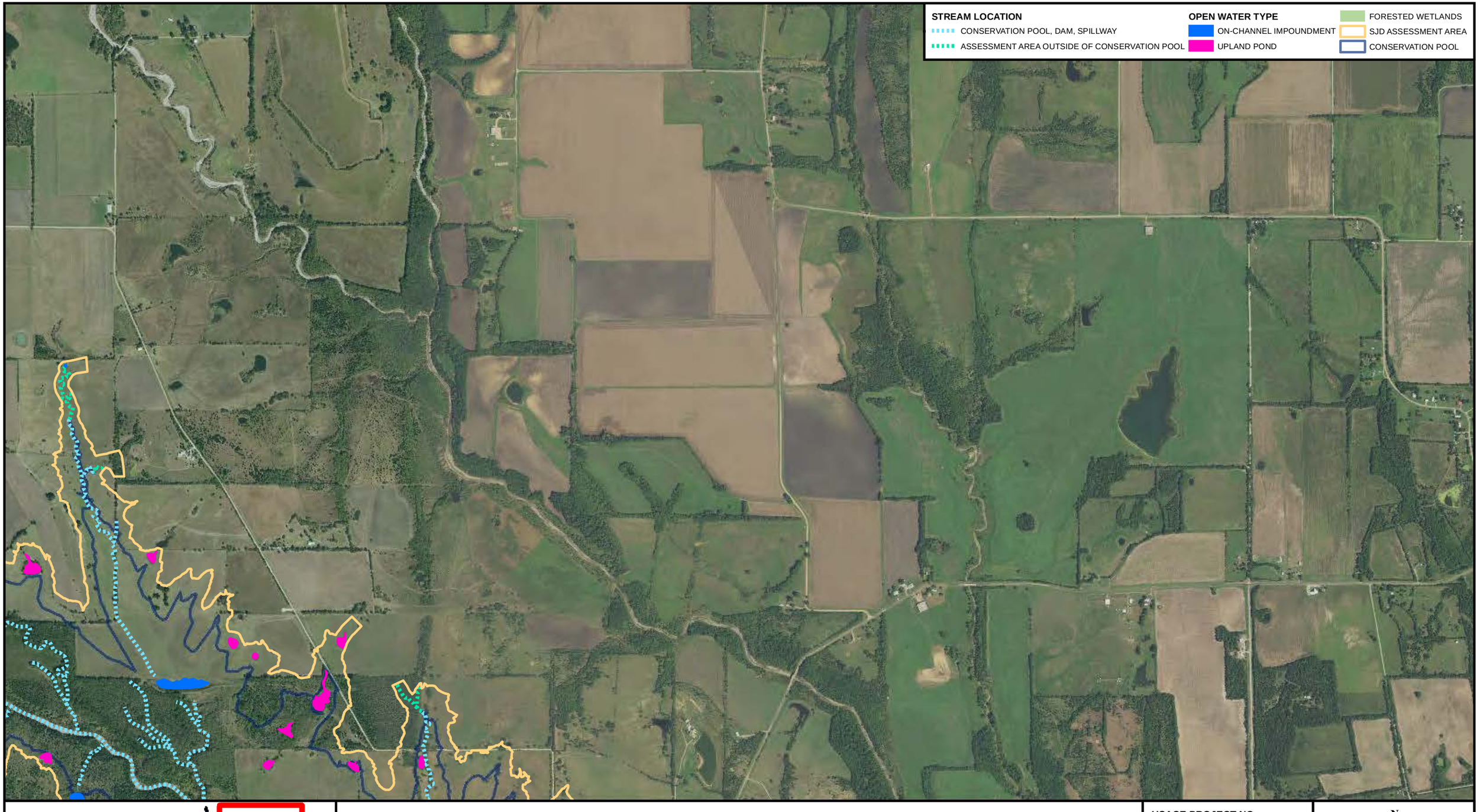

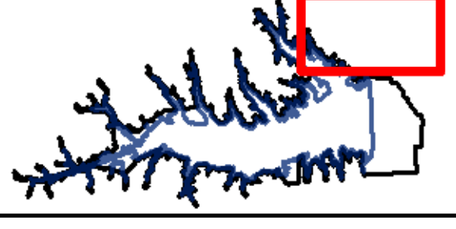

FIGURE 11: AQUATIC RESOURCES
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

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1,300 650 0 Feet

MAPBOOK

DELINEATED STREAMS

N22
N20
N20-TRIB1
N22-TRIB2
N20-TRIB1
N21
N21
NSR
N22-TRIB1
S23
S24
N23
N24
S27
S26
S25
S22
S22-TRIB2

STREAM LOCATION
- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE
- ON-CHANNEL IMPOUNDMENT

- SJD ASSESSMENT AREA
- CONSERVATION POOL

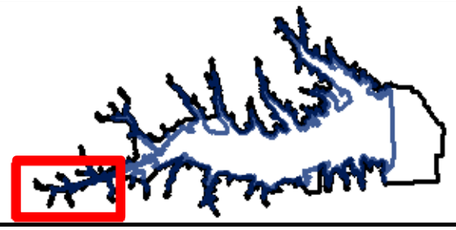

FIGURE 1: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

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1,000 500 0 Feet

N22
N22-TRIB2
N22-TRIB1
N20-TRIB1
N21
N21
N20
N20-TRIB1
NSR
S20
S21-TRIB1
S21-TRIB2
S21
S18
S19-TRIB1
S19-TRIB2
S19-TRIB3
S19
S19-TRIB5
S23
S24
S22
S22-TRIB2

STREAM LOCATION
- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE
- ON-CHANNEL IMPOUNDMENT
- SJD ASSESSMENT AREA
- CONSERVATION POOL

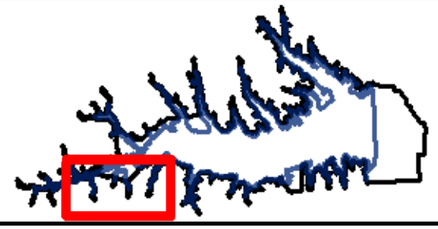


FIGURE 2: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

S20
S18
S18
S17
S16
S15-TRIB3
S15-TRIB2-A1
S15-TRIB2
S19-TRIB1
S19-TRIB2
S19-TRIB3
S19
S19-TRIB5
S16-TRIB4
S16-TRIB3
S16-TRIB5
S16-TRIB6
S15-TRIB2-A3
S16-TRIB7-A1
S16-TRIB8
S16-TRIB7
S16

STREAM LOCATION
- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE
- ON-CHANNEL IMPOUNDMENT

- SJD ASSESSMENT AREA
- CONSERVATION POOL

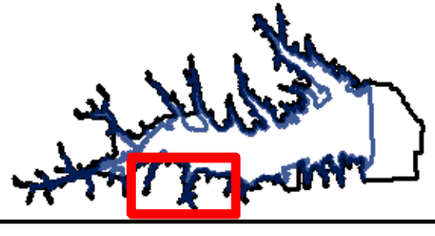


FIGURE 3: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

S15-TRIB3
S15-TRIB2
S15-TRIB2-A1
S15-TRIB1
S15-TRIB2-A2
S15-TRIB1-A1
S15-TRIB2-A3
S15-TRIB1
S12-TRIB5
S12-TRIB6
S12-TRIB4
S12
S12-TRIB7-A1
S10-TRIB1-A1
S12-TRIB7

STREAM LOCATION
- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE
- ON-CHANNEL IMPOUNDMENT

- SJD ASSESSMENT AREA
- CONSERVATION POOL

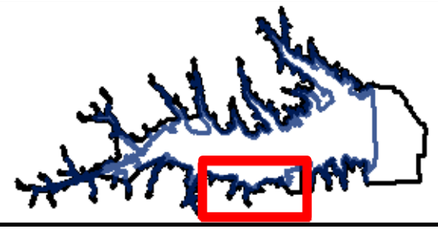


FIGURE 4: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

S12-TRIB5
S12-TRIB6
S12-TRIB4
S12
S12-TRIB7-A1
S10-TRIB1-A1
S12-TRIB7
S10-TRIB1-A1
S10-TRIB1
S10-TRIB1-A2
S10-TRIB1
S9
S8
S8-TRIB3
S8-TRIB4
S8-TRIB4-A2
S8-TRIB5
S8
S8-TRIB6
S8-TRIB7
S4
S4
S4-TRIB3
S2-TRIB3-A1

STREAM LOCATION
- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE
- ON-CHANNEL IMPOUNDMENT

- SJD ASSESSMENT AREA
- CONSERVATION POOL

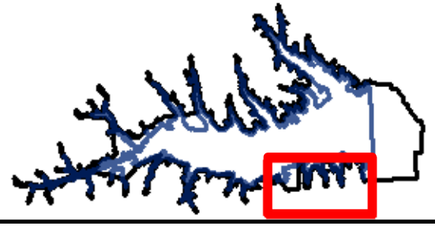


FIGURE 5: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

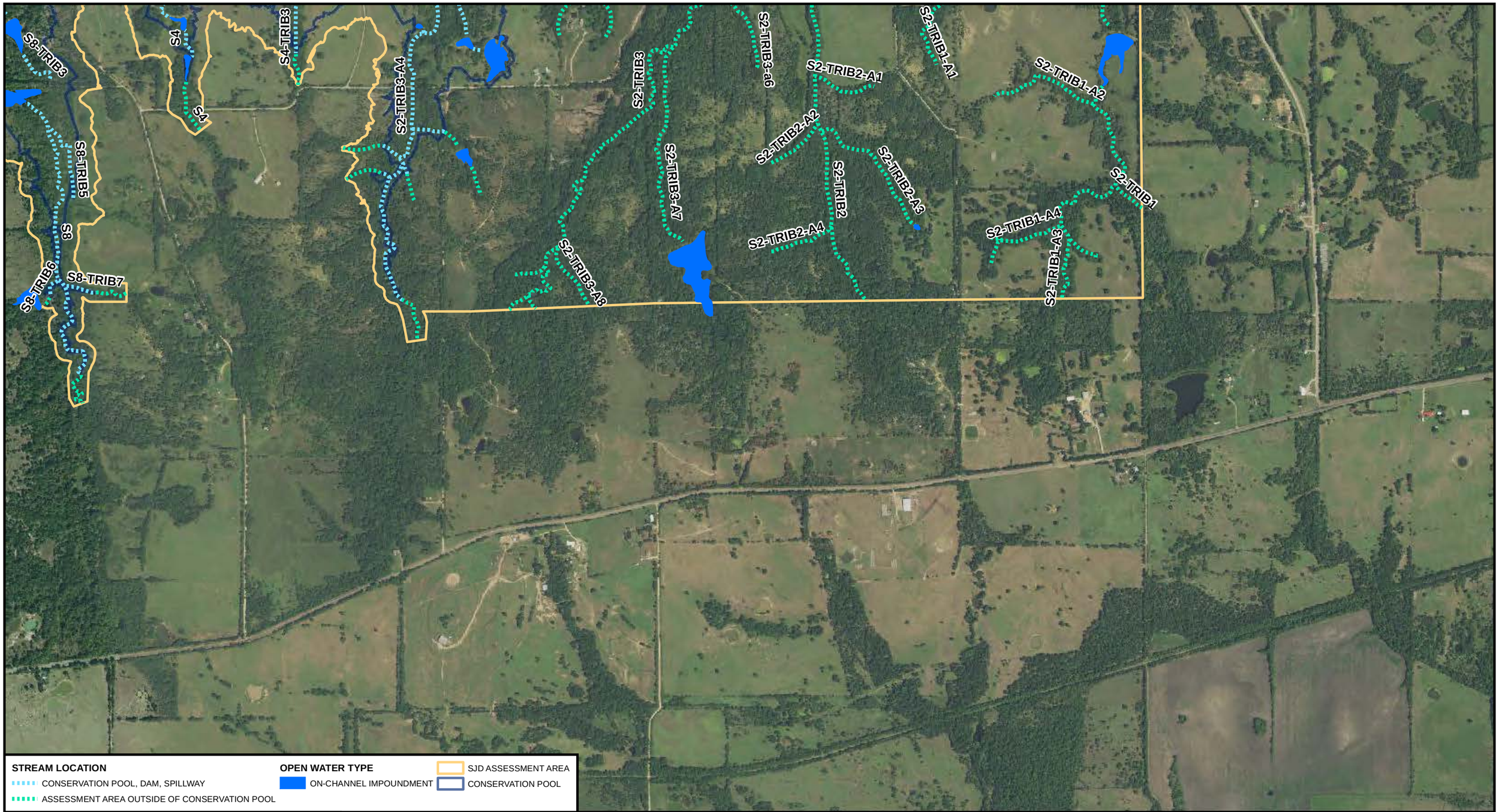
USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet



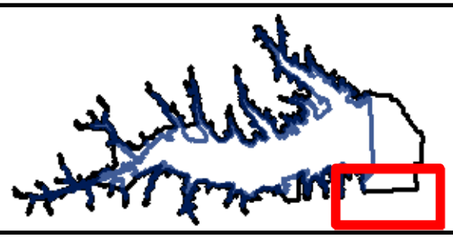


FIGURE 6: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

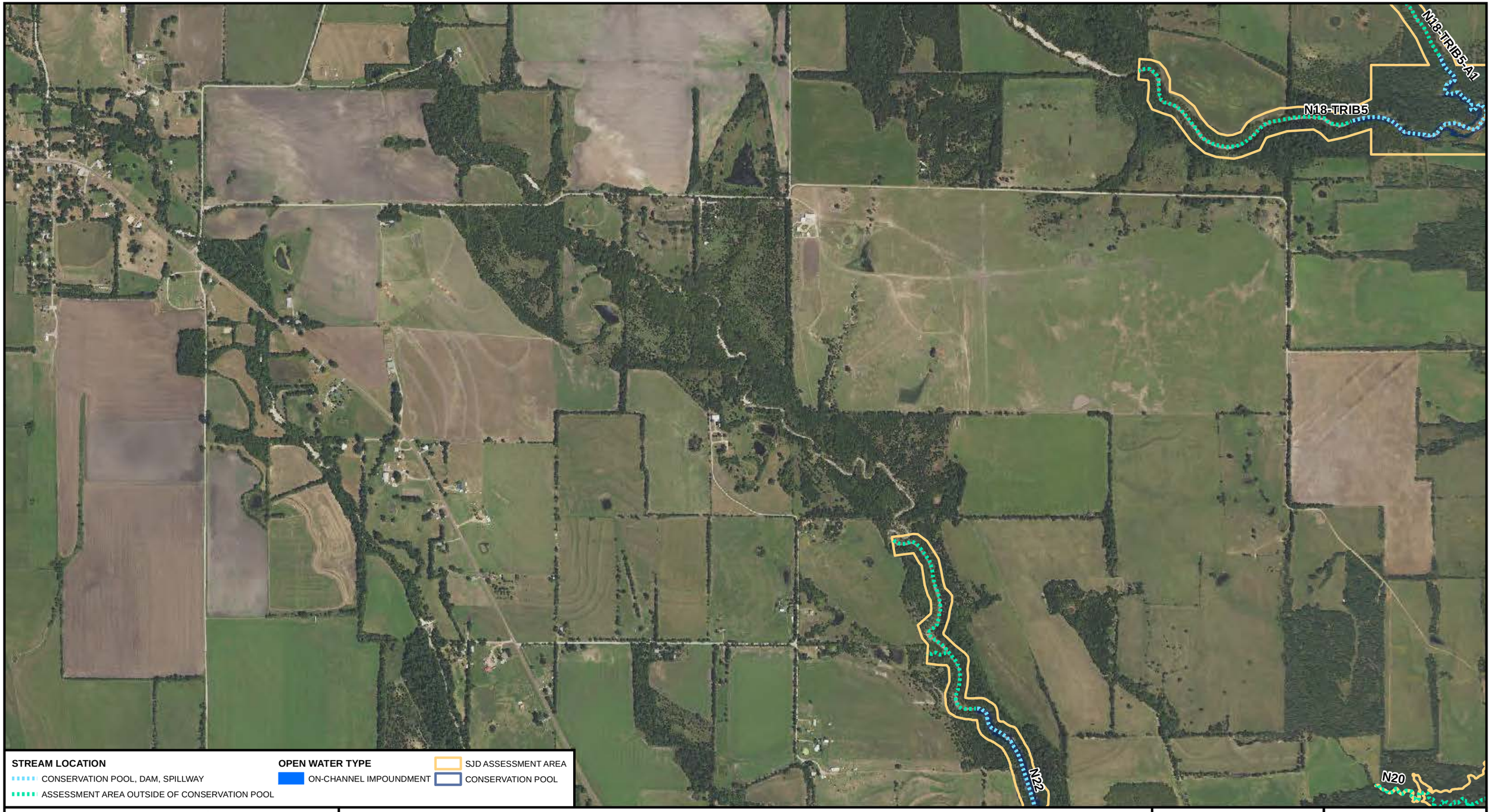
USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet



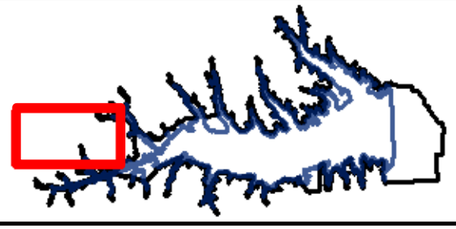


FIGURE 7: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

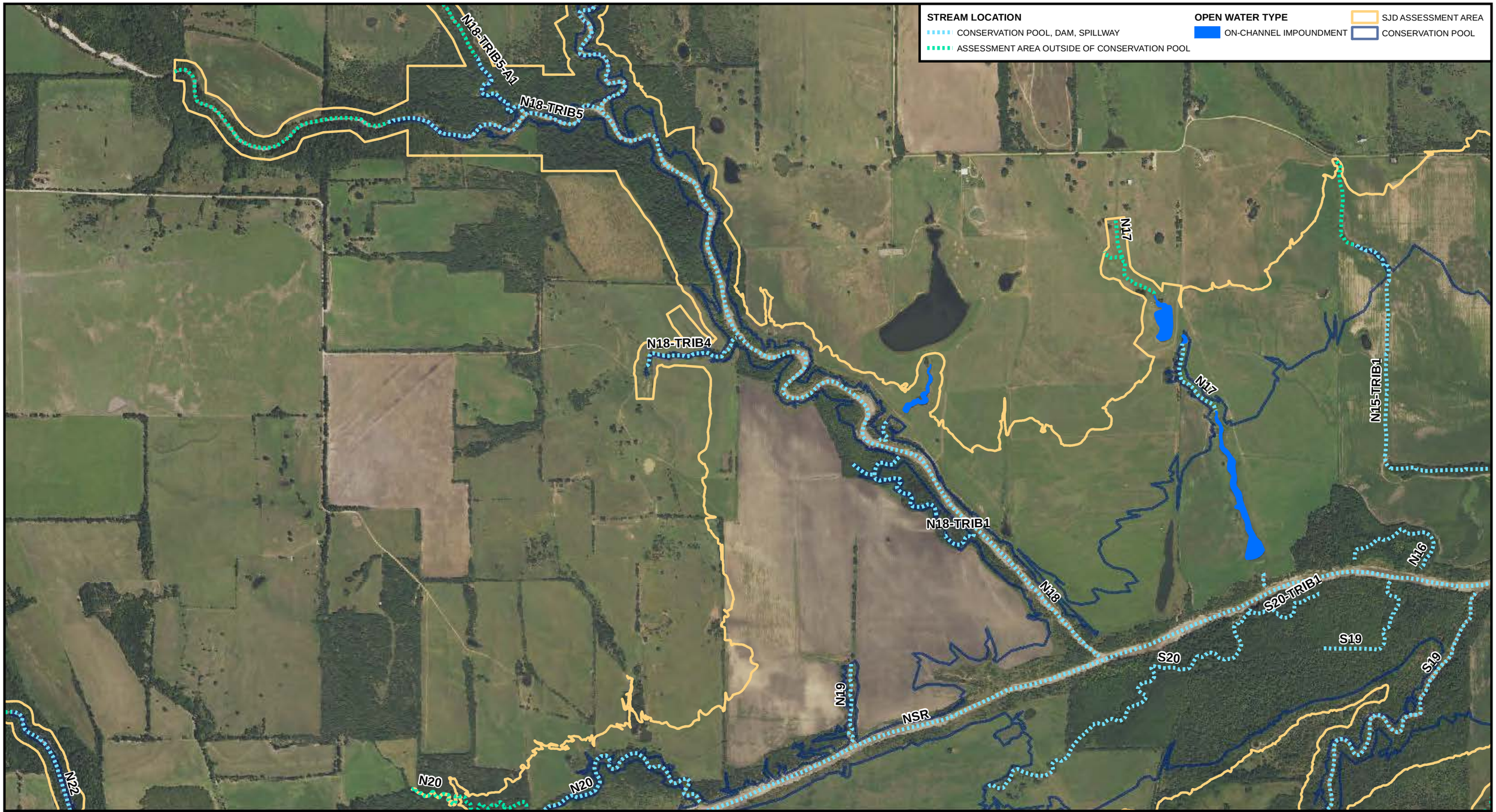
USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet



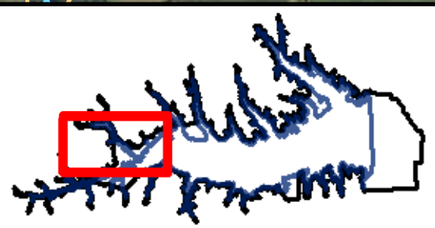


FIGURE 8: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

STREAM LOCATION
- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE
- ON-CHANNEL IMPOUNDMENT

- SJD ASSESSMENT AREA
- CONSERVATION POOL

N17
N17
N15
N15-TRIB1
N15-TRIB1-A1
N14
N13
N13-TRIB1
N12-TRIB3
N12-TRIB2
N12-TRIB1
N12
N11
N10-TRIB2
N10
N16
N18
S20-TRIB1
S19
S20
S19
S18
S18
S17
S16
S16-TRIB2
S16-TRIB1
S15-TRIB4
S15
S15-TRIB3
S15-TRIB2
S15-TRIB1
NSR

FIGURE 9: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

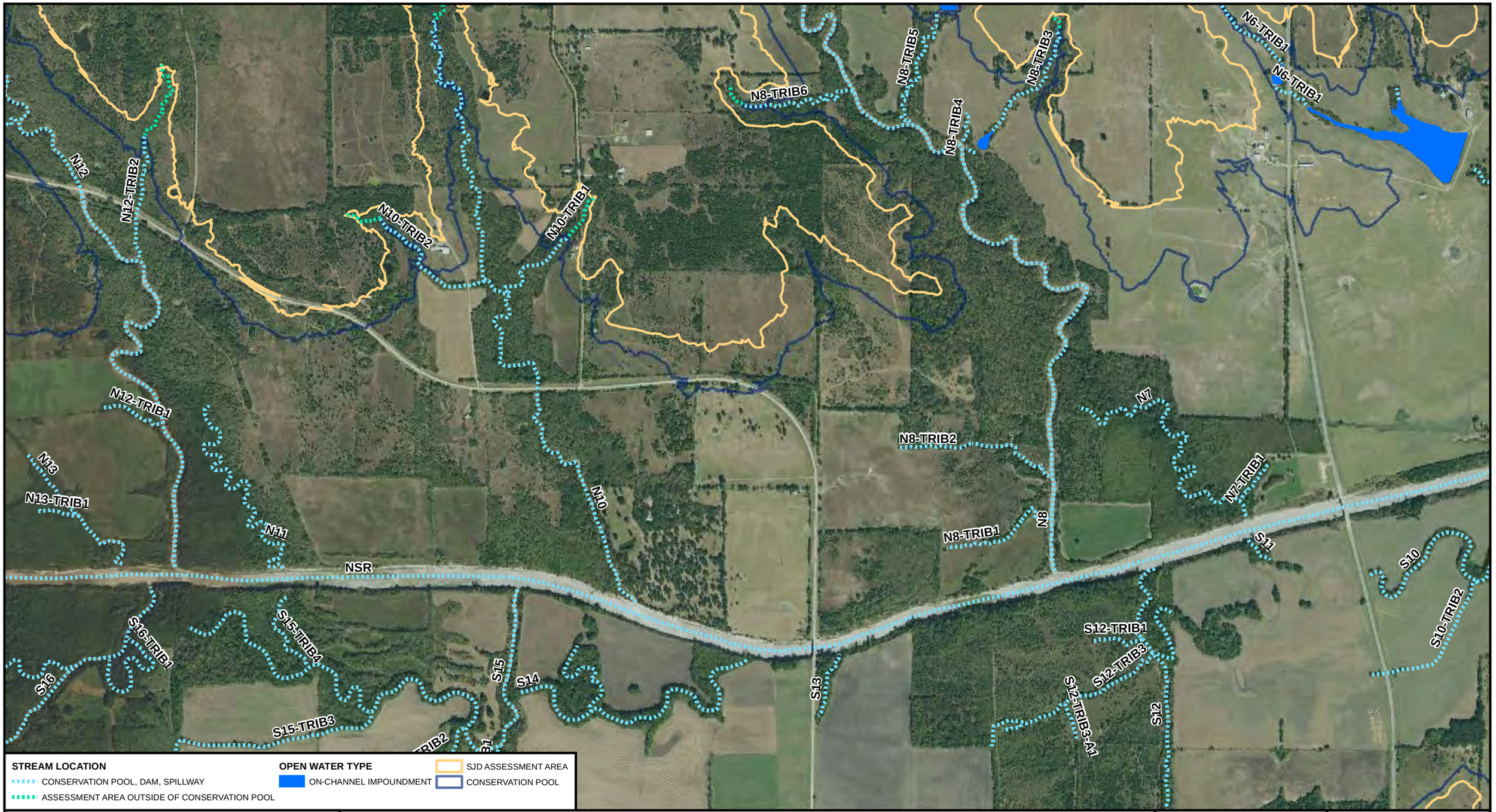
USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet



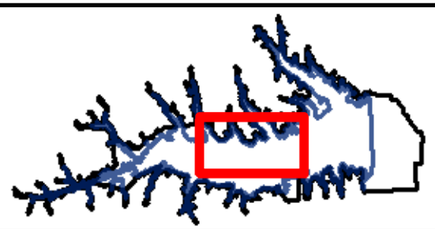


FIGURE 10: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

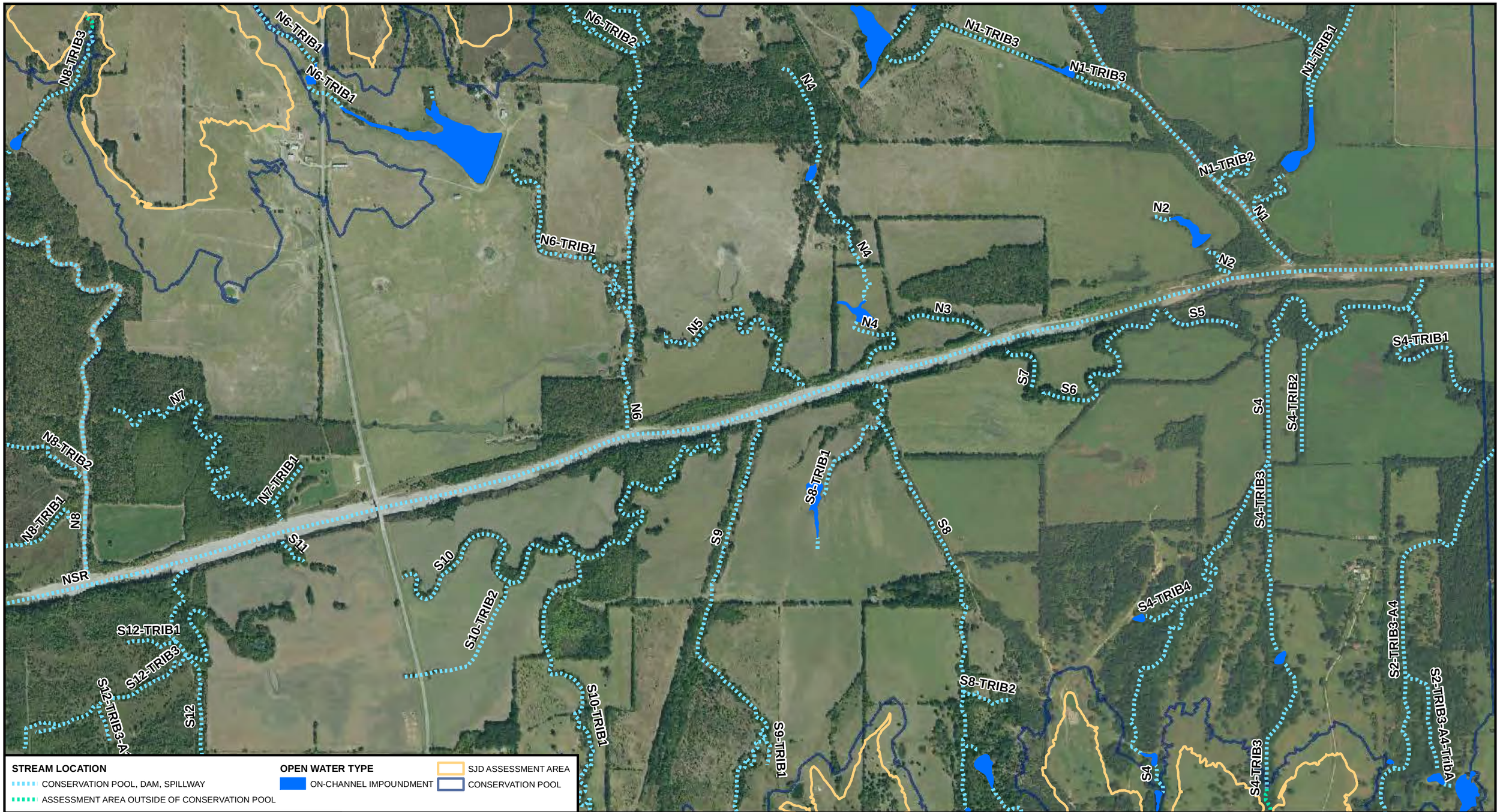
USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet



STREAM LOCATION
- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE
- ON-CHANNEL IMPOUNDMENT

- SJD ASSESSMENT AREA
- CONSERVATION POOL

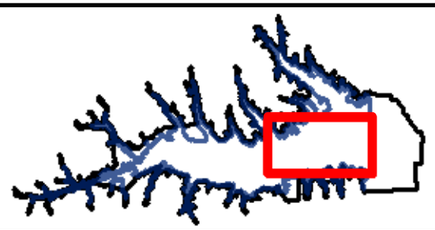


FIGURE 11: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

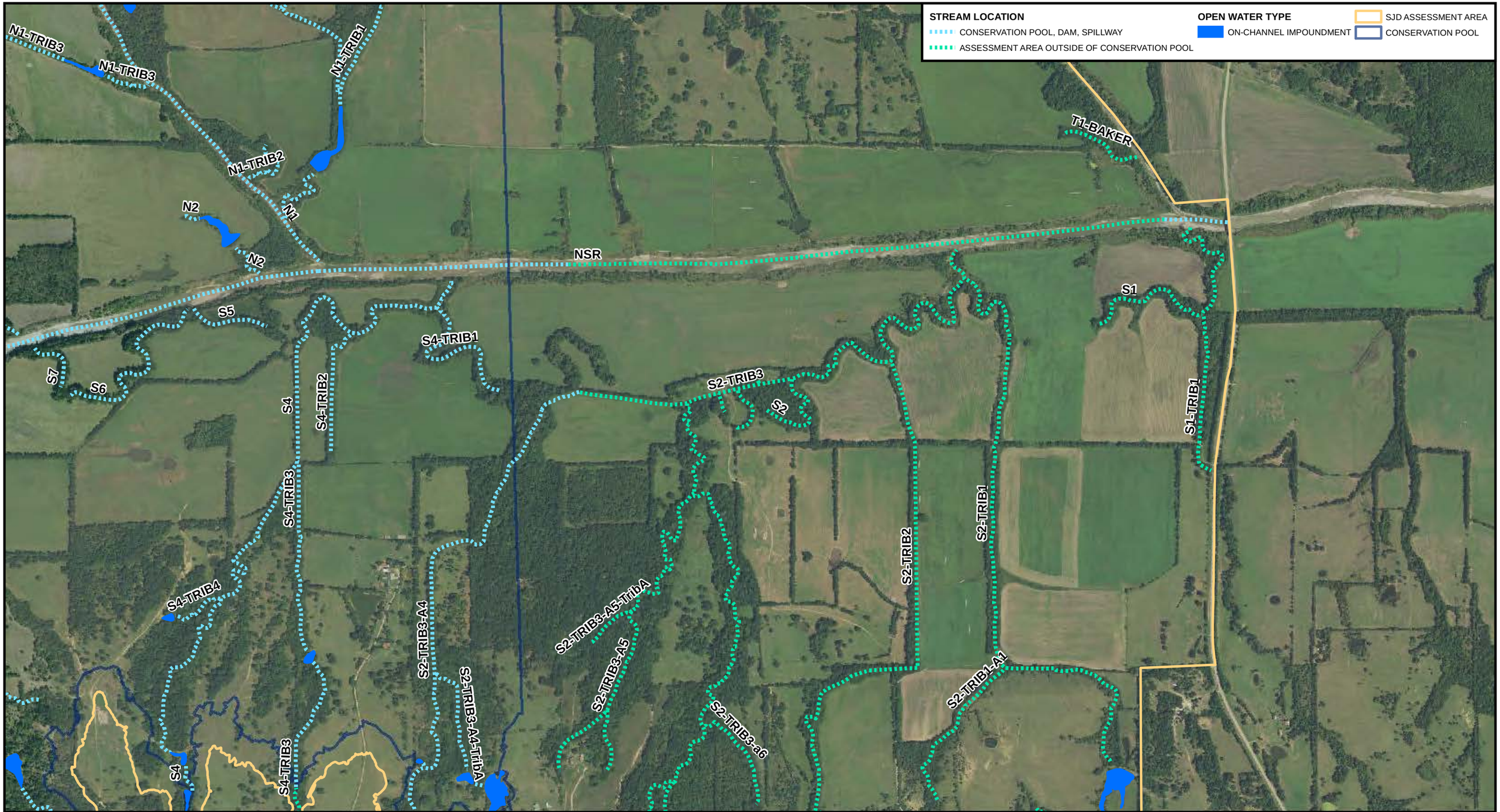
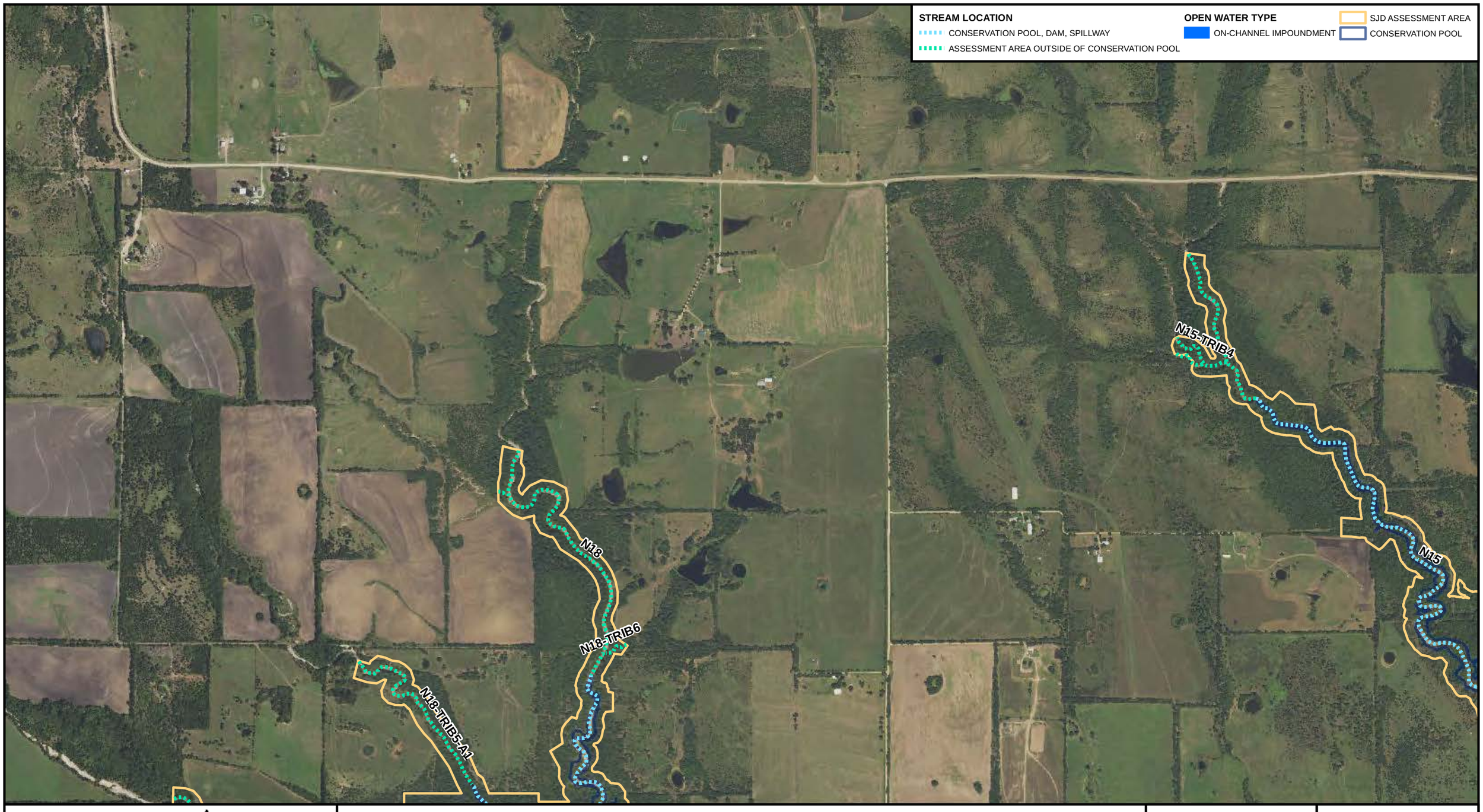


FIGURE 12: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017



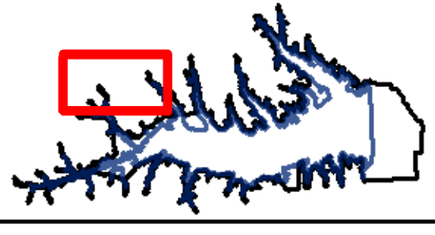


FIGURE 13: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

STREAM LOCATION
- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE
- ON-CHANNEL IMPOUNDMENT

- SJD ASSESSMENT AREA
- CONSERVATION POOL

N15-TRIB4
N15
N15-TRIB3
N15-TRIB2
N12-TRIB8
N12-TRIB8-A1
N12
N12-TRIB7
N12-TRIB5
N12-TRIB4
N10-TRIB3
N10

FIGURE 14: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

STREAM LOCATION

- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE

- ON-CHANNEL IMPOUNDMENT

- SJD ASSESSMENT AREA
- CONSERVATION POOL

N1
N1-TRIB15-A6
N1-TRIB15
N1-TRIB13
N1-TRIB12
N8
N8-TRIB10-A1
N8-TRIB10
N8-TRIB9
N6
N6-TRIB5
N6-TRIB4
N6
N8-TRIB8
N8-TRIB7
N8-TRIB5-A1
N6-TRIB2
N10-TRIB3
N8-TRIB5
N8-TRIB3
N6-TRIB1
N10

FIGURE 15: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

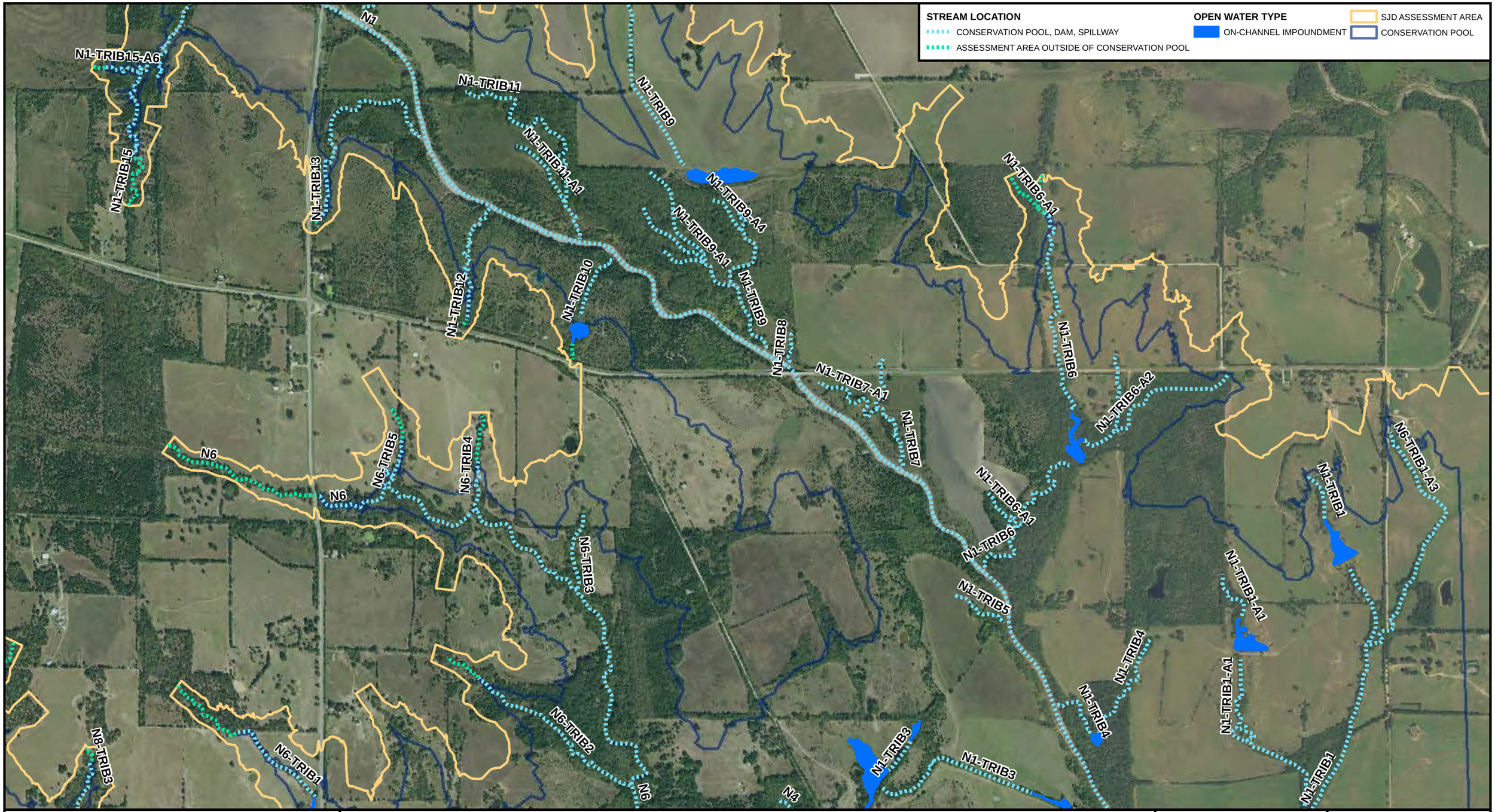


FIGURE 16: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

STREAM LOCATION
- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE
- ON-CHANNEL IMPOUNDMENT

- SJD ASSESSMENT AREA
- CONSERVATION POOL

N1-TRIB6-A1
N1-TRIB6
N1-TRIB6-A2
N1-TRIB6
N1-TRIB1
N6-TRIB1-A3
T3-TRIB2
T3-BAKER
T3-TRIB1
T2-BAKER
T2-BAKER
N1-TRIB1-A1
N1-TRIB4
N1
N1-TRIB4
N1-TRIB1-A1
N1-TRIB1
N1-TRIB3

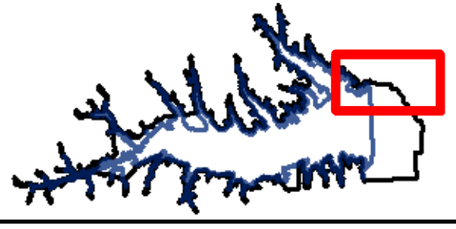


FIGURE 17: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

STREAM LOCATION
- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE
- ON-CHANNEL IMPOUNDMENT

- SJD ASSESSMENT AREA
- CONSERVATION POOL

N1-TRIB21
N1-TRIB16-A3
N1-TRIB16-A2
N1-TRIB16
N1-TRIB17
N1-TRIB14
N1-TRIB15-A1
N1-TRIB15
N1
N1-TRIB15-A6
N8

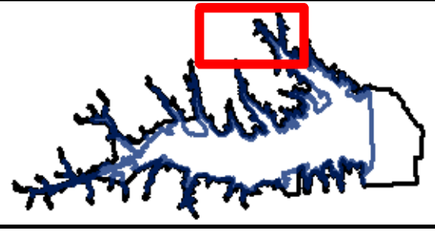


FIGURE 18: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

STREAM LOCATION
- CONSERVATION POOL, DAM, SPILLWAY
- ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

OPEN WATER TYPE
- ON-CHANNEL IMPOUNDMENT

- SJD ASSESSMENT AREA
- CONSERVATION POOL

N1-TRIB16-A3
N1-TRIB16-A2
N1-TRIB16
N1-TRIB14
N1-TRIB15-A1
N1-TRIB15
N1-TRIB15-A6
N1-TRIB9-A6
N1-TRIB9-A5
N1-TRIB9

FIGURE 19: DELINEATED STREAMS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

MAPBOOK

DELINEATED OPEN WATERS

OCP-28

JURISDICTIONAL OPEN WATERS
ON-CHANNEL IMPOUNDMENT

NON-JURISDICTIONAL OPEN WATERS
UPLAND POND

STREAM LOCATION
CONSERVATION POOL, DAM, SPILLWAY
ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

SJD ASSESSMENT AREA
CONSERVATION POOL

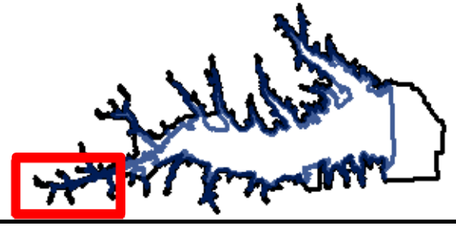


FIGURE 1: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

UP-136
UP-141
UP-143
UP-142
UP-139
UP-138
UP-137
OCP-28

JURISDICTIONAL OPEN WATERS
ON-CHANNEL IMPOUNDMENT

NON-JURISDICTIONAL OPEN WATERS
UPLAND POND

STREAM LOCATION
CONSERVATION POOL, DAM, SPILLWAY
ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

SJD ASSESSMENT AREA
CONSERVATION POOL

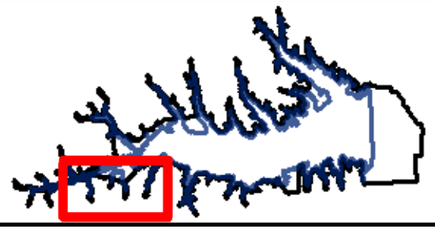


FIGURE 2: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

UP-141
UP-143
UP-142
UP-146
UP-147
OCP-29
OCP-30
UP-148

JURISDICTIONAL OPEN WATERS
ON-CHANNEL IMPOUNDMENT

NON-JURISDICTIONAL OPEN WATERS
UPLAND POND

STREAM LOCATION
CONSERVATION POOL, DAM, SPILLWAY
ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

SJD ASSESSMENT AREA
CONSERVATION POOL

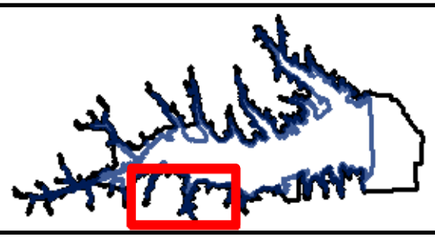


FIGURE 3: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

UP-147
OCP-30
UP-148
UP-149
OCP-31
UP-150
UP-151
UP-153
UP-154
UP-155
UP-156
UP-157
UP-158
UP-159
UP-162

JURISDICTIONAL OPEN WATERS
ON-CHANNEL IMPOUNDMENT

NON-JURISDICTIONAL OPEN WATERS
UPLAND POND

STREAM LOCATION
CONSERVATION POOL, DAM, SPILLWAY
ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

SJD ASSESSMENT AREA
CONSERVATION POOL

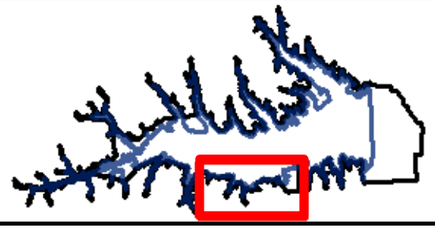


FIGURE 4: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

UP-159
UP-160
UP-158
UP-164
UP-167
UP-171
UP-170
OCP-33
OCP-38
OCP-41
OCP-43
OCP-42
UP-166
OCP-39
OCP-34
OCP-35
UP-172
UP-174
UP-175
UP-153
UP-154
UP-161
UP-165
UP-173
UP-191
UP-155
OCP-44
UP-151
UP-163
UP-156
UP-150
UP-162
OCP-36
UP-157

JURISDICTIONAL OPEN WATERS
ON-CHANNEL IMPOUNDMENT
UPLAND POND

NON-JURISDICTIONAL OPEN WATERS
CONSERVATION POOL, DAM, SPILLWAY
ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

STREAM LOCATION
SJD ASSESSMENT AREA
CONSERVATION POOL

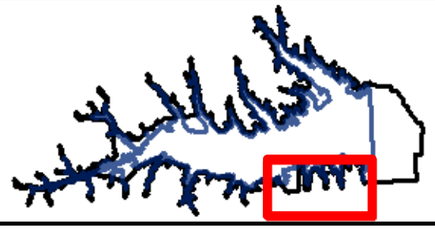


FIGURE 5: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
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Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

OCP-33
OCP-38
OCP-39
OCP-41
OCP-42
OCP-43
UP-198
UP-199
OCP-47
UP-197
OCP-35
UP-174
UP-175
UP-190
UP-172
UP-173
UP-191
OCP-44
UP-195
UP-194
OCP-46
UP-196
OCP-45
UP-192
UP-193
OCP-36

JURISDICTIONAL OPEN WATERS
ON-CHANNEL IMPOUNDMENT

NON-JURISDICTIONAL OPEN WATERS
UPLAND POND

STREAM LOCATION
CONSERVATION POOL, DAM, SPILLWAY
ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

SJD ASSESSMENT AREA
CONSERVATION POOL

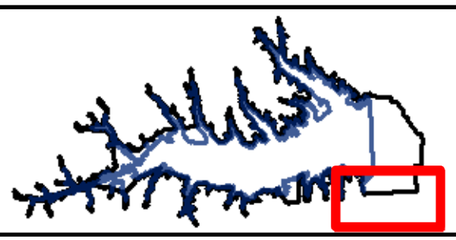

FIGURE 6: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
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Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

JURISDICTIONAL OPEN WATERS
ON-CHANNEL IMPOUNDMENT

NON-JURISDICTIONAL OPEN WATERS
UPLAND POND

STREAM LOCATION
CONSERVATION POOL, DAM, SPILLWAY
ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

SJD ASSESSMENT AREA
CONSERVATION POOL

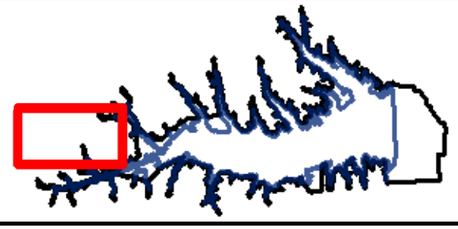

FIGURE 7: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

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Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

JURISDICTIONAL OPEN WATERS
ON-CHANNEL IMPOUNDMENT

NON-JURISDICTIONAL OPEN WATERS
UPLAND POND

STREAM LOCATION
CONSERVATION POOL, DAM, SPILLWAY
ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

SJD ASSESSMENT AREA
CONSERVATION POOL

UP-134
UP-135
UP-136
OCP-27
OCP-26
OCP-25
UP-212
UP-129
UP-128
OCP-24
UP-133
UP-132
UP-130
UP-131
UP-140
UP-141
UP-143

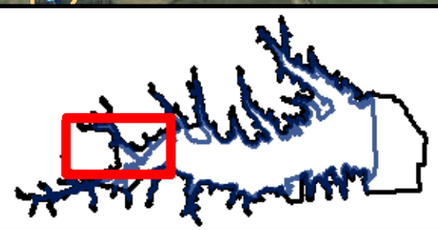

FIGURE 8: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

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Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

JURISDICTIONAL OPEN WATERS
ON-CHANNEL IMPOUNDMENT

NON-JURISDICTIONAL OPEN WATERS
UPLAND POND

STREAM LOCATION
CONSERVATION POOL, DAM, SPILLWAY
ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

SJD ASSESSMENT AREA
CONSERVATION POOL

UP-116
UP-211
UP-117
UP-118
UP-114
UP-115
UP-119
UP-111
UP-112
UP-120
UP-122
UP-113
UP-106
UP-126
UP-129
UP-121
UP-109
UP-110
OCP-26
UP-105
UP-125
UP-210
UP-128
OCP-25
UP-103
UP-212
UP-104
UP-127
UP-100
UP-123
UP-209
UP-101
OCP-24
UP-102
UP-99
UP-130
UP-124
UP-133
UP-132
UP-131
UP-144
UP-145
UP-140
UP-143
UP-141

FIGURE 9: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
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Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

UP-116
UP-211
UP-86
OCP-20
OCP-18
UP-75
UP-74
UP-73
UP-78
OCP-19
UP-83
UP-114
UP-115
UP-111
UP-112
UP-207
OCP-17
UP-84
UP-79
UP-80
UP-72
UP-108
UP-107
UP-106
UP-81
UP-71
UP-109
UP-110
UP-105
UP-210
UP-103
UP-93
UP-94
UP-104
UP-92
UP-91
UP-98
UP-82
UP-70
UP-100
UP-97
UP-209
UP-101
UP-102
UP-99
UP-208
UP-96
UP-95
UP-152
UP-159
UP-158

JURISDICTIONAL OPEN WATERS
ON-CHANNEL IMPOUNDMENT

NON-JURISDICTIONAL OPEN WATERS
UPLAND POND

STREAM LOCATION
CONSERVATION POOL, DAM, SPILLWAY
ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

SJD ASSESSMENT AREA
CONSERVATION POOL

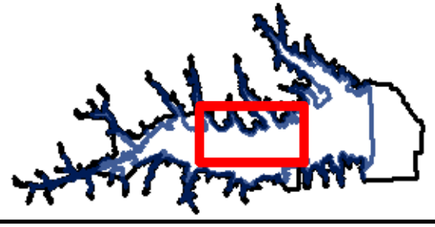

FIGURE 10: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
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Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

UP-64
UP-62
UP-60
OCP-11
OCP-7
UP-20
OCP-10
OCP-6
UP-74
OCP-18
UP-75
UP-73
UP-59
UP-61
OCP-17
UP-63
OCP-4
OCP-19
UP-78
UP-83
OCP-9
UP-207
UP-84
UP-79
OCP-5
UP-66
UP-72
UP-68
UP-67
UP-80
UP-65
UP-71
UP-81
OCP-8
UP-69
UP-82
UP-70
UP-176
UP-177
UP-182
OCP-32
UP-178
UP-179
UP-168
UP-181
UP-180
UP-184
UP-169
OCP-37
UP-183
OCP-40
UP-185
UP-152
UP-171
OCP-33
OCP-38
OCP-41
OCP-43
OCP-39
OCP-42
OCP-34
UP-175

JURISDICTIONAL OPEN WATERS
ON-CHANNEL IMPOUNDMENT

NON-JURISDICTIONAL OPEN WATERS
UPLAND POND

STREAM LOCATION
CONSERVATION POOL, DAM, SPILLWAY
ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

SJD ASSESSMENT AREA
CONSERVATION POOL

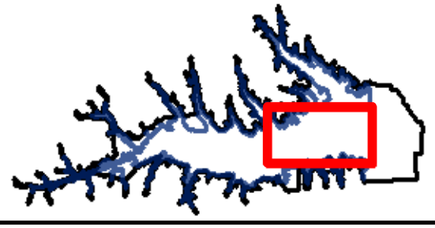

FIGURE 11: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

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Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

OCP-7
OCP-6
OCP-4
OCP-5
UP-65
UP-20
UP-18
UP-17
UP-7
UP-8
UP-3
UP-5
UP-4
UP-19
UP-6
UP-1
UP-205
UP-204
UP-176
UP-188
UP-177
UP-178
UP-182
UP-203
UP-202
UP-201
UP-179
UP-181
UP-180
UP-184
UP-206
OCP-37
UP-183
UP-189
UP-200
OCP-40
UP-185
UP-187
UP-186
UP-198
UP-199
OCP-47
UP-197

JURISDICTIONAL OPEN WATERS
ON-CHANNEL IMPOUNDMENT

NON-JURISDICTIONAL OPEN WATERS
UPLAND POND

STREAM LOCATION
CONSERVATION POOL, DAM, SPILLWAY
ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

SJD ASSESSMENT AREA
CONSERVATION POOL

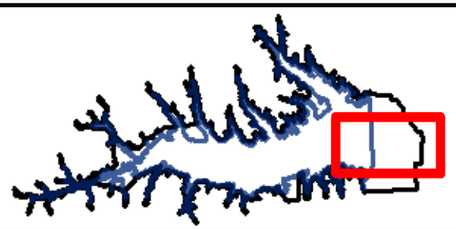

FIGURE 12: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
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Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

JURISDICTIONAL OPEN WATERS
ON-CHANNEL IMPOUNDMENT

NON-JURISDICTIONAL OPEN WATERS
UPLAND POND

STREAM LOCATION
CONSERVATION POOL, DAM, SPILLWAY
ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

SJD ASSESSMENT AREA
CONSERVATION POOL

FIGURE 13: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

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Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

JURISDICTIONAL OPEN WATERS
ON-CHANNEL IMPOUNDMENT

NON-JURISDICTIONAL OPEN WATERS
UPLAND POND

STREAM LOCATION
CONSERVATION POOL, DAM, SPILLWAY
ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

SJD ASSESSMENT AREA
CONSERVATION POOL

OCP-23
OCP-22
OCP-21
UP-116

FIGURE 14: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

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Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

JURISDICTIONAL OPEN WATERS
ON-CHANNEL IMPOUNDMENT

NON-JURISDICTIONAL OPEN WATERS
UPLAND POND

STREAM LOCATION
CONSERVATION POOL, DAM, SPILLWAY
ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

SJD ASSESSMENT AREA
CONSERVATION POOL

UP-43
UP-45
UP-46
UP-89
UP-88
UP-85
UP-87
UP-90
UP-86
OCP-20
UP-77
UP-76
UP-116
OCP-18
UP-74

FIGURE 15: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
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Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

JURISDICTIONAL OPEN WATERS
ON-CHANNEL IMPOUNDMENT

NON-JURISDICTIONAL OPEN WATERS
UPLAND POND

STREAM LOCATION
CONSERVATION POOL, DAM, SPILLWAY
ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

SJD ASSESSMENT AREA
CONSERVATION POOL

UP-42
UP-43
UP-45
UP-41
UP-40
UP-39
OCP-13
UP37
UP-38
UP-46
UP-47
UP-36
UP-35
UP-34
OCP-14
UP-49
UP-33
OCP-12
UP-26
UP-25
UP-48
UP-50
UP-23
UP-51
UP-52
UP-53
UP-54
OCP-2
UP-30
UP-22
UP-32
UP-31
UP-58
UP-57
UP-27
OCP-3
UP-21
UP-55
UP-56
OCP-11
UP-77
UP-76
OCP-7
UP-20
OCP-10
UP-29
UP-28
UP-64
UP-60
UP-62
UP-59
UP-74
OCP-18
OCP-6

FIGURE 16: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
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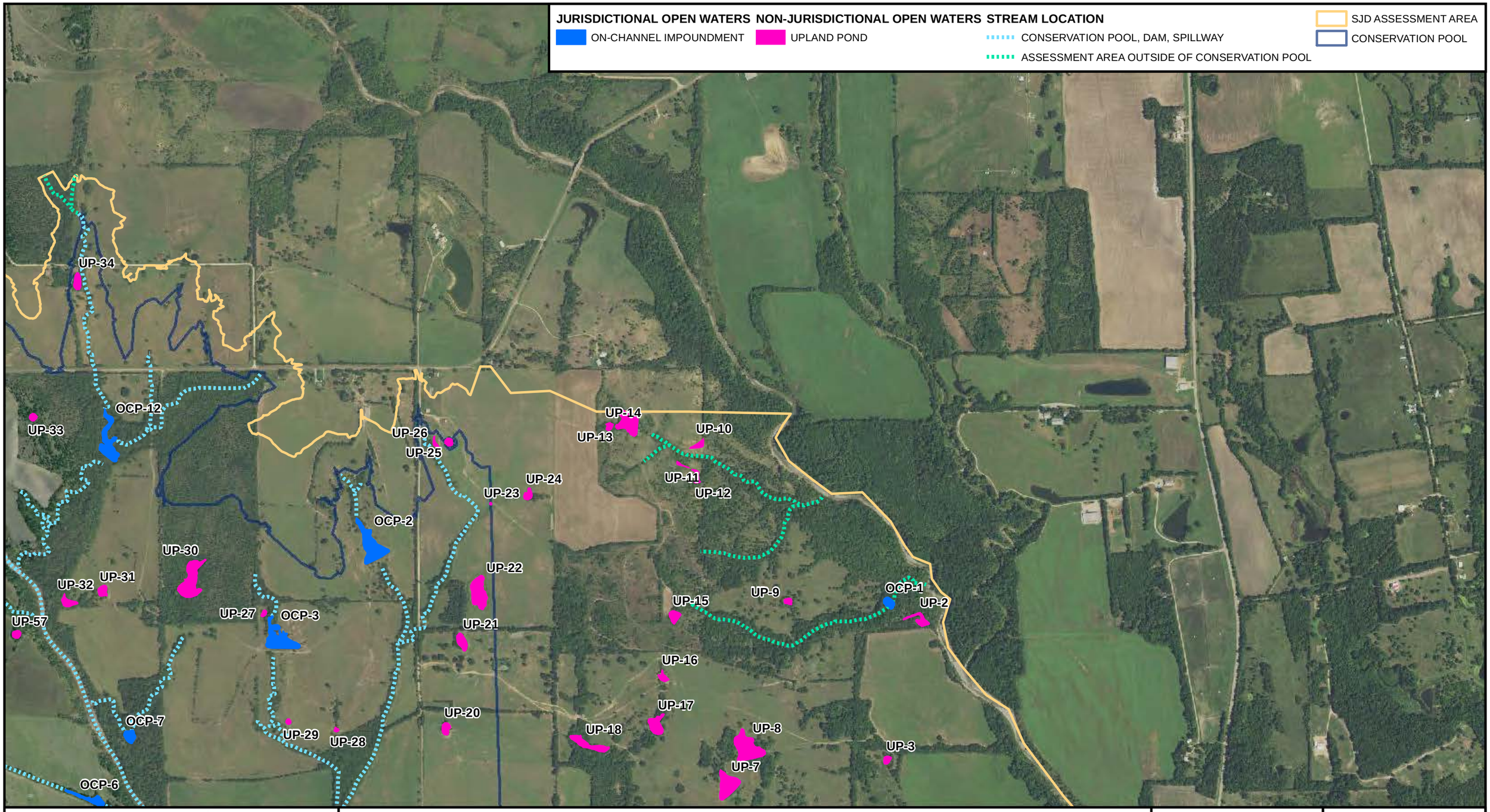
Date: 6/15/2017

N
W E
S

1,000 500 0 Feet



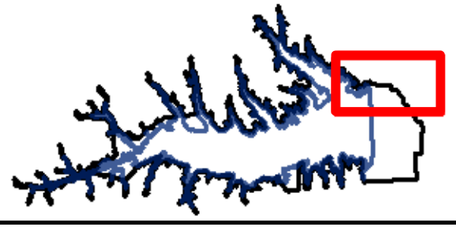


FIGURE 17: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
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Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

JURISDICTIONAL OPEN WATERS
ON-CHANNEL IMPOUNDMENT

NON-JURISDICTIONAL OPEN WATERS
UPLAND POND

STREAM LOCATION
CONSERVATION POOL, DAM, SPILLWAY
ASSESSMENT AREA OUTSIDE OF CONSERVATION POOL

SJD ASSESSMENT AREA
CONSERVATION POOL

OCP-16
UP-44
UP-43

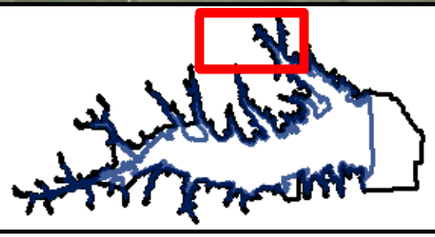

FIGURE 18: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

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Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

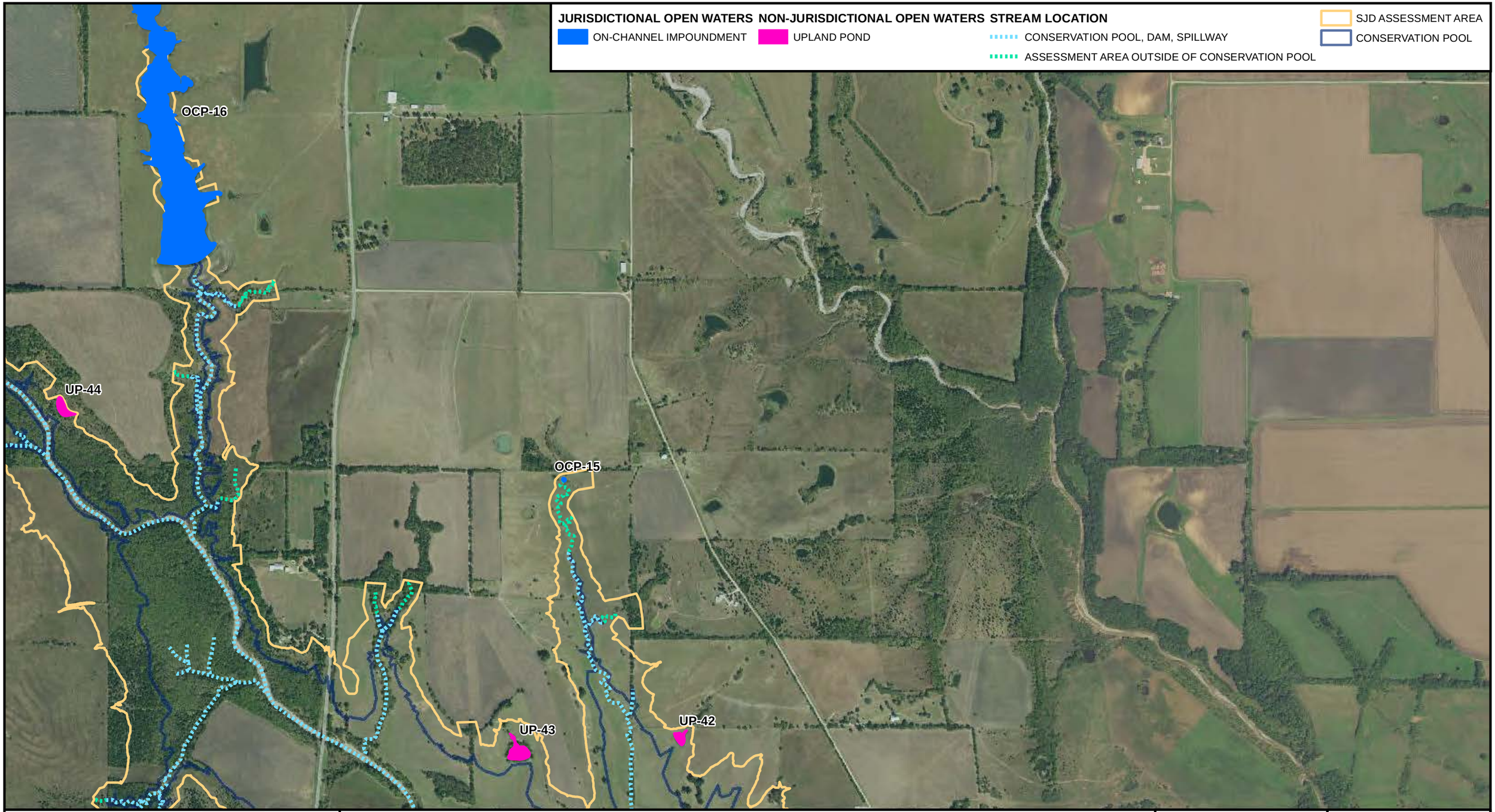

FIGURE 19: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
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PREPARED BY:
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Date: 6/15/2017

N
W E
S

1,000 500 0 Feet

MAPBOOK

DELINEATED ISOLATED FORESTED WETLANDS

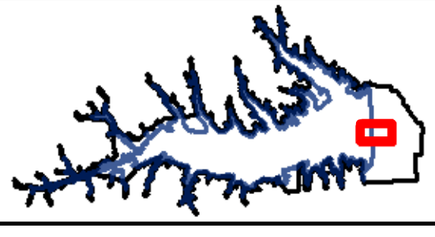

FIGURE 1: FORESTED WETLANDS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
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Date: 6/15/2017

N
W E
S

290 145 0 Feet

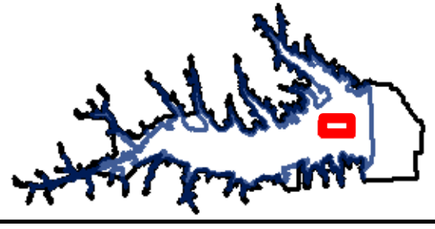

FIGURE 2: FORESTED WETLANDS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
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Date: 6/15/2017

N
W E
S

260 130 0 Feet

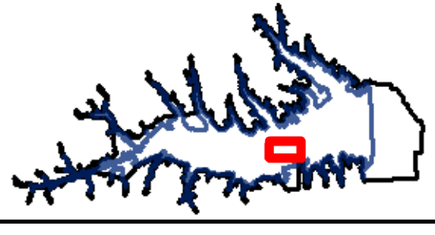

FIGURE 3: FORESTED WETLANDS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
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Date: 6/15/2017

N
W E
S

290 145 0 Feet

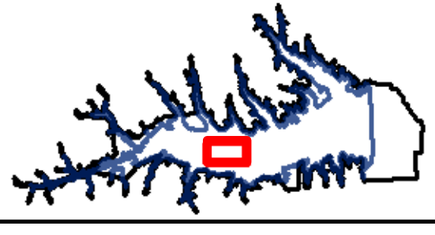

FIGURE 4: FORESTED WETLANDS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
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Date: 6/15/2017

N
W E
S

370 185 0 Feet

FIGURE 5: FORESTED WETLANDS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
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Date: 6/15/2017

N
W E
S

210 105 0 Feet

APPENDIX C

WETLAND DETERMINATION DATA FORMS

MAPBOOK

WETLAND DETERMINATION SAMPLING LOCATIONS

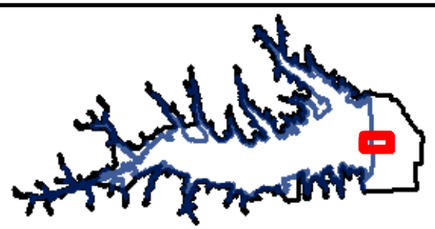


FIGURE 1: WETLAND DETERMINATION DATA FORMS SAMPLING LOCATIONS PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

250 125 0 Feet

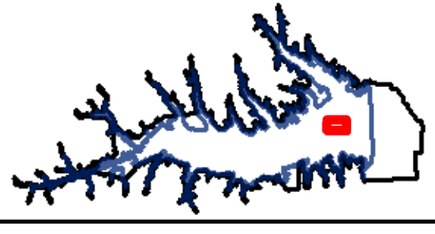


FIGURE 2: WETLAND DETERMINATION DATA FORMS SAMPLING LOCATIONS PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

180 90 0 Feet

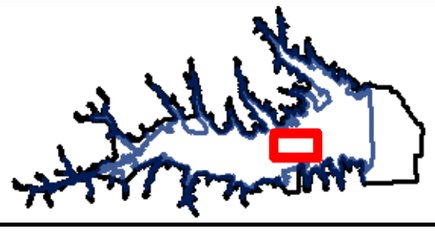


FIGURE 3: WETLAND DETERMINATION DATA FORMS SAMPLING LOCATIONS PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION

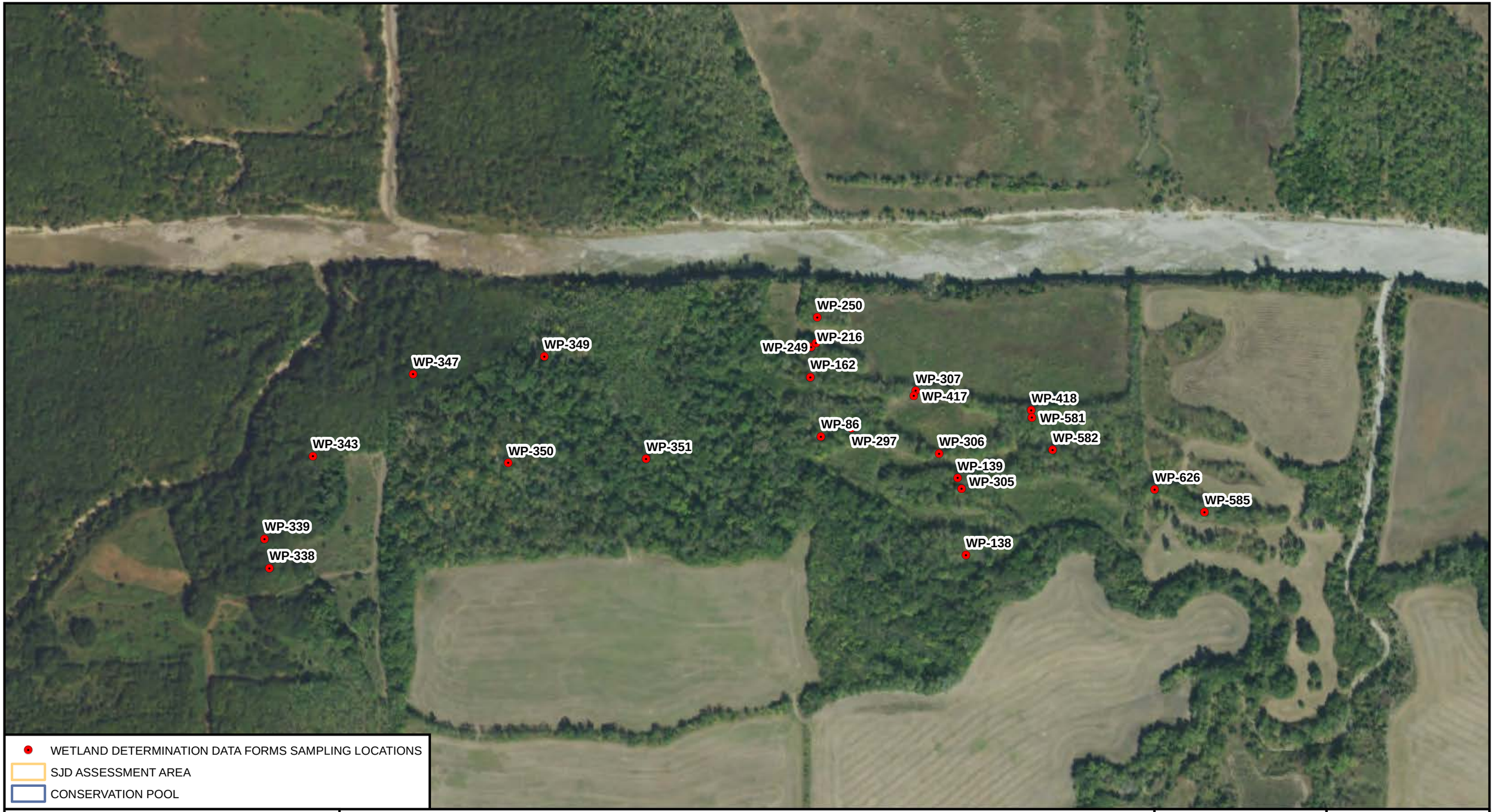
USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

410 205 0 Feet



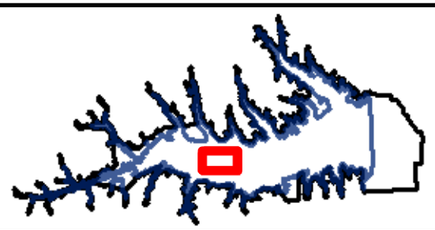


FIGURE 4: WETLAND DETERMINATION DATA FORMS SAMPLING LOCATIONS PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

330 165 0 Feet

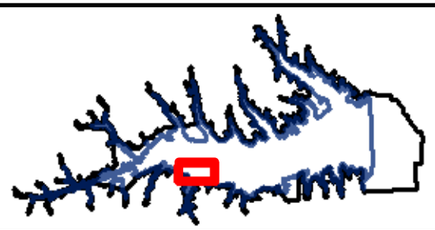


FIGURE 5: WETLAND DETERMINATION DATA FORMS SAMPLING LOCATIONS PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
S

330 165 0 Feet

WP-57
WP-58
WP-6
WP-5
WP-2
WP-133

WETLAND DETERMINATION DATA FORMS SAMPLING LOCATIONS
SJD ASSESSMENT AREA
CONSERVATION POOL

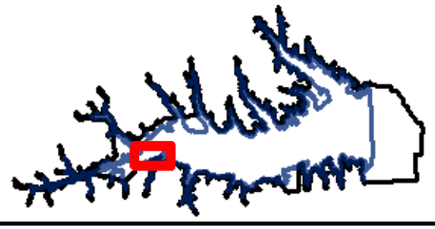


FIGURE 6: WETLAND DETERMINATION DATA FORMS SAMPLING LOCATIONS PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION

USACE PROJECT NO.:
SWF-2003-00336

PREPARED BY:
ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

N
W E
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330 165 0 Feet

WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP2

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45226 Long: -96.01460 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded 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 X, 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:

Heavy storms the previous day; wooded area near North Sulphur River channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	20	Yes	FAC
2. Ulmus crassifolia	25	Yes	FAC
3. Celtis laevigata	45	Yes	FAC
4. Malcura pomifera	5	No	FACU
	95	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Fraxinus pennsylvanica	5	No	FAC
2. Celtis laevigata	10	No	FAC
3. Ulmus crassifolia	5	No	FACU
4. Juniperus virginiana	3	No	UPL
5. Symphoricarpos orbiculatus	5	No	FACU
	28	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Elymus virginicus	50	Yes	FAC
2. Toxicodendron radicans	15	No	FACU
3. Torillis arvensis	10	No	UPL
4. Carex planostachys	25	Yes	UPL
5.			
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Toxicodendron radicans	5	No	FACU
2. Smilax sp.	2	No	FAC
	7	= Total Cover	

% Bare Ground in Herb Stratum 0

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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 3/2	100					Clay	

[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:

No redox features; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/30/17

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP3

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45907 Long: -95.89972 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: R4SBC

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 X, 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:

Forested wetland, part of the remnant North Sulphur River channel; not hyraulically or hydrologically connected to any stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	90	Yes	FAC
2. Populus deltoides	5	No	FAC
3.			
4.			
	95	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Fraxinus pennsylvanica	5	No	FAC
2. Celtis laevigata	2	No	FAC
3. Carya ovata	1	No	FACU
4.			
5.			
	8	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Lolium multiflorum	5	No	UPL
2. Ranunculus hispidus	1	No	FACW
3. Torillis arvensis	1	No	UPL
4. Ambrosia trifida	1	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	8	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 92

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

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 =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 3/1	90	10 YR 4/6	10	C	M	Clay	

[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** X **No** _____

Remarks:

Redox features observed; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/30/17

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP4

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45900 Long: -95.89973 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded 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 X, 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 _____ No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____ No X	
Wetland Hydrology Present?	Yes _____ No X	

Remarks:

Outside of forested wetland from sampling point WP3

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	35	Yes	FAC
2. Ulmus americana	15	No	FAC
3.			
4.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Fraxinus pennsylvanica	5	No	FAC
2. Celtis laevigata	2	No	FAC
3. Carya ovata	1	No	FACU
4.			
5.			
	8	= Total Cover	
Herb Stratum (Plot size: 450sq ft)			
1. Lolium multiflorum	95	Yes	UPL
2. Setaria italica	2	No	FACU
3. Torillis arvensis	2	No	UPL
4. Amaranthus sp,	1	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	57	x 3 =	171
FACU species	4	x 4 =	16
UPL species	97	x 5 =	485
Column Totals:	158 (A)		672 (B)

Prevalence Index = B/A = 4.25

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 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 _____ No X

Remarks:

SOIL

Sampling Point: WP4

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 3/1	100					Clay	

[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:

No redox features; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP5

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45254 Long: -96.01153 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded 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 X, 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:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica / Ulmus americana	5/5	No/No	FAC/FAC
2. Ulmus crassifolia	15	Yes	FAC
3. Celtis laevigata	30	Yes	FAC
4. Maclura pomifera	15	Yes	FACU
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	5	No	FAC
2. Maclura pomifera	10	No	FACU
3. Ulmus crassifolia	5	No	FAC
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Elymus virginicus	10	No	FAC
2. Ptilimnium nutalli	15	Yes	FACW
3. Amaranthus tuberculatus	20	Yes	FAC
4. Viola missouriensis	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	50	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Parthenocissus quinquefolia	5	No	FACU
2.			
	5	= Total Cover	

% Bare Ground in Herb Stratum 50

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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP5

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 3/1	100					Clay	

[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:

No redox features; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph HallSupplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP6

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45295 Long: -96.01133 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded 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 X, 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:

Heavy storms the previous day; forested wetland in wooded area near North Sulphur River channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	45	Yes	FAC
2. Ulmus crassifolia	15	Yes	FAC
3. Celtis laevigata	5	No	FAC
4.			
	65	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Cercis canadensis	10	No	UPL
2. Fraxinus pennsyvanica	20	Yes	FAC
3. Ulmus crassifolia	10	No	FAC
4.			
5.			
	40	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Elymus virginicus	5	No	FAC
2. Carex blanda	2	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	7	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Parthenocissus quinquefolia	5		FACU
2.			FAC
	5	= Total Cover	

% Bare Ground in Herb Stratum 93

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	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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP6

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

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

[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** X **No** _____

Remarks:

Redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 X No _____ Depth (inches): <2

Water Table Present? Yes X No _____ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 0

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: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 11

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45325 Long: -95.94321 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded 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 X, 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 _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

Remnant former North Sulphur River channel located within field west of SH 34; has been previously filled but still depressionally feature; not hydraulically or hydrologically connected to existing North Sulphur River channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix nigra	50	Yes	FACW
2.			
3.			
4.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Lolium multiflorum	50	Yes	UPL
2. Rumex altissimus	10	No	FAC
3. Helianthus annuus	10	No	FACU
4. Setaria parviflora	10	No	FAC
5. Rudbeckia hirta	10	No	FACU
6.			
7.			
8.			
9.			
10.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	50	x 2 =	100
FAC species	20	x 3 =	60
FACU species	20	x 4 =	80
UPL species	50	x 5 =	250
Column Totals:	140 (A)		490 (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 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 _____ No X

Remarks:

Remnant channel located within field recently tilled

SOIL

Sampling Point: WP 11

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 2/1	90					Clay	

[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:

No redox features observed; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

Remnant former North Sulphur River channel west of SH 34; previously filled but still depressional

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 12

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45361 Long: -95.94423 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded 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 X, 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:

Remnant former North Sulphur River channel located within field west of SH 34; has been previously filled but still depressional feature; not hydraulically or hydrologically connected to existing North Sulphur River channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix nigra	40	Yes	FACW
2. Celtis laevigata	20	Yes	FAC
3.			
4.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Lolium multiflorum	15	Yes	UPL
2. Sorghum halepense	15	Yes	FACU
3. Eleocharis palustris	15	Yes	OBL
4. Rumex altissimus	15	Yes	FAC
5. Xanthium strumarium	15	Yes	FAC
6.			
7.			
8.			
9.			
10.			
	75	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Nekemias arborea	5	No	FAC
2.			
	5	= Total Cover	

% Bare Ground in Herb Stratum 25

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71% (A/B)

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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:

Remnant channel located within field recently tilled.

SOIL

Sampling Point: WP 12

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 2/1	90					Clay	

[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:

No redox features observed; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

Remnant former North Sulphur River channel west of SH 34; previously filled but still depressional

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 13

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45447 Long: -95.94407 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded 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 X, 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 X	No _____	

Remarks:

Remnant former North Sulphur River channel located within field west of SH 34; has been previously filled but still depressionally feature; not hydraulically or hydrologically connected to existing North Sulphur River channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix nigra	50	Yes	FACW
2. Ulmus americana	30	Yes	FAC
3.			
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Ulmus americana	10	No	FAC
2. Celtis laevigata	5	No	FAC
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Lolium multiflorum	10	No	UPL
2. Rumex altissimus	5	No	FAC
3. Carex cros-corvi	15	Yes	OBL
4. Sorghum halepense	2	No	FACU
5. Toxicodendron radicans	3	No	FACU
6.			
7.			
8.			
9.			
10.			
	35	= Total Cover	
Woody Vine Stratum (Plot size: 450 ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 65

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 _____	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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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:

Remnant channel located within field where recent tillage occurred

SOIL

Sampling Point: WP 13

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 2/1	90					Clay	

[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:

No redox features observed; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

Remnant former North Sulphur River channel west of SH 34; previously filled but still depressional

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 14

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.4532 Long: -95.9451 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded 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 X, 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:

Outside edge of forested wetland within remnant former North Sulphur River channel; former channel not hydraulically or hydrologically connected to existing North Sulphur River channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Carya illinoinensis	90	Yes	FAC
2. Celtis laevigata	5	No	FAC
3. Ulmus americana	5	No	FAC
4.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	10	Yes	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Lolium multiflorum	5	No	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 95

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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:

Outside edge of forested wetland within remnant former channel of North Sulphur River located within field west of SH 34

SOIL

Sampling Point: WP 14

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 2/1	99	10 YR 4/6	1	C	M	Clay	

[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:

Insufficient redox features observed; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

Outside edge of forested wetland within remnant former North Sulphur River channel west of SH 34

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP57

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45353 Long: -96.01078 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded 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 X, 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:

Heavy storms the previous day; forested wetland in wooded area near North Sulphur River channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	85	Yes	FAC
2.			
3.			
4.			
	85 = Total Cover		
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Fraxinus pennsyvanica	10	No	FAC
2.			
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: 450 sq ft)			
1. Ptilimnium nutalli	85	Yes	FACW
2. Carex blanda	5	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP57

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10 YR 3/2	100	10 YR 5/4	15	C	M	Clay	

[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** X **No** _____

Remarks:

Redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 X No _____ Depth (inches): 3

Water Table Present? Yes X No _____ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 0

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: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP58

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45353 Long: -96.01074 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded 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 X, 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:

Outside of the forested wetland delineated in wp57

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	20	Yes	FAC
2. Celtis laevigata	60	Yes	FAC
3.			
4.			
	80 = Total Cover		
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Fraxinus pennsyvanica	10	No	FAC
2. Celtis laevigata	15	No	FAC
3.			
4.			
5.			
	25 = Total Cover		
Herb Stratum (Plot size: 450 sq ft)			
1. Amaranthus tuberculatus	70	Yes	FAC
2. Ptilimnium nutalli	5	No	FACW
3. Elymus virginicus	5	No	FAC
4. Carex blanda	5	No	FAC
5. Viola missouriensis	5	No	FACW
6.			
7.			
8.			
9.			
10.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 10

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 _____	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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP58

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	10 YR 3/2	100					Clay	

[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:

No redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/1/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP86

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45293 Long: -95.97781 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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 X No _____	

Remarks:

depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	5	No	FAC
2. Celtis laevigata	30	Yes	FAC
3. Ulmus crassifolia/Ulmus americana	10/30	No/Yes	FAC/FAC
4. Quercus shumardii/Quercus macrocarpa	5/5	No/No	FAC/FACU
	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Quercus shumardii	10	No	FAC
2. Quercus macrocarpa	10	No	FACU
3. Celtis laevigata	15	No	FAC
4.			
5.			
	35	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Elymus virginicus	2	No	FAC
2. Viola missouriensis	2	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	4	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Toxicodendron radicans	3	No	FACU
2. Smilax bona-nox/Campsis radicans	3	No	FAC/UFACU
	6	= Total Cover	

% Bare Ground in Herb Stratum 96

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP86

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-1	10 YR 2/1	100					Clay	

[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:

No redox features; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP133

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45045 Long: -96.01480 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded 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 X, 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:

Heavy storms the previous day; wooded area near North Sulphur River channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	20	Yes	FAC
2. Celtis laevigata	50	Yes	FAC
3. Maclura pomifera	15	No	FACU
4.			
	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Cornus drummondi	5	No	FAC
2. Celtis laevigata	15	No	FAC
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Toxicodendron radicans	15	No	FACU
2. Carex planostachys	40	Yes	UPL
3. Elymus virginicus	40	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Lonicera japonica	5	No	FACU
2.			
	5	= Total Cover	

% Bare Ground in Herb Stratum 5

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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

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 =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP133

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	10 YR 3/2	100					Clay	

[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:

No redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP134

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.4464 Long: -95.99635 Datum: NAD83

Soil Map Unit Name: Normangee Clay Loam, 2 to 5 percent slopes, eroded 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 _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

Heavy storms the previous day; wooded area near North Sulphur River channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus stellata	80	Yes	FACU
2.			
3.			
4.			
	80 = Total Cover		
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Quercus stellata	20	No	FAC
2. Celtis laevigata	15	No	FAC
3. Symphoricarpos orbiculatus	35	Yes	FACU
4. Ulmus crassifolia	10	No	
5.			
	80 = Total Cover		
Herb Stratum (Plot size: 450 sq ft)			
1. Toxicodendron radicans	15	No	FACU
2. Carex planostachys	40	Yes	UPL
3. Elymus virginicus	30	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	85 = Total Cover		
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 15

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 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 _____ No X

Remarks:

SOIL

Sampling Point: WP134

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 3/2	100					Clay	

[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:

No redox features present

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 _____ No X Depth (inches): _____

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP136

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45081 Long: -95.98882 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally flooded NWI classification: PFO1A

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 X, 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:

Heavy storms the day before; wooded area near North Sulphur River channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	30	Yes	FAC
2. Celtis laevigata/Quercus muehlenbergii	20/20	Yes/Yes	FAC/FAC
3. Ulmus crassifolia	10	Yes	FAC
4. Maclura pomifera	10	No	FACU
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata/Quercus muehlenbergii	15/10	No/No	FAC/FAC
2. Quercus stellata/Cercis canadensis	10/5	No/No	FACU/UPL
3. Juniperus virginiana	5	No	UPL
4. Ulmus crassifolia	10	No	FAC
5. Fraxinus pennsylvanica	20	No	FAC
	75	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Toxicodendron radicans	20	Yes	FACU
2. Viola missouriensis	5	No	FACW
3. Elymus virginicus	30	Yes	FAC
4. Daucus carota	10	No	UPL
5. Erigeron annuus	5	No	FAC
6.			
7.			
8.			
9.			
10.			
	70	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Parthenocissus quinquefolia	5	No	FACU
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum 30

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3 (A/B)

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP136

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 3/2	100					Clay	

[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:

No redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP138

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45169 Long: -95.9761 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally flooded 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 X, 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:

Heavy storms the previous day; wooded area with channel scars; between remnant North Sulphur River channel and current North Sulphur River channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	30	Yes	FAC
2. Celtis laevigata	25	Yes	FAC
3. Ulmus americana	15	No	FAC
4. Morus rubra	10	No	FACU
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	15	No	FAC
2. Fraxinus pennsylvanica	10	No	FAC
3. Ulmus americana	10	No	FAC
4.			
5.			
	35	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Carex planostachys	15	No	UPL
2. Ambrosia trifida	5	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 80

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

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 =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP138

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 3/2	100					Clay	

[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:

Earthworms present; No redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP139

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45247 Long: -95.97617 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally flooded 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 X, 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:

Heavy storms the previous day; depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	30	Yes	FAC
2. Celtis laevigata	10	No	FAC
3. Ulmus americana	20	Yes	FAC
4.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	10	No	FAC
2. Fraxinus pennsylvanica	15	No	FAC
3. Ulmus americana	10	No	FAC
4.			
5.			
	35	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Carex blanda	5	No	FAC
2. Ambrosia trifida	10	No	FAC
3. Torilis arvensis	5	No	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 80

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP139

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
0-1								Organic Matter
1-18	10 YR 2/1	95	10 YR 4/6	5	C	M	Clay	

[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** X **No** _____

Remarks:

Redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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: Lake Ralph Hall City/County: Ladonia/Fannin Sampling Date: 6/1/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP162

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45353 Long: -95.97792 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded 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 X, 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 X No _____	

Remarks:

depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	10	No	FAC
2. Celtis laevigata	20	Yes	FAC
3. Ulmus crassifolia	50	Yes	FAC
4.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	10	No	FAC
2. Ulmus crassifolia	10	No	FAC
3. Ilex decidua	10	No	FAC
4.			
5.			
	35	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Elymus virginicus	3	No	FAC
2. Viola missouriensis	5	No	FACW
3. Torilis arvensis	5	No	UPL
4. Ambrosia trifida	2	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	15	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Toxicodendron radicans	3	No	FACU
2. Smilax bona-nox/Campsis radicans	3	No	FAC/UFACU
	6	= Total Cover	

% Bare Ground in Herb Stratum 85

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP162

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4								Organic Matter
4-18	10 YR 2/1	100					Clay	

[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:

No redox features; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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: Lake Ralph Hall City/County: Ladonia/Fannin Sampling Date: 6/1/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP216

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45383 Long: -95.9779 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded 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 X, 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:

depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	20	Yes	FAC
2. Celtis laevigata	35	Yes	FAC
3. Ulmus crassifolia	20	Yes	FAC
4.			
	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	10	No	FAC
2. Ulmus crassifolia	5	No	FAC
3. Fraxinus pennsylvanica	10	No	FAC
4. Styphnolobium affine	5	No	UPL
5.			
	30	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Elymus virginicus	3	No	FAC
2. Toxicodendron radicans	5	No	FACU
3. Lolium perenne	2	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	10	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Toxicodendron radicans	5	No	FACU
2. Parthenocissus quinquefolia	5	No	FACU
	10	= Total Cover	

% Bare Ground in Herb Stratum 90

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	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 =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP216

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-1								Organic Matter
1-3	10 YR 2/1	95	10 YR 4/6	5	C	M	Clay	Redox in upper portions
3-18	10 YR 2/1	100						

[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** X **No** _____

Remarks:

Redox features present ; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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: Lake Ralph Hall City/County: Ladonia/Fannin Sampling Date: 6/1/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP249

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45387 Long: -95.97784 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded 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 X, 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:

depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	10	No	FAC
2. Celtis laevigata	45	Yes	FAC
3. Ulmus crassifolia	40	Yes	FAC
4.			
	95	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Styphnolobium affine	10	No	UPL
2. Celtis laevigata	5	No	FAC
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Elymus virginicus	80	Yes	FAC
2. Toxicodendron radicans	5	No	FACU
3. Parthenocissus quinquefolia	10	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Toxicodendron radicans	5	No	FACU
2. Parthenocissus quinquefolia	5	No	FACU
	10	= Total Cover	

% Bare Ground in Herb Stratum 5

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	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 =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP249

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 3/1	100					Clay	

[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:

No redox features; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall City/County: Ladonia/Fannin Sampling Date: 6/1/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP250

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45413 Long: -95.97782 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded 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 X, 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:

depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	45	Yes	FAC
2. Celtis laevigata	25	Yes	FAC
3. Ulmus crassifolia	20	Yes	FAC
4.			
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	5	No	FAC
2. Ulmus crassifolia	5	No	FAC
3. Fraxinus pennsylvanica	15	No	FAC
4. Ulmus americana	10	No	FAC
5.			
	35	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Ambrosia trifida	1	No	FAC
2. Styphnolobium affine	1	No	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	2	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum 98

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 _____	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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP250

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-1								Organic Matter
1-3	10 YR 2/1	95	10 YR 4/6	5	C	M	Clay	Redox in upper portions
3-18	10 YR 2/1	100						

[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** X **No** _____

Remarks:

Redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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: Lake Ralph Hall City/County: Ladonia/Fannin Sampling Date: 6/1/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP297

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1

Subregion (LRR): Southwest Prairies Lat: 33.453 Long: -95.97744 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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:

delineated during heavy storm; similar to wp86. depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	45	Yes	FAC
2. Celtis laevigata	25	Yes	FAC
3. Ulmus crassifolia	20	Yes	FAC
4.			
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	5	No	FAC
2. Ulmus crassifolia	5	No	FAC
3. Fraxinus pennsylvanica	15	No	FAC
4. Ulmus americana	10	No	FAC
5.			
	35	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Ambrosia trifida	1	No	FAC
2. Styphnolobium affine	1	No	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	2	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum 98

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 _____	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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP297

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

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

[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** X **No** _____

Remarks:

Redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP305

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45236 Long: -95.97613 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally flooded NWI classification: PFO1A

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 X, 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:

Heavy storms the previous day; depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	10	No	FAC
2. Celtis laevigata	35	Yes	FAC
3. Ulmus americana	50	Yes	FAC
4.			
	95 = Total Cover		
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	90	Yes	FAC
2. Quercus stellata	5	No	FACU
3.			
4.			
5.			
	95 = Total Cover		
Herb Stratum (Plot size: 450 sq ft)			
1. Toxicodendron radicans	5	No	FACU
2. Elymus virginicus	50	Yes	FAC
3. Viola missouriensis	5	No	FACW
4. Parthenocissus quinquefolia	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	65 = Total Cover		
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 35

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	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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP305

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 2/1	100					Clay	

[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:

No redox features; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP306

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45272 Long: -95.97639 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally flooded 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 X, 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:

Heavy storms the previous day; depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Acer negundo	35	Yes	FAC
2. Fraxinus pennsylvanica	35	Yes	FAC
3. Gleditsia triacanthos	10	No	FACU
4.			
5.			
	80 = Total Cover		
Herb Stratum (Plot size: 450 sq ft)			
1. Torilis arvensis	5	No	FAC
2. Elymus virginicus	20	Yes	FAC
3. Ambrosia trifida	40	Yes	FAC
4. Bignonia capreolata	5	No	FACU
5. Amaranthus tuberculatus	30	Yes	FAC
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

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

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP306

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 3/2	100					Clay	

[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:

No redox features; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP307

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45337 Long: -95.97666 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally flooded 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 X, 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:

Heavy storms the previous day; depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	30	Yes	FAC
2. Celtis laevigata	15	Yes	FAC
3. Ulmus americana	30	Yes	FAC
4.			
	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	10	No	FAC
2. Fraxinus pennsylvanica	10	No	FAC
3. Ulmus americana	5	No	FAC
4. Juniperus virginiana	5	No	UPL
5.			
	30	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Toxicodendron radicans	3	No	FACU
2. Bignonia capreolata	2	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 95

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 _____	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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP307

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

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

[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** X **No** _____

Remarks:

Redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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: Lake Ralph Hall City/County: Ladonia/Fannin Sampling Date: 6/1/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP338

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45173 Long: -95.9845 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded 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 X, 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:

Delineated during heavy rainfall, former channel scar

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ulmus americana	20	Yes	FAC
2. Celtis laevigata	40	Yes	FAC
3. Fraxinus pennsylvanica	20	Yes	FAC
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	15	No	FAC
2. Fraxinus pennsylvanica	5	No	FAC
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Viola missouriensis	10	No	FACW
2. Elymus virginica	20	Yes	FAC
3. Toxicodendron radicans	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	35	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Toxicodendron radicans	5	No	FACU
2. Parthenocissus quinquefolia	5	No	FACU
	10	= Total Cover	

% Bare Ground in Herb Stratum 65

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	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 =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP338

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 3/2	100					Clay	

[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:

No redox. Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall City/County: Ladonia/Fannin Sampling Date: 6/1/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP339

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45203 Long: -95.98456 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded 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 X, 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:

Delineated during heavy rainfall; former channel scar

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Morus rubra	25	Yes	FACU
2. Fraxinus pennsylvanica	45	Yes	FAC
3.			
4.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700sq ft)			
1. Celtis laevigata	10	No	FAC
2. Fraxinus pennsylvanica	20	Yes	FAC
3. Morus rubra	10	No	FACU
4.			
5.			
	40	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Elymus virginica	10	No	FAC
2. Toxicodendron radicans	5	No	FACU
3. Ambrosia trifida	20	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	35	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Toxicodendron radicans	5	No	FACU
2. Parthenocissus quinquefolia	5	No	FACU
	10	= Total Cover	

% Bare Ground in Herb Stratum 65

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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

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 =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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:

Buttressed tree trunks

SOIL

Sampling Point: WP339

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10 YR 2/1	100					Clay	
12-18	10 YR 2/1	80	10 YR 5/2	20	C	M	Clay	depletions below 12 inches

[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:

Does not fit any of the hydric soil indicators. Tinn Clay, occasionally flooded, is a nationally listed hydric soil. Naturally dark soils

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 _____ No X Depth (inches): _____

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall City/County: Ladonia/Fannin Sampling Date: 6/1/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP343

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45285 Long: -95.98395 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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:

Delineated during heavy rainfall. Old tributary to former N. Sulphur channel. Channel full of grass, no OHWM

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Celtis laevigata	30	Yes	FAC
2. Fraxinus pennsylvanica	40	Yes	FAC
3.			
4.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	5	No	FAC
2. Fraxinus pennsylvanica	20	Yes	FAC
3. Ulmus americana	1	No	FAC
4.			
5.			
	35	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Elymus virginica	60	Yes	FAC
2. Carex blanda	5	No	FAC
3. Ambrosia trifida	15	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	80	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Smilax bona-nox	5	No	FACU
2. Parthenocissus quinquefolia	5	No	FACU
	10	= Total Cover	

% Bare Ground in Herb Stratum 20

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	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 =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP343

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 3/2	100					Clay	

[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:

No redox. Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall City/County: Ladonia/Fannin Sampling Date: 6/1/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP347

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45366 Long: -95.98271 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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:

Delineated during heavy rainfall. Old tributary to former N. Sulphur channel. Channel full of grass, no OHWM

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Celtis laevigata	15	No	FAC
2. Fraxinus pennsylvanica	20	Yes	FAC
3. Ulmus americana	45	Yes	FAC
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	5	No	FAC
2. Fraxinus pennsylvanica	10	No	FAC
3. Ulmus americana	25	Yes	FAC
4. Ulmus crassifolia	5	No	FAC
5.			
	45	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Ampelopsis arborea	15	No	FAC
2. Chasmanthium latifolium	70	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	85	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Smilax bona-nox	5	No	FACU
2. Parthenocissus quinquefolia	5	No	FACU
	10	= Total Cover	

% Bare Ground in Herb Stratum 15

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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP347

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 3/2	100					Clay	

[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:

No redox. Tinn Clay, occasionally flooded, is a nationally listed hydric soil.

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 _____ No X Depth (inches): _____

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall City/County: Ladonia/Fannin Sampling Date: 6/1/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP349

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.4538 Long: -95.98113 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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 X No _____	

Remarks:

Delineated during heavy rainfall. Former N. Sulphur channel.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Celtis laevigata	40	Yes	FAC
2. Fraxinus pennsylvanica	30	Yes	FAC
3. Ulmus americana	20	Yes	FAC
4.			
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	20	Yes	FAC
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Viola missouriensis	5	No	FACW
2. Chasmanthium latifolium	30	Yes	FACU
3. Elymus virginicus	15	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	50	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Smilax bona-nox	5	No	FACU
2. Parthenocissus quinquefolia	5	No	FACU
	10	= Total Cover	

% Bare Ground in Herb Stratum 50

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP349

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-8	10 YR 3/2	100					Clay	
8-18	10 YR 5/2	80					Clay	20 % Mottles of 10 YR 3/2

[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:

Does not match any hydric soil indicators. Tinn Clay, occasionally flooded, is a nationally listed hydric soil. naturally dark soil; Earthworms and grubs present in soil core.

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 _____ No X Depth (inches): _____

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: Lake Ralph Hall City/County: Ladonia/Fannin Sampling Date: 6/1/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP350

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45273 Long: -95.98159 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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 X No _____	

Remarks:

Delineated during heavy rainfall.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Celtis laevigata	5	No	FAC
2. Fraxinus pennsylvanica	10	No	FAC
3. Ulmus americana	10	No	FAC
4. Ulmus crassifolia	35	Yes	FAC
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	20	Yes	FAC
2. Fraxinus pennsylvanica	15	Yes	FAC
3. Symphoricarpos orbiculatus	15	Yes	FACU
4.			
5.			
	50	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Amaranthus tuberculatus	25	Yes	FAC
2. Torilis arvensis	5	No	UPL
3. Elymus virginicus	15	Yes	FAC
4. Ambrosia trifida	5	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	50	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 50

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP350

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 3/1	100					Clay	

[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:

No redox. Tinn Clay, occasionally flooded, is a nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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: Lake Ralph Hall City/County: Ladonia/Fannin Sampling Date: 6/1/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP351

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45274 Long: -95.97993 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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:

Former North Sulphur channel acting as an active channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	15	No	FAC
2. Acer negundo	75	Yes	FAC
3.			
4.			
	90 = Total Cover		
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Acer negundo	15	No	FAC
2. Ulmus americana	5	No	FAC
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: 450 sq ft)			
1. Carex blanda	2	No	FAC
2. Elymus virginica	5	No	FAC
3. Toxicodendron radicans	2	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	9 = Total Cover		
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 91

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP351

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

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

[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** X **No** _____

Remarks:

Redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 404

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.46224 Long: -95.91757 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	95	Yes	FAC
2. Maclura pomifera	2	No	FACU
3. Celtis laevigata	2	No	FAC
4.			
	99	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Fraxinus pennsylvanica	5	No	FAC
2. Celtis laevigata	5	No	FAC
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Lolium multiflorum	50	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	50	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 50

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	107	x 3 =	321
FACU species	2	x 4 =	8
UPL species	50	x 5 =	250
Column Totals:	159 (A)		579 (B)

Prevalence Index = B/A = 3.64

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 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 _____ No X

Remarks:

SOIL

Sampling Point: WP 404

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 3/1	90					Clay	

[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:

No redox features; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soils

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 _____ No X Depth (inches): _____

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

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

Remarks:

outside edge of former channel scar

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/17

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 405

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.46255 Long: -95.91884 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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:

depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	65	Yes	FAC
2. Celtis laevigata	5	No	FAC
3.			
4.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Fraxinus pennsylvanica	5	No	FAC
2. Maclura pomifera	2	No	FACU
3.			
4.			
5.			
	7	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Carex crus-corvi	70	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	70	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 30

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 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: WP405

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 3/1	90	10 YR 4/6	10	C	M	Clay	

[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** X **No** _____

Remarks:

Redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil.

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): _____

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

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

Remarks:

Former channel scar forms isolated depression.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 406

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.46259 Long: -95.91885 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	40	Yes	FAC
2. Celtis laevigata	20	Yes	FAC
3. Maclura pomifera	5	No	FACU
4. Ulmus crassifolia	5	No	FAC
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Maclura pomifera	5	No	FACU
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Viola missouriensis	5	No	FACW
2. Carex planostachys	90	Yes	UPL
3. Elymus virginicus	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Parthenocissus quinquefolia	2	No	FACU
2. Smilax bona-nox	2	No	FACU
	4	= Total Cover	

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	70	x 3 =	210
FACU species	14	x 4 =	56
UPL species	90	x 5 =	450
Column Totals:	179 (A)		726 (B)

Prevalence Index = B/A = 4.06

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP406

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 3/1	100					Clay	

[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:

No redox features; isolated former channel scar forms closed depression; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

No hydrologic indicators observed

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP417

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45331 Long: -95.97668 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally flooded 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 X, 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:

Heavy storms the previous day; outside of forested wetland delineated at wp307

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	10	No	FAC
2. Ulmus americana	5	No	FAC
3.			
4.			
	15	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Ulmus americana	5	No	FAC
2. Juniperus virginiana	5	No	FAC
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Toxicodendron radicans	5	No	FACU
2. Bignonia capreolata	5	No	FAC
3. Ambrosia trifida	30	Yes	FAC
4. Amaranthus tuberculatus	10	No	FAC
5. Torilis arvensis	10	No	FAC
6. Elymus virginicus	20	Yes	FAC
7. Erigeron annuus	10	No	FACU
8.			
9.			
10.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP417

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 3/1	100					Clay	

[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:

No redox features

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 _____ No X Depth (inches): _____

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP418

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45314 Long: -95.97526 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally flooded 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 X, 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:

Heavy storms the previous day; depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	65	Yes	FAC
2. Ulmus americana	20	Yes	FAC
3. Celtis laevigata	10	No	FAC
4.			
	95	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Ulmus americana	5	No	FAC
2. Celtis laevigata	5	No	FAC
3. Fraxinus pennsylvanica			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Elymus virginicus	1	No	FAC
2. Bignonia capreolata	2	No	FAC
3. Ambrosia trifida	5	No	FAC
4. Torilis arvensis	2	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	10	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 90

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

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 =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP418

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

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

[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** X **No** _____

Remarks:

Redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 474

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45216 Long: -95.94622 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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 X No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	50	Yes	FAC
2. Ulmus americana	45	Yes	FAC
3.			
4.			
	95 = Total Cover		
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Acer negundo	10	Yes	FAC
2. Morus rubra	10	Yes	FACU
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: 450 sq ft)			
1. Lolium multiflorum	2	No	UPL
2. Carex crus-corvi	2	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	4 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 96

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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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:

Up between remnant channels of former North Sulphur River; not hydraulically or hydrologically connected to existing main channel.

SOIL

Sampling Point: WP 474

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 2/1	99					Clay	
12-18			10 YR 4/6	1	C	M	Clay	

[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:

Insufficient redox features observed; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

between meander bends of impounded section of remnant former North Sulphur River channel

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 482

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.46276 Long: -95.91907 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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

Remarks:

depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Celtis laevigata	10	No	FAC
2. Ulmus crassifolia	50	Yes	FAC
3. Fraxinus pennsylvanica	20	Yes	FAC
4. Maclura pomifera	10	No	FACU
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Fraxinus pennsylvanica	5	No	FAC
2. Gleditsia triacanthos	5	No	FAC
3. Ulmus crassifolia	5	No	FAC
4. Celtis laevigata	5	No	FAC
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Carex cherokeensis	15	Yes	FACW
2. Ptilimnium nuttallii	5	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 80%

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 _____	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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP 482

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10 YR 3/1	100						
4-18	10 YR 3/1	98	10 YR 4/6	2	C	M	Clay	

[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** X **No** _____

Remarks:

Redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soils

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 _____ No X Depth (inches): _____

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

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

Remarks:

insufficient hydrological indicators observed

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 512

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.46313 Long: -95.91921 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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:

depressional area associated with former channel scar; not hydraulically connected to any stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus macrocarpa	10	No	FACU
2. Ulmus crassifolia	60	Yes	FAC
3. Fraxinus pennsylvanica	10	No	FAC
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Ulmus crassifolia	5	No	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Carex crus-corvi	8	No	OBL
2. Ptilimnium nuttallii	5	No	FACW
3. Amaranthus tuberculatus	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	18	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 82

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	8	x 1 =	8
FACW species	5	x 2 =	10
FAC species	80	x 3 =	240
FACU species	10	x 4 =	40
UPL species		x 5 =	
Column Totals:	103 (A)		298 (B)

Prevalence Index = B/A = 2.89

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☑ 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: WP512

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 3/1	98					Clay	
4-18			10YR 4/6	2	C	M	Clay	

[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** X **No** _____

Remarks:

Redox features observed; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

depressional area associated with former channel scar

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP581

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45307 Long: -95.97526 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally flooded 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 X, 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:

Heavy storms the previous day; outside the forested wetland delineated at wp418

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	10	No	FAC
2. Ulmus americana	35	Yes	FAC
3. Celtis laevigata	35	Yes	FAC
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Ulmus americana	5	No	FAC
2. Celtis laevigata	10	No	FAC
3. Fraxinus pennsylvanica	20	Yes	FAC
4. Quercus muehlenbergii	5	No	FAC
5. Acer negundo	5	No	FAC
	45	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Elymus virginicus	35	Yes	FAC
2. Torilis arvensis	10	No	UPL
3. Ambrosia trifida	10	No	FAC
4. Parthenocissus quinquefolia	10	No	FACU
5. Toxicodendron radicans	30	Yes	FACU
6.			
7.			
8.			
9.			
10.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Parthenocissus quinquefolia	5	No	FACU
2.	5	No	FAC
	10	= Total Cover	

% Bare Ground in Herb Stratum 5

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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

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 =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP581

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 3/1	100					Clay	

[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:

No redox features; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP582

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45273 Long: -95.97502 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally flooded NWI classification: PFO1A

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

Remarks:

Heavy storms the previous day; depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	10	No	FAC
2. Celtis laevigata	60	Yes	FAC
3.			
4.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	5	No	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Elymus virginicus	5	No	FAC
2. Amaranthus tuberculatus	8	No	FAC
3. Ambrosia trifida	10	No	FAC
4. Campsis radicans	20	Yes	FACU
5. Toxicodendron radicans	20	Yes	FACU
6. Erigeron annuus	2	No	FACU
7.			
8.			
9.			
10.			
	65	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Parthenocissus quinquefolia	5	No	FACU
2.	5	No	FAC
	10	= Total Cover	

% Bare Ground in Herb Stratum 35

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	105	x 3 =	315
FACU species	45	x 4 =	180
UPL species	0	x 5 =	0
Column Totals:	150 (A)		495 (B)

Prevalence Index = B/A = 3.3

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 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 _____ No X

Remarks:

SOIL

Sampling Point: WP582

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 2/1	100					Clay	

[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:

No redox features; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP585

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45207 Long: -95.9732 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally flooded 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 X, 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:

Heavy storms the previous day; depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	50	Yes	FAC
2. Celtis laevigata	15	Yes	FAC
3. Ulmus crassifolia	5	No	FAC
4.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	5	No	FAC
2. Fraxinus pennsylvanica			
3. Ulmus crassifolia			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Toxicodendron radicans	5	No	FACU
2. Viola missouriensis	2	No	FACW
3. Ambrosia trifida	8	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	15	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Toxicodendron radicans/Campsis radicans	5/5	No	FACU/FACU
2. Smilax bona-nox	5	No	FACU
	15	= Total Cover	

% Bare Ground in Herb Stratum 85

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

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 =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP585

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

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

[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** X **No** _____

Remarks:

Redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 624

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.46309 Long: -95.91971 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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:

depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	65	Yes	FAC
2. Celtis laevigata	5	No	FAC
3. Ulmus crassifolia	10	No	FAC
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Ulmus crassifolia	5	No	FAC
2. Celtis laevigata	5	No	FAC
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Carex crus-corvi	12	No	OBL
2. Ptilimnium nuttallii	8	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 80

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	12	x 1 =	12
FACW species	8	x 2 =	16
FAC species	90	x 3 =	270
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	110 (A)		298 (B)

Prevalence Index = B/A = 2.71

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☑ 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: WP 624

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-1							Organic	surface layer of organic material
1-4	10 YR 3/1	100					Clay	
4-18	10 YR 3/1	98	10 YR 4/6	2	C	M	Clay	

[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** X **No** _____

Remarks:

Redox features observed; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

depressional area associated with former channel scar

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP626

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45231 Long: -95.9738 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally flooded 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 X, 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:

Heavy storms the previous day; depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	45	Yes	FAC
2. Celtis laevigata	20	Yes	FAC
3. Ulmus crassifolia	5	No	FAC
4.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	5	No	FAC
2. Fraxinus pennsylvanica	5	No	FAC
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Toxicodendron radicans	5	No	FACU
2. Viola missouriensis	10	No	FACW
3. Ambrosia trifida	3	No	FAC
4. Elymus virginicus	2	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Toxicodendron radicans	5	No	FACU
2. Smilax bona-nox	5	No	FACU
	10	= Total Cover	

% Bare Ground in Herb Stratum 80

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP626

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

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

[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** X **No** _____

Remarks:

Redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 709

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.46273 Long: -95.91951 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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:

depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	30	Yes	FAC
2. Ulmus crassifolia	25	Yes	FAC
3. Celtis laevigata	15	No	FAC
4. Maclura pomifera	10	No	FACU
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Fraxinus pennsylvanica	2	No	FAC
2. Maclura pomifera	5	No	FACU
3.			
4.			
5.			
	7	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Carex crus-corvi	10	No	OBL
2. Viola missouriensis	2	No	FACW
3. Ptilimnium nuttallii	3	No	FACW
4. Amaranthus tuberculatus	5	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 80%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	5	x 2 =	10
FAC species	77	x 3 =	231
FACU species	15	x 4 =	60
UPL species		x 5 =	
Column Totals:	107 (A)		311 (B)

Prevalence Index = B/A = 2.91

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☑ 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: WP 709

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 3/1	80	10 YR 4/6	20	C	M	Clay	

[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** X **No** _____

Remarks:

Redox features prominent; Tinn clay, occasionally flooded is nationally listed hydric soil, naturally dark soil

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 X No _____ Depth (inches): 2 inches

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

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

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

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

Remarks:

depressional area associated with former channel scar

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 801

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.4627 Long: -95.92014 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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:

depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ulmus crassifolia	60	Yes	FAC
2. Fraxinus pennsylvanica	5	No	FAC
3. Maclura pomifera	5	No	FACU
4. Celtis laevigata	2	No	FAC
	72	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Fraxinus pennsylvanica	2	No	FAC
2. Ulmus crassifolia	2	No	FAC
3. Gleditsia triacanthos	2	No	FAC
4. Maclura pomifera	2	No	FACU
5.			
	8	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Carex crus-corvi	70	Yes	OBL
2. Ptilimnium nuttalli	10	No	FACW
3. Amaranthus tuberculatus	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	85	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Campsis radicans	2	No	FACU
2.			
	2	= Total Cover	

% Bare Ground in Herb Stratum 15

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 70	x 1 = 70
FACW species 10	x 2 = 20
FAC species 78	x 3 = 234
FACU species 9	x 4 = 36
UPL species	x 5 =
Column Totals: 167 (A)	360 (B)

Prevalence Index = B/A = 2.16

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☑ 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: WP 801

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 3/1	98	10 YR 4/6	2	C	M	Clay	

[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** X **No** _____

Remarks:

Redox features observed; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

depressional area associated with former channel scar

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 857

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.46282 Long: -95.92099 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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:

depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	50	Yes	FAC
2. Ulmus crassifolia	10	No	FAC
3. Celtis laevigata	10	No	FAC
4. Maclura pomifera	5	No	FACU
	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Fraxinus pennsylvanica	5	No	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Carex crus-corvi	5	No	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1. Campsis radicans	2	No	FACU
2.			
	2	= Total Cover	

% Bare Ground in Herb Stratum 95

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 5	x 1 = 5
FACW species 0	x 2 = 0
FAC species 75	x 3 = 225
FACU species 7	x 4 = 28
UPL species 0	x 5 = 0
Column Totals: 87 (A)	258 (B)

Prevalence Index = B/A = 2.97

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☑ 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: WP 857

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 3/1	90	10 YR 4/6	10	C	M	Clay	

[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** X **No** _____

Remarks:

Redox features observed; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 X No _____ Depth (inches): 2

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

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

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

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

Remarks:

depressional area associated with former channel scar

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 1146

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.4625 Long: -95.92113 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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:

depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	60	Yes	FAC
2. Maclura pomifera	10	No	FACU
3. Ulmus crassifolia	15	No	FAC
4. Celtis laevigata	5	No	FAC
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Fraxinus pennsylvanica	5	No	FAC
2. Celtis laevigata	2	No	FAC
3.			
4.			
5.			
	7	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Carex crus-corvi	10	No	OBL
2. Amaranthus tuberculatus	5	No	FAC
3. Chasmanthium latifolium	2	No	FACU
4. Viola missouriensis	2	No	FACW
5. Lemna minor	15	Yes	OBL
6.			
7.			
8.			
9.			
10.			
	34	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 66%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	2	x 2 =	4
FAC species	92	x 3 =	276
FACU species	12	x 4 =	48
UPL species	0	x 5 =	0
Column Totals:	131 (A)		353 (B)

Prevalence Index = B/A = 2.69

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☑ 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: WP 1146

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 3/1	80	10 YR 4/6	20	C	M	Clay	

[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** X **No** _____

Remarks:

Redox features observed; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 X No _____ Depth (inches): 2 inches

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

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

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

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

Remarks:

depressional area associated with former channel scar

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 1334

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.4619 Long: -95.92107 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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:

depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	30	Yes	FAC
2. Celtis laevigata	25	Yes	FAC
3. Ulmus crassifolia	20	Yes	FAC
4. Maclura pomifera	5	No	FACU
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Celtis laevigata	10	No	FAC
2. Fraxinus pennsylvanica	10	No	FAC
3. Ulmus crassifolia	10	No	FAC
4.			
5.			
	30	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Carex crus-corvi	15	No	OBL
2. Amaranthus tuberculatus	5	No	FAC
3. Viola missouriensis	2	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	22	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 78

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	15	x 1 =	15
FACW species	2	x 2 =	4
FAC species	110	x 3 =	330
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	132 (A)		369 (B)

Prevalence Index = B/A = 2.8

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☑ 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: WP 1334

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 3/1	85	10 YR 4/6	15	C	M	Clay	

[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** X **No** _____

Remarks:

Redox features observed; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 X No _____ Depth (inches): 2 inches

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

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

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

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

Remarks:

depressional area associated with former channel scar

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 1409

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.46231 Long: -95.91948 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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:

depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	45	Yes	FAC
2. Ulmus crassifolia	40	Yes	FAC
3.			
4.			
	85 = Total Cover		
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Fraxinus pennsylvanica	5	No	FAC
2. Ulmus crassifolia	5	No	FAC
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: 450 sq ft)			
1. Carex crus-corvi	65	Yes	OBL
2. Amaranthus tuberculatus	5	No	FAC
3. Viola missouriensis	2	No	FACW
4. Ptilimnium nuttallii	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	77 = Total Cover		
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 23

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	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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP 1409

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

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

[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** X **No** _____

Remarks:

Redox features observed; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

Depressional area associated with former channel scar

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 1410

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.46214 Long: -95.91925 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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

Remarks:

depressional area associated with former channel scar; not hydraulically connected to any existing stream channel

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus macrocarpa	25	Yes	FACU
2. Maclura pomifera	25	Yes	FACU
3. Celtis laevigata	10	No	FAC
4. Ulmus crassifolia	25	Yes	FAC
	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Fraxinus pennsylvanica	5	No	FAC
2. Celtis laevigata	5	No	FAC
3. Gleditsia triacanthos	1	No	FAC
4.			
5.			
	11	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Carex crus-corvi	15	Yes	OBL
2. Lolium multiflorum	20	Yes	UPL
3. Elymus virginicus	20	Yes	FAC
4. Ptilimnium nuttalli	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: 450)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 40 %

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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	5	x 2 =	10
FAC species	66	x 3 =	198
FACU species	50	x 4 =	200
UPL species	20	x 5 =	100
Column Totals:	156 (A)		523 (B)

Prevalence Index = B/A = 3.35

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 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 _____ No X

Remarks:

SOIL

Sampling Point: WP 1410

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 3/1	100					Clay	

[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:

No redox features observed; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

depressional area associated with former channel scar

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 1471

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.46202 deg Long: -95.91898 deg Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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

Remarks:

Depressional area associated with former channel scar; comparable area to WP 1410

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700- sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus macrocarpa	25	Yes	FACU
2. Fraxinus pennsylvanica	25	Yes	FAC
3.			
4.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Ulmus crassifolia	2	No	FAC
2.			
3.			
4.			
5.			
	2	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Carex crus-corvi	10	Yes	OBL
2. Viola missouriensis	5	No	FACW
3. Lolium multiflorum	10	Yes	UPL
4. Ptilimnium nuttalli	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	30	= Total Cover	
Woody Vine Stratum (Plot size: 450)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 70

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	10	x 2 =	20
FAC species	27	x 3 =	81
FACU species	25	x 4 =	100
UPL species	10	x 5 =	50
Column Totals:	82 (A)		261 (B)

Prevalence Index = B/A = 3.18

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 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 _____ No X

Remarks:

SOIL

Sampling Point: WP 1471

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

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

[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** X **No** _____

Remarks:

Redox features observed; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

Depressional area associated with former channel scar

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017

Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP 1504

Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:

Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0-1%

Subregion (LRR): Southwest Prairies Lat: 33.45929 Long: -95.93517 Datum: NAD83

Soil Map Unit Name: Tinn Clay, Occasionally Flooded NWI classification: PFO1A

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 X, 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:

Wooded area bordering the north side of the North Sulphur river channel.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ulmus crassifolia	40	Yes	FAC
2. Celtis laevigata	40	Yes	FAC
3. Fraxinus pennsylvanica	5	No	FAC
4. Maclura pomifera	5	No	FACU
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 700 sq ft)			
1. Ulmus crassifolia	10	No	FAC
2. Celtis laevigata	50	Yes	FAC
3. Fraxinus pennsylvanica	2	No	FAC
4.			
5.			
	62	= Total Cover	
Herb Stratum (Plot size: 450 sq ft)			
1. Elymus virginicus	50	Yes	FAC
2. Viola missouriensis	10	No	FACW
3. Carex planostachys	40	Yes	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 450 sq ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

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 = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 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: WP 1504

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 2/1	90					Clay	

[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:

No redox features observed; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil

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 _____ No X Depth (inches): _____

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

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

Remarks:

APPENDIX D

PHOTOGRAPHS

PHOTOGRAPHS

ON-CHANNEL OPEN WATERS

OCP2. WP235 Pond with 3 foot wetland fringe. 5/30/2017.

OCP2. WP235 Pond with 3 foot wetland fringe. 5/30/2017.

OCP3. WP236 Pond with 3-15 foot wetland fringe. 5/30/2017.

OCP3. WP236 Pond with 3-15 foot wetland fringe. 5/30/2017.

OCP3. WP238 Larger part of the 3-15 foot wetland fringe of on-channel pond 3. 5/30/2017.

OCP4. WP240 Pond with no wetland fringe. 5/30/2017.

OCP4. WP240 Pond with no wetland fringe. 5/30/2017.

OCP5. WP401 Pond with 1 foot wetland fringe. 5/31/2017.

OCP5. WP401 Pond with 1 foot wetland fringe. 5/31/2017.

OCP7. WP320 Small pond with no wetland fringe before transition to channel. 5/30/2017.

OCP8. WP1472 Pond with partial 1 foot wetland fringe. 5/31/2017.

OCP8. WP1472 Pond with partial 1 foot wetland fringe. 5/31/2017.

OCP10. WP326 Pond with 6 foot wetland fringe and submerged vegetation. 5/30/2017.

OCP10. WP326 Pond with 6 foot wetland fringe and submerged vegetation. 5/30/2017.

OCP11. WP400 Pond with partial 1 foot wetland fringe, submerged and floating vegetation. 5/30/2017.

OCP11. WP400 Pond with partial 1 foot wetland fringe, submerged and floating vegetation. 5/30/2017.

OCP13. WP1 Pond with partial 1-6 foot wetland fringe. 6/1/2017.

OCP13. WP2 Pond with 1-6 foot partial wetland fringe. 6/1/2017.

OCP17. WP1500 Large pond with wetland fringe ranging from 1-20 feet and algae. 5/31/2017.

OCP17. WP1501 Large pond with wetland fringe ranging from 1-20 feet and algae. 5/31/2017.

OCP17. WP1502 Large pond with wetland fringe ranging from 1-20 feet and algae. 5/31/2017.

OCP17. WP1502 Large pond with wetland fringe ranging from 1-20 feet and algae. 5/31/2017.

OCP17. WP1503 Large pond with wetland fringe ranging from 1-20 feet and algae. 5/31/2017.

OCP19. WP715 Pond with partial 1-3 foot wetland fringe. 5/31/2017.

OCP19. WP715 Pond with partial 1-3 foot wetland fringe. 5/31/2017.

OCP23. WP336 Large pond with partial 1 foot wetland fringe. 6/1/2017.

OCP32. WP4 Pond with no wetland fringe. 5/31/2017.

OCP32. WP4 Pond with no wetland fringe. 5/31/2017.

OCP32. WP4 Pond with no wetland fringe. 5/31/2017.

OCP33. WP10 Pond with partial 3 foot wetland fringe and submerged vegetation. 5/31/2017.

OCP33. WP10 Pond with partial 3 foot wetland fringe and submerged vegetation. 5/31/2017.

PHOTOGRAPHS

UPLAND OPEN WATERS

UP6. WP226 Upland Pond. 5/30/2017.

UP7. WP228 Upland Pond. 5/30/2017.

UP7. WP228 Upland Pond. 5/30/2017.

UP8. WP227 Upland Pond. 5/30/2017.

UP8. WP227 Upland Pond. 5/30/2017.

UP16. WP234 Upland Pond. 5/30/2017.

UP17. WP231 Upland Pond. 5/30/2017.

UP18. WP233 Upland Pond. 5/30/2017.

UP19. WP225 Upland Pond. 5/30/2017.

UP30. WP322 Upland Pond. 5/30/2017.

UP65. WP402 Upland Pond. 5/31/2017.

UP65. WP402 Upland Pond. 5/31/2017.

UP67. WP1473 Upland Pond. 5/31/2017.

UP79. WP713 Upland Pond below UP207. 5/31/2017.

UP79/80. WP714 Berm between ponds below UP207. 5/31/2017.

UP80. WP714 Upland Pond. 5/31/2017.

UP117. WP334 Upland Pond. 6/1/2017.

UP117. WP335 Upland Pond. 6/1/2017.

UP143. WP4 Upland Pond. 6/2/2017.

UP143. WP4 Upland Pond. 6/2/2017.

UP152. WP711 Upland Pond. 5/31/2017.

UP155. WP711 Upland Pond. 5/31/2017.

UP168. WP6 Upland Pond. 5/31/2017.

UP207. WP713 Upland. 5/31/2017.

E-4: Approved Jurisdictional Determination

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

July 27, 2017

Regulatory Division

SUBJECT: SWF-2003-00336, Lake Ralph Hall, Upper Trinity Regional Water District

Mr. Larry Patterson
Upper Trinity Regional Water District
900 N. Kealy
P.O. Drawer 305
Lewisville, Texas 75067

Dear Mr. Patterson:

This letter is in regard to your request for an approved jurisdictional determination information received March 29, 2017, and additional information received June 22 and July 5, 2017, concerning the proposed Lake Ralph Hall Reservoir project located in Fannin County, Texas. The study area for the approved jurisdictional determination encompasses approximately 13,100 acres.

We have reviewed the site in question in accordance with Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. Under Section 404, the USACE regulates the discharge of dredged and fill material into waters of the United States, including wetlands. Our responsibility under Section 10 is to regulate any work in, or affecting, navigable waters of the United States.

Based on the Supplemental Report in Support for AJD for proposed Lake Ralph Hall project, dated June 21, 2017, multiple previous site visits associated with the ongoing development of the Environmental Impact Statement associated with the permit application, and other information available to us, waters of the United States under Section 404 do exist in the study area. We concur with the delineation of waters of the United States as shown on the 11 maps sheets included in the referenced report identified as Aquatic Resources Proposed Lake Ralph Hall Supplemental Jurisdictional Determination. This approved jurisdictional determination (JD) is valid for a period of no more than five (5) years from the date of this letter unless new information warrants revision of the delineation before the expiration date. A copy of the Approved Jurisdictional Determination form supporting this determination is enclosed for your information.

This determination does not convey any property rights, either in real estate or material or any exclusive privileges, nor does it authorize any injury to property or invasion of rights or Federal, State, or local laws or regulations. This determination does not eliminate the requirements to obtain State or local permits or approvals as needed.

Department of the Army authorization would be required for the discharge of dredged or fill material into any areas identified as waters of the United States, unless otherwise exempted. If you anticipate a discharge, please provide us with a detailed description of the proposed project, a suitable map of the proposed project area showing the location of proposed discharges, the type and amount of material (temporary or permanent), if any, to be discharged, and plan and cross-section views of the proposed project. Please note that it is unlawful to start work without a Department of the Army permit if one is required.

The Applicant may accept or appeal this approved JD or provide new information in accordance with the enclosed Notification of Administration Appeal Options and Process and Request for Appeal (NAAOP-RFA). If the Applicant elects to appeal this approved JD, the Applicant must complete Section II (Request for Appeal or Objections to an Initial Proffered Permit) of the enclosure and return it to the Division Engineer, ATTN: CESWD-PD-O Appeals Review Officer, U.S. Army Corps of Engineers, 1100 Commerce Street, Dallas, Suite 831, Texas 75242-0216 within 60 days of the date of this notice. Failure to notify the USACE within 60 days of the date of this notice means you accept the approved JD in its entirety and waive all rights to appeal the approved JD.

Thank you for your interest in our nation's water resources. If you have any questions concerning this matter please contact Mr. Chandler Peter at (817) 886-1736. Other information concern our regulatory program is at http://www.swf.usace.army.mil/Missions/Regulatory.

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,

Stephen Brooks
Chief, Regulatory Division

Enclosures:

Appeals Form
Approved Jurisdictional Determination Form

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Upper Trinity Regional Water District	File Number: 2003-00336	Date: 7/24/2017
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/appeals.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:	If you only have questions regarding the appeal process you may also contact: Mr. Elliott Carman Administrative Appeals Review Officer (CESWD-PD-O) U.S. Army Corps of Engineers 1100 Commerce Street, Suite 831 Dallas , Texas 75242-1317 469-487-7061

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
_____ Signature of appellant or agent.		

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 26 June 2017

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Fort Worth District, Lake Ralph Hall, SWF-2003-00336

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: Texas County/parish/borough: Fannin City: Ladonia
Center coordinates of site (lat/long in degree decimal format): Lat. 33.46302° **N**, Long. 95.90102° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: North Sulphur River
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Sulphur River
Name of watershed or Hydrologic Unit Code (HUC): 8 - 11140301
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: June 26, 2017
☒ Field Determination. Date(s): Specific field investigation to develop data to produce PJD dated October 26, 2006 were conducted by applicant August-September, 2005. USACE and cooperating agencies conducted numerous site visits to portions of project area from 2002 through 2015 associated with jurisdictional determination and resource assessments associated with development of Environmental Impact Statement for proposed project.

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☒ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☒ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Stream (non-wetland) waters: linear feet: 690,918 acreage: 387.14 (streams)
      Other open waters: acres: 59.89 (on channel ponds)
      Wetlands: 10.0 acres (PEM lacustrine fringe around on-channel ponds).

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual and Great Plains Delineation Supplement**
      Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]

---

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: **212 open water stock tanks constructed in uplands occur within the study area totaling 83 acres (Table A-3 of Appendix A). Additionally, there are 3.8 acres (comprised of 26 features – Table A-4 of Appendix A) of forested wetlands associated with remnant channels of the North Sulphur River. Due to historic channelization and significant channel degradation, the 100 year flood of the North Sulphur River is contained in its existing channel banks. No hydrologic connection/significant nexus exists between the remnant channels and the North Sulphur River.**

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
Identify TNW: No TNWs are in assessment area. The nearest USACE designated navigable water is the segment of the Sulphur River downstream of Wright Patman Dam to the Texas/Arkansas state border. See section B.1.ii below for distance.

Summarize rationale supporting determination:

2. **Wetland adjacent to TNW**
Summarize rationale supporting conclusion that wetland is "adjacent": N/A.

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

(i) **General Area Conditions:**
Watershed size: 100 square miles
Drainage area: 467 square miles
Average annual rainfall: 33 inches
Average annual snowfall: 3 inches

(ii) **Physical Characteristics:**
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☒ Ephemeral tributaries flow through 2 and the North Sulphur River flows through 1 tributary before entering TNW.

Project waters are more than 100 river miles from TNW.

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Project waters are more than 30 river miles from RPW.
Project waters are 105 aerial (straight) miles from TNW.
Project waters are 37 aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW[5]: Named (see item b below) and unnamed tributaries flow into North Sulphur River which flows into to Sulphur River (starting at confluence with South Sulphur River which becomes navigable approximately 105 miles downstream.
Tributary stream order, if known: Varies.

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural. Explain:
☐ Artificial (man-made). Explain:
☒ Manipulated (man-altered). Explain: North Sulphur River and named (Merrill, Bralley Pool, Leggets Branch, Davis, Pickle, Pot, Brushy, Bear, Allen, Long and Headrick Branch Creeks) and unnamed tributries to it are natural channels but modified due to headcuts. North Sulphur River channelized in 1930s. Unique soil properties continue to erode and channel as well as tributaries continue to degrade. Headcuts occur to all tributaries in the study area.

Tributary properties with respect to top of bank (estimate):
Average width: 150 feet
Average depth: 45 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):

☒ Silts	☐ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☒ Bedrock	☐ Vegetation. Type/% cover:	

☐ Other. Explain: Bedrock is decomposing soft shale.

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: highly eroding, sloughing banks with channel eroded into underlying shale bedrock; delamination of the shale results in average channel down-cutting at a rate of 2 inches/year and channel widening of 4 inches/year as side slopes are destabilized and slough.

Presence of run/riffle/pool complexes. Explain: No riffle pool complexes exist.
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): Dependent on tributary. North Sulphur River is 0.1 %

(c) Flow:
Tributary provides for: **Intermittent but not seasonal flow Other tributaries are epemeral.**
Estimate average number of flow events in review area/year: **6-10**
Describe flow regime: Channel flow is extremely flashy with high flows immediately following significant rain events rapidly reducing to a trickle unless subsequent rainfall experienced in the watershed. Channel is frequently dry in most locations with variable to non-existent pooling.
Other information on duration and volume: Stage discharge and rating curves are provided in the geomorphological evaluation and hydraulic and hydrologic analyses.

Surface flow is: **Discrete and confined.** Characteristics: Flashy – immediate peak with rapidly diminishing flows.

Subsurface flow: **Unknown**. Explain findings: No groundwater discharges documented in hydrologic analysis.
☐ Dye (or other) test performed:

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☒ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☒ scour
☐ sediment deposition	☒ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community

[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

☐ other (list):
☐ Discontinuous OHWM.[7] Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: Turbid during flow events but clearer during lower flows
Identify specific pollutants, if known: Suspended solids.

(iv) Biological Characteristics. Channel supports (check all that apply):

☐ Riparian corridor. Characteristics (type, average width):
☒ Wetland fringe. Characteristics: Emergent wetland occurs on fringes of on-channel stock tanks.
☐ Habitat for:
- ☐ Federally Listed species. Explain findings:
- ☐ Fish/spawn areas. Explain findings:
- ☐ Other environmentally-sensitive species. Explain findings:
- ☒ Aquatic/wildlife diversity. Explain findings: Limited invertebrate and songbird utilization.

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:
Properties: PEM fringes associated with on channel ponds
Wetland size: 10 acres
Wetland type. Explain: Wetlands confined to on channel ponds
Wetland quality. Explain: Detailed functional assessment of the wetlands not accomplished. Vegetation in wetland areas are typically desirable and include Typha, Eleocharis, Polyuganum, Carex, Juncus, Sagittaria, Ludwigia, Potamigeton and Ranunculus species. Hydrilla was also documented in some assessed areas. Wetlands are expected to rate as low to average quality based on geomorphic and vegetation type, density as well as agricultural activities and grazing adjacent and in the wetland areas. Wetlands provide soil rentention and protection at pond edges.

Project wetlands cross or serve as state boundaries. N/A

(b) General Flow Relationship with Non-TNW:
Flow is: **Ephemeral flow**. Explain: Wetlands are associated with on-channel pond construction. Outlets exist and/or spills occur during precipitation events from ponds into connecting named and unnamed tributaries to the North Sulphur River.

Surface flow is: **Confined**
Characteristics:

Subsurface flow: **Unknown**. Explain findings:
☐ Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:
☒ Directly abutting – wetlands are created by and connected to pond pool elevations.
☐ Not directly abutting
- ☐ Discrete wetland hydrologic connection. Explain:
- ☐ Ecological connection. Explain:
- ☐ Separated by berm/barrier. Explain: There is an earthen berm east of the wetland.

(d) Proximity (Relationship) to TNW
Project wetlands are **30 (or more)** river miles from TNW.
Project waters are **30 (or more)** aerial (straight) miles from TNW.
Flow is from: **Wetland to navigable waters.**
Estimate approximate location of wetland as within the **2-year or less** floodplain.

(ii) Chemical Characteristics:

[7]Ibid.

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Herbaceous fringe varying in widths from 1 to more than 20 feet as part of 27 on-channel ponds. Wetlands perform water quality functions from overland flow to waters via filtration and sediment trapping, retention and nutrient transformation. Nutrient transformation from stream flow into ponds also accomplished.

Identify specific pollutants, if known: unknown.

(iii) Biological Characteristics. Wetland supports (check all that apply):

☐ Riparian buffer. Characteristics (type, average width):

☒ Vegetation type/percent cover. Explain: Eleocharis, Typha,

☐ Habitat for:

☐ Federally Listed species. Explain findings:

☐ Fish/spawn areas. Explain findings:

☐ Other environmentally-sensitive species. Explain findings:

☒ Aquatic/wildlife diversity. Explain findings: Variation in vegetation communities compared to upland vegetation can provide minor habitat for occasional use of wetland and water dependent species.

3. Characteristics of all wetlands adjacent to tributaries (if any)

All wetland(s) being considered in the cumulative analysis: **25-30**

Approximately 10 acres in total are being considered in the cumulative analysis as identified in the delineation report at 27 on-channel ponds. Off-site desk top estimation was used to identify wetland fringes occurring with on-channel ponds. The higher resolution aerial photographs from 2014-2016 compared to those used in the 2006 PJD report facilitated in refinements of the previously identified (delineated) aquatic resources as well as identification in modifications to aquatic resources within the project area (erosional features, impoundments, etc.). These refinements to the delineated aquatic resources were performed as a "desktop" evaluation. To ground-truth observations from the desktop evaluation, field investigations were performed May 30 through June 2, 2017 to assess a representative sample area of portions of the 13,094-acre assessment area. These "on the ground" assessments aided in verification of identified aquatic resources from the desktop evaluation as well as to map the limits of potential waters of the U.S. identified both from the desktop evaluation and in the field. As an example, 14 of the 47 mapped on-channel ponds within the assessment area representing approximately 29.7 percent were investigated in the field. Lacustrine "fringe" wetland areas associated with the 14 on-channel ponds assessed in the field were observed and recorded in the field. The lacustrine wetlands, predominantly herbaceous emergent wetlands, represented approximately 3.4 acres of the 23.8 acres of the 14 on-channel ponds assessed or approximately 14.3 percent of the assessed on-channel pond acreage. This percentage of fringe wetlands was used to estimate the lacustrine wetland area associated with the total delineated area of on-channel impoundments within the assessment area that would be considered as hydraulically and hydrologically connected to waters of the U.S. Calculation of area of Lacustrine Fringe Wetlands (emergent) totaled 3.4 acres identified for 23.8 acres of 14 on-channel ponds that were field assessed. This equated to 14.3 percent of 69.9 acres of 47 on-channel ponds within assessment area resulting in the determination that slightly less than10 acres of on-channel fringe wetlands exist.

Summarize overall biological, chemical and physical functions being performed: See descriptions above.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: The North Sulphur River totals 65,646 linear feet in the study area and is intermittent. Additionally, numerous ephemeral tributaries totaling 625,272 lineal feet have continuous ordinary high water marks that feed into the North Sulphur River. On said tributaries are 47 on channel ponds totaling 59.89 acres of open water. Wetland fringes associated with the ponds total 10 acres. All streams flow during and shortly after precipitation events allowing for biological and chemical contributions to the North Sulphur River which flows into Relatively Permanent Flow portions of the channel and eventually into the Sulphur River which is a TNW. Sediment, biota (including fish from on channel stock tanks) and organic matter are contributed to the North Sulphur River. Tributaries can also act as refugia during high flow events in the North Sulphur River. The tributaries and on channel wetlands also contribute as well as carry pollutants and flood waters to TNWs, can reduce amount of pollutants or flood water reaching a TNW, and transfer nutrients and organic carbon downstream.

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

     Provide estimates for jurisdictional waters in the review area (check all that apply):
     - ☐ Tributary waters: linear feet width (ft).
     - ☐ Other non-wetland waters: acres.
       Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   - ☒ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   - ☒ Tributary waters: **690,918** linear feet and up to **45** width (ft).
   - ☒ Other non-wetland waters: **59.89** acres of on channel ponds.
     Identify type(s) of waters: On channel ponds.

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
     - ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
     - ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☒ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

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[8]See Footnote # 3.

Provide acreage estimates for jurisdictional wetlands in the review area: **10** acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.**[9]
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   ☒ Demonstrate that impoundment was created from "waters of the U.S.," (see **69.89** acres of on-channel ponds and associated fringe wetlands as detailed in this form), or
   ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]

☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
   Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

☒ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and Great Plains Regional Supplement.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
   ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☒ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Numerous stock tanks constructed in uplands exist as well as stock tanks that are not connected to tributaries to the North Sulphur River. Isolated forested wetlands also exist which are not adjacent due to significant channel degradation of North Sulphur River and are no longer connected to or have interaction with the river.
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☒ Lakes/ponds: 83 acres upland ponds/stock tanks.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☒ Wetlands: 3.8 acres.

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[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☒ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps:
- ☐ Corps navigable waters' study:
- ☒ U.S. Geological Survey Hydrologic Atlas:
  - ☐ USGS NHD data.
  - ☒ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: Greenville NW, Celeste, Pike, Wolfe City, Gober, Ladonia, Honey Grove and Dodd City.
- ☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Fannin.
- ☒ National wetlands inventory map(s). Cite name: See USGS quad map names.
- ☐ State/Local wetland inventory map(s):
- ☐ FEMA/FIRM maps:
- ☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): 2003-2005 and 2014-2016 FSA NAIP and 2015 Texas Ortho-imagery Project.
  or ☒ Other (Name & Date): On site photos from 2006 delineation report and 2017 supplment.
- ☐ Previous determination(s). File no. and date of response letter:
- ☐ Applicable/supporting case law:
- ☐ Applicable/supporting scientific literature:
- ☐ Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD: