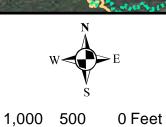
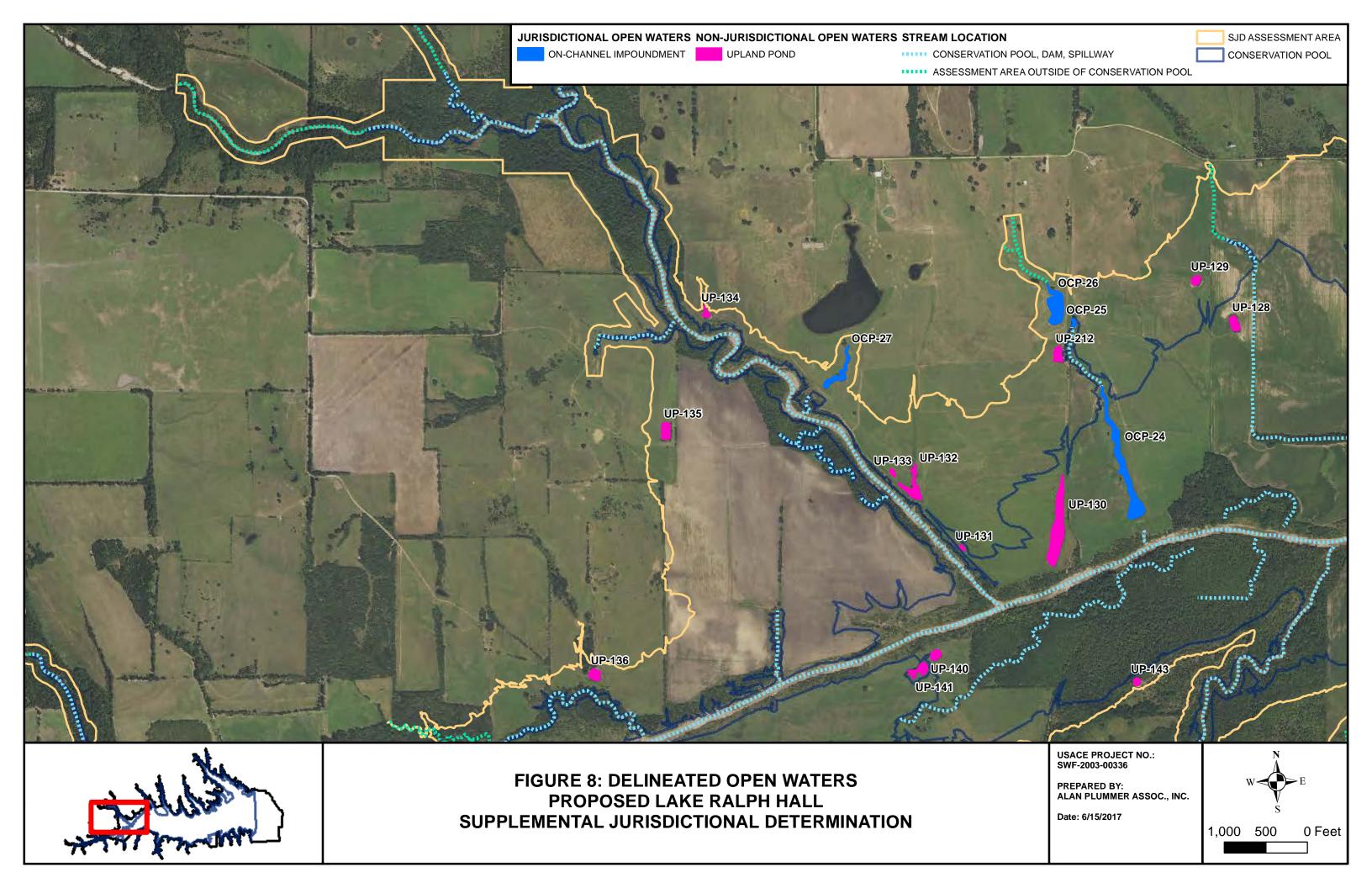


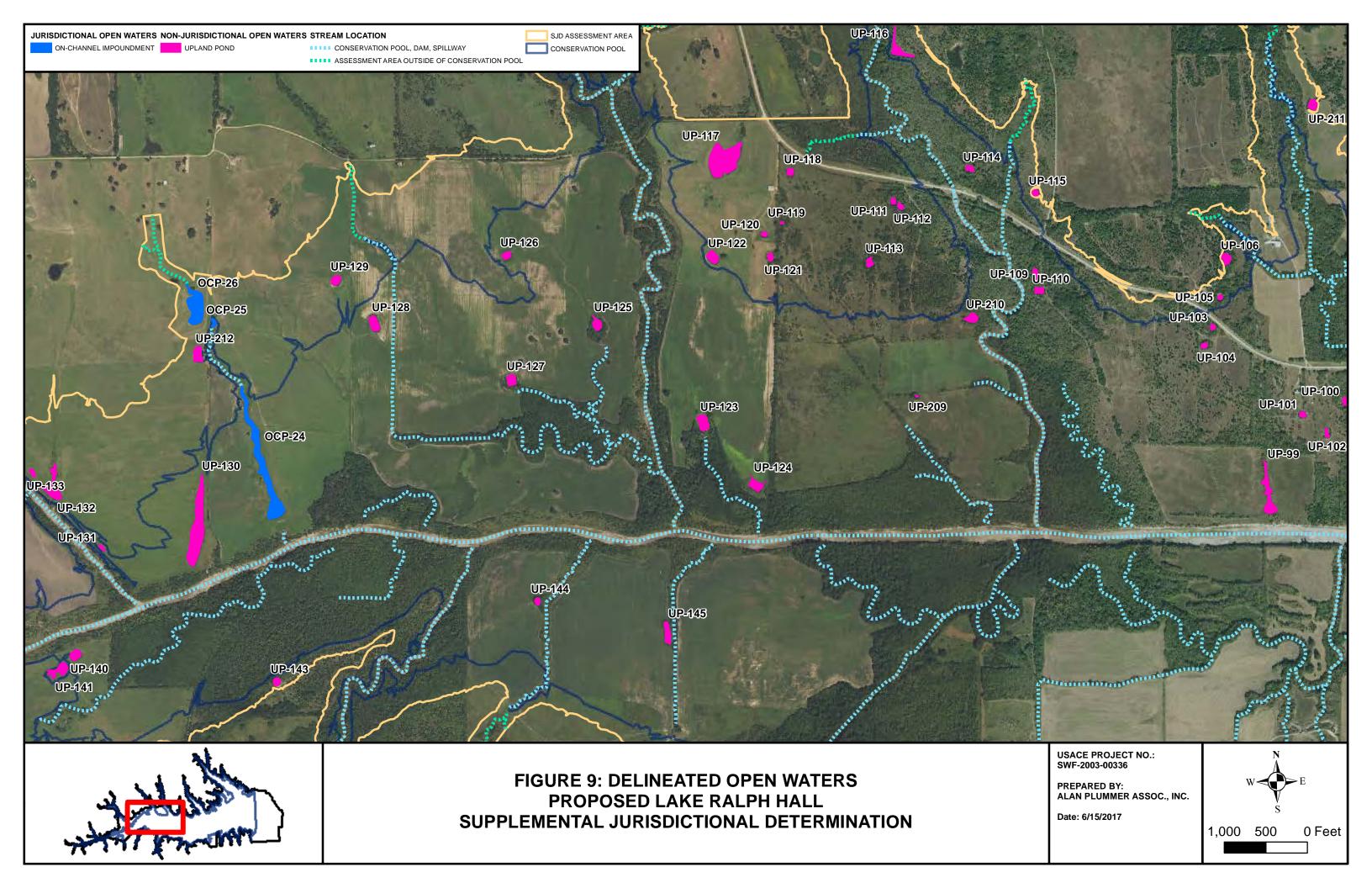
FIGURE 7: DELINEATED OPEN WATERS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

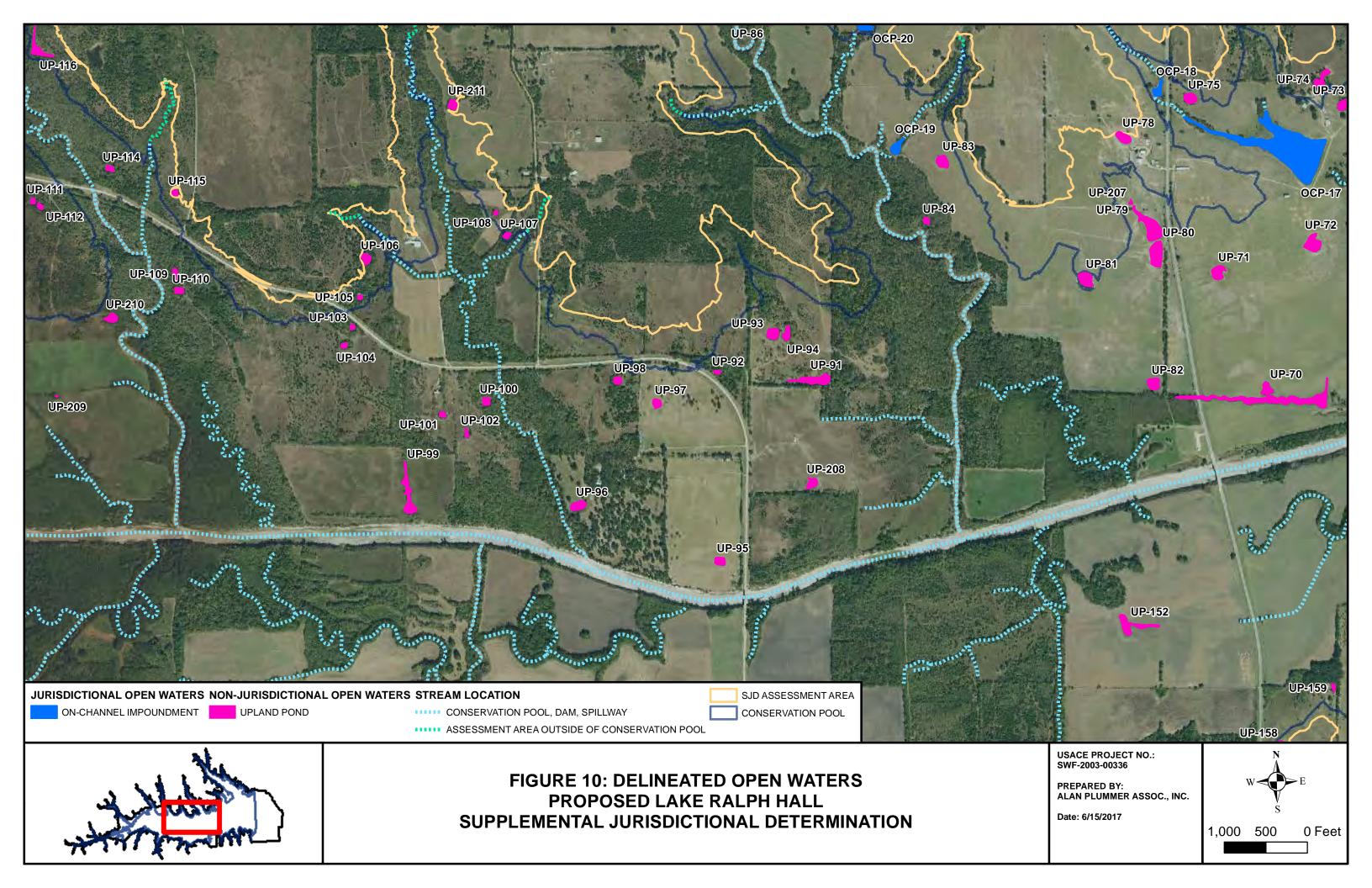
PREPARED BY: ALAN PLUMMER ASSOC., INC.

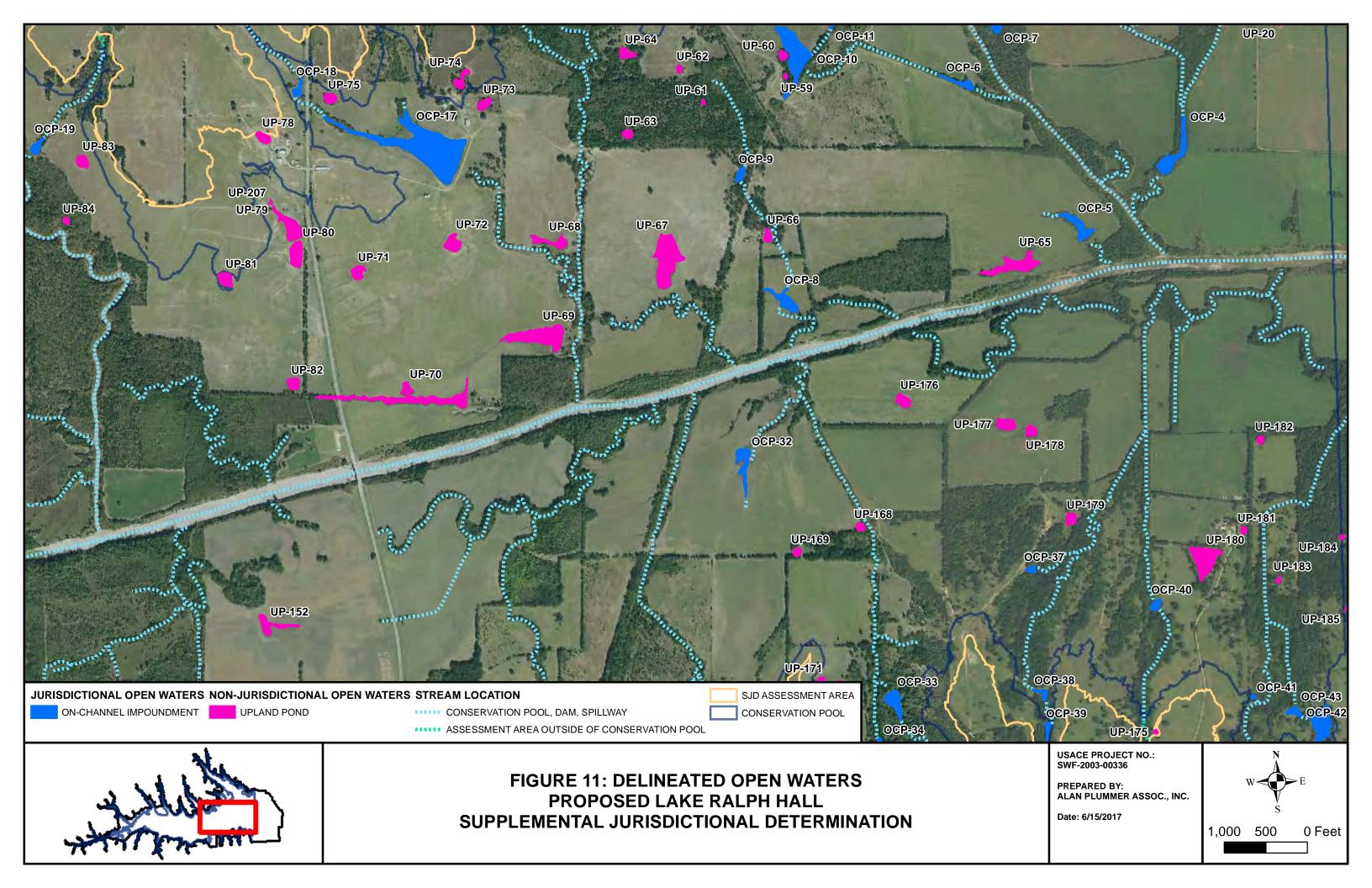
Date: 6/15/2017

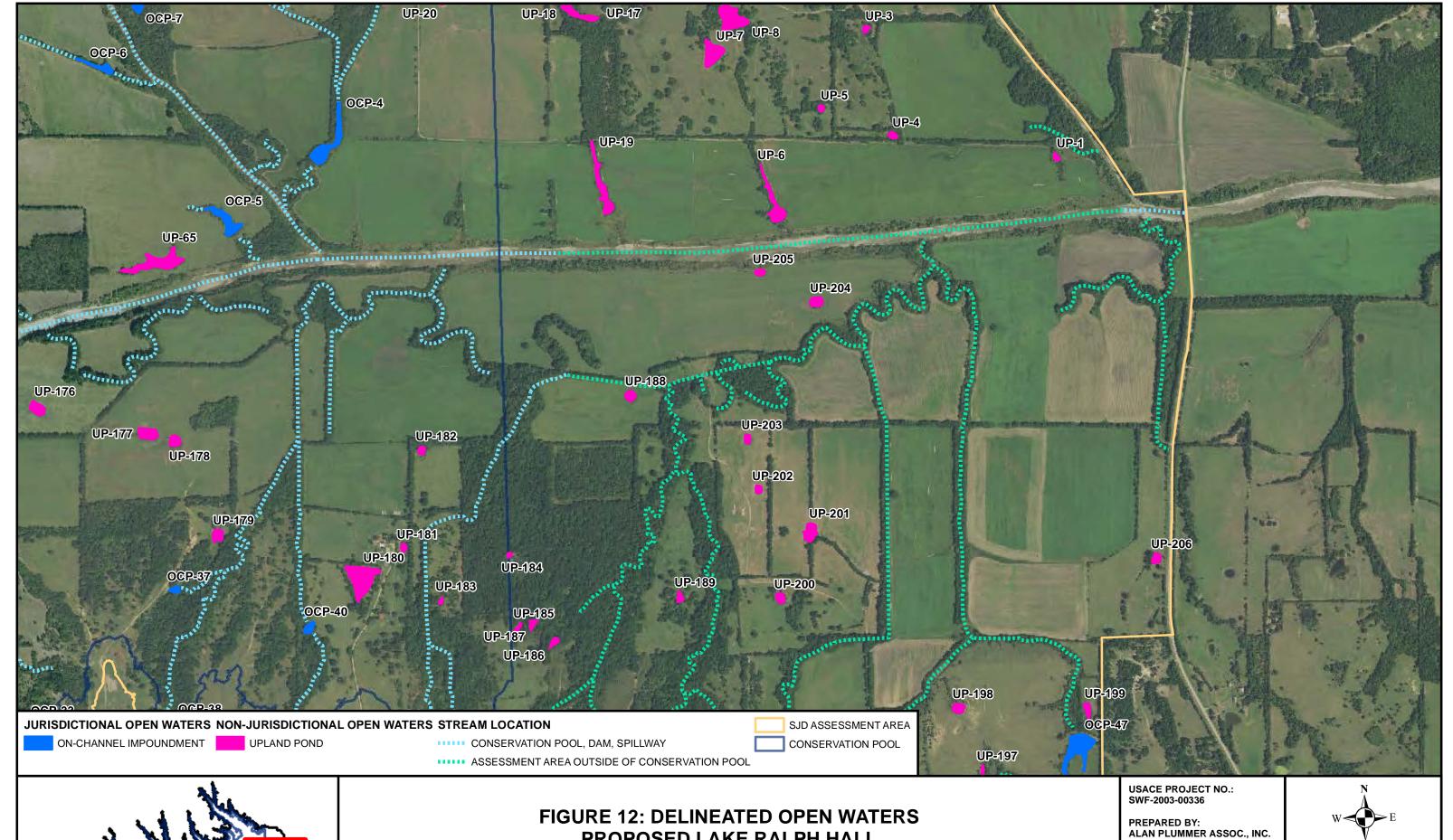








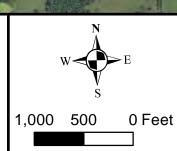


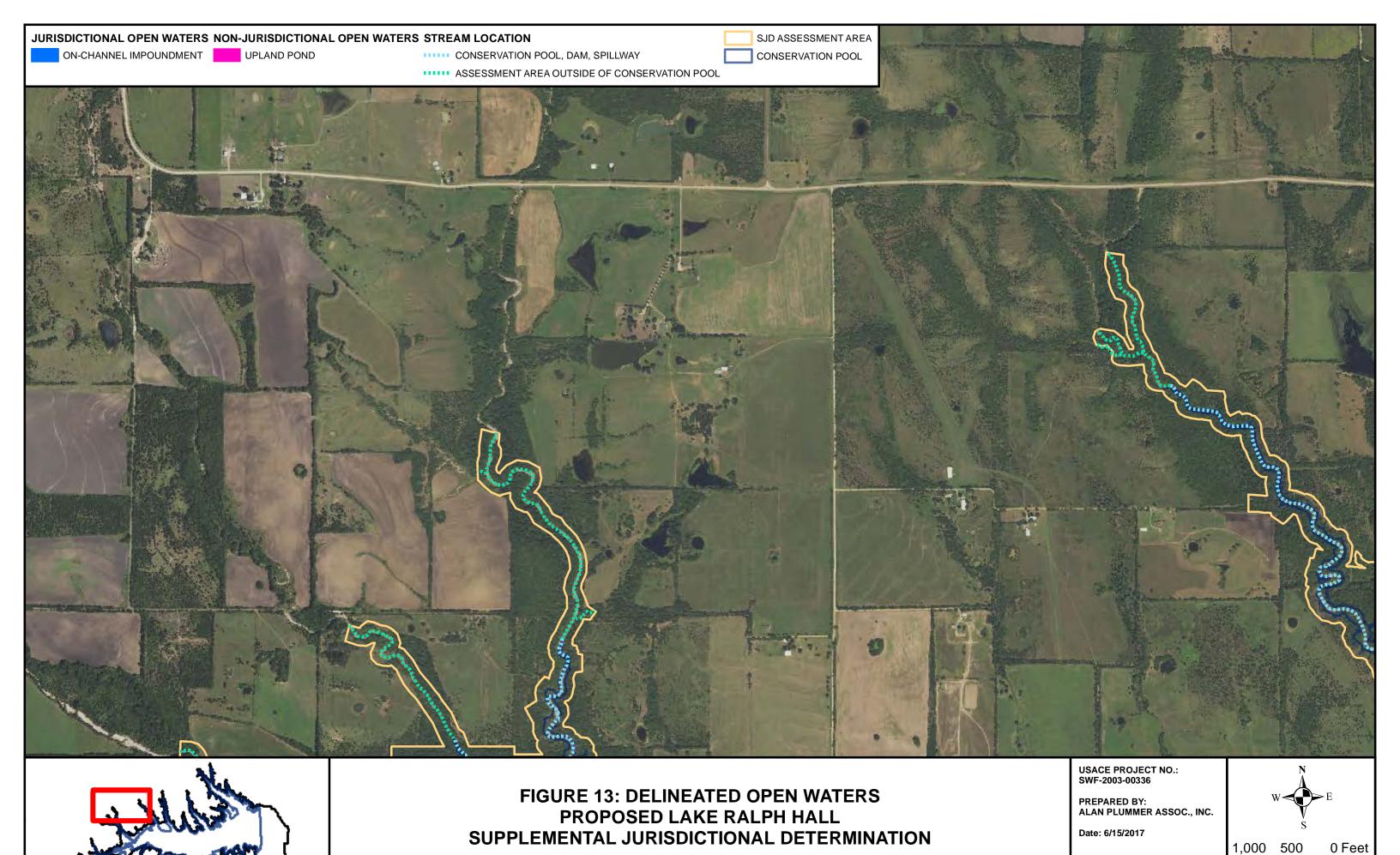


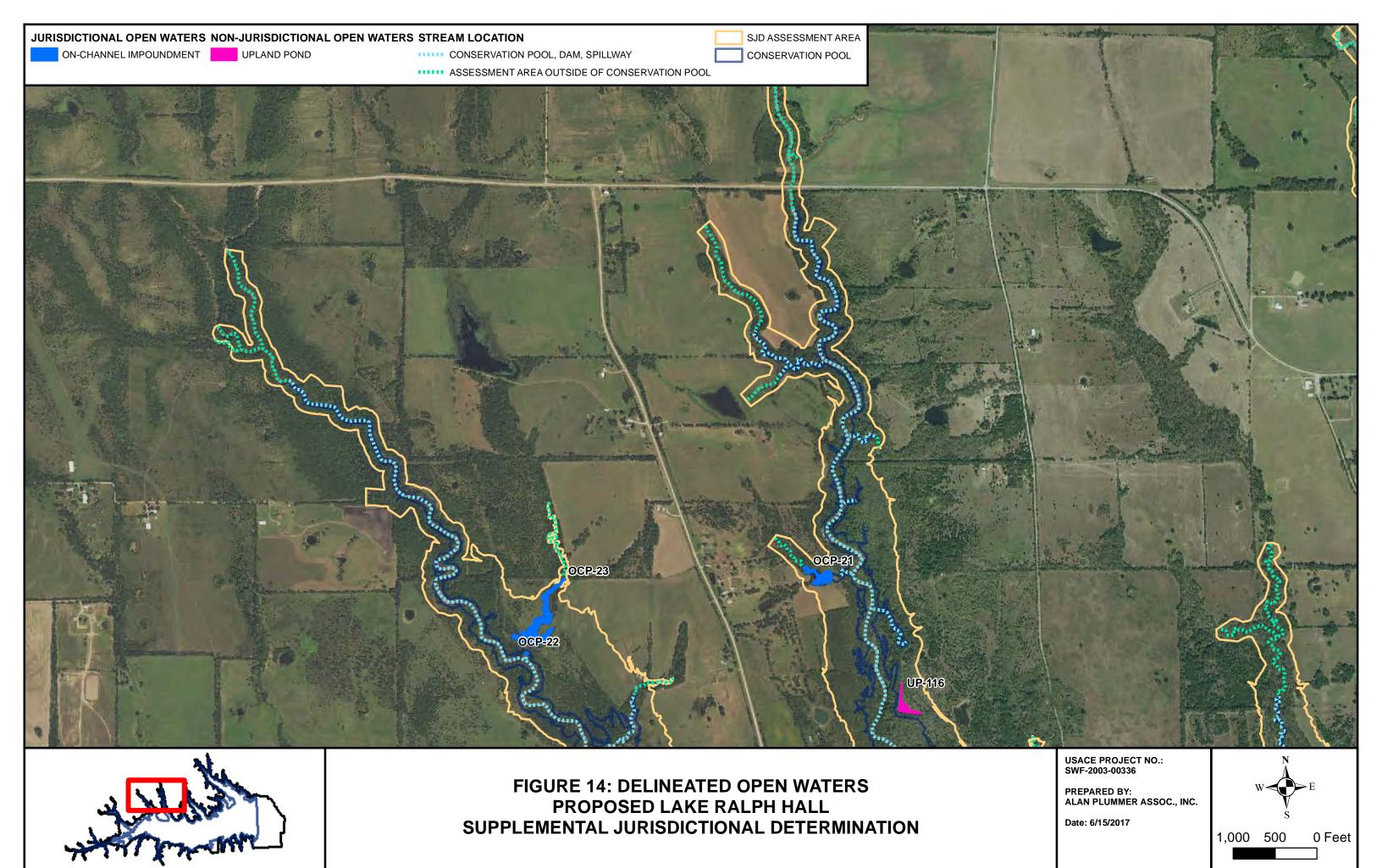


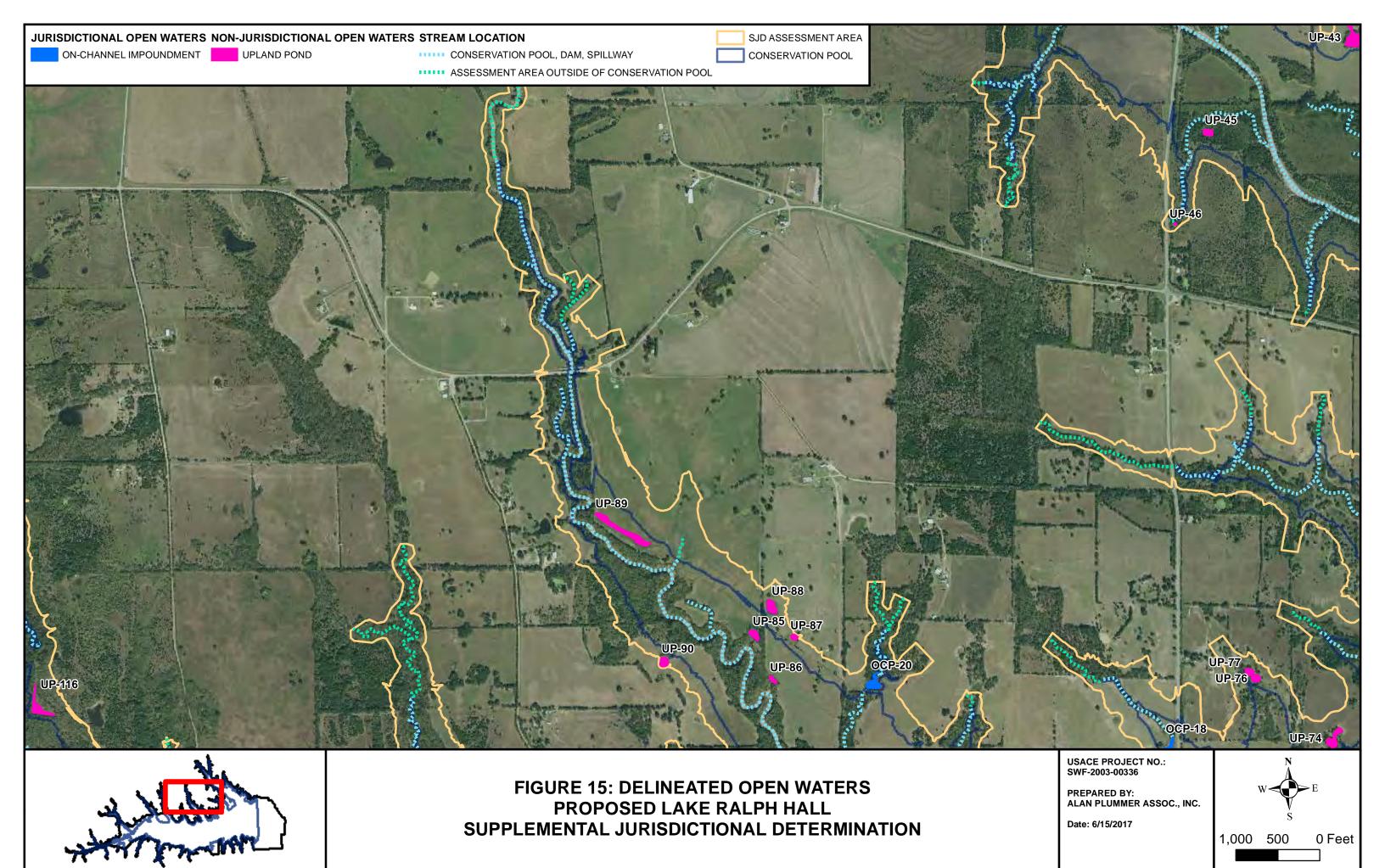
PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION

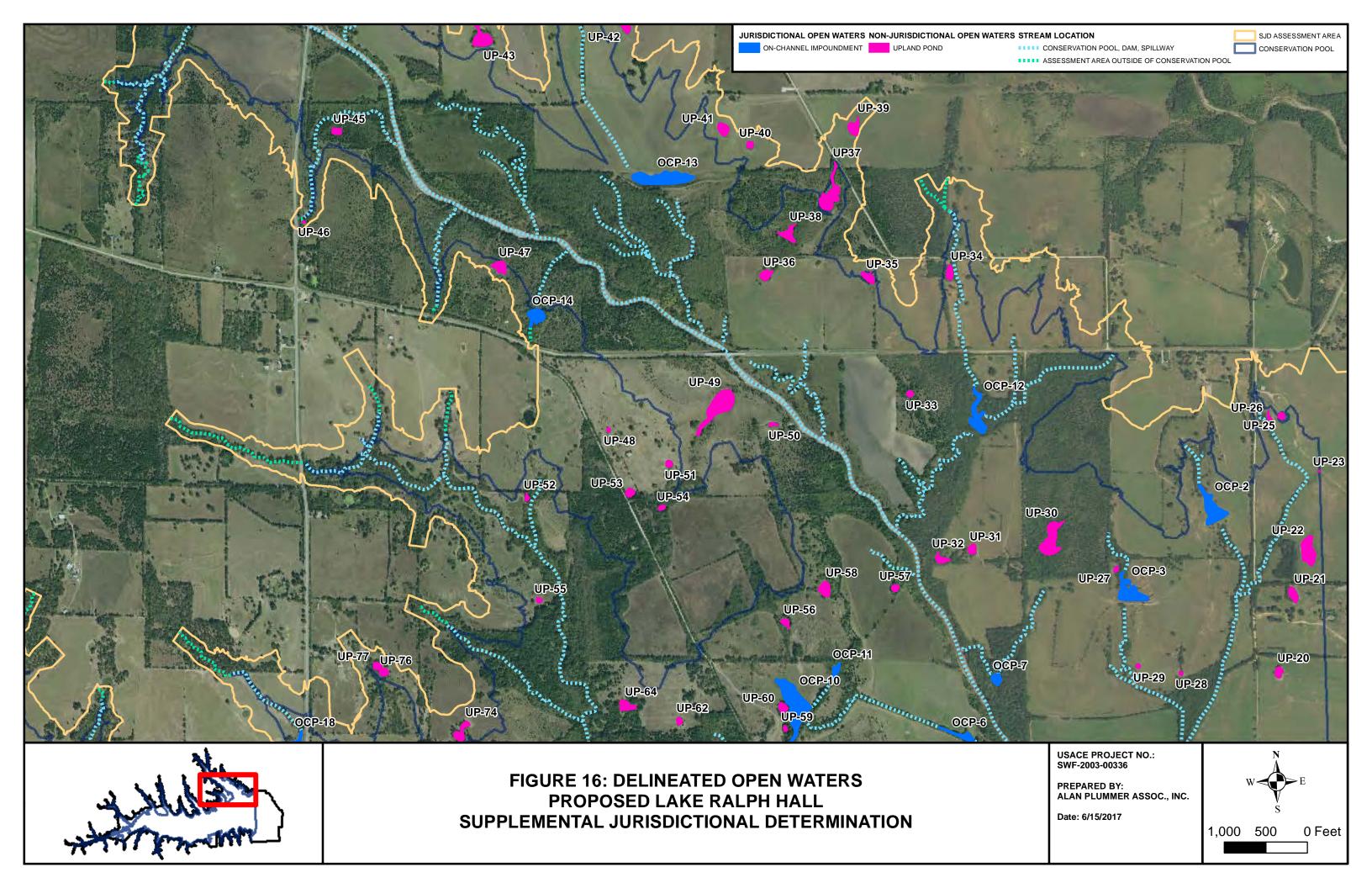
Date: 6/15/2017

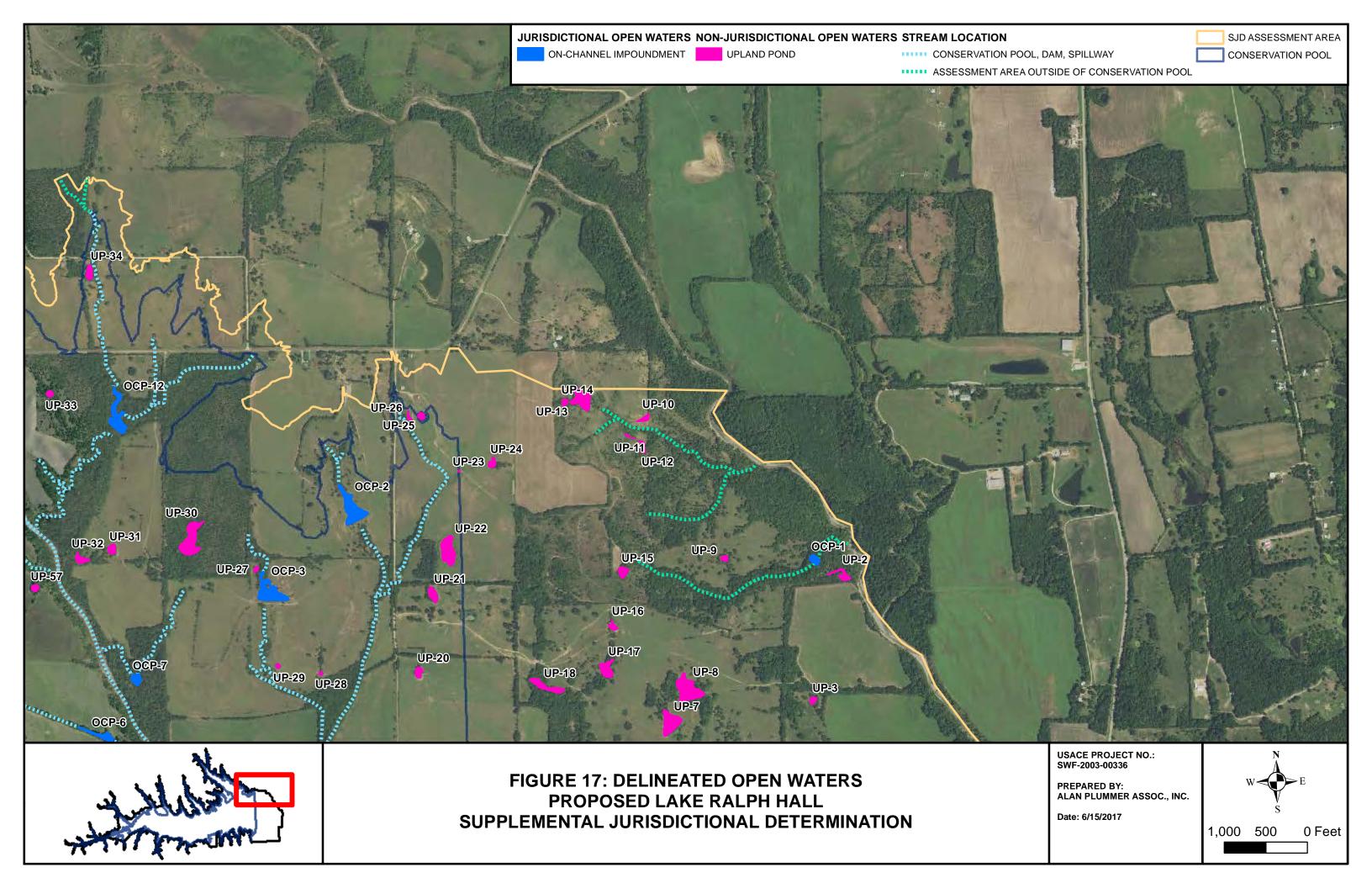


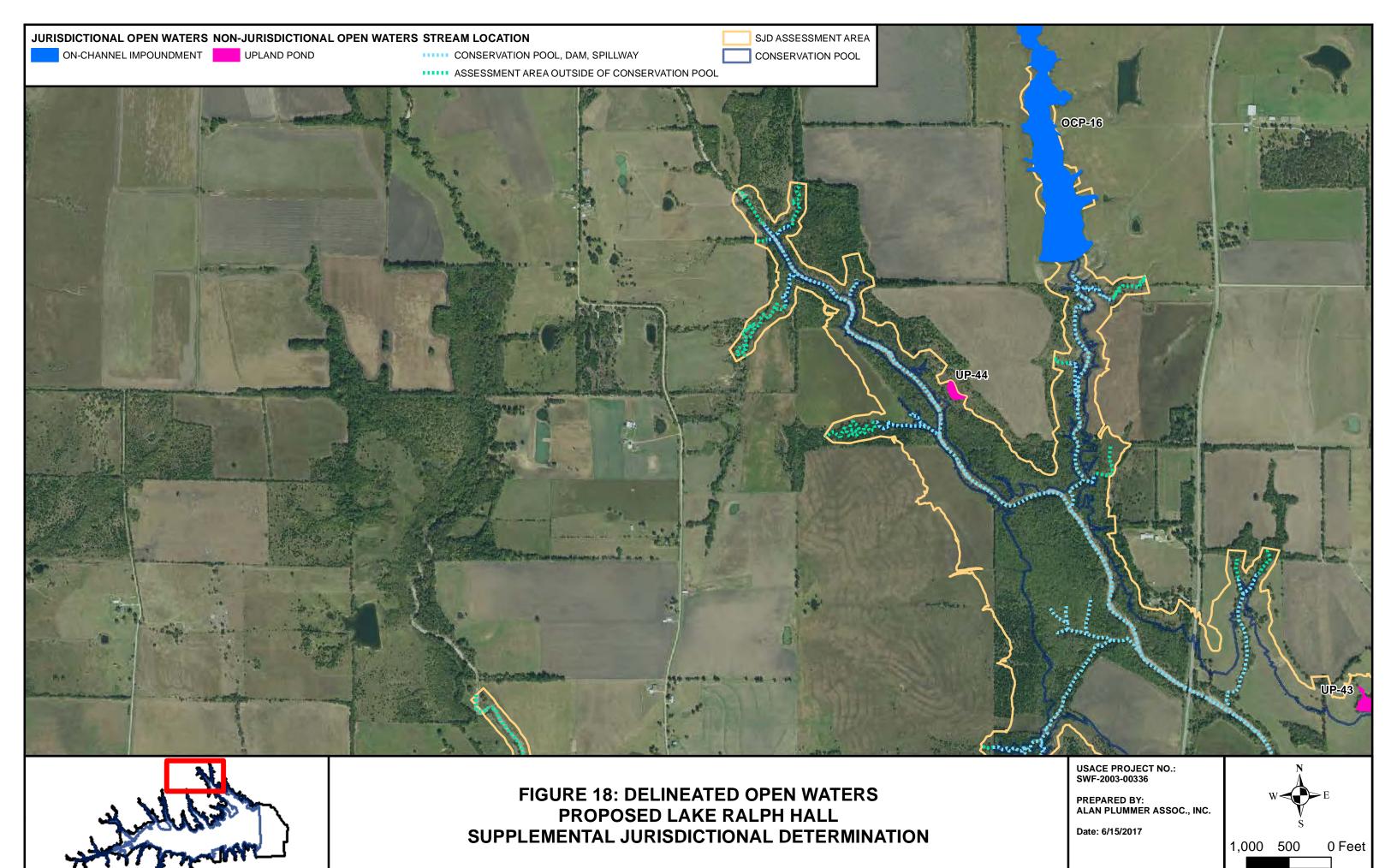


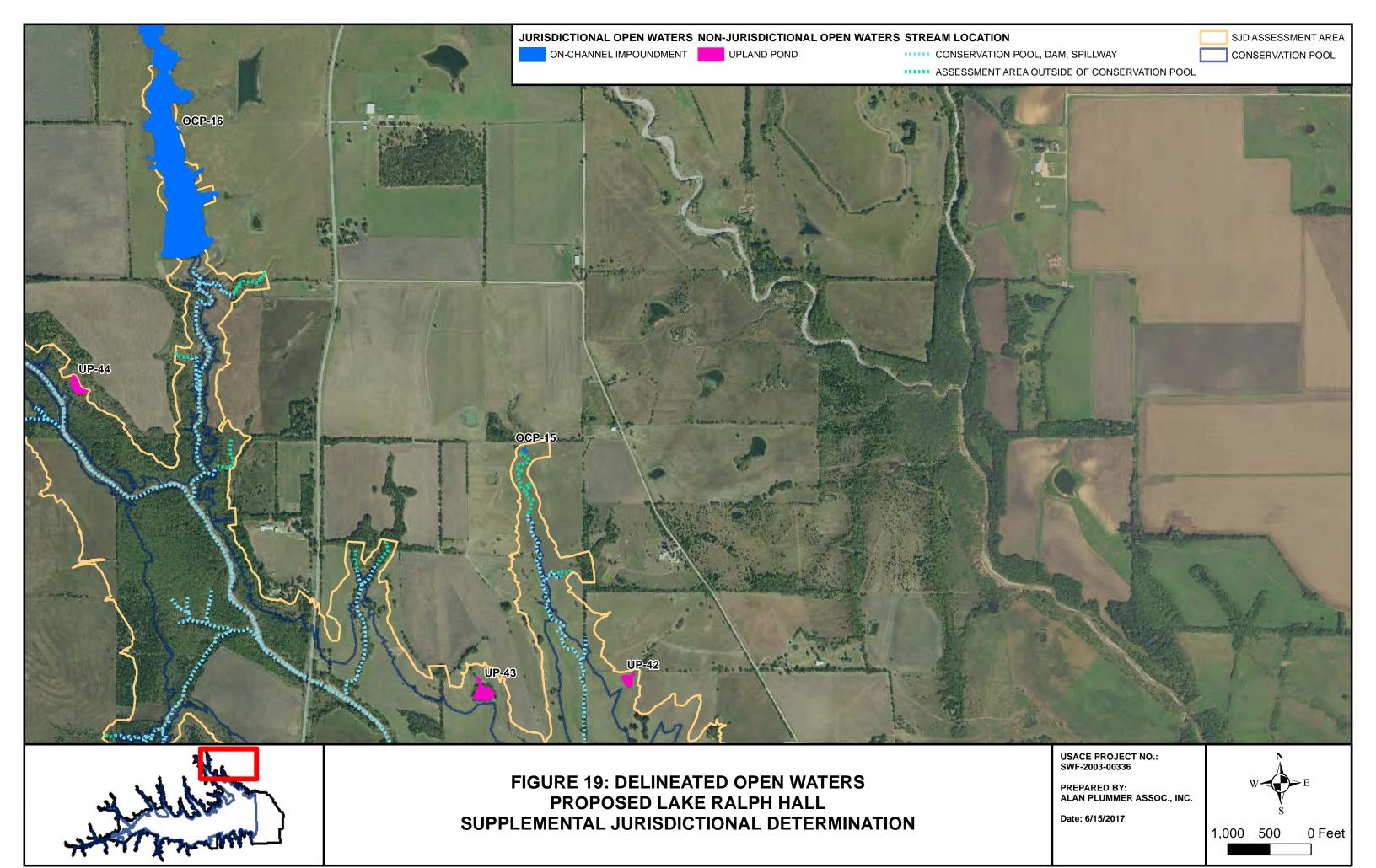












# MAPBOOK DELINEATED ISOLATED FORESTED WETLANDS





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

PREPARED BY: ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017







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

PREPARED BY: ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017





PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION

PREPARED BY: ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017



145 0 Feet 290





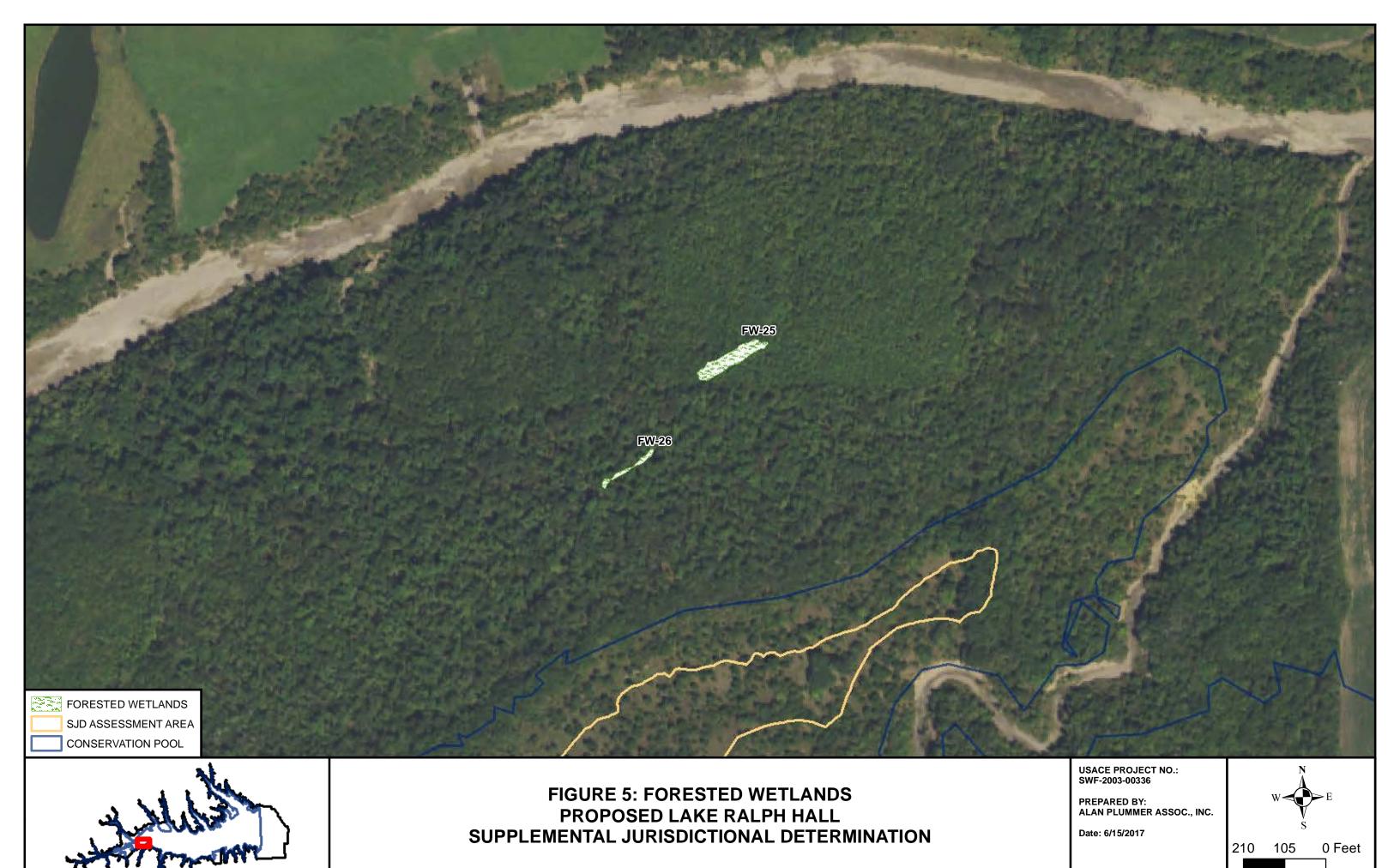
**FIGURE 4: FORESTED WETLANDS** PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION USACE PROJECT NO.: SWF-2003-00336

PREPARED BY: ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017



370 185 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

PREPARED BY: ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017







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

PREPARED BY: ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017

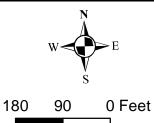






FIGURE 3: WETLAND DETERMINATION DATA FORMS
SAMPLING LOCATIONS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

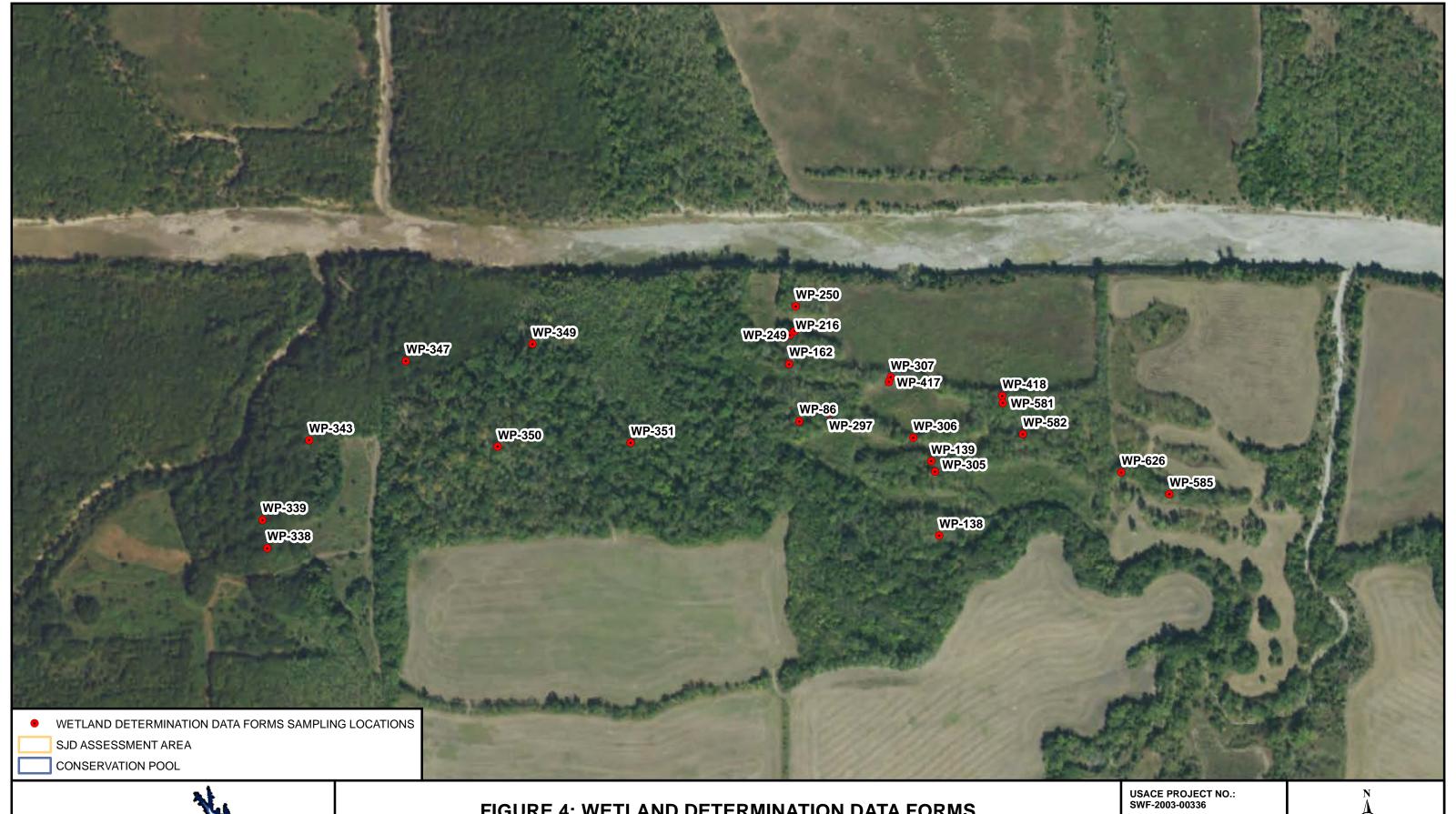
USACE PROJECT NO.: SWF-2003-00336

PREPARED BY: ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017



410 205 0 Feet



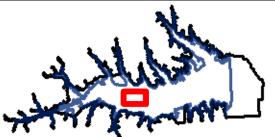


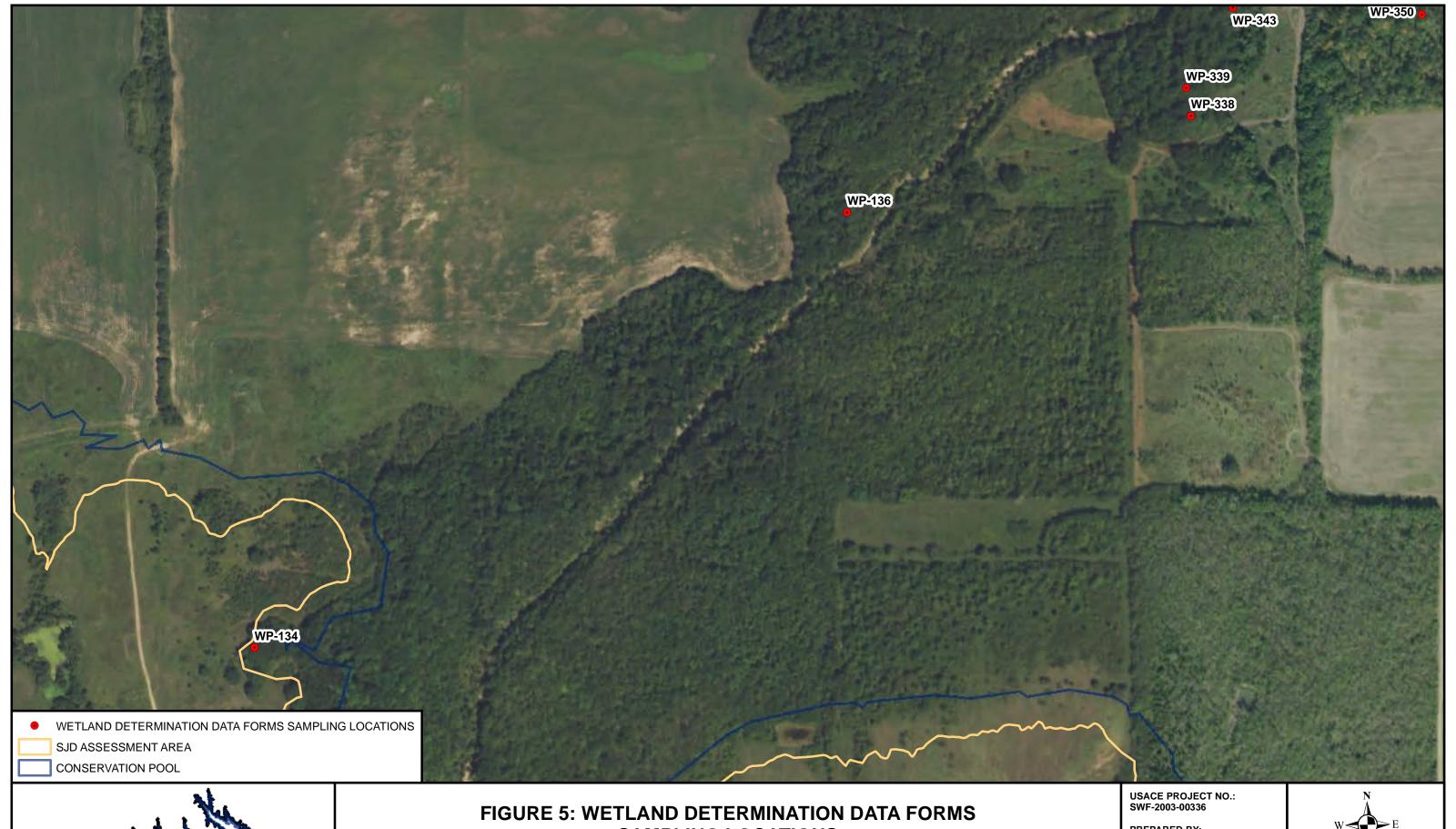
FIGURE 4: WETLAND DETERMINATION DATA FORMS
SAMPLING LOCATIONS
PROPOSED LAKE RALPH HALL
SUPPLEMENTAL JURISDICTIONAL DETERMINATION

PREPARED BY: ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017



330 165 0 Feet



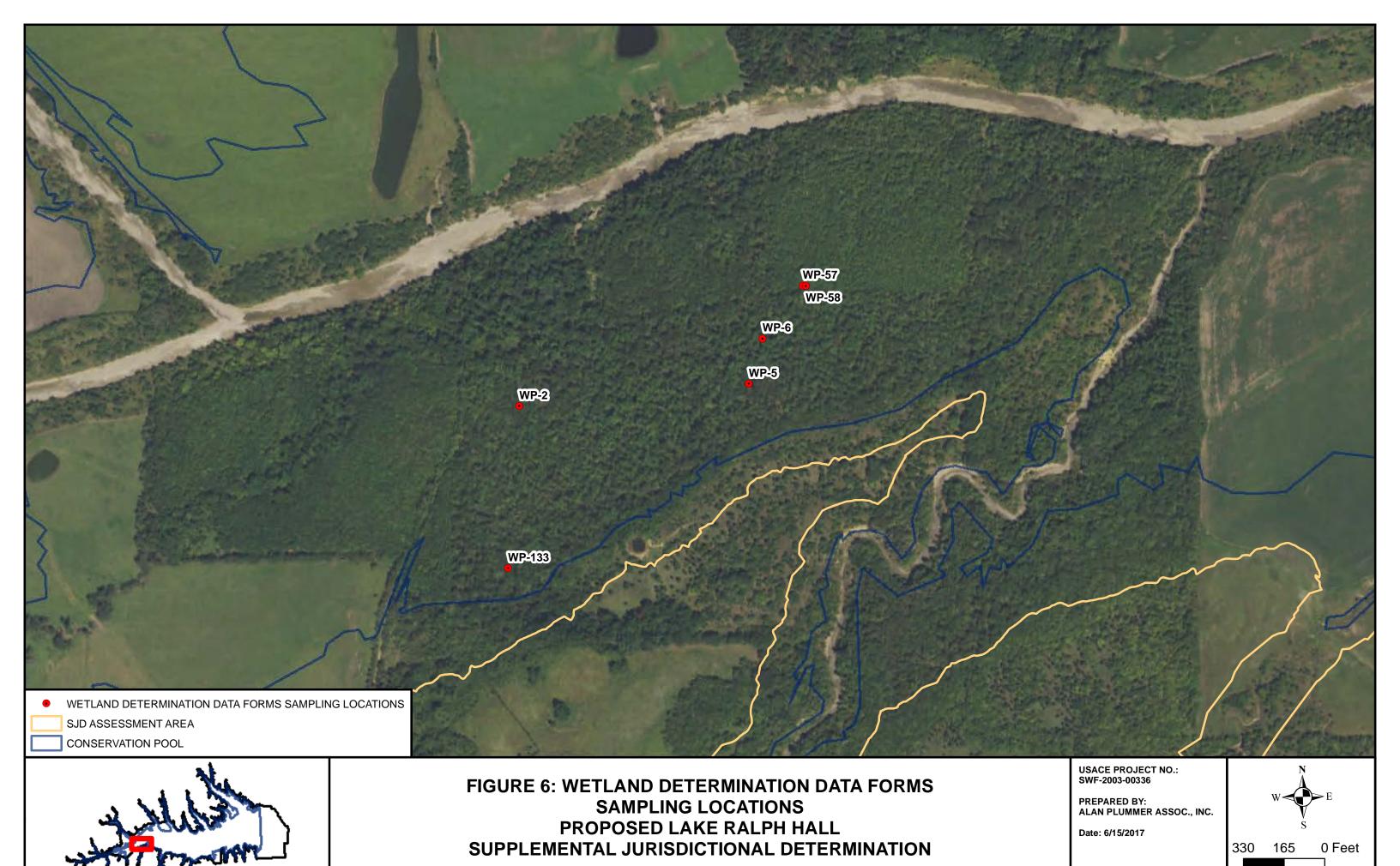


**SAMPLING LOCATIONS** PROPOSED LAKE RALPH HALL SUPPLEMENTAL JURISDICTIONAL DETERMINATION

PREPARED BY: ALAN PLUMMER ASSOC., INC.

Date: 6/15/2017







## WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall		City/Coun	ty: Ladonia/F	annin	Samplin	ng Date: 6/2/2	017	
Applicant/Owner: Upper Trinity Regional Water District State: TX Sampling Point: WP						!		
Investigator(s): Jason Voight, Andrew Sample		Section, T	ownship, Ra	nge:				
Landform (hillslope, terrace, etc.): Valley		Local reli	ef (concave,	convex, none): Concave				
Subregion (LRR): Southwest Prairies	Lat: 33.4	15226		Long: <u>-96.01460</u>		Datum: N	IAD83	
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classific				
Are climatic / hydrologic conditions on the site typical for	this time of ve							
Are Vegetation, Soil, or Hydrology				'Normal Circumstances"			No	
Are Vegetation, Soil _X _, or Hydrology				eeded, explain any answe				
SUMMARY OF FINDINGS – Attach site ma							res, etc	
Hydrophytic Vegetation Present? Yes X	No		(l 0 l l	14				
Hydric Soil Present? Yes	No X		the Sampled thin a Wetlar		No	No _X		
Wetland Hydrology Present? Yes	No X	WII	uiiii a vveuai	iu: 165	NO	_ NO _^		
Remarks:								
Heavy storms the previous day; wood  VEGETATION – Use scientific names of pla			Ortif Odip	ndi Niver channe				
700 #	Absolute		nt Indicator	Dominance Test worl	sheet:			
Tree Stratum (Plot size: 700 sq ft )	% Cover 20	Species Yes	? Status FAC	Number of Dominant S				
Fraxinus pennsylvanica     Ulmus crassifolia	25	Yes	FAC	That Are OBL, FACW, (excluding FAC-):	or FAC	4	(A)	
3. Celtis laevigata	45	Yes	FAC				_	
4. Malcura pomifera	5	No	FACU	Total Number of Domir Species Across All Stra		5	(B)	
	95	= Total C	over				_ ` ` `	
Sapling/Shrub Stratum (Plot size: 700 sq ft )		- rotar o	0101	Percent of Dominant S That Are OBL, FACW,		80	(A/B)	
1. Fraxinus pennsylvanica	5	No	FAC	Prevalence Index wor	rkohooti			
2. Celtis laevigata		No	FAC	Total % Cover of:		Multiply by:		
3. Ulmus crassifolia	<u>5</u> 3	No No	FACU UPL	OBL species				
Juniperus virginiana     Symphoricarpos orbiculatus	<u>3</u>	No No	FACU	FACW species				
5. Symphonicarpos dibiculatus		-		FAC species				
Herb Stratum (Plot size: 450 sq ft	20	= Total C	over	FACU species		4 =		
1. Elymus virginicus	50	Yes	FAC	UPL species				
2. Toxicodendron radicans	15	No	FACU	Column Totals:	(A	n)	(B)	
3. Torillis arvensis	10	No	UPL	Prevalence Index	, _ B/\ _			
4. Carex planostachys	25	Yes	UPL	Hydrophytic Vegetati				
5				1 - Rapid Test for				
6				2 - Dominance Te		-		
7				3 - Prevalence Ind	ex is ≤3.0	)1		
8				4 - Morphological				
9		-		data in Remark		•	,	
10		= Total C	over	Problematic Hydro	phytic Ve	getation' (Exp	olain)	
Woody Vine Stratum (Plot size: 450 sq ft )		- Total C	0.401	<sup>1</sup> Indicators of hydric so			y must	
1. Toxicodendron radicans	5	No	FACU	be present, unless dist	urbed or p	oroblematic.		
2. Smilax sp.	2	No	FAC	Hydrophytic				
0/ Page Cround in Horb Strature 0	7	= Total C	over	Vegetation Present? Ye	s X	No		
% Bare Ground in Herb Stratum 0  Remarks:				1			•	

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SOIL Sampling Point: WP2

Profile Desc	cription: (Describ	e to the depth	needed to docu	ment the i	ndicator	or confirm	the absence of	indicators.)	
Depth	Matrix			x Features	1	. 2	<b>-</b>		
(inches)	Color (moist)		Color (moist)	%	Type'	<u>Loc<sup>2</sup></u>	<u>Texture</u>	Remarks	_
0-18	10 YR 3/2	100					Clay		_
									_
									_
				_ <del>_</del>		_			
									_
									-
									_
									_
									_
	oncentration, D=D	•				d Sand Gr		on: PL=Pore Lining, M=Matrix.	
	Indicators: (Appl	icable to all L	_				_	Problematic Hydric Soils <sup>3</sup> :	
Histosol	. ,			Gleyed Ma	, ,			k (A9) (LRR I, J)	
	pipedon (A2)			Redox (S5				irie Redox (A16) (LRR F, G, H)	
	istic (A3) en Sulfide (A4)			d Matrix (S Mucky Mir	•			ace (S7) ( <b>LRR G</b> ) as Depressions (F16)	
	d Layers (A5) ( <b>LRF</b>	R F)		Gleyed Ma			_	Houtside of MLRA 72 & 73)	
	uck (A9) ( <b>LRR F, G</b>	,		ed Matrix (I			_ `	Vertic (F18)	
	d Below Dark Surfa			Dark Surfa	,			nt Material (TF2)	
_	ark Surface (A12)			ed Dark Su	, ,			low Dark Surface (TF12)	
	Mucky Mineral (S1)			Depression	. ,	4.0)		plain in Remarks)	
	Mucky Peat or Pea	` , ` .		ains Depre	•	,		nydrophytic vegetation and	
S CM IVIL	ucky Peat or Peat (	(LKK F)	(ML	RA 72 & 7	O UT LKK	<b>n</b> )		drology must be present, drology must be present,	
Restrictive	Layer (if present)	:					unicss dis	naneou or problematio.	
Type:	_ayo. ( p. 000)								
, , <u> </u>	ches):						Hydric Soil Pre	esent? Yes No_X	
Remarks:	·-/.		<del></del>				1 ,		
No redox	x features; T	inn clay,	occasionally	floode	d is na	tionally	y listed hydr	ic soil; naturally dark so	oil
	CV								
HYDROLO									
_	drology Indicator								
	cators (minimum o	fone required;		•				Indicators (minimum of two required	<u>(t</u>
	Water (A1)		Salt Crust		- (D16)			e Soil Cracks (B6)	
ı 📻 🐧	ater Table (A2)		_ :	vertebrate	. ,			ly Vegetated Concave Surface (B8)	1
Saturation (A3)  Hydrogen Sulfide Odor (C1)  Water Marks (B1)  Dry-Season Water Table (C2)  Dry-Season Water Table (C2)  Oxidized Rhizospheres on Living Ro						, ,	۱۵۱		
	larks (B1) nt Deposits (B2)					na Boots	<del></del>	d Rhizospheres on Living Roots (C	<b>3</b> )
1 1 1	posits (B3)		· <del></del>	Rhizosphe not tilled)		ing Roots		re tilled) h Burrows (C8)	
1 1 1	at or Crust (B4)			of Reduce		1)		ion Visible on Aerial Imagery (C9)	
1 1 -	posits (B5)			s Surface (		'/		rphic Position (D2)	
	on Visible on Aeria	al Imagery (B7)		plain in Re				eutral Test (D5)	
	stained Leaves (B9		55. (2.4		,			leave Hummocks (D7) (LRR F)	
Field Obser	,	-						, , , , , ,	
Surface Wat	er Present?	Yes N	o X Depth (ir	iches):		_			
Water Table	Present?		o X Depth (ir						
Saturation P	resent?		o X Depth (ir				and Hydrology P	resent? Yes NoX	_
(includes car	oillary fringe)								_
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
D									
Remarks:									













## WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD	City/County: Ladonia/Fannin Sampling Date: 5/30/17					7	
Applicant/Owner: Upper Trinity Regional Water District				State: TX	Samplinç	Sampling Point: WP3	
Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:							
Landform (hillslope, terrace, etc.): Valley						Slope (%)	. 0-1%
				Long: <u>-95.89972</u>			
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classific			
Are climatic / hydrologic conditions on the site typical for the							
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"		Yes X N	lo
Are Vegetation, Soil _X, or Hydrology				eeded, explain any answe		·	
SUMMARY OF FINDINGS – Attach site map							s, etc.
Hydrophytic Vegetation Present? Yes X	No						
Hydrophytic Vegetation Present?  Yes X  Yes X  Yes X	No		the Sampled				
Wetland Hydrology Present? Yes X	No	W	ithin a Wetlai	nd? Yes _ ^_	No		
Remarks:		l l					
Forested wetland, part of the remnant	North Su	ılphur	River cha	annel; not hyrauli	cally or	r hydrolog	ically
connected to any stream channel		•		•	•	, ,	•
VECETATION Lies scientific names of pla	nto						
VEGETATION – Use scientific names of pla	Absolute	Domine	ant Indicator	Dominanaa Taat warl	robooti		
Tree Stratum (Plot size: 700 sq ft )			ant Indicator s? Status	Dominance Test work  Number of Dominant S			
1. Fraxinus pennsylvanica	90	Yes	FAC	That Are OBL, FACW,		4	
2. Populus deltoides	5	No	FAC	(excluding FAC-):		1	(A)
3				Total Number of Domir		1	<b>(5</b> )
4				Species Across All Stra	ıta:	1	(B)
Sapling/Shrub Stratum (Plot size: 700 sq ft)	95	= Total (	Cover	Percent of Dominant S		100	(A /D)
1. Fraxinus pennsylvanica	5	No	FAC	That Are OBL, FACW,	or FAC:	100	(A/B)
2. Celtis laevigata	2	No	FAC	Prevalence Index wor	ksheet:		
3. Carya ovata	1	No	FACU	Total % Cover of:			
4				OBL species			
5				FACW species			
450 sq.ft	8	= Total (	Cover	FACIL appeies		_	_
Herb Stratum (Plot size: 450 sq ft 1. Lolium multiflorum	5	No	UPL	FACU species UPL species		4 = 5 <i>-</i>	_
2 Ranunculus hispidus	_ <del>1</del>	No	FACW	Column Totals:			
3. Torillis arvensis	1	No	UPL	Column Fotalo.	(//)		(D)
4. Ambrosia trifida	1	No	FAC	Prevalence Index			_
5.				Hydrophytic Vegetati			
6.				1 - Rapid Test for		•	
7							
8				3 - Prevalence Ind 4 - Morphological			
9				data in Remark	s or on a s	separate sheet	pporting )
10	•			Problematic Hydro	phytic Veç	getation <sup>1</sup> (Expla	ain)
Woody Vine Stratum (Plot size: 450 sq ft )	8	= Total (	Cover	<sup>1</sup> Indicators of hydric so	il and wetl:	and hydrology	must
1				be present, unless dist			must
2.				Hydrophytic			
	0	= Total (	Cover	Vegetation	s X	No	
% Bare Ground in Herb Stratum 92				i-lescill: 16	<u> </u>	NO	
Remarks:							

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SOIL Sampling Point: WP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix		Redox Features			. 2	Toutons Dougette		
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks	
0-18	10 YR 3/1	90	10 YR 4/6	10	<u>C</u>	M	Clay		
				-					
							<del></del>		
							<u> </u>		
								_	
1Type: C=Cc	ncentration D-Der	oletion RM	=Reduced Matrix, CS	S-Covere	d or Coat	ed Sand G	Grains <sup>2</sup> Location	n: PL=Pore Lining, M=Matrix.	
			LRRs, unless othe			eu Sanu C		Problematic Hydric Soils <sup>3</sup> :	
Histosol			_		atrix (S4)		_	(A9) (LRR I, J)	
	ipedon (A2)			Redox (S				ie Redox (A16) ( <b>LRR F, G, H</b> )	
Black His				d Matrix (			_	ce (S7) ( <b>LRR G</b> )	
	n Sulfide (A4)			,	ineral (F1)	)	=	Depressions (F16)	
Stratified	Layers (A5) (LRR	F)	Loamy	Gleyed M	latrix (F2)		(LRR H	outside of MLRA 72 & 73)	
	ck (A9) ( <b>LRR F, G,</b>			d Matrix	. ,		Reduced Ve	, ,	
	Below Dark Surfac	e (A11)	_	Dark Surf	, ,		=	Material (TF2)	
	rk Surface (A12)				urface (F7	7)		w Dark Surface (TF12)	
	ucky Mineral (S1)	(CO) (LDD (		Depressio	ons (F8) essions (I	T46)		ain in Remarks)	
	lucky Peat or Peat ( cky Peat or Peat (S		· · · —		73 of LR	,		drophytic vegetation and Irology must be present,	
3 cili ivid	cky reacorreac(S	3) ( <b>LIXIX I</b> )	(IVIL	.NA 12 Q	73 OI LIN	(X 11)		urbed or problematic.	
Restrictive L	ayer (if present):						1		
_	, ,								
,, <u> </u>	:hes):						Hydric Soil Pres	sent? Yes X No No	
Remarks:			<del></del>				11,4	······································	
Remarks.									
Redox fea	atures observe	ed <sup>.</sup> Tinn	clay, occasion	hally flo	oded	is natio	nally listed hyd	ric soil; naturally dark soil	
HYDROLO	GY								
Wetland Hyd	Irology Indicators:	<u> </u>							
_			d; check all that appl	v)			Secondary In	dicators (minimum of two required)	
Surface \		one require	Salt Crust					Soil Cracks (B6)	
	ter Table (A2)		Aguatic In		oc (B12)		_	Vegetated Concave Surface (B8)	
Saturation			Hydrogen		` '			Patterns (B10)	
						)		, ,	
Water Marks (B1)  Sediment Deposits (B2)  Dry-Season Water Table (C2)  Oxidized Rhizospheres on Living Roots (C3)  (where tilled)									
	osits (B3)		<del></del>	not tilled		virig recots	· · · — ·	Burrows (C8)	
	t or Crust (B4)		Presence			:4)		n Visible on Aerial Imagery (C9)	
	osits (B5)		Thin Muck			,, ,	_	phic Position (D2)	
	on Visible on Aerial	Imagery (B	_		` '			utral Test (D5)	
_	ained Leaves (B9)	magory (D			omamoj			ave Hummocks (D7) (LRR F)	
Field Observ	` ,						<u> </u>		
Surface Water		'es	No X Depth (in	ches):					
Water Table			No X Depth (in						
Saturation Pr			No X Depth (in				land Hydrology Pro	esent? Yes X No	
(includes cap	illary fringe)	es	No Depth (in	cnes):		vvei	lialid Hydrology Fre	sent? res NO	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks:									









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	Sampline	g Point: WP4	
Investigator(s): Jason Voight, Andrew Sample				ange:			
Landform (hillslope, terrace, etc.): Valley		Local r	elief (concave,	convex, none): Concave		Slope (%)	): <u>0-1%</u>
Subregion (LRR): Southwest Prairies	Lat: 33.4	45900		_ Long: <u>-95.89973</u>		Datum: NA	\D83
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classific			
Are climatic / hydrologic conditions on the site typical for							
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"			No
Are Vegetation, SoilX, or Hydrology				eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site ma							es, etc.
Hydrophytic Vegetation Present? Yes	No X		Is the Sample	d Area			
Hydric Soil Present? Yes	No X		within a Wetla		No	Χ	
Wetland Hydrology Present? Yes	No X						
Remarks: Outside of forested wetland from sam	npling poir	nt WF	23				
VEGETATION – Use scientific names of pl	ants.						
Tree Stratum (Plot size: 700 sq ft )	Absolute		nant Indicator es? Status	Dominance Test work	sheet:		
1. Fraxinus pennsylvanica	35	Yes		Number of Dominant S That Are OBL, FACW,			
2. Ulmus americana	15	No	FAC	(excluding FAC-):	OI I AO	1	(A)
3.				Total Number of Domir	nant		
4				Species Across All Stra	ıta:	2	_ (B)
700 sq.ft	50	= Total	Cover	Percent of Dominant S	pecies		
Sapling/Shrub Stratum (Plot size: 700 sq ft )  1. Fraxinus pennsylvanica	5	No	FAC	That Are OBL, FACW,	or FAC:	50	_ (A/B)
2. Celtis laevigata		No		Prevalence Index wor	ksheet:		
3. Carya ovata	1	No	FACU	Total % Cover of:			
4.				· ·		1 = 0	
5.				FACW species 0			
450cg ft	8	= Total	Cover			3 = 171	_
Herb Stratum (Plot size: 450sq ft 1. Lolium multiflorum	95	Yes	s UPL	FACU species 4 UPL species 97	X	$4 = \frac{10}{485}$ $5 = \frac{485}{100}$	_
2. Setaria italica		No		Column Totals: 158			— (B)
3. Torillis arvensis	2	No	UPL			,	(2)
4. Amaranthus sp,	1	No	FACU	Prevalence Index			
5.				Hydrophytic Vegetati			
6				1 - Rapid Test for 2 - Dominance Test		•	
7				3 - Prevalence Ind			
8				4 - Morphological			pporting
9				data in Remark	s or on a s	separate sheet	:)
10	400			Problematic Hydro	phytic Ve	getation <sup>1</sup> (Expl	ain)
Woody Vine Stratum (Plot size: 450 sq ft )		= Total		<sup>1</sup> Indicators of hydric so be present, unless dist			must
1 2				Hydrophytic			
	0			Vegetation		V	
% Bare Ground in Herb Stratum 0				Present? Ye	s	No X	
Remarks:							

Profile Desc	ription: (Describ	e to the depth	n needed to docur	nent the	indicator	or confirm	n the absence of i	ndicators.)
Depth	Matrix			x Feature	S1	. 2		
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-18	10 YR 3/1	100		_			Clay	
					. '			
·					· ——			_
	-							
1= 0.0							2, 2,	
			Reduced Matrix, CS			ed Sand G		on: PL=Pore Lining, M=Matrix.
_		icable to all L	RRs, unless other.				_	Problematic Hydric Soils <sup>3</sup> :
Histosol	, ,			Gleyed Ma				k (A9) (LRR I, J)
	oipedon (A2)			Redox (S5	•			irie Redox (A16) ( <b>LRR F, G, H</b> ) ace (S7) ( <b>LRR G</b> )
Black Hi	en Sulfide (A4)			d Matrix (S	neral (F1)		=	s Depressions (F16)
	d Layers (A5) ( <b>LR</b> f	) F)		Gleyed M	, ,		_	l outside of MLRA 72 & 73)
	ick (A9) ( <b>LRR F, G</b>			d Matrix (			_ `	Vertic (F18)
	d Below Dark Surf			Dark Surfa	,			nt Material (TF2)
	ark Surface (A12)	,	_		urface (F7)	)		ow Dark Surface (TF12)
Sandy M	lucky Mineral (S1)		Redox [	Depressio	ns (F8)		Other (Exp	olain in Remarks)
2.5 cm N	Mucky Peat or Pea	t (S2) ( <b>LRR G</b>	, <b>H</b> ) 🔲 High Pla	ains Depr	essions (F	16)	<sup>3</sup> Indicators of h	ydrophytic vegetation and
5 cm Mu	icky Peat or Peat	(S3) ( <b>LRR F</b> )	(ML	RA 72 &	73 of LRR	R H)	wetland hy	drology must be present,
							unless dis	turbed or problematic.
Restrictive I	_ayer (if present)	:						
Type:								
Depth (ind	ches):						Hydric Soil Pre	esent? Yes NoX
Remarks:								
No redox	features; T	ïnn clay,	occasionally	floode	ed is na	ationall	ly listed hydr	ic soil; naturally dark soil
HYDROLO	GY							
Wetland Hyd	drology Indicator	s:						
Primary Indic	cators (minimum o	fone required;	check all that appl	y)			Secondary I	ndicators (minimum of two required)
Surface	Water (A1)		Salt Crust	(B11)			Surface	Soil Cracks (B6)
High Wa	iter Table (A2)		Aquatic In	vertebrate	es (B13)		Sparsel	y Vegetated Concave Surface (B8)
Saturation	on (A3)		Hydrogen	Sulfide O	dor (C1)		Drainag	e Patterns (B10)
☐ Water M	arks (B1)		Dry-Seaso	n Water	Γable (C2)		Oxidize	d Rhizospheres on Living Roots (C3)
Sedimer	nt Deposits (B2)		Oxidized F	Rhizosphe	res on Liv	ing Roots	(C3) (when	re tilled)
Drift Dep	oosits (B3)		(where i	not tilled)			Crayfish	n Burrows (C8)
│	at or Crust (B4)		Presence	of Reduce	ed Iron (C4	4)	Saturati	on Visible on Aerial Imagery (C9)
Iron Dep	osits (B5)		Thin Muck	Surface	(C7)		Geomo	rphic Position (D2)
Inundation	on Visible on Aeria	al Imagery (B7)	Other (Exp	olain in Re	emarks)		☐ FAC-Ne	eutral Test (D5)
Water-S	tained Leaves (B9	)					Frost-H	eave Hummocks (D7) (LRR F)
Field Observ	vations:							
Surface Wate	er Present?	Yes N	o X Depth (in	ches):				
Water Table			o x Depth (in					
Saturation Pr			o X Depth (in				land Hvdrology Pr	resent? Yes NoX
(includes cap	oillary fringe)							
Describe Red	corded Data (strea	ım gauge, mor	nitoring well, aerial <sub>l</sub>	photos, pr	evious ins	spections),	, if available:	
Remarks:								





	City/Count	ty: Ladonia/F	annin	Samplin	g Date: 6/2/2	017
				_ Samplin	g Point: WP5	
	Section, T	ownship, Ra	nge:			
	Local relie	ef (concave,	convex, none): Concave	)	Slope (%	6): <u>0-1%</u>
r this time of ve						
					Yes X	No
						res, etc
_ No	le t	the Sampled	ΙΛτοα			
_ No _ X		_		No	Χ	
_ No _X						
Absolute % Cover						
5/5	No/No	FAC/FAC				
15	Yes	FAC	(excluding FAC-):	,	4	(A)
30	Yes	FAC	Total Number of Domi	nant	_	
15	Yes	FACU	Species Across All Str	ata:	5	(B)
70	= Total Co	over			00	
5	No	FAC	That Are OBL, FACW	or FAC:	80	(A/B)
10	No	FACU	Prevalence Index wo	rksheet:		
5	No	FAC	Total % Cover of:		Multiply by:	<u> </u>
					<u> </u>	
20	= Total Co	over	1			
10	No	FAC				
15	Yes	FACW				
20	Yes	FAC				
5	No	FACW				
			1 <del></del>		•	
	·					
						upporting
			Problematic Hydro	ophytic Ve	getation <sup>1</sup> (Exp	olain)
50	= Total Co	over	<sup>1</sup> Indicators of hydric so	oil and wet	land hydrolog	y must
5	No	FACU				
			Hydrophytic			
5	= Total Co	over	Present? Y	es X	No	
	Lat: 33.4  or this time of yes significantly naturally properties.  No X  No X  No X  Dlants.  Absolute % Cover 5/5  15  30  15  70  5  10  5  20  10  15  20  5  5  5  5  5  5  5  5  5  5  5  6  7  7  7  7  7  8  8  8  8  8  8  8  8	Section, T	Section, Township, Ra   Local relief (concave, Lat: 33.45254	State: TX   Section, Township, Range:	Section, Township, Range:	State: TX   Sampling Point:   WP5

Profile Desc	cription: (Describ	e to the depth	needed to docu	ment the i	indicator	or confirm	n the absence of	indicators.)	_
Depth	Matrix			x Feature	4		<b>-</b> .	5	
(inches)	Color (moist)		Color (moist)	%	Type'	Loc <sup>2</sup>	Texture	Remarks	-
0-18	10 YR 3/1	100			·		Clay		_
									_
									-
									-
									-
									-
									_
	oncentration, D=D	•				d Sand Gr		on: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators: (Appl	icable to all L	RRs, unless other	rwise not	ed.)		Indicators for	Problematic Hydric Soils <sup>3</sup> :	
Histosol	. ,			Gleyed Ma	. ,			k (A9) ( <b>LRR I, J</b> )	
	oipedon (A2)			Redox (S5	•		_	irie Redox (A16) ( <b>LRR F, G, H</b> )	
	istic (A3)			d Matrix (S	,			ace (S7) (LRR G)	
	en Sulfide (A4)	. =\		Mucky Mir			_	ns Depressions (F16)	
	d Layers (A5) ( <b>LRF</b> uck (A9) ( <b>LRR F, G</b>	,		Gleyed Maded Matrix (				Houtside of MLRA 72 & 73) Vertic (F18)	
	d Below Dark Surfa			Dark Surfa	,			nt Material (TF2)	
	ark Surface (A12)	200 (7111)		ed Dark Su	, ,			low Dark Surface (TF12)	
	/lucky Mineral (S1)			Depressio	, ,			plain in Remarks)	
	Mucky Peat or Pea		_	ains Depre	. ,	16)		nydrophytic vegetation and	
5 cm Μι	ucky Peat or Peat (	(S3) ( <b>LRR F</b> )	(MI	RA 72 &	73 of LRR	<b>H</b> )	wetland hy	drology must be present,	
							unless dis	turbed or problematic.	
Restrictive	Layer (if present)	:							
Type:								V	
Depth (in	ches):						Hydric Soil Pre	esent? Yes NoX	
Remarks:							•		
No redevi	. fo otumo o . T	المرام ماما		ر ا م م ما م	ممائم	المممك	المنتما لمصفوان		.:1
ino redox	x reatures; i	inn ciay,	occasionally	lloode	ea is na	ationali	y iistea nyar	ic soil; naturally dark so	)
HYDROLO	GY								
	drology Indicator	s·							
-	cators (minimum o		check all that ann	lv)			Secondary	Indicators (minimum of two required)	١
	Water (A1)	r one required,	Salt Crus					e Soil Cracks (B6)	L
	ater Table (A2)			vertebrate	s (B13)			ly Vegetated Concave Surface (B8)	
Saturati	` '			Sulfide O	, ,			ge Patterns (B10)	
	larks (B1)			on Water 1				ed Rhizospheres on Living Roots (C3	٤١
	nt Deposits (B2)					ing Roots		re tilled)	"
	posits (B3)		· <del></del>	not tilled)		ing reoots		h Burrows (C8)	
	at or Crust (B4)			of Reduce		1)		ion Visible on Aerial Imagery (C9)	
1 1 -	posits (B5)			Surface (		•,		rphic Position (D2)	
I 💳 🗀 .	on Visible on Aeria	ıl Imagery (B7)		plain in Re				eutral Test (D5)	
_	stained Leaves (B9			piaiii iii ite	mamoj			leave Hummocks (D7) (LRR F)	
Field Obser	,	,						(2.7)	
Surface Wat		Yes N	o X Depth (ir	iches).					
Water Table			o X Depth (ir						
Saturation P			o X Depth (ir				and Hydrology P	resent? Yes NoX	
(includes cap		res iv	o Deptii (ii	icries)		_   ••••••	and Hydrology F	resent: res NO	-
	corded Data (strea	ım gauge, mor	itoring well, aerial	photos, pr	evious ins	pections),	if available:		
Remarks:									_







Project/Site: Lake Ralph HallSupplemental JD		City/Coun	nty: Ladonia/F	annin	_ Sampline	g Date: 6/2/20	)17
Applicant/Owner: Upper Trinity Regional Water District				State: TX	_ Samplino	g Point: WP6	
Investigator(s): Jason Voight, Andrew Sample		Section,	Township, Ra	nge:			
Landform (hillslope, terrace, etc.): Valley		Local reli	ief (concave,	convex, none): Concave		Slope (%	s): <u>0-1%</u>
Subregion (LRR): Southwest Prairies				Long: <u>-96.01133</u>			
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classifi			
Are climatic / hydrologic conditions on the site typical for	this time of ve						
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"		Yes X	Νο
Are Vegetation, SoilX, or Hydrology				eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site ma							es. etc
	No						
	No		the Sampled				
Wetland Hydrology Present? Yes X	No	wi	thin a Wetla	nd? Yes X	No		
Remarks:							
Heavy storms the previous day; fores  VEGETATION – Use scientific names of pl		nd in w	vooded a	rea near North S	Sulphur	River cha	ınnel
TEGET/THON GOO COLORISMO HAMICO OF PI	Absolute	Domina	nt Indicator	Dominance Test wor	ksheet:		
Tree Stratum (Plot size: 700 sq ft )			Status	Number of Dominant S			
1. Fraxinus pennsylvanica	45	Yes	FAC	That Are OBL, FACW,		3	(4)
2. Ulmus crassifolia	15	Yes	FAC	(excluding FAC-):			_ (A)
3. Celtis laevigata	5	No	FAC	Total Number of Domi		3	(D)
4				Species Across All Str	ata:		_ (B)
Sapling/Shrub Stratum (Plot size: 700 sq ft	65	= Total C	Cover	Percent of Dominant S		100	(A /D)
1. Cercis canadensis	10	No	UPL	That Are OBL, FACW,	or FAC:	100	_ (A/B)
2. Fraxinus pennsyvanica	20	Yes	FAC	Prevalence Index wo	rksheet:		
3. Ulmus crassifolia	10	No	FAC	Total % Cover of:		Multiply by:	
4.				OBL species			
5				FACW species			
450 og #	40	= Total C	Cover	FAC species			
Herb Stratum (Plot size: 450 sq ft)  1. Elymus virginicus	5	No	FAC	FACU species		4 =	
Carex blanda		No	FAC	UPL species  Column Totals:			
				Column Totals.	(A)	)	(D)
3				Prevalence Index	x = B/A =		
4.         5.				Hydrophytic Vegetati	on Indicat	tors:	
6.				1 - Rapid Test for		•	
7.				2 - Dominance Te			
8.				3 - Prevalence Inc			
9.				4 - Morphological data in Remark			
10		-		Problematic Hydro		•	•
450 4	7	= Total C	over	l <del>.</del>		, ,	,
Woody Vine Stratum (Plot size: 450 sq ft )				<sup>1</sup> Indicators of hydric so be present, unless dist			/ must
1. Parthenocissus quinquefolia	5		FACU FAC			32.2	
2	5	T-112		Hydrophytic Vegetation			
% Bare Ground in Herb Stratum 93	<u> </u>	= Total C	over	Present? Ye	es X	No	
Remarks:				ı			

Profile Desc	ription: (Describe	to the dep	th needed to docu	ment the	indicator o	or confir	m the absence of in	ndicators.)
Depth	Matrix			x Feature		2		
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-2	10 YR 3/1	100					Clay	
2-18	10 YR 3/1	95	10 YR 5/4	5	С	M	Clay	
							<del></del>	
·							<del></del>	
					- <del></del>			
							<u> </u>	_
								<u> </u>
	oncentration, D=Dep					d Sand G		n: PL=Pore Lining, M=Matrix.
_	Indicators: (Applic	able to all	_				_	Problematic Hydric Soils <sup>3</sup> :
Histosol	. ,		_	Gleyed M				(A9) ( <b>LRR I, J</b> )
	pipedon (A2)			Redox (S				rie Redox (A16) ( <b>LRR F, G, H</b> )
Black Hi	, ,			d Matrix (	,		=	ce (S7) (LRR G)
	n Sulfide (A4)	<b>-</b> \			neral (F1)		_	Depressions (F16)
	Layers (A5) (LRR			Gleyed M			Reduced V	outside of MLRA 72 & 73)
	ick (A9) ( <b>LRR F, G,</b> d Below Dark Surfac			ed Matrix ( Dark Surf	. ,			t Material (TF2)
	ark Surface (A12)	e (ATT)			urface (F7)			ow Dark Surface (TF12)
	fucky Mineral (S1)			Depressio				lain in Remarks)
	/lucky Peat or Peat (	S2) ( <b>LRR (</b>		•	essions (F	16)		ydrophytic vegetation and
	icky Peat or Peat (S				73 of LRR	,		drology must be present,
	,	, , ,	`			,		urbed or problematic.
Restrictive I	_ayer (if present):							
Type:								
Depth (inc	ches):						Hydric Soil Pres	sent? Yes X No
Remarks:							1 -	
Redox fe	atures presen	t; Tinn c	lay, occasion	ally flo	oded is	nation	ally listed hyd	ric soil; naturally dark soil
	•							· · · · · · · · · · · · · · · · · · ·
HYDROLO	GY							
Wetland Hy	drology Indicators:							
Primary India	cators (minimum of c	ne required	; check all that app	ly)			Secondary Ir	ndicators (minimum of two required)
✓ Surface		•	☐ Salt Crust				Surface	Soil Cracks (B6)
	iter Table (A2)		Aquatic In		es (B13)			Vegetated Concave Surface (B8)
Saturation	` '		Hydrogen		, ,		`	e Patterns (B10)
	arks (B1)				Table (C2)		`	Rhizospheres on Living Roots (C3)
	nt Deposits (B2)				eres on Livi	na Roots	<del></del>	e tilled)
	posits (B3)			not tilled		ng rtooto	· · — ·	Burrows (C8)
1 1 1 1	at or Crust (B4)		_ `		, ed Iron (C4	)		on Visible on Aerial Imagery (C9)
111-	osits (B5)		Thin Muck		•	,		phic Position (D2)
	on Visible on Aerial	Imagery (Ri	_		. ,			utral Test (D5)
_	tained Leaves (B9)	imagory (Di	) <u> </u>	piairiiiii	omano,			eave Hummocks (D7) (LRR F)
Field Obser	. ,							pave Hammooke (DT) (ERRT)
Surface Water		ν <sub>ος</sub> Χ Ι	No Depth (in	chec).	<2			
			No Depth (in			-		
Water Table						-   <u>,</u>	dend Herrer =	
Saturation Pi (includes cap		'es	No Depth (in	iches):		_   wet	land Hydrology Pro	esent? Yes X No
Describe Re	corded Data (stream	gauge, mo	nitoring well, aerial	photos, p	revious ins	pections)	, if available:	
			_		,	,		
Remarks:								













Project/Site: Lake Ralph Hall Supplemental JD	City/County: Ladonia/Fannin Sampling Date: 5/31/20					
Applicant/Owner: Upper Trinity Regional Water District				State: TX		
Investigator(s): Jason Voight, Andrew Sample				inge:		
Landform (hillslope, terrace, etc.): Valley		Local re	lief (concave,	convex, none): Concave	Slope (%): 0-1%	6
					Datum: NAD83	
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classifica		
Are climatic / hydrologic conditions on the site typical for th						
Are Vegetation, Soil, or Hydrology					resent? Yes X No	
Are Vegetation, Soil _X, or Hydrology				eeded, explain any answer		
SUMMARY OF FINDINGS – Attach site map						c.
Hydrophytic Vegetation Present? Yes 1	No X					
Hydric Soil Present? Yes 1			the Sampled ithin a Wetlar		No ×	
Wetland Hydrology Present? Yes 1		W	illilli a vvellai	nur res	NO <u>^</u>	
Remarks:						
Remnant former North Sulphur River chann						
still depressionally feature; not hydraulically	or hydrol	logicall	ly connecte	ed to existing North	Sulphur River channel	
VEGETATION – Use scientific names of plan	nts					
VEGETATION – Use scientific fiames of plan	Absolute	Domino	ant Indicator	Dominance Test works	choot:	
Tree Stratum (Plot size: 700 sq ft )			s? Status	Number of Dominant Sp		
1. Salix nigra	50	Yes	FACW	That Are OBL, FACW, o	or FAC	
2				(excluding FAC-):	<u>1</u> (A)	
3				Total Number of Domina	ant	
4				Species Across All Strat	a: <u>2</u> (B)	
Sapling/Shrub Stratum (Plot size: 700 sq ft )	50	= Total (	Cover	Percent of Dominant Sp		
				That Are OBL, FACW, o	or FAC: 50% (A/E	3)
1 2				Prevalence Index work	sheet:	
3.				Total % Cover of:		
4					x 1 = 0	
5.					x 2 = 100	
	0	= Total (	Cover		x 3 = 60	
Herb Stratum (Plot size: 450 sq ft				FACU species 20	$x 4 = \frac{80}{250}$	
1. Lolium multiflorum		Yes	UPL FAC		x = 5 = 250	
2. Rumex altissimus 3. Helianthus annuus	10	No No	FACU	Column Totals: 140	(A) <u>490</u> (B)	)
Setaria parviflora	10	No	FAC	Prevalence Index	= B/A = 3.5	
5. Rudbeckia hirta	10	No	FACU	Hydrophytic Vegetatio	n Indicators:	
				1 - Rapid Test for H	ydrophytic Vegetation	
6				2 - Dominance Test	is >50%	
8				3 - Prevalence Inde		
9				4 - Morphological A	daptations <sup>1</sup> (Provide supportin or on a separate sheet)	ng
10					hytic Vegetation <sup>1</sup> (Explain)	
450 6	90	= Total (	Cover			
Woody Vine Stratum (Plot size: 450 sq ft )  1				'Indicators of hydric soil be present, unless distu	and wetland hydrology must rbed or problematic.	
2				Hydrophytic		
	0			Vegetation Present? Yes	s No ×	
				resent: Tes	110	
Remarks:	ا المستعمد	اد مالا				
Remnant channel located within field r	ecently t	illed				

Profile Description: (Describe t	o the depth ne	eded to docur	nent the i	ndicator	or confirn	n the absence of in	dicators.)
Depth <u>Matrix</u>			x Features	S	2		
(inches) Color (moist)		color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-18 10 YR 2/1	90					Clay	
·							
17 00 11 11 11 11						. 21	
<sup>1</sup> Type: C=Concentration, D=Deple					ed Sand G		r: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applica	DIE to all LRK	_				_	Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)			Gleyed Ma				(A9) ( <b>LRR I, J</b> ) ie Redox (A16) ( <b>LRR F, G, H</b> )
Histic Epipedon (A2) Black Histic (A3)			Redox (S5 d Matrix (S				ce (S7) (LRR G)
Hydrogen Sulfide (A4)			Mucky Mir	,			Depressions (F16)
Stratified Layers (A5) (LRR F	)	·	Gleyed Ma	. ,			outside of MLRA 72 & 73)
1 cm Muck (A9) (LRR F, G, H		·	d Matrix (F			Reduced Ve	•
Depleted Below Dark Surface			Dark Surfa	,			Material (TF2)
Thick Dark Surface (A12)		Deplete	d Dark Su	rface (F7)	)	Very Shallo	w Dark Surface (TF12)
Sandy Mucky Mineral (S1)			Depression	. ,			ain in Remarks)
2.5 cm Mucky Peat or Peat (S			ains Depre	•			drophytic vegetation and
5 cm Mucky Peat or Peat (S3	) (LRR F)	(ML	RA 72 & 7	73 of LRR	<b>H</b> )		rology must be present,
Destrictive Lover (if weepent)						unless distu	urbed or problematic.
Restrictive Layer (if present):							
Type:							<b>v</b>
Depth (inches):						Hydric Soil Pres	sent? Yes No X
Remarks:							
Nie weden festungs als een	and There a		11 61		! 4!-		data a a the a atenaa thee alamba a a th
No redox features observ	/ea; Tinn c	lay, occasio	onally fi	ooaea	is natio	nally listed nyo	dric soil; naturally dark soil
HYDROLOGY							
Wetland Hydrology Indicators:							
Primary Indicators (minimum of or							dicators (minimum of two required)
Surface Water (A1)		Salt Crust	(B11)				Soil Cracks (B6)
High Water Table (A2)		Aquatic In					Vegetated Concave Surface (B8)
Saturation (A3)		Hydrogen		. ,		☐ Drainage	Patterns (B10)
Water Marks (B1)		Dry-Seaso					Rhizospheres on Living Roots (C3)
Sediment Deposits (B2)		Oxidized F	Rhizosphe	res on Liv	ing Roots		,
Drift Deposits (B3)		(where i	not tilled)				Burrows (C8)
Algal Mat or Crust (B4)		Presence			1)	_	n Visible on Aerial Imagery (C9)
Iron Deposits (B5)		H Thin Muck	,				phic Position (D2)
Inundation Visible on Aerial In	nagery (B7)	U Other (Exp	olain in Re	marks)			ıtral Test (D5)
Water-Stained Leaves (B9)						Frost-Hea	ave Hummocks (D7) (LRR F)
Field Observations:		_					
		Depth (in					
Water Table Present? Ye	s No <u>x</u>	Depth (in	ches):		_		
	s No <u>x</u>	Depth (in	ches):		Wetl	land Hydrology Pre	sent? Yes No X
(includes capillary fringe)  Describe Recorded Data (stream)	acusa manitar	ing wall parial	obotoo pr	ovious ins	nootiona)	if available:	
Describe Necorded Data (Stream)	jauye, momon	ing well, aelial	ριτυτύδ, μπ	evious iils	pecii0118),	ii avaliabit.	
Demade							
Remarks:							
Remnant former North	Sulphur R	liver chanr	nel wes	t of Sh	1 34; p	reviously filled	but still depressional





Project/Site: Lake Ralph Hall Supplemental JD	City/County: Ladonia/Fannin Sampling Date: 5/31/20					
Applicant/Owner: Upper Trinity Regional Water District				State: TX	Sampling Point: V	VP 12
Investigator(s): Jason Voight, Andrew Sample		Section,	Township, Ra	inge:		
Landform (hillslope, terrace, etc.): Valley				=	Slop	e (%): 0-1%
				Long: <u>-95.94423</u>		
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classifica		
Are climatic / hydrologic conditions on the site typical for the						
Are Vegetation, Soil, or Hydrology				"Normal Circumstances" p		No
Are Vegetation, Soil _x, or Hydrology				eeded, explain any answer		
SUMMARY OF FINDINGS – Attach site map					,	itures, etc.
Hydrophytic Vegetation Present? Yes X						
Hydric Soil Present? Yes			the Sampled		v	
Wetland Hydrology Present? Yes		W	rithin a Wetlar	nd? Yes	No X	
Remarks:				-		
Remnant former North Sulphur River char				-		
still depressional feature; not hydraulically	or hydrol	ogicall	ly connecte	ed to existing North	Sulphur Rive	r channel
VEGETATION – Use scientific names of pla	nte					
VEGETATION – Ose scientific flames of pla	Absolute	Domine	ant Indicator	Dominance Test works	shoot:	
Tree Stratum (Plot size: 700 sq ft )			s? Status	Number of Dominant Sp		
1. Salix nigra	40	Yes	FACW	That Are OBL, FACW, o	or FAC	
2. Celtis laevigata	20	Yes	FAC	(excluding FAC-):	5	(A)
3				Total Number of Domina	ant	<del>(-</del> )
4				Species Across All Strat	ta: <u>7</u>	(B)
Sapling/Shrub Stratum (Plot size: 700 sq ft)	60	= Total (	Cover	Percent of Dominant Sp		(4.45)
				That Are OBL, FACW, o	or FAC: <u>71%</u>	(A/B)
1 2				Prevalence Index work	sheet:	
3.				Total % Cover of:	Multiply	by:
4.				OBL species		
5.				FACW species		
450 %	0	= Total (	Cover	FAC species		
Herb Stratum (Plot size: 450 sq ft				FACU species		
Lolium multiflorum     Sorghum halepense	<u>15</u> 	Yes Yes	UPL FACU	UPL species		
Et l'all	15	Yes	OBL	Column Totals:	(A)	(B)
Eleocharis palustris     Rumex altissimus		Yes	FAC	Prevalence Index	= B/A =	
5. Xanthium strumarium	<del>15</del>	Yes		Hydrophytic Vegetatio	n Indicators:	
6				1 - Rapid Test for H	lydrophytic Vegetat	tion
7.				2 - Dominance Test	t is >50%	
8.				3 - Prevalence Inde		
9				4 - Morphological A	daptations <sup>1</sup> (Provid or on a separate s	le supporting
10.				Problematic Hydrop		
450 #	75	= Total (	Cover		,	
Woody Vine Stratum (Plot size: 450 sq ft )  1. Nekemias arborea	5	No	FAC	<sup>1</sup> Indicators of hydric soil be present, unless distu		
		110	170		<u> </u>	
2	_	= Total (	Cover	Hydrophytic Vegetation		
% Bare Ground in Herb Stratum 25		= TOTAL	Cover		s <u>×</u> No	
Remarks:						
Remnant channel located within field i	recently t	illed.				

Profile Desc	ription: (Describe	to the depth	needed to docur	nent the i	indicator	or confirn	n the absence of i	indicators.)
Depth	Matrix			x Feature	S1		_	
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-18	10 YR 2/1	90					Clay	
	-			-				
						-		
				_				
				-				
1- 0.0							2, 2,	
	oncentration, D=De					ed Sand G		on: PL=Pore Lining, M=Matrix.
_	Indicators: (Appli	cable to all Li	_				_	Problematic Hydric Soils <sup>3</sup> :
Histosol	, ,			Gleyed Ma				k (A9) (LRR I, J)
Black Hi	oipedon (A2)			Redox (S5 d Matrix (S				irie Redox (A16) ( <b>LRR F, G, H</b> ) ace (S7) ( <b>LRR G</b> )
	en Sulfide (A4)			Mucky Mir				s Depressions (F16)
	d Layers (A5) ( <b>LRR</b>	F)		Gleyed Ma			_	outside of MLRA 72 & 73)
	ick (A9) ( <b>LRR F, G</b> ,			d Matrix (			_ `	Vertic (F18)
	d Below Dark Surfa	,		Dark Surfa	,			nt Material (TF2)
Thick Da	ark Surface (A12)		Deplete	d Dark Su	ırface (F7)	)	Very Shall	ow Dark Surface (TF12)
Sandy M	Mucky Mineral (S1)		Redox I	Depressio	ns (F8)			olain in Remarks)
	Mucky Peat or Peat				essions (F	,		nydrophytic vegetation and
5 cm Mu	icky Peat or Peat (S	63) ( <b>LRR F</b> )	(ML	RA 72 &	73 of LRR	<b>H</b> )		drology must be present,
	(16						unless dis	turbed or problematic.
	Layer (if present):							
Type:								V
1	ches):						Hydric Soil Pre	esent? Yes No X
Remarks:								
	<b>6</b>							
No redox	reatures obse	rvea; i inn	clay, occasi	onally f	looded	is natio	onally listed ny	dric soil; naturally dark soil
HYDROLO	GV							
_	drology Indicators							
-	cators (minimum of	one required;						ndicators (minimum of two required)
Surface	Water (A1)		Salt Crust					Soil Cracks (B6)
	ater Table (A2)		Aquatic In					y Vegetated Concave Surface (B8)
Saturatio			Hydrogen		, ,			ge Patterns (B10)
	larks (B1)		Dry-Seaso		. ,			d Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized F			ing Roots		re tilled)
	posits (B3)			not tilled)				n Burrows (C8)
"	at or Crust (B4)		Presence			1)	_	ion Visible on Aerial Imagery (C9)
	oosits (B5)		Thin Muck		. ,			rphic Position (D2)
	on Visible on Aerial	Imagery (B7)	U Other (Exp	olain in Re	emarks)			eutral Test (D5)
	tained Leaves (B9)						Frost-H	eave Hummocks (D7) (LRR F)
Field Observ								
Surface Water			Depth (in					
Water Table	Present?	Yes No	Depth (in	ches):				
Saturation P		Yes No	Depth (in	ches):		Wetl	land Hydrology Pı	resent? Yes No X
(includes cap Describe Red	corded Data (strear	n gauge, moni	toring well, aerial	photos, pr	evious ins	pections).	if available:	
		J 30, 1110111		,, pi		,/,		
Remarks:								
	formar Na-41	a Qulakiii	Divor obos	عميد ام	ot of O	J 21	rovioual: £ill=	d but still danrassians!
Remnani	i iormer Norti	ı Sulpnur	kiver chanr	iei wes	51 OT 51	1 34; p	reviously fille	ed but still depressional









Project/Site: Lake Ralph Hall Supplemental JD	(	City/Coun	ty: Ladonia/F	annin	Sampling Date: 5/31/2	2017
Applicant/Owner: Upper Trinity Regional Water District				State: TX		
Investigator(s): Jason Voight, Andrew Sample				nge:		
Landform (hillslope, terrace, etc.): Valley		Local reli	ef (concave,	convex, none): Concave	Slope (%	): <u>0-1%</u>
Subregion (LRR): Southwest Prairies				Long: <u>-95.94407</u>		
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classific		
Are climatic / hydrologic conditions on the site typical for the						
Are Vegetation, Soil, or Hydrology				'Normal Circumstances" p		No
Are Vegetation, Soil _X, or Hydrology				eeded, explain any answe		
SUMMARY OF FINDINGS – Attach site map						es, etc.
Lhidraphytia Vagatatian Present? Vag X	No					
Hydrophytic Vegetation Present?  Yes   Hydric Soil Present?  Yes   Yes	No X		the Sampled			
Wetland Hydrology Present?  Yes X	No	wi	thin a Wetlar	nd? Yes	No <u>×</u>	
Remarks:						
Remnant former North Sulphur River chani	nel located	d within	field west	of SH 34; has bee	n previously filled	but
still depressionally feature; not hydraulically	or hydrol	logically	y connecte	ed to existing North	Sulphur River cha	annel
VEGETATION – Use scientific names of pla	nts.					
Tree Stratum (Plot size: 700 sq ft	Absolute		nt Indicator	Dominance Test work	sheet:	
1. Salix nigra	50	Yes	Status FACW	Number of Dominant S That Are OBL, FACW,		
2. Ulmus americana	30	Yes	FAC	(excluding FAC-):	3	_ (A)
3.				Total Number of Domin	ant	
4				Species Across All Stra	^	_ (B)
	00	= Total C	over	Percent of Dominant Sp	necies	
Sapling/Shrub Stratum (Plot size: 700 sq ft )				That Are OBL, FACW,		_ (A/B)
1. Ulmus americana	_ 10	No	FAC	Prevalence Index wor	ksheet:	
2. Celtis laevigata	5	No	FAC		Multiply by:	
3					x 1 =	
4					x 2 =	
0	15	= Total C	over		x 3 =	
Herb Stratum (Plot size: 450 sq ft )		= Total C	ovei	FACU species		
1. Lolium multiflorum	10	No	UPL	UPL species	x 5 =	
2. Rumex altissimus	5	No	FAC	Column Totals:	(A)	(B)
3. Carex cros-corvi	15	Yes	OBL	Prevalence Index	x = B/A =	
4. Sorghum halepense	_ 2	No	FACU	Hydrophytic Vegetation		
5. Toxicodendron radicans		No	FACU		Hydrophytic Vegetation	
6				2 - Dominance Tes		
7				3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>	
8				4 - Morphological A	Adaptations <sup>1</sup> (Provide su	pporting
9					s or on a separate shee	
10		= Total C	over	Problematic Hydro	phytic Vegetation <sup>1</sup> (Expl	lain)
Woody Vine Stratum (Plot size: 450 ft )  1.				<sup>1</sup> Indicators of hydric soi be present, unless dist	il and wetland hydrology urbed or problematic.	must
2.				Hydrophytic		
	0			Vegetation	a X N-	
				Present? Ye	es <u>X</u> No	
Remarks:						
Remnant channel located within field	where red	cent til	iage occi	urred		

Profile Description: (Des	cribe to the dep	th needed to docur	nent the i	ndicator	or confirr	n the absence of ir	ndicators.)
	atrix		x Features	S	2		
(inches) Color (mo		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-18 10 YR 2/1	90					Clay	
			·				
· ——					-		
			- ——			·	
				-			
1		D 1 111 11 01				21	DI D. III MAN
<sup>1</sup> Type: C=Concentration, [					ed Sand G		n: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (A	Applicable to all	_				_	Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)			Gleyed Ma				(A9) ( <b>LRR I, J</b> ) rie Redox (A16) ( <b>LRR F, G, H</b> )
Histic Epipedon (A2) Black Histic (A3)			Redox (S5 d Matrix (S				ce (S7) ( <b>LRR G</b> )
Hydrogen Sulfide (A4)		=	Mucky Mir	,		_	Depressions (F16)
Stratified Layers (A5)			Gleyed Ma	, ,			outside of MLRA 72 & 73)
1 cm Muck (A9) (LRR			d Matrix (I	. ,		Reduced V	•
Depleted Below Dark			Dark Surfa	,			t Material (TF2)
Thick Dark Surface (A	12)	Deplete	d Dark Su	rface (F7)	)	Very Shallo	ow Dark Surface (TF12)
Sandy Mucky Mineral		_	Depressio	. ,			lain in Remarks)
2.5 cm Mucky Peat or	. , ,	· · · —	ains Depre	,	,		drophytic vegetation and
5 cm Mucky Peat or P	eat (S3) (LRR F)	(ML	RA 72 & 7	73 of LRR	( <b>H</b> )		drology must be present,
Destrictive Leven (if need	4) -					unless disti	urbed or problematic.
Restrictive Layer (if pres							
Туре:		<del></del>					<b>v</b>
Depth (inches):						Hydric Soil Pres	sent? Yes No X
Remarks:							
Nie weden feet wee	la a a sa ca ala Tira		11 41				data a atti mati matti danti a att
no redox reatures of	observea; i ir	in clay, occasi	onally fi	ooaea	is natio	onally listed ny	dric soil; naturally dark soil
HYDROLOGY							
Wetland Hydrology Indic							
Primary Indicators (minimu	m of one required						ndicators (minimum of two required)
Surface Water (A1)		Salt Crust	(B11)				Soil Cracks (B6)
High Water Table (A2)		Aquatic In					Vegetated Concave Surface (B8)
Saturation (A3)		Hydrogen		, ,		☐ Drainage	e Patterns (B10)
Water Marks (B1)		Dry-Seaso					Rhizospheres on Living Roots (C3)
Sediment Deposits (B	2)	Oxidized F	Rhizosphe	res on Liv	ing Roots	(C3) (where	e tilled)
Drift Deposits (B3)		(where	not tilled)				Burrows (C8)
Algal Mat or Crust (B4	)	Presence		•	4)		on Visible on Aerial Imagery (C9)
Iron Deposits (B5)		H Thin Muck	,	,			phic Position (D2)
Inundation Visible on A		7) <u> </u>	olain in Re	marks)			utral Test (D5)
Water-Stained Leaves	(B9)					Frost-He	eave Hummocks (D7) (LRR F)
Field Observations:							
Surface Water Present?		No X Depth (in					
Water Table Present?	Yes	No x Depth (in	ches):		_		
Saturation Present?	Yes	No x Depth (in	ches):		Wet	land Hydrology Pre	esent? Yes X No
(includes capillary fringe)	troom gougo mo	nitoring well parial	obotoo pr	ovious inc	nactions)	if available:	
Describe Recorded Data (s	siream gauge, mo	milloring well, aerial	priotos, pr	evious ins	peciions),	, ii avaliable.	
December							
Remarks:							
Remnant former N	Iorth Sulphu	ır River chanr	nel wes	t of Sh	1 34; p	reviously filled	d but still depressional









Project/Site: Lake Ralph Hall Supplemental JD		City/County	Ladonia/F	annin	Sampling Date: <u>5/31/2017</u>		
Applicant/Owner: Upper Trinity Regional Water District	-			State: TX			
				nge:			
Landform (hillslope, terrace, etc.): Valley					Slope (%): 0-1%		
Subregion (LRR): Southwest Prairies	Lat: 33.4	1532		Long: -95.9451	Datum: NAD83		
				NWI classifi			
Are climatic / hydrologic conditions on the site typical for thi							
Are Vegetation, Soil, or Hydrology					present? Yes X No		
Are Vegetation, Soil x, or Hydrology	naturally pro	blematic?	(If ne	eeded, explain any answ	ers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map	showing	samplin	g point l	ocations, transect	s, important features, etc.		
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Remarks:  Outside edge of forested wetland within	n remna	with		nd? Yes Sulphur River c	,		
channel not hydraulically or hydrological		nected to	o existir	ng North Sulphur	River channel		
VEGETATION – Use scientific names of plan	Absolute	Dominant	Indicator	Dominance Test wor	kehoot		
<u>Tree Stratum</u> (Plot size: 700 sq ft		Species?		Number of Dominant S			
1. Carya illinoinensis	90	Yes	FAC	That Are OBL, FACW,	, or FAC		
2. Celtis laevigata	- <del>5</del> 5	No No	FAC	(excluding FAC-):	<u>2</u> (A)		
3. Ulmus americana		No	FAC	Total Number of Domi Species Across All Str	0		
4	100	= Total Cov	/or				
Sapling/Shrub Stratum (Plot size: 700 sq ft		= Total Cov	/EI	Percent of Dominant S That Are OBL, FACW,			
1. Celtis laevigata		Yes	FAC	Prevalence Index wo	rkshoot.		
2					Multiply by:		
3					x 1 =		
4					x 2 =		
5	10	= Total Cov	/or		x 3 =		
Herb Stratum (Plot size: 450 sq ft )		= 10tal C01	/GI	FACU species	x 4 =		
1. Lolium multiflorum	5	No	UPL	UPL species	x 5 =		
2				Column Totals:	(A) (B)		
3				Prevalence Inde	x = B/A =		
4				Hydrophytic Vegetat			
5					Hydrophytic Vegetation		
6				2 - Dominance Te			
7				3 - Prevalence Inc			
8					Adaptations <sup>1</sup> (Provide supporting		
9					ks or on a separate sheet)		
10	_			Problematic Hydro	ophytic Vegetation <sup>1</sup> (Explain)		
Woody Vine Stratum (Plot size: 450 sq ft 1.		= Total Cov		<sup>1</sup> Indicators of hydric so be present, unless dis	oil and wetland hydrology must turbed or problematic.		
2.				Hydrophytic			
	0	= Total Cov		Vegetation	v		
% Bare Ground in Herb Stratum 95				Present? You	es <u>X</u> No		
Remarks:				_			
Outside edge of forested wetland within within field west of SH 34	n remna	nt forme	er chanr	nel of North Sulp	hur River located		

Profile Descri	ption: (Describe	to the dep	th needed to docur	nent the	indicator	or confir	m the absence of inc	dicators.)	
Depth	Matrix Redox Features								
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks	
0-18	10 YR 2/1	99	10 YR 4/6	1	С	М	Clay		
		<u> </u>				· ·			
<del></del> -				-					
		<del></del>			<del></del>	·	<del>-</del>		
				_					
				-	•	• •			
1 0 0			- III				21 (1	Di B. III MANA	
			Reduced Matrix, CS			ed Sand G		: PL=Pore Lining, M=Matrix.	
_		able to all	LRRs, unless other				_	roblematic Hydric Soils <sup>3</sup> :	
Histosol (A	,			Gleyed Ma				(A9) (LRR I, J)	
Black Hist	pedon (A2)			Redox (S5 d Matrix (\$				e Redox (A16) ( <b>LRR F, G, H</b> ) e (S7) ( <b>LRR G</b> )	
	Sulfide (A4)			Mucky Mi	,		_	Depressions (F16)	
	Layers (A5) ( <b>LRR I</b>	F)		Gleyed M				outside of MLRA 72 & 73)	
	k (A9) ( <b>LRR F, G,</b> l			d Matrix (	. ,		Reduced Ve	•	
	Below Dark Surfac		Redox [	Dark Surfa	ace (F6)		_	Material (TF2)	
Thick Dark	k Surface (A12)		Deplete	d Dark Su	ırface (F7	")	Very Shallov	w Dark Surface (TF12)	
	icky Mineral (S1)			Depressio	. ,			ain in Remarks)	
	ucky Peat or Peat (			ains Depr	•	,		drophytic vegetation and	
5 cm Mucl	ky Peat or Peat (S	3) ( <b>LRR F</b> )	(ML	RA 72 &	73 of LRI	R H)		rology must be present,	
Dootsietive I e	(:6						unless distu	rbed or problematic.	
	yer (if present):								
	nes):						Hydric Soil Pres	ent? Yes No X	
Remarks:									
							e u e e ii		
insufficient	redox reatures	observe	ea; Tinn clay, oc	casiona	ally floo	aea is n	iationally listed n	ydric soil; naturally dark soil	
HYDROLOG	·V								
-	ology Indicators:								
-		ne required	d; check all that appl					dicators (minimum of two required)	
Surface W	/ater (A1)		Salt Crust	(B11)				Soil Cracks (B6)	
	er Table (A2)		Aquatic In					Vegetated Concave Surface (B8)	
Saturation	ı (A3)		Hydrogen		, ,		☐ Drainage	Patterns (B10)	
Water Mai	rks (B1)		Dry-Seaso		•	•		Rhizospheres on Living Roots (C3)	
	Deposits (B2)		Oxidized F	Rhizosphe	res on Li	ing Roots	· · ·	,	
☐ Drift Depo				not tilled)				Burrows (C8)	
_	or Crust (B4)		Presence		,	4)		n Visible on Aerial Imagery (C9)	
Iron Depo			H Thin Muck		` '			hic Position (D2)	
	n Visible on Aerial I	lmagery (B	7) <u> </u>	olain in Re	emarks)			tral Test (D5)	
	ined Leaves (B9)						Frost-Hea	ave Hummocks (D7) (LRR F)	
Field Observa									
Surface Water			No X Depth (in						
Water Table P	resent? Y	'es	No X Depth (in	ches):					
Saturation Pre		'es	No X Depth (in	ches):		Wet	tland Hydrology Pres	sent? Yes No X	
(includes capil		anuan ma	onitoring well, aerial	nhoton ni	ovious in	anactiona)	if available:		
Pescribe Keco	nueu Dala (Sileam	gauge, m	nitioning well, aerial	ρποιοδ, βΙ	evious in	spections)	, ii avaliaDI <del>C</del> .		
Dament									
Remarks:							<b>.</b> <del></del>		
Outside e	dge of forest	ed wetl	and within ren	nnant	tormer	North	Sulphur River	channel west of SH 34	













Project/Site: Lake Ralph Hall Supplemental JD		City/Coun	nty: Ladonia/F	annin	_ Sampline	ampling Date: 6/2/2017		
Applicant/Owner: Upper Trinity Regional Water District				State: TX				
Investigator(s): Jason Voight, Andrew Sample		Section, 1	Гownship, Ra	nge:				
Landform (hillslope, terrace, etc.): Valley		Local reli	ef (concave,	convex, none): Concave		Slope (%): 0-1%		
Subregion (LRR): Southwest Prairies	Lat: 33.4	45353		Long: <u>-96.01078</u>		Datum: NA	AD83	
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classifi				
Are climatic / hydrologic conditions on the site typical for								
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"			No	
Are Vegetation, SoilX, or Hydrology				eeded, explain any answe	ers in Rem	arks.)		
SUMMARY OF FINDINGS – Attach site ma							es, etc.	
Hydrophytic Vegetation Present? Yes X	No	le	the Sampled	I Area				
Hydric Soil Present? Yes X	No		thin a Wetlar		No			
Wetland Hydrology Present? Yes X  Remarks:	No							
Heavy storms the previous day; fores		nd in w	vooded a	rea near North S	ulphur	River cha	nnel	
VEGETATION – Use scientific names of pl		D	at LaPasta	I Danis Tark was				
Tree Stratum (Plot size: 700 sq ft )	Absolute <u>% Cover</u>		nt Indicator Status	Dominance Test work  Number of Dominant S				
1. Fraxinus pennsylvanica	85	Yes	FAC	That Are OBL, FACW,		2		
2				(excluding FAC-):			_ (A)	
3				Total Number of Domi		2	(D)	
4	0.5			Species Across All Str	ата:		_ (B)	
Sapling/Shrub Stratum (Plot size: 700 sq ft )	85	= Total C	over	Percent of Dominant S That Are OBL, FACW,		100	(A/B)	
1. Fraxinus pennsyvanica	10	No	FAC				_ (A/b)	
2.				Prevalence Index wo				
3				Total % Cover of:				
4				OBL species				
5	4.0			FACW species				
Herb Stratum (Plot size: 450 sq ft )	10	= Total C	over	FACU species				
1. Ptilimnium nutalli	85	Yes	FACW	UPL species				
2. Carex blanda	5	No	FAC	Column Totals:				
3.								
4				Prevalence Index				
5		-		Hydrophytic Vegetati  1 - Rapid Test for				
6				2 - Dominance Te		•		
7				3 - Prevalence Inc				
8				4 - Morphological			pporting	
9				data in Remark	s or on a s	separate sheet	t)	
10	00			Problematic Hydro	phytic Vec	getation <sup>1</sup> (Expl	ain)	
Woody Vine Stratum (Plot size: 450 sq ft )		= Total C		<sup>1</sup> Indicators of hydric so be present, unless dist			must	
2.				Hydrophytic				
40	0	= Total C		Vegetation	es X	No		
% Bare Ground in Herb Stratum 10 Remarks:								

Profile Desc	cription: (Describe	e to the dep	th needed to docu	ıment the	indicator o	or confir	m the absence of	indicators.)
Depth	Matrix			ox Feature		. 2	<b>-</b> .	5 .
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc <sup>2</sup>		Remarks
0-2	10 YR 3/2	100	10 YR 5/4	15	C	M	Clay	
-				_				
-	-							
					. ———		<u> </u>	
	oncentration, D=De					d Sand G		on: PL=Pore Lining, M=Matrix.
	Indicators: (Appli	cable to all	_				_	r Problematic Hydric Soils <sup>3</sup> :
Histosol	• •			Gleyed Ma	, ,			ek (A9) (LRR I, J)
	pipedon (A2)			Redox (S5	•		_	airie Redox (A16) ( <b>LRR F, G, H</b> ) ace (S7) ( <b>LRR G</b> )
	istic (A3) en Sulfide (A4)			ed Matrix (S Mucky Mir	•		_	ns Depressions (F16)
	d Layers (A5) ( <b>LRR</b>	<b>F</b> )		Gleyed M			_	H outside of MLRA 72 & 73)
	uck (A9) ( <b>LRR F, G</b>	,		ed Matrix (				Vertic (F18)
	d Below Dark Surfa	,		Dark Surfa	,			nt Material (TF2)
	ark Surface (A12)			ed Dark Su	, ,			llow Dark Surface (TF12)
	Mucky Mineral (S1)			Depressio	. ,			plain in Remarks)
	Mucky Peat or Peat	. , .	· · · —	lains Depr	•	,		hydrophytic vegetation and
5 cm IVII	ucky Peat or Peat (	53) ( <b>LRR F</b> )	(IVI)	LRA 72 &	/3 OT LRR	H)		ydrology must be present, sturbed or problematic.
Restrictive	Layer (if present):						unless dis	sturbed of problematic.
Type:								
, , <u> </u>	ches):						Hydric Soil Pro	esent? Yes X No
Remarks:			<del></del>				, , , , , , ,	
- tomano								
Redox fe	atures presei	nt; Tinn c	lay, occasion	nally floo	oded is	nation	ally listed hyd	dric soil; naturally dark soil
HYDROLO								
Wetland Hy	drology Indicators	s:						
	cators (minimum of	one required						Indicators (minimum of two required)
Surface	Water (A1)		Salt Crus	t (B11)			_	e Soil Cracks (B6)
1 🚍 🐣	ater Table (A2)		= '	nvertebrate	, ,			ly Vegetated Concave Surface (B8)
Saturati	, ,			n Sulfide O				ge Patterns (B10)
	larks (B1)			on Water	, ,			ed Rhizospheres on Living Roots (C3)
	nt Deposits (B2)			Rhizosphe		ng Roots	` ′ 🗂 `	re tilled)
	posits (B3)			not tilled)				h Burrows (C8)
	at or Crust (B4)			of Reduce		)	_	tion Visible on Aerial Imagery (C9)
·	posits (B5)	/D:		k Surface				orphic Position (D2)
	on Visible on Aeria	• • •	(Ex	kplain in Re	emarks)			eutral Test (D5)
	Stained Leaves (B9)						Frost-H	Heave Hummocks (D7) (LRR F)
Field Obser		Vaa X	No Depth (i	n ah a a\.	3			
Surface Wat						-		
Water Table			No Depth (i			-		, X X
Saturation P	resent? pillary fringe)	Yes^_	No Depth (i	nches):		_   wet	land Hydrology P	resent? Yes X No No
	corded Data (strea	m gauge, mo	onitoring well, aeria	l photos, pr	evious insp	pections)	, if available:	
Remarks:								













Project/Site: Lake Ralph Hall Supplemental JD		City/Coun	ty: Ladonia/F	annin	Sampling	g Date: 6/2/2	2017	
Applicant/Owner: Upper Trinity Regional Water District				State: TX San				
Investigator(s): Jason Voight, Andrew Sample		Section, T	Гownship, Ra	inge:				
Landform (hillslope, terrace, etc.): Valley		Local reli	ef (concave,	convex, none): Concave		Slope (9	%): <u>0-1%</u>	
Subregion (LRR): Southwest Prairies				Long: -96.01074				
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classific				
Are climatic / hydrologic conditions on the site typical for	this time of ve							
Are Vegetation, Soil, or Hydrology				"Normal Circumstances" p		Yes X	No	
Are Vegetation, SoilX_, or Hydrology				eeded, explain any answe				
SUMMARY OF FINDINGS – Attach site ma							res, etc	
Hydrophytic Vegetation Present? Yes X	No		4h - Ol		<u> </u>		· · ·	
Hydric Soil Present? Yes	No X		the Sampled thin a Wetlar		No	Х		
Wetland Hydrology Present? Yes	NoX	Wil	umi a vvenai	id: res				
Remarks:								
Outside of the forested wetland deline	eated in w	/p57						
VEGETATION – Use scientific names of pla	ants.							
	Absolute	Domina	nt Indicator	Dominance Test work	sheet:			
Tree Stratum (Plot size: 700 sq ft )			? Status	Number of Dominant S				
1. Fraxinus pennsylvanica	20	Yes	FAC	That Are OBL, FACW,		3	(4)	
2. Celtis laevigata	60	Yes	FAC	(excluding FAC-):			(A)	
3				Total Number of Domin		3	(B)	
4	80			Species Across All Stra	ıla.		(D)	
Sapling/Shrub Stratum (Plot size: 700 sq ft )	80	= Total C	over	Percent of Dominant Sp That Are OBL, FACW,		100	(A/B)	
1. Fraxinus pennsyvanica	10	No	FAC	That Ale OBL, FACW,	oi PAC.		(A/B)	
2. Celtis laevigata	15	No	FAC	Prevalence Index wor				
3				Total % Cover of:				
4				OBL species				
5				FACW species				
Herb Stratum (Plot size: 450 sq ft	25	= Total C	over	FACU species				
Herb Stratum (Plot size: 430 sq II )  1. Amaranthus tuberculatus	70	Yes	FAC	UPL species		4 = 5 =		
2. Ptilimnium nutalli	5	No	FACW	Column Totals:				
3. Elymus virginicus	5	No	FAC					
4. Carex blanda	5	No	FAC	Prevalence Index				
5. Viola missouriensis	5	No	FACW	Hydrophytic Vegetation			_	
6		· <u></u>		1 - Rapid Test for F  2 - Dominance Tes		•	1	
7				3 - Prevalence Inde				
8				4 - Morphological A			supporting	
9				data in Remarks				
10				Problematic Hydro	phytic Veç	getation¹ (Exp	plain)	
Woody Vine Stratum (Plot size: 450 sq ft )	90	= Total C	over	<sup>1</sup> Indicators of hydric soi	l and wetl	and hydrolog	gy must	
1				be present, unless distu				
2.				Hydrophytic				
	0	= Total C	over	Vegetation	s X	No		
% Bare Ground in Herb Stratum 10				Present? Ye	s <u> </u>	No	_	
Remarks:								

Profile Desc	cription: (Describ	e to the depti	h needed to docu	ment the i	indicator	or confirn	n the absence of	indicators.)	_
Depth	Matrix			x Feature			<b>-</b> .		
(inches)	Color (moist)		Color (moist)	%	Type'	Loc <sup>2</sup>	Texture	Remarks	-
0-2	10 YR 3/2	100		_			Clay		-
				_					
		<del>_</del>		_					•
	-								
				_					
				_					
		•	Reduced Matrix, C			d Sand G		on: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators: (App	licable to all L	RRs, unless other	rwise not	ed.)		Indicators for	Problematic Hydric Soils <sup>3</sup> :	
Histosol	, ,			Gleyed Ma	, ,			k (A9) ( <b>LRR I, J</b> )	
	oipedon (A2)			Redox (S5	•			irie Redox (A16) ( <b>LRR F, G, H</b> )	
	istic (A3)			d Matrix (S	,		_	ace (S7) (LRR G)	
	en Sulfide (A4)	. F\		Mucky Mir			_	ns Depressions (F16)	
	d Layers (A5) ( <b>LRI</b> uck (A9) ( <b>LRR F, 0</b>	,		Gleyed Maded Matrix (			_ `	Houtside of MLRA 72 & 73) Vertic (F18)	
	d Below Dark Surf			Dark Surfa				nt Material (TF2)	
	ark Surface (A12)	400 (711)	_	ed Dark Su	. ,			low Dark Surface (TF12)	
_	Aucky Mineral (S1)	)		Depressio	, ,			plain in Remarks)	
2.5 cm l	Mucky Peat or Pea	t (S2) ( <b>LRR G</b>	, <b>H</b> ) 🔲 High Pl	ains Depre	essions (F	16)	<sup>3</sup> Indicators of I	nydrophytic vegetation and	
5 cm Μι	ucky Peat or Peat	(S3) ( <b>LRR F</b> )	(MI	RA 72 & 7	73 of LRR	<b>H</b> )	wetland hy	ydrology must be present,	
							unless dis	turbed or problematic.	
Restrictive	Layer (if present)	:							
Type:								V	
Depth (in	ches):						Hydric Soil Pro	esent? Yes NoX	
Remarks:									
No rodov	footures pro	oonti Tinn	alay, agagaia	الم مالي وا		a nation	ممالير انمدم مل امر	rdrie eeile metermeller derle ee	.:1
ino redox	reatures pre	sent, rinn	ciay, occasio	many no	ooded i	s nation	nally listed ny	dric soil; naturally dark so	)II
HYDROLO	GY								
	drology Indicator	'S:							_
-			check all that app	lv)			Secondary	Indicators (minimum of two required)	
	Water (A1)		Salt Crus			-		e Soil Cracks (B6)	
	ater Table (A2)			vertebrate	es (B13)		_	ly Vegetated Concave Surface (B8)	
Saturation	, ,			Sulfide O	. ,			ge Patterns (B10)	
	larks (B1)			on Water T				ed Rhizospheres on Living Roots (C3	)
	nt Deposits (B2)					ing Roots	<del></del>	re tilled)	′
	posits (B3)		<del></del>	not tilled)		9		h Burrows (C8)	
	at or Crust (B4)			of Reduce		1)		ion Visible on Aerial Imagery (C9)	
1 1 -	posits (B5)			Surface (		,		orphic Position (D2)	
Inundati	on Visible on Aeria	al Imagery (B7)		plain in Re				eutral Test (D5)	
☐ Water-S	tained Leaves (B9	9)					Frost-H	leave Hummocks (D7) (LRR F)	
Field Obser	vations:								_
Surface Wat	er Present?	Yes N	lo X Depth (ir	ches):					
Water Table	Present?		lo X Depth (ir						
Saturation P			lo X Depth (ir				and Hydrology P	resent? Yes NoX	
(includes cap	oillary fringe)								
Describe Re	corded Data (strea	am gauge, mor	nitoring well, aerial	photos, pr	evious ins	pections),	if available:		
Remarks:						_			-
l									









## WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD		City/Count	y: Ladonia/F	annin	Sampling I	Date: <u>6/1/20</u>	)17
Applicant/Owner: Upper Trinity Regional Water District				State: TX	_ Sampling I	Point: WP86	3
Investigator(s):		Section, To	ownship, Rai	nge:			
Landform (hillslope, terrace, etc.): Valley	_	Local relie	f (concave, o	convex, none): Concav	е	Slope (%	o): <u>0-1%</u>
Subregion (LRR): Southwest Prairies	Lat: 33.4	15293		Long: <u>-95.97781</u>		Datum: N	AD83
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classi			
Are climatic / hydrologic conditions on the site typical for t	his time of ve	ar? Yes					
Are Vegetation, Soil, or Hydrology						es X	No
Are Vegetation, Soil _X, or Hydrology				eded, explain any ansv			
SUMMARY OF FINDINGS – Attach site ma						,	es, etc
		<u></u>	-	·	•		
Hydrophytic Vegetation Present? Yes X	No	ls t	he Sampled				
Hydric Soil Present?  Wetland Hydrology Present?  YesX	No^	wit	hin a Wetlar	nd? Yes	No _	X	
Remarks:	110						
depressional area associated with for	mer chan	nel sca	r. not hv	draulically conn	ected to	any exis	stina
stream channel	iller Gran	1101 300	ii, HOUTIY	dradically com	ecied to	arry Chic	ung
Stream charmer							
VEGETATION – Use scientific names of pla	ants.						
Tree Stratum (Plot size: 700 sq ft	Absolute	Dominan Species?	t Indicator	Dominance Test wo			
1. Fraxinus pennsylvanica	<u> </u>	No No	FAC	Number of Dominant That Are OBL, FACW			
2. Celtis laevigata	30	Yes	FAC	(excluding FAC-):	, 011 AC _	2	_ (A)
3. Ulmus crassifolia/Ulmus americana	10/30	No/Yes	FAC/FAC	Total Number of Dom	inant		
4. Quercus shumardii/Quercus macrocarpa	5/5	No/No	FAC/FACU	Species Across All St		2	_ (B)
	85	= Total Co	ver	Percent of Dominant	Species		
Sapling/Shrub Stratum (Plot size: 700 sq ft )	40	NI.	E40	That Are OBL, FACW		100	_ (A/B)
1. Quercus shumardii	<u>10</u>	No No	FACU FACU	Prevalence Index we	orksheet:		
Quercus macrocarpa     Celtis laevigata	15	No	FAC	Total % Cover of		Multiply by:	
			1710	OBL species			
4.       5.		-		FACW species	x 2 :	=	
0	35	= Total Co	over	FAC species	x 3 :	=	
Herb Stratum (Plot size: 450 sq ft )				FACU species			
1. Elymus virginicus	2	No	FAC	UPL species			
2. Viola missouriensis	2	No	FACW	Column Totals:	(A)		(B)
3				Prevalence Inde	ex = B/A =		
4				Hydrophytic Vegeta			
5				1 - Rapid Test fo	r Hydrophytic	Vegetation	
6				2 - Dominance T	est is >50%		
7 8			<del></del>	3 - Prevalence In	dex is ≤3.0 <sup>1</sup>		
9.			<del></del>	4 - Morphologica	Adaptations	(Provide su	upporting
10.				data in Remai		•	•
	4	= Total Co	ver	<del>-</del>			,
Woody Vine Stratum (Plot size: 450 sq ft )	·			<sup>1</sup> Indicators of hydric s be present, unless dis			/ must
1. Toxicodendron radicans	$-\frac{3}{3}$	No No	FACUEACII			, DICITICALIC.	
2. Smilax bona-nox/Campsis radicans		No	FAC/UFACU	Hydrophytic Vegetation			
% Bare Ground in Herb Stratum 96	U	= Total Co	over		′es X	No	
Remarks:				l			

Profile Desc	cription: (Describ	e to the depth	needed to docu	ment the i	indicator	or confirn	n the absence of	indicators.)
Depth	Matrix			x Feature	1	. 2	_	
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-1	10 YR 2/1						Clay	
								_
				-				
	_							<u> </u>
	oncentration, D=De					d Sand G	rains. <sup>2</sup> Location	on: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appl	icable to all L	RRs, unless othe	rwise not	ed.)		Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy	Gleyed Ma	atrix (S4)		1 cm Muc	k (A9) ( <b>LRR I, J</b> )
	pipedon (A2)			Redox (S5	•		_	irie Redox (A16) (LRR F, G, H)
	istic (A3)			d Matrix (S	,			ace (S7) (LRR G)
	en Sulfide (A4)	<b>. </b>		Mucky Mir			_	ns Depressions (F16)
	d Layers (A5) ( <b>LRF</b> uck (A9) ( <b>LRR F, G</b>	,		Gleyed Ma			_ `	Houtside of MLRA 72 & 73) Vertic (F18)
	ıck (A9) ( <b>LRR F, G</b> d Below Dark Surfa			ed Matrix ( Dark Surfa				Vertic (F18) nt Material (TF2)
	ark Surface (A12)	ace (ATT)	_		urface (F7)			low Dark Surface (TF12)
_	Mucky Mineral (S1)			Depressio	, ,			plain in Remarks)
	Mucky Peat or Pea				essions (F	16)	<del></del> · · ·	nydrophytic vegetation and
5 cm Mu	ucky Peat or Peat (	S3) ( <b>LRR F</b> )	(ML	RA 72 & 1	73 of LRR	<b>H</b> )	wetland hy	drology must be present,
							unless dis	turbed or problematic.
Restrictive	Layer (if present):							
Type:			<u>—</u>					.,
Depth (in	ches):		<u> </u>				Hydric Soil Pre	esent? Yes NoX
Remarks:							-	
No redox	x features; I	inn clay, o	occasionally	floode	ed is na	ationall	y listed hydr	ic soil; naturally dark soil
HYDROLO	GY							
	drology Indicators	6.						
_	cators (minimum of		abook all that ann	lv)			Cocondon	Indicators (minimum of two required)
	•	one required,						Indicators (minimum of two required)  Soil Cracks (B6)
	Water (A1) ater Table (A2)		Salt Crust	. (DTT) ivertebrate	o (P12)			ly Vegetated Concave Surface (B8)
1 <b>—</b>	` ,			Sulfide O	. ,			ge Patterns (B10)
Saturation	larks (B1)				dor (Ст) Гable (С2)			ed Rhizospheres on Living Roots (C3)
	nt Deposits (B2)					ing Roots		re tilled)
	posits (B3)		· · · · · · · · · · · · · · · · · · ·	not tilled)		y 110013	—	h Burrows (C8)
1 1 1	at or Crust (B4)				ed Iron (C4	1)		ion Visible on Aerial Imagery (C9)
~	posits (B5)			Surface (		*)		rphic Position (D2)
ı 🚐	on Visible on Aeria	ıl Imagery (B7)		plain in Re				eutral Test (D5)
_	stained Leaves (B9		<u> </u>	piaiii iii ike	inano,			leave Hummocks (D7) (LRR F)
Field Obser		,						isave riammesia (57) (Errit 1)
Surface Wat		Yes N	o X Depth (ir	iches).				
Water Table			o X Depth (ir					
			o X Depth (ir				and Hydrology D	resent? Yes X No
Saturation P (includes cap		res N	υ <u> </u>	icnes):		vveti	and nydrology P	resent? res NO
	corded Data (strea	m gauge, mon	itoring well, aerial	photos, pr	eviou <del>s</del> ins	pections),	if available:	
Remarks:								







## WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD		City/Coun	ity: Ladonia/F	annin	Samplin	g Date: 6/2/2	017
Applicant/Owner: Upper Trinity Regional Water District				State: TX	Samplin	g Point: WP1	33
Investigator(s): Jason Voight, Andrew Sample		Section, 7	Гownship, Ra	nge:			
Landform (hillslope, terrace, etc.): Valley		Local reli	ef (concave,	convex, none): Concave		Slope (%	%): <u>0-1%</u>
Subregion (LRR): Southwest Prairies				Long: <u>-96.01480</u>			
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classifi			
Are climatic / hydrologic conditions on the site typical for	this time of ve						
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"			No
Are Vegetation, SoilX, or Hydrology				eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site ma						,	res, etc.
Hydrophytic Vegetation Present? Yes X	No				<u> </u>		·
Hydric Soil Present? Yes	No X		the Sampled thin a Wetlar		No	Χ	
Wetland Hydrology Present? Yes	No X	WI	unin a vvenai	ild: Tes	NO		
Remarks:							
Heavy storms the previous day; wood	led area r	near N	orth Sulp	hur River channe	əl		
VEGETATION – Use scientific names of pla				,			
Tree Stratum (Plot size: 700 sq ft)	Absolute % Cover		nt Indicator Status	Dominance Test work			
1. Fraxinus pennsylvanica	20	Yes	FAC	Number of Dominant S That Are OBL, FACW,			
2. Celtis laevigata	50	Yes	FAC	(excluding FAC-):		3	(A)
3. Maclura pomifera	15	No	FACU	Total Number of Domii	nant		
4				Species Across All Stra	ata:	4	(B)
700 sq ft	85	= Total C	over	Percent of Dominant S			
Sapling/Shrub Stratum (Plot size: 700 sq ft )  1. Cornus drummondi	5	No	FAC	That Are OBL, FACW,	or FAC:	75	(A/B)
2. Celtis laevigata		No	FAC	Prevalence Index wo	rksheet:		
3.	<u> </u>			Total % Cover of:		Multiply by:	
4		-		OBL species	x	1 =	
5				FACW species			
	20	= Total C	over	FAC species			
Herb Stratum (Plot size: 450 sq ft )	4.5	NIa	EAOU	FACU species		4 =	
Toxicodendron radicans     Carex planostachys	<u>15</u> 40	No Yes	FACU UPL	UPL species			
2. Elymus virginicus	40	Yes	FAC	Column Totals:	(A	)	(B)
	<del></del>	-	TAO	Prevalence Index	κ = B/A =		
4				Hydrophytic Vegetati	on Indica	tors:	
5				1 - Rapid Test for		•	
7.				2 - Dominance Te			
8.				3 - Prevalence Ind			
9.				4 - Morphological data in Remark			
10		ī		Problematic Hydro		•	,
450 4	95	= Total C	over	l.			,
Woody Vine Stratum (Plot size: 450 sq ft)  1. Lonicera japonica	5	No	FACU	<sup>1</sup> Indicators of hydric so be present, unless dist			y must
2.				Hydrophytic			
_	5	= Total C	over	Vegetation	X	No	
% Bare Ground in Herb Stratum 5				Present? Ye	.s <u> </u>	No	-
Remarks:							

Profile Desc	cription: (Describ	e to the depti	h needed to docu	ment the i	indicator	or confirn	n the absence of	indicators.)	_
Depth	Matrix			x Feature			<b>-</b> .		
(inches)	Color (moist)		Color (moist)	%	Type'	Loc <sup>2</sup>	Texture	Remarks	-
0-2	10 YR 3/2	100		_			Clay		-
				_					
		<del>_</del>		_					•
	-								
				_					
				_					
		•	Reduced Matrix, C			d Sand G		on: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators: (App	licable to all L	RRs, unless other	rwise not	ed.)		Indicators for	Problematic Hydric Soils <sup>3</sup> :	
Histosol	, ,			Gleyed Ma	, ,			k (A9) ( <b>LRR I, J</b> )	
	oipedon (A2)			Redox (S5	•			irie Redox (A16) ( <b>LRR F, G, H</b> )	
	istic (A3)			d Matrix (S	,		_	ace (S7) (LRR G)	
	en Sulfide (A4)	. F\		Mucky Mir			_	ns Depressions (F16)	
	d Layers (A5) ( <b>LRI</b> uck (A9) ( <b>LRR F, 0</b>	,		Gleyed Maded Matrix (			_ `	Houtside of MLRA 72 & 73) Vertic (F18)	
	d Below Dark Surf			Dark Surfa				nt Material (TF2)	
	ark Surface (A12)	400 (711)	_	ed Dark Su	. ,			low Dark Surface (TF12)	
_	Aucky Mineral (S1)	)		Depressio	, ,			plain in Remarks)	
2.5 cm l	Mucky Peat or Pea	t (S2) ( <b>LRR G</b>	, <b>H</b> ) 🔲 High Pl	ains Depre	essions (F	16)	<sup>3</sup> Indicators of I	nydrophytic vegetation and	
5 cm Μι	ucky Peat or Peat	(S3) ( <b>LRR F</b> )	(MI	RA 72 & 7	73 of LRR	<b>H</b> )	wetland hy	ydrology must be present,	
							unless dis	turbed or problematic.	
Restrictive	Layer (if present)	:							
Type:								V	
Depth (in	ches):						Hydric Soil Pro	esent? Yes NoX	
Remarks:									
No rodov	footures pro	oonti Tinn	alay, agagaia	الم مالي وا		a nation	ممالير انمدم مل امر	rdrie eeile metermeller derle ee	.:1
ino redox	reatures pre	sent, rinn	ciay, occasio	many no	ooded i	s nation	nally listed ny	dric soil; naturally dark so	)II
HYDROLO	GY								
	drology Indicator	'S:							_
-			check all that app	lv)			Secondary	Indicators (minimum of two required)	
	Water (A1)		Salt Crus			-		e Soil Cracks (B6)	
	ater Table (A2)			vertebrate	es (B13)		_	ly Vegetated Concave Surface (B8)	
Saturation	, ,			Sulfide O	. ,			ge Patterns (B10)	
	larks (B1)			on Water T				ed Rhizospheres on Living Roots (C3	)
	nt Deposits (B2)					ing Roots	<del></del>	re tilled)	′
	posits (B3)		<del></del>	not tilled)		9		h Burrows (C8)	
	at or Crust (B4)			of Reduce		1)		ion Visible on Aerial Imagery (C9)	
1 1 -	posits (B5)			Surface (		,		orphic Position (D2)	
Inundati	on Visible on Aeria	al Imagery (B7)		plain in Re				eutral Test (D5)	
☐ Water-S	tained Leaves (B9	9)					Frost-H	leave Hummocks (D7) (LRR F)	
Field Obser	vations:								_
Surface Wat	er Present?	Yes N	lo X Depth (ir	ches):					
Water Table	Present?		lo X Depth (ir						
Saturation P			lo X Depth (ir				and Hydrology P	resent? Yes NoX	
(includes cap	oillary fringe)								
Describe Re	corded Data (strea	am gauge, mor	nitoring well, aerial	photos, pr	evious ins	pections),	if available:		
Remarks:						_			-
l									









## WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Lake Ralph Hall Supplemental JD		City/Cou	nty: Ladonia/F	annin	Sampling	g Date: 6/2/20	17
Applicant/Owner: Upper Trinity Regional Water District				State: TX	Sampling	g Point: WP13	4
Investigator(s): Jason Voight, Andrew Sample				inge:			
Landform (hillslope, terrace, etc.): Valley				-		Slope (%)	: 0-1%
Subregion (LRR): Southwest Prairies			,	, -			
Soil Map Unit Name: Normangee Clay Loam, 2 to 5 percei							
Are climatic / hydrologic conditions on the site typical for the							
Are Vegetation, Soil, or Hydrology				"Normal Circumstances" p		Yes X	lo.
Are Vegetation, Soil, or Hydrology				eeded, explain any answer			
SUMMARY OF FINDINGS – Attach site map							es, etc.
Hydrophytic Vegetation Present? Yes	No X	lo	the Complete	I Aron			
Hydric Soil Present? Yes	No X		s the Sampled vithin a Wetlar		No	Χ	
Wetland Hydrology Present? Yes	NoX	•	Titilli a Wetlai	103			
Heavy storms the previous day; wood	ed area r	near N	lorth Sulp	hur River channe	l 		
VEGETATION – Use scientific names of pla	nts.						
Tree Stratum (Plot size: 700 sq ft	Absolute % Cover		ant Indicator s? Status	Dominance Test works			
1. Quercus stellata	80	Yes	FACU	Number of Dominant Sp That Are OBL, FACW, of			
2.				(excluding FAC-):		1	(A)
3				Total Number of Domina	ant		
4				Species Across All Strat	ia:	4	(B)
Sapling/Shrub Stratum (Plot size: 700 sq ft)	80	= Total (	Cover	Percent of Dominant Sp		25	
1. Quercus stellata	20	No	FAC	That Are OBL, FACW, o	or FAC:	25	(A/B)
2. Celtis laevigata	15	No	FAC	Prevalence Index work	sheet:		
3. Symphoricarpos orbiculatus	35	Yes	FACU	Total % Cover of:			
4. Ulmus crassifolia	10	No		OBL species			
5				FACW species			
450 sq ft	80	= Total (	Cover	FACUL appeirs		_	
Herb Stratum (Plot size: 450 sq ft 1. Toxicodendron radicans	15	No	FACU	FACU species UPL species		4 = 5 <i>-</i>	_
2. Carex planostachys	40	Yes	UPL	Column Totals:			
3. Elymus virginicus	30	Yes	FAC				
4.				Prevalence Index			_
5				Hydrophytic Vegetatio			
6				1 - Rapid Test for H		ŭ	
7				3 - Prevalence Inde			
8				4 - Morphological A			nnortina
9				data in Remarks	or on a s	separate sheet	)
10				Problematic Hydrop	hytic Veç	getation <sup>1</sup> (Expla	ain)
Woody Vine Stratum (Plot size: 450 sq ft )  1.		= Total (		<sup>1</sup> Indicators of hydric soil be present, unless distu			must
2.				Hydrophytic			
45		= Total (		Vegetation		No X	
% Bare Ground in Herb Stratum 15 Remarks:				Present? Yes	<u>'                                    </u>	NO	

(inches)	Matrix (Accident		Redox Features	<u> </u>	D
0-18	Color (moist) 10 YR 3/2		Color (moist) % Type <sup>1</sup>	Loc <sup>2</sup> Texture	Remarks
0-18	10 YR 3/2			Clay	
			duced Matrix, CS=Covered or Coated		n: PL=Pore Lining, M=Matrix.
		cable to all LRF	Rs, unless otherwise noted.)		Problematic Hydric Soils <sup>3</sup> :
Histosol	. ,		Sandy Gleyed Matrix (S4)		(A9) (LRR I, J)
	pipedon (A2) istic (A3)		Sandy Redox (S5) Stripped Matrix (S6)		rie Redox (A16) ( <b>LRR F, G, H</b> ) ce (S7) ( <b>LRR G</b> )
	en Sulfide (A4)		Loamy Mucky Mineral (F1)		Depressions (F16)
	d Layers (A5) ( <b>LRR</b>	<b>F</b> )	Loamy Gleyed Matrix (F2)		outside of MLRA 72 & 73)
	uck (A9) ( <b>LRR F, G</b> ,		Depleted Matrix (F3)	Reduced \	,
	d Below Dark Surfa		Redox Dark Surface (F6)		t Material (TF2)
	ark Surface (A12)		Depleted Dark Surface (F7)		ow Dark Surface (TF12)
	Mucky Mineral (S1)		Redox Depressions (F8)		lain in Remarks)
	Mucky Peat or Peat		-		ydrophytic vegetation and
5 cm IVII	ucky Peat or Peat (\$	53) ( <b>LRR F</b> )	(MLRA 72 & 73 of LRR		drology must be present, urbed or problematic.
Restrictive	Layer (if present):			uniess dist	urbed of problematic.
	Layor (ii proconty)				
	ches):		-	Hydric Soil Pre	sent? Yes NoX
Remarks:			-	11,4110 0011110	
rtomanto.					
No ro	edox fea	tures n	resent		
INUIL					
		<u> </u>			
HYDROLO	oGY .				
HYDROLO					
HYDROLO Wetland Hy Primary Indi	OGY drology Indicators cators (minimum of	s: one required; ch	neck all that apply)		ndicators (minimum of two required)
HYDROLO  Wetland Hy  Primary India	drology Indicators cators (minimum of Water (A1)	s: one required; ch			ndicators (minimum of two required) Soil Cracks (B6)
Wetland Hy Primary India Surface High Wa	drology Indicators cators (minimum of Water (A1) ater Table (A2)	s: one required; ch	neck all that apply)  Salt Crust (B11)  Aquatic Invertebrates (B13)	Surface Sparsely	Soil Cracks (B6)   Vegetated Concave Surface (B8)
Wetland Hy Primary Indi Surface High Wa	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3)	s: one required; ch	neck all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Surface Sparsely Drainag	Soil Cracks (B6)  Vegetated Concave Surface (B8) e Patterns (B10)
Wetland Hy Primary India Surface High Wa Saturati Water N	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1)	s: one required; ch	neck all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2)	Surface Sparsely Drainag Oxidized	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3)
Wetland Hy Primary India Surface High Wa Saturati Water M Sedime	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)	s: one required; ch	neck all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Livin	Surface Sparsely Drainag Oxidized	Soil Cracks (B6)  v Vegetated Concave Surface (B8) e Patterns (B10) d Rhizospheres on Living Roots (C3) e tilled)
Wetland Hy Primary India Surface High Wa Saturati Water M Sedimee	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)	s: one required; ch	neck all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Livin (where not tilled)	Surface Sparsely Drainag Oxidized  ng Roots (C3)  Crayfish	Soil Cracks (B6)  v Vegetated Concave Surface (B8) e Patterns (B10) I Rhizospheres on Living Roots (C3) e tilled) Burrows (C8)
HYDROLO  Wetland Hy Primary India Surface High Wa Saturati Water M Sedimel Drift Del Algal Ma	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	s: one required; ch	neck all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Livin (where not tilled) Presence of Reduced Iron (C4)	Surface Sparsely Drainag Oxidized ng Roots (C3) Crayfish Saturati	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) It filled) Burrows (C8) On Visible on Aerial Imagery (C9)
HYDROLO  Wetland Hy Primary India Surface High Wa Saturati Water M Sedimel Drift De Algal Ma Iron Dep	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	s: one required; ch	neck all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Livin (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7)	Surface Sparsely Drainag Oxidized  mg Roots (C3) (wher Crayfish Saturati Geomor	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) High tilled Burrows (C8) On Visible on Aerial Imagery (C9) Phic Position (D2)
HYDROLO  Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedimel Drift De Algal Ma Iron Dep	rdrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial	one required; ch	neck all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Livin (where not tilled) Presence of Reduced Iron (C4)	Surface Sparsely Drainag Oxidized  mg Roots (C3) Crayfish Saturatio Geomor FAC-Ne	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Patilled) Burrows (C8) On Visible on Aerial Imagery (C9) Phic Position (D2) utral Test (D5)
HYDROLO  Wetland Hy Primary India Surface High Wa Saturati Water M Sedime Drift Del Algal Ma Iron Dep Inundati Water-S	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Stained Leaves (B9)	one required; ch	neck all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Livin (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7)	Surface Sparsely Drainag Oxidized  mg Roots (C3) Crayfish Saturatio Geomor FAC-Ne	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) High tilled Burrows (C8) On Visible on Aerial Imagery (C9) Phic Position (D2)
HYDROLO  Wetland Hy Primary India  Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Inundati Water-S	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Stained Leaves (B9) rvations:	one required; ch	neck all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Livin (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7) Other (Explain in Remarks)	Surface Sparsely Drainag Oxidized (where Crayfish Saturation Geomor FAC-Ne	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Patilled) Burrows (C8) On Visible on Aerial Imagery (C9) Phic Position (D2) utral Test (D5)
HYDROLO  Wetland Hy Primary India Surface High Wa Saturati Water M Sedimel Drift De Algal Ma Iron Dep Inundati Water-S  Field Obser	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Stained Leaves (B9) rvations: ter Present?	one required; ch	neck all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Livin (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7) Other (Explain in Remarks)  X Depth (inches):	Surface Sparsely Drainag Oxidized (wher Crayfish Saturatio Geomor FAC-Ne Frost-He	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Patilled) Burrows (C8) On Visible on Aerial Imagery (C9) Phic Position (D2) utral Test (D5)
HYDROLO  Wetland Hy Primary India Surface High Wa Saturati Water M Sedimel Drift Del Algal Ma Iron Del Inundati Water-S Field Obser Surface Water Table	redrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Stained Leaves (B9) rvations: ter Present?	one required; che I Imagery (B7)  Yes No _	neck all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Livin (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7) Other (Explain in Remarks)  X Depth (inches):  Depth (inches):	Surface Sparsely Drainag Oxidized  Crayfish Saturati Geomor FAC-Ne Frost-He	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Patilled) Burrows (C8) Pon Visible on Aerial Imagery (C9) Phic Position (D2) Putral Test (D5) Pave Hummocks (D7) (LRR F)
HYDROLO  Wetland Hy Primary India Surface High Wa Saturati Water M Sedimel Drift Del Algal Ma Iron Dep Inundati Water-S Field Obser Surface Wat Water Table Saturation P	redrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Stained Leaves (B9) redroms: ter Present? Present?	one required; che I Imagery (B7)  Yes No _	neck all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Livin (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7) Other (Explain in Remarks)  X Depth (inches):	Surface Sparsely Drainag Oxidized  Crayfish Saturati Geomor FAC-Ne Frost-He	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Patilled) Burrows (C8) On Visible on Aerial Imagery (C9) Phic Position (D2) utral Test (D5)
HYDROLO  Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Inundati Water-S Field Obser Surface Wat Water Table Saturation P (includes ca	redrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Stained Leaves (B9) redroms: ter Present? Present?	one required; che in the control of	neck all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Livin (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7) Other (Explain in Remarks)  X Depth (inches):  Depth (inches):	Surface Sparsely Drainag Oxidized Trayfish Saturati Geomor FAC-Ne Frost-He Wetland Hydrology Pr	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Patilled) Burrows (C8) Pon Visible on Aerial Imagery (C9) Phic Position (D2) Putral Test (D5) Pave Hummocks (D7) (LRR F)
HYDROLO  Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Inundati Water-S Field Obser Surface Wat Water Table Saturation P (includes ca	redrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Stained Leaves (B9) redroms: ter Present? Present?	one required; che in the control of	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Livin (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7) Other (Explain in Remarks)  X Depth (inches): X Depth (inches):	Surface Sparsely Drainag Oxidized Trayfish Saturati Geomor FAC-Ne Frost-He Wetland Hydrology Pr	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Patilled) Burrows (C8) Pon Visible on Aerial Imagery (C9) Phic Position (D2) Putral Test (D5) Pave Hummocks (D7) (LRR F)
HYDROLO  Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Inundati Water-S Field Obser Surface Wat Water Table Saturation P (includes ca	redrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Stained Leaves (B9) redroms: ter Present? Present?	one required; che in the control of	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Livin (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7) Other (Explain in Remarks)  X Depth (inches): X Depth (inches):	Surface Sparsely Drainag Oxidized Trayfish Saturati Geomor FAC-Ne Frost-He Wetland Hydrology Pr	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Patilled) Burrows (C8) Pon Visible on Aerial Imagery (C9) Phic Position (D2) Putral Test (D5) Pave Hummocks (D7) (LRR F)
HYDROLO  Wetland Hy Primary India Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Inundati Water-S Field Obser Surface Wat Water Table Saturation P (includes cal	redrology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial Stained Leaves (B9) redroms: ter Present? Present?	one required; che in the control of	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Livin (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7) Other (Explain in Remarks)  X Depth (inches): X Depth (inches):	Surface Sparsely Drainag Oxidized Trayfish Saturati Geomor FAC-Ne Frost-He Wetland Hydrology Pr	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Patilled) Burrows (C8) Pon Visible on Aerial Imagery (C9) Phic Position (D2) Putral Test (D5) Pave Hummocks (D7) (LRR F)







