





Project/Site: Lake Ralph Hall		City/Coun	ity: Ladonia/F	annin	Sampling	Date: 6/1/2	017
Applicant/Owner: Upper Trinity Regional Water District				State: TX	Sampling	Point: WP3	349
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	Lat: 33.4	1538		Long: <u>-95.98113</u>		Datum: N	NAD83
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" 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		th - O	14			
Hydric Soil Present? Yes	No X		the Sampled thin a Wetlar		No	Χ	
Wetland Hydrology Present? Yes X	No	WI	unin a vvenai	ild? Tes	NO_		
Remarks:							
Delineated during heavy rainfall. Forn	ner N. Su	lphur c	channel.				
VEGETATION – Use scientific names of pla	ants						
VEGETATION 636 30161111110 Hallies of pic	Absolute	Domina	nt Indicator	Dominance Test work	sheet:		
Tree Stratum (Plot size: 700 sq ft )			? Status	Number of Dominant S			
1. Celtis laevigata	40	Yes	FAC	That Are OBL, FACW,		5	(4)
2. Fraxinus pennsylvanica	30	Yes	FAC	(excluding FAC-):			(A)
3. Ulmus americana	20	Yes	FAC	Total Number of Domir		6	(D)
4				Species Across All Stra	ıta:		(B)
Sapling/Shrub Stratum (Plot size: 700 sq ft )	90	= Total C	over	Percent of Dominant S		83	(A /D)
1. Celtis laevigata	20	Yes	FAC	That Are OBL, FACW,	or FAC:		(A/B)
2.				Prevalence Index wor	ksheet:		
3.				Total % Cover of:		Multiply by:	
4.				OBL species			
5				FACW species			
450 cg ft	20	= Total C	over	FAC species			
Herb Stratum (Plot size: 450 sq ft )  1. Viola missouriensis	5	No	FACW	FACU species		4 =	
2. Chasmanthium latifolium	30	Yes	FACU	UPL species Column Totals:			
3. Elymus virginicus	15	Yes	FAC	Coldifili Totals.	(^)		(D)
4.				Prevalence Index			
5.				Hydrophytic Vegetation			
6.				1 - Rapid Test for I		•	1
7.				2 - Dominance Tes			
8				3 - Prevalence Ind 4 - Morphological			
9				data in Remark			
10				Problematic Hydro	phytic Veg	getation <sup>1</sup> (Exp	olain)
Woody Vine Stratum (Blot size, 450 sq ft	50	= Total C	over	<sup>1</sup> Indicators of hydric so	il and wath	and hydrolog	ny muet
Woody Vine Stratum (Plot size: 450 sq ft)  1. Smilax bona-nox	5	No	FACU	be present, unless dist			ıy ınuəl
2. Parthenocissus quinquefolia	5	No	FACU	Hydrophytic			
	10	= Total C	over	Vegetation	~		
% Bare Ground in Herb Stratum 50				Present? Ye	s	No	
Remarks:		· · ·					

Profile Desc	cription: (Describe	to the depth	needed to docu	ment the i	indicator	or confirm	n the absence	of indicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	_	Color (moist)	%	Type'	Loc <sup>2</sup>	Texture	Remarks
0-8	10 YR 3/2	100					Clay	
8-18	10 YR 5/2	80		_			Clay	20 % Mottles of 10 YR 3/2
·				-				
<u> </u>	-							
				_				
	-			_	· ——		-	
<del> </del>				-				
	oncentration, D=De					d Sand G		cation: PL=Pore Lining, M=Matrix.
	Indicators: (Appli	cable to all LF					_	for Problematic Hydric Soils <sup>3</sup> :
Histosol	, ,			Gleyed Ma	. ,			Muck (A9) ( <b>LRR I, J</b> )
	pipedon (A2)			Redox (S5	•			Prairie Redox (A16) (LRR F, G, H)
	istic (A3)			d Matrix (S	•			Surface (S7) (LRR G)
	en Sulfide (A4)			Mucky Mir	, ,		<del>_</del> ~	Plains Depressions (F16)
	d Layers (A5) (LRR	,	·	Gleyed Ma				RR H outside of MLRA 72 & 73)
	uck (A9) (LRR F, G,			ed Matrix (l Dark Surfa	,			ced Vertic (F18)
	d Below Dark Surfa ark Surface (A12)	ce (ATT)	_	ed Dark Su	` '			arent Material (TF2) Shallow Dark Surface (TF12)
	Mucky Mineral (S1)			Depressio	, ,			(Explain in Remarks)
	Mucky Peat or Peat	(S2) (LRR G.		ains Depre	. ,	16)		of hydrophytic vegetation and
	ucky Peat or Peat (		. —	RA 72 & 7	,	,		d hydrology must be present,
<del></del>	(	,	,			,		s disturbed or problematic.
Restrictive	Layer (if present):							·
Type:								
	ches):						Hydric Soil	Present? Yes No _X
Remarks:			<del></del>				1.,,	
rtomanto.								
Does not matc	h any hydric soil indic	cators. Tinn Clay	, occasionally flood	ed, is a nati	onally listed	hydric soil	I. naturally dark s	soil; Earthworms and grubs present in soil core.
HYDROLO	GY							
Wetland Hy	drology Indicators	):						
Primary India	cators (minimum of	one required;	check all that app	ly)			Seconda	ary Indicators (minimum of two required)
☐ Surface	Water (A1)		Salt Crust	(B11)			☐ Sur	face Soil Cracks (B6)
	ater Table (A2)		_	vertebrate	s (B13)			arsely Vegetated Concave Surface (B8)
Saturati	` '			Sulfide O				inage Patterns (B10)
	larks (B1)		_ `	on Water 1	. ,			dized Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		<b>—</b> 1	Rhizosphe	` '	ing Roots		vhere tilled)
	posits (B3)		<del></del>	not tilled)		<b>5</b>	· · — ·	yfish Burrows (C8)
	at or Crust (B4)			of Reduce		<b>l</b> )		uration Visible on Aerial Imagery (C9)
	posits (B5)			Surface (		,		omorphic Position (D2)
I 💳	on Visible on Aerial	Imagery (B7)		plain in Re	. ,			C-Neutral Test (D5)
	Stained Leaves (B9)	0 , , ,	<u> </u>	piaiii iii ite	markoj			st-Heave Hummocks (D7) (LRR F)
Field Obser	` '							ot Houve Hammooks (B7) (Ett. 1)
		Voc N-	X Depth (ir	choo):				
Surface Wat								
Water Table			Depth (ir					- V
Saturation P		Yes No	Depth (ir	iches):		Wetl	land Hydrolog	y Present? Yes X No
(includes cap Describe Re	piliary fringe) corded Data (strear	m gauge moni	toring well aerial	photos pr	evious ins	pections)	if available:	
2 3301130 110	Data (otroat	94490, 1110111		F5100, PI		<sub>-</sub>	G. GIIGDIO.	
Domorto								
Remarks:								







Project/Site: Lake Ralph Hall		City/Cou	nty: Ladonia/F	annin	Samplin	g Date: 6/1/2	2017
Applicant/Owner: Upper Trinity Regional Water District				State: TX	Samplin	g Point: WP:	350
Investigator(s): Jason Voight, Andrew Sample		Section,	Township, Ra	nge:			
Landform (hillslope, terrace, etc.): Valley		Local re	lief (concave,	convex, none): Concave		Slope (	%): <u>0-1%</u>
Subregion (LRR): Southwest Prairies	Lat: 33.4	45273		Long: <u>-95.98159</u>		Datum: _	NAD83
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"		Yes X	No
Are Vegetation, SoilX, or Hydrology				eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site ma							ıres, etc
	No			<u> </u>	<u> </u>		<u> </u>
Hydric Soil Present? Yes			the Sampled		No	X	
	No	, w	rithin a Wetlaı	nd? fes	No		
Remarks:		•					
Delineated during heavy rainfall.							
VEGETATION – Use scientific names of pl	ants.						
	Absolute	Domina	ant Indicator	Dominance Test worl	sheet:		
Tree Stratum (Plot size: 700 sq ft )	% Cover	Specie	s? Status	Number of Dominant S			
1. Celtis laevigata	5	No	FAC	That Are OBL, FACW,	or FAC	5	(4)
2. Fraxinus pennsylvanica		No	FAC	(excluding FAC-):			(A)
Ulmus americana     Ulmus crassifolia	10 35	No Yes	FAC FAC	Total Number of Domin		6	(B)
4. Olitius crassilolia				Species Across All Stra	ıla.		(D)
Sapling/Shrub Stratum (Plot size: 700 sq ft )	00	= Total (	Cover	Percent of Dominant S That Are OBL, FACW,		83	(A/B)
1. Celtis laevigata	20	Yes	FAC	That Are OBL, FACW,	or FAC.		(A/B)
2. Fraxinus pennsylvanica	15	Yes	FAC	Prevalence Index wo			
3. Symphoricarpos orbiculatus	15	Yes	FACU	Total % Cover of:			
4				OBL species			
5				FACW species		· · · · · · · · · · · · · · · · · · ·	
Heat Olerano (Plane) 450 sq ft	50	= Total 0	Cover	FACULARISIS			
Herb Stratum (Plot size: 450 sq ft)  1. Amaranthus tuberculatus	25	Yes	FAC	FACU species		4 =	
2. Torilis arvensis	5	No	UPL	Column Totals:			
3. Elymus virginicus	15	Yes	FAC		,	,	, ,
4. Ambrosia trifida	5	No	FAC	Prevalence Index			
5.				Hydrophytic Vegetati			
6				1 - Rapid Test for		•	1
7				2 - Dominance Te			
8				4 - Morphological			supporting
9				data in Remark			
10				Problematic Hydro	phytic Ve	getation <sup>1</sup> (Ex	plain)
Woody Vine Stratum (Plot size: 450 sq ft )	50	= Total (	Cover	<sup>1</sup> Indicators of hydric so	il and wet	land hydrolog	nv must
1				be present, unless dist			,,
2				Hydrophytic			
	0	= Total (	Cover	Vegetation	~		
% Bare Ground in Herb Stratum 50	<del></del>			Present? Ye	s^_	No	_
Remarks:							

Profile Desc	ription: (Describe	to the depth	needed to docur	nent the i	indicator	or confirn	n the absence of	indicators.)
Depth	Matrix			x Feature				
(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	
				-	· <del></del>			
·	-			-				
	-				· ——			_
					·			_
	oncentration, D=De					d Sand G		on: PL=Pore Lining, M=Matrix.
	Indicators: (Appli	cable to all L	_					Problematic Hydric Soils <sup>3</sup> :
Histosol	. ,			Gleyed Ma				k (A9) ( <b>LRR I, J</b> )
	pipedon (A2)			Redox (S5	•			irie Redox (A16) (LRR F, G, H)
Black Hi	, ,			d Matrix (S	,		_	ace (S7) (LRR G)
	n Sulfide (A4)				neral (F1)		-	ns Depressions (F16)
	Layers (A5) (LRR			Gleyed Ma			_ `	Houtside of MLRA 72 & 73)
	ick (A9) (LRR F, G,			d Matrix (	,			Vertic (F18) nt Material (TF2)
	d Below Dark Surfa ark Surface (A12)	ce (ATT)		Dark Surfa	urface (F7)			low Dark Surface (TF12)
	fucky Mineral (S1)			o Dark Sc Depressio		1		plain in Remarks)
	Jucky Peat or Peat	(S2) (I RR G			essions (F	16)		nydrophytic vegetation and
	icky Peat or Peat (				73 of LRR	,		/drology must be present,
	(1	, (=:::::,	(			/		turbed or problematic.
Restrictive I	_ayer (if present):							·
Type:								
, , <u> </u>	ches):						Hydric Soil Pre	esent? Yes No X
Remarks:			<del></del>				1 . 7	
rtomano.								
No redo	x Tinn Clav	occasio	nally floode	ed is a	a natio	nally li	isted hydric	soil; naturally dark soil
1101040	Ciay		- Trainy Troota	, .o c				
<b>HYDROLO</b>	GY							
Wetland Hy	drology Indicators							
-	cators (minimum of		check all that anni	v)			Secondary I	Indicators (minimum of two required)
-	Water (A1)	one required,	Salt Crust					e Soil Cracks (B6)
					- (D40)			ly Vegetated Concave Surface (B8)
	iter Table (A2)		Aquatic In		, ,			
Saturation  Water M			Hydrogen				`	ge Patterns (B10)
	arks (B1)		Dry-Seaso		, ,			d Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized F			ing Roots	` ′ 🦳 `	re tilled)
1 1 1 1	posits (B3)			not tilled)				h Burrows (C8)
111-	at or Crust (B4)		Presence			1)		ion Visible on Aerial Imagery (C9)
	oosits (B5)		H Thin Muck		. ,			rphic Position (D2)
_	on Visible on Aerial	Imagery (B7)	U Other (Exp	olain in Re	emarks)			eutral Test (D5)
Water-S	tained Leaves (B9)						Frost-H	eave Hummocks (D7) (LRR F)
Field Obser			V					
Surface Water			o X Depth (in					
Water Table	Present?	Yes No	o X Depth (in	ches):				
Saturation P			o X Depth (in				and Hydrology P	resent? Yes X No No
(includes car	oillary fringe)							
Describe Re	corded Data (strear	n gauge, mon	itoring well, aerial	onotos, pr	eviou <del>s</del> ins	pections),	ıt avaılable:	
Remarks:								









Project/Site: Lake Ralph Hall		City/Count	ty: Ladonia/F	annin	Sampling	g Date: 6/1/20	17
Applicant/Owner: Upper Trinity Regional Water District				State: TX	Samplinç	Point: WP35	51
Investigator(s): Jason Voight, Andrew Sample		Section, T	ownship, Ra	nge:			
Landform (hillslope, terrace, etc.): Valley		Local relie	ef (concave,	convex, none): Concave		Slope (%)	): <u>0-1%</u>
Subregion (LRR): Southwest Prairies	Lat: 33.4	15274		Long: <u>-95.97993</u>		Datum: NA	AD83
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" p		Yes X	No
Are Vegetation, SoilX, or Hydrology				eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site ma							es, etc.
Hydrophytic Vegetation Present? Yes X	No	lo 4	ha Cammia	1.4			
Hydric Soil Present? Yes X	No		he Sampled hin a Wetla		No		
Wetland Hydrology Present? Yes X	No	Wit	illii a wetiai	103			
Remarks:							
Former North Sulphur channel acting	as an act	tive cha	annel				
VEGETATION – Use scientific names of pla	ants.						
	Absolute	Dominar	nt Indicator	Dominance Test work	sheet:		
Tree Stratum (Plot size: 700 sq ft )			? Status	Number of Dominant S			
1. Fraxinus pennsylvanica	15	No	FAC	That Are OBL, FACW,		1	(4)
2. Acer negundo	75	Yes	FAC	(excluding FAC-):		<u> </u>	_ (A)
3		-		Total Number of Domin		1	(B)
4	90			Species Across All Stra	ıa.		_ (D)
Sapling/Shrub Stratum (Plot size: 700 sq ft )		= Total Co	over	Percent of Dominant Sp That Are OBL, FACW,		100	(A/B)
1. Acer negundo	15	No	FAC			-	_ (//////
2. Ulmus americana	5	No	FAC	Prevalence Index wor		NA 101 1 1	
3				Total % Cover of:			
4		-		OBL species FACW species			
5	20			FAC species			
Herb Stratum (Plot size: 450 sq ft )	20	= Total Co	over	FACU species		4 =	
1. Carex blanda	2	No	FAC	UPL species			
2. Elymus virginica	5	No	FAC	Column Totals:			
3. Toxicodendron radicans	2	No	FACU	Duamala a a a la dam	D/A		
4				Prevalence Index  Hydrophytic Vegetation			
5				1 - Rapid Test for H			
6				2 - Dominance Tes		•	
7				3 - Prevalence Inde			
8				4 - Morphological A			pporting
9		-		data in Remarks		•	,
10		= Total Co		Problematic Hydro	phytic Vec	getation¹ (Expl	ain)
Woody Vine Stratum (Plot size: 450 sq ft )			ovei	<sup>1</sup> Indicators of hydric soi be present, unless distu			must
1 2.				Hydrophytic			
			over	Vegetation	v		
% Bare Ground in Herb Stratum 91				Present? Ye	s	No	
Remarks:							

Profile Desc	cription: (Describe	e to the dep	th needed to docu	ment the	indicator	or confirr	n the absence	of indicators.)
Depth	Matrix			ox Feature				
(inches)	Color (moist)		Color (moist)	%	Type'	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-8	10 YR 3/1	100						
8-18	10 YR 4/2	95	10 YR 4/6	5	C	M	Clay	Redox past 8 inches
							-	
				_			-	
				_				
			,	_				
			=Reduced Matrix, C			d Sand G		cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to all	LRRs, unless othe	rwise no	ted.)		_	for Problematic Hydric Soils <sup>3</sup> :
Histosol	. ,			Gleyed M	, ,			Muck (A9) ( <b>LRR I, J</b> )
	pipedon (A2)			Redox (S	•			Prairie Redox (A16) (LRR F, G, H)
	stic (A3) en Sulfide (A4)			d Matrix (	neral (F1)			Surface (S7) (LRR G) Plains Depressions (F16)
	d Layers (A5) ( <b>LRR</b>	F)		Gleyed M			_	RR H outside of MLRA 72 & 73)
	uck (A9) ( <b>LRR F, G</b>	,		ed Matrix				eed Vertic (F18)
	d Below Dark Surfa			Dark Surf	. ,			arent Material (TF2)
Thick Da	ark Surface (A12)		Deplete	ed Dark S	urface (F7)		Very S	Shallow Dark Surface (TF12)
_	Mucky Mineral (S1)			Depression	, ,			(Explain in Remarks)
_	Mucky Peat or Peat	` ' '	· · · —		essions (F	,		of hydrophytic vegetation and
5 cm Mu	ucky Peat or Peat (	S3) ( <b>LRR F</b> )	(ML	.RA 72 &	73 of LRR	<b>H</b> )		d hydrology must be present, disturbed or problematic.
Restrictive I	Layer (if present):						uniess	disturbed of problematic.
Type:	Layer (ii present).							
, , <u> </u>	ches):						Hydric Soil	Present? Yes X No No
Remarks:							11,4110 0011	
Tromano.								
Redox fe	atures presei	nt; Tinn o	clay, occasion	ally flo	oded is	nation	ally listed I	nydric soil; naturally dark soil
	·							<u> </u>
HYDROLO	GY							
Wetland Hy	drology Indicators	S:						
Primary India	cators (minimum of	one require	d; check all that app	ly)			Seconda	ary Indicators (minimum of two required)
Surface	Water (A1)		Salt Crust	(B11)			☐ Suri	face Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic Ir	vertebrate	es (B13)		<u>✓</u> Spa	rsely Vegetated Concave Surface (B8)
Saturation	on (A3)		Hydrogen	Sulfide C	dor (C1)		☐ Dra	inage Patterns (B10)
Water M	larks (B1)		Dry-Seas	on Water	Table (C2)		U Oxid	dized Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		U Oxidized	Rhizosphe	eres on Liv	ing Roots		vhere tilled)
1 1 1	posits (B3)			not tilled				yfish Burrows (C8)
"	at or Crust (B4)				ed Iron (C4	<b>l</b> )		uration Visible on Aerial Imagery (C9)
I 💳	oosits (B5)		H Thin Mucl					omorphic Position (D2)
	on Visible on Aeria		7) <u> </u>	plain in R	emarks)			C-Neutral Test (D5)
	tained Leaves (B9)						<u></u> Fros	st-Heave Hummocks (D7) (LRR F)
Field Obser			V					
Surface Wat			No X Depth (ir					
Water Table			No X Depth (ir					V
Saturation P		Yes	No X Depth (ir	iches):		Wet	land Hydrolog	y Present? Yes X No
(includes car Describe Re		m gauge, mo	onitoring well, aerial	photos, p	reviou <del>s</del> ins	pections).	if available:	
	(55	J J=,	<b>3</b> , 2.2.10.1	, P		, ,		
Remarks:								





Project/Site: Lake Ralph Hall Supplemental JD		City/Cou	nty: Ladonia/F	annin	Sam	pling Date: <u>5/31</u>	/2017
Applicant/Owner: Upper Trinity Regional Water District				State: TX	Sam	oling Point: WP	404
Investigator(s): Jason Voight, Andrew Sample		Section,	Township, Ra	inge:			
Landform (hillslope, terrace, etc.): Valley		Local re	lief (concave,	convex, none): Conc	ave	Slope (	%): <u>0-1%</u>
Subregion (LRR): Southwest Prairies	Lat: 33.4	46224		_ Long: <u>-95.91757</u>		Datum:	NAD83
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI clas			
Are climatic / hydrologic conditions on the site typical for							
Are Vegetation, Soil, or Hydrology				"Normal Circumstance			No
Are Vegetation, Soil X, or Hydrology				eeded, explain any an			
SUMMARY OF FINDINGS – Attach site ma							ıres, etc.
	No x	Is	the Sampled	l Area			
	No x		ithin a Wetla			No X	
Wetland Hydrology Present? Yes X  Remarks:	No						
VEGETATION – Use scientific names of p	lants.  Absolute	Domina	ant Indicator	Dominance Test w	vorksheet		
Tree Stratum (Plot size: 700 sq ft )			s? Status	Number of Domina			
1. Fraxinus pennsylvanica	95	Yes	FAC	That Are OBL, FAC			(4)
2. Maclura pomifera	2	No	FACU	(excluding FAC-):			(A)
3. Celtis laevigata		No	FAC	Total Number of Do Species Across All		2	(B)
4	99	= Total (	Cover				(D)
Sapling/Shrub Stratum (Plot size: 700 sq ft )		= Total C	Cover	Percent of Dominar That Are OBL, FAC			(A/B)
1. Fraxinus pennsylvanica	5	No	FAC	Prevalence Index			` ′
2. Celtis laevigata		No	FAC	Total % Cover			,-
3						$x 1 = \frac{0}{}$	
4						x 2 = 0	
5	10	= Total (	Cover	FAC species	07	x 3 = 321	
Herb Stratum (Plot size: 450 sq ft )	<u> </u>	•		1 ACO species	2	x 4 = 8	
1. Lolium multiflorum		Yes		O1 E 3P00103	50	x 5 = 250	
2				Column Totals: 1	59	(A) <u>579</u>	(B)
3				Prevalence In	dex = B/A	A = 3.64	
4 5				Hydrophytic Vege	tation Ind	licators:	
6				1 <del>-</del>		ohytic Vegetatio	n
7				2 - Dominance			
8.				3 - Prevalence			
9						ntions <sup>1</sup> (Provide on a separate she	
10				Problematic Hy	drophytic	Vegetation <sup>1</sup> (Ex	plain)
Woody Vine Stratum (Plot size: 450 sq ft	<u></u>	= Total (	Cover	<sup>1</sup> Indicators of hydric be present, unless			gy must
1 2.				Hydrophytic			
	0	= Total (	Cover	Vegetation	V-	Y	
% Bare Ground in Herb Stratum 50	·			Present?	Yes	No X	_
Remarks:							

Profile Desc	ription: (Describe	to the depth	needed to docu	ment the i	indicator	or confirn	n the absence of	indicators.)	
Depth	Matrix			x Feature	4				
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks	
0-18	10 YR 3/1	90					Clay		
l ———	-			_					
l ———				_					
¹Type: C=Co	oncentration, D=De	pletion, RM=F	Reduced Matrix, C	S=Covered	d or Coate	d Sand G	rains. <sup>2</sup> Location	on: PL=Pore Lining, M=Matrix	ζ.
Hydric Soil	Indicators: (Appli	cable to all L	RRs, unless other	rwise not	ed.)			Problematic Hydric Soils <sup>3</sup> :	
Histosol	(A1)		Sandy	Gleyed Ma	atrix (S4)		1 cm Muc	k (A9) ( <b>LRR I, J</b> )	
Histic Ep	oipedon (A2)		Sandy	Redox (S5	5)		Coast Pra	irie Redox (A16) (LRR F, G, F	1)
	stic (A3)			d Matrix (S	,		_	ace (S7) (LRR G)	
	en Sulfide (A4)			Mucky Mir			_	ns Depressions (F16)	
	d Layers (A5) (LRR	,		Gleyed Ma				Houtside of MLRA 72 & 73)	
	uck (A9) (LRR F, G			ed Matrix (	,			Vertic (F18)	
	d Below Dark Surfa ark Surface (A12)	ce (ATT)		Dark Surfa ed Dark Su	, ,			nt Material (TF2) low Dark Surface (TF12)	
	Mucky Mineral (S1)			Depressio	, ,			plain in Remarks)	
_	Mucky Peat or Peat	(S2) (LRR G.		ains Depre	. ,	16)		nydrophytic vegetation and	
5 cm Μι	ıcky Peat or Peat (	S3) (LRR F)	, <u> </u>	RA 72 & 1	•	,		/drology must be present,	
							unless dis	turbed or problematic.	
Restrictive I	Layer (if present):								
Type:									
Depth (in	ches):						Hydric Soil Pre	esent? Yes No <sup>X</sup>	<u>,                                     </u>
Remarks:							L		
No redox	k features; Ti	nn clay, d	occasionally	floode	d is na	tionally	/ listed hydri	c soil; naturally dark	soils
HYDROLO	CV								
_	drology Indicators								
	cators (minimum of	one required;		• •				Indicators (minimum of two red	<u>(dariuk</u>
	Water (A1)		Salt Crus					e Soil Cracks (B6)	/= -\
	ater Table (A2)		_ :	vertebrate	, ,			ly Vegetated Concave Surface	) (B8)
Saturation				Sulfide O				ge Patterns (B10)	. (00)
I = Water IV	larks (B1)		_	on Water 1	, ,	D (-		d Rhizospheres on Living Roo	its (C3)
111	nt Deposits (B2)		·	Rhizosphe		ing Roots		re tilled)	
1 1 1	posits (B3)			not tilled)		1)		h Burrows (C8) ion Visible on Aerial Imagery (	(C0)
	at or Crust (B4) posits (B5)			of Reduce Surface (		+)	_	rphic Position (D2)	(C9)
I 💳	on Visible on Aerial	Imagany (P7)		plain in Re				eutral Test (D5)	
	tained Leaves (B9)			piaiii iii Ke	illaiks)			leave Hummocks (D7) ( <b>LRR</b> I	<b>E</b> \
Field Obser							<u> </u>	eave Hummocks (D1) (LIKK)	,
Surface Wat		Voc N	o X Depth (ir	oboc):					
Water Table			o X Depth (ir				and Hedrelean D		
Saturation P (includes car		Yes N	o X Depth (ir	icnes):		_   weti	and Hydrology P	resent? Yes X No _	
Describe Re	corded Data (stream	m gauge, mor	itoring well, aerial	photos, pr	evious ins	pections),	if available:		
Remarks:									
outside e	edge of forme	er channe	Lscar						
23.0.00	90 01 1011110	5.16/1110	. 5001						





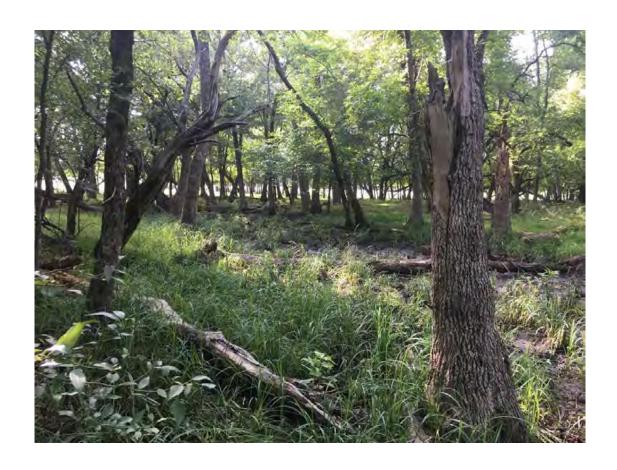


Project/Site: Lake Ralph Hall Supplemental JD		City/County:	Ladonia/F	annin	Sampling Date: 5/31/17
Applicant/Owner: Upper Trinity Regional Water District				State: TX	Sampling Point: WP 405
Investigator(s): Jason Voight, Andrew Sample				inge:	
Landform (hillslope, terrace, etc.): Valley		Local relief	(concave,	convex, none): Concave	Slope (%): <u>0-1%</u>
Subregion (LRR): Southwest Prairies	Lat: 33.4	16255		Long: <u>-95.91884</u>	Datum: NAD83
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classific	
Are climatic / hydrologic conditions on the site typical for					
Are Vegetation, Soil, or Hydrology					present? Yes X No
Are Vegetation, Soil X, or Hydrology				eeded, explain any answe	
SUMMARY OF FINDINGS – Attach site ma					
Hydrophytic Vegetation Present?  Yes X	No	la 4h	. Cammia	1 A	
Hydric Soil Present? Yes x	No		e Sampled in a Wetla		No
Wetland Hydrology Present?  Yes X  Remarks:	No	With	iii a vvetiai	103	
	rmar chan	nol coor	·· not by	draulically coppe	octed to any exicting
depressional area associated with fo stream channel	illiel Chan	ilei scai	, HOUTIN	diadilically corline	cled to any existing
Stream charmer					
VEGETATION – Use scientific names of p	lants.				
Tree Stratum (Plot size: 700 sq ft )	Absolute % Cover	Dominant Species?		Dominance Test work	
1. Fraxinus pennsylvanica	65	Yes	FAC	Number of Dominant S That Are OBL, FACW,	
2. Celtis laevigata	5	No	FAC	(excluding FAC-):	2 (A)
3.				Total Number of Domin	ant
4				Species Across All Stra	ta: <u>2</u> (B)
Continue (Charles Continue (Plate) - 700 sq ft	70	= Total Cov	ver .	Percent of Dominant Sp	
Sapling/Shrub Stratum (Plot size: 700 sq ft 1. Fraxinus pennsylvanica	5	No	FAC	That Are OBL, FACW,	or FAC: 100% (A/B)
2. Maclura pomifera	2	No	FACU	Prevalence Index wor	ksheet:
3.				Total % Cover of:	Multiply by:
4.					x 1 =
5					x 2 =
Hart Ottature (District 450 sq.ft	7	= Total Cov	ver .		x 3 =
Herb Stratum (Plot size: 450 sq ft )  1. Carex crus-corvi	70	Yes	OBL	FACU species	x 4 = x 5 =
Carex crus-corvi  2.	<del></del> -				(A) (B)
3					
4.					= B/A =
5				Hydrophytic Vegetation	
6				2 - Dominance Tes	Hydrophytic Vegetation
7				3 - Prevalence Inde	
8				4 - Morphological A	Adaptations <sup>1</sup> (Provide supporting
9					s or on a separate sheet)
10		= Total Cov		Problematic Hydro	phytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 450 sq ft )  1				<sup>1</sup> Indicators of hydric soi be present, unless distu	l and wetland hydrology must urbed or problematic.
2				Hydrophytic	
20	0	= Total Cov	ver .	Vegetation	s_XNo
% Bare Ground in Herb Stratum 30 Remarks:				i-lescill; te	3 NU
INGINAL.					

Profile Desc	ription: (Describe	to the dep	th needed to docu	ment the	indicator	or confir	m the absence of	indicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-18	10 YR 3/1	90	10 YR 4/6	10	<u>C</u>	M	Clay	
					_			
					_			
				_		-		
	-							
				_				
1Type: C=C	oncentration, D=Dep	letion PM-	-Peduced Matrix C	S-Covere	nd or Coat	ed Sand G	Prains <sup>2</sup> Locati	on: PL=Pore Lining, M=Matrix.
	Indicators: (Applic					eu Sanu C		r Problematic Hydric Soils <sup>3</sup> :
Histosol		abic to all			atrix (S4)		_	k (A9) (LRR I, J)
	pipedon (A2)			Redox (S				airie Redox (A16) (LRR F, G, H)
Black Hi				d Matrix (	•		_	ace (S7) (LRR G)
	n Sulfide (A4)			,	ineral (F1)	)	_	ns Depressions (F16)
	Layers (A5) (LRR	F)			latrix (F2)		_	H outside of MLRA 72 & 73)
	ıck (A9) ( <b>LRR F, G</b> ,			ed Matrix			Reduced	Vertic (F18)
Depleted	d Below Dark Surfac	e (A11)	✓ Redox	Dark Surf	ace (F6)		Red Pare	nt Material (TF2)
_	ark Surface (A12)				urface (F7	7)		llow Dark Surface (TF12)
	lucky Mineral (S1)			Depression	` '			plain in Remarks)
	Aucky Peat or Peat				ressions (I	,		hydrophytic vegetation and
5 cm Mu	icky Peat or Peat (S	3) ( <b>LRR F</b> )	(ML	.RA /2 &	73 of LR	R H)		ydrology must be present,
Postrictivo I	_ayer (if present):						uniess dis	sturbed or problematic.
Type:	ahaa).						Usalvia Cail Dv	esent? Yes X No
1	ches):						Hydric Soil Pro	esent? Yes X No
Remarks:								
Pedov fe	aturae praean	t: Tinn c	lay occasion	ally flo	ndad is	nation	ally listed by	dric soil; naturally dark soil.
TCGGX IC	atures presen	ι, τιιιι ι	nay, occasion	any not	Jaca 13	riation	ally listed flye	and son, naturally dark son.
<b>HYDROLO</b>	GY							
Wetland Hy	drology Indicators:	<u> </u>						
-	cators (minimum of o		d. check all that ann	lv)			Secondary	Indicators (minimum of two required)
-	Water (A1)	one require	Salt Crust					e Soil Cracks (B6)
	iter Table (A2)		Aquatic Ir		oc (B13)			ly Vegetated Concave Surface (B8)
Saturation			Hydrogen					ge Patterns (B10)
	arks (B1)		Dry-Seas		, ,	)		ed Rhizospheres on Living Roots (C3)
	nt Deposits (B2)					·) ving Roots		re tilled)
	posits (B3)			not tilled		virig Roots	· · · — ·	h Burrows (C8)
	at or Crust (B4)		Presence		*	٠٨)		tion Visible on Aerial Imagery (C9)
"	oosits (B5)		Thin Mucl			· <del>·</del> +)		orphic Position (D2)
	on Visible on Aerial	Imagary (P			, ,			eutral Test (D5)
	tained Leaves (B9)	iiiagery (D	) <u> </u>	piaiii iii iX	emarks)			Heave Hummocks (D7) (LRR F)
Field Obser	. ,							icave Hammooks (B7) (ERR 1)
Surface Water		/oc	No X Depth (ir	oboc):				
Water Table			No X Depth (ir				den dillenderte en B	. X . X
Saturation Pi (includes cap		'es <u>^</u>	No Depth (ir	icnes):		wei	liand Hydrology P	resent? Yes X No
	corded Data (stream	n gauge, mo	onitoring well, aerial	photos, p	revious in	spections)	, if available:	
	•	= '	-			,		
Remarks:								
	hannel scar f	orme ie	nlated denros	sion				
i omilei c	manno scal I	011113 13	olated depies	SIUII.				







Project/Site: Lake Ralph Hall Supplemental JD		City/Cou	ınty: Ladonia/F	annin	Sampling	Date: 5/31/20	017
Applicant/Owner: Upper Trinity Regional Water District		State: TX	Sampling	Point: WP 40	06		
Investigator(s): Jason Voight, Andrew Sample				inge:			
Landform (hillslope, terrace, etc.): Valley		Local re	elief (concave,	convex, none): Concave		Slope (%)	): <u>0-1%</u>
Subregion (LRR): Southwest Prairies				Long: -95.91885			
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"		es X	No
Are Vegetation, Soil X, or Hydrology				eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site ma							es, etc
Hydrophytic Vegetation Present? Yes _X	No	1	s the Sampled	ΑΛιοο			
Hydric Soil Present? Yes	No x		vithin a Wetla		No _X	(	
Wetland Hydrology Present? Yes  Remarks:	No <u>x</u>		Titling a Trotic				
VEGETATION – Use scientific names of pl							
Tree Stratum (Plot size: 700 sq ft )	Absolute % Cover		ant Indicator es? Status	Dominance Test work			
1. Fraxinus pennsylvanica	40	Yes	FAC	Number of Dominant S That Are OBL, FACW,			
2. Celtis laevigata	20	Yes	FAC	(excluding FAC-):		2	_ (A)
3. Maclura pomifera	5	No	FACU	Total Number of Domir	ant		
4. Ulmus crassifolia	5	No	FAC	Species Across All Stra	ıta: <u>3</u>	3	_ (B)
Sapling/Shrub Stratum (Plot size: 700 sq ft )	'	= Total	Cover	Percent of Dominant S That Are OBL, FACW,		67%	_ (A/B)
1. Maclura pomifera	5	No	FACU	Prevalence Index wor	kshoot:		
2				Total % Cover of:		Multiply by:	
3						= 0	
4	<u> </u>			FACW species 5			
5	5	= Total		· · · · · · · · · · · · · · · · · · ·	x 3 :		
Herb Stratum (Plot size: 450 sq ft )	<del>-</del>	_= 10tai	Cover	FACU species 14	x 4 :	= 56	
1. Viola missouriensis	5	No	FACW	UPL species 90	x 5	= 450	
2. Carex planostachys	90	Yes	UPL	Column Totals: 179	(A)	726	(B)
3. Elymus virginicus	5	No	FAC	Prevalence Index	- B/A - <sup>A</sup>	1.06	
4		· <del></del>		Hydrophytic Vegetation			
5				1 - Rapid Test for I			
6				2 - Dominance Tes		3	
7		· <del></del>		3 - Prevalence Ind	ex is ≤3.0 <sup>1</sup>		
8				4 - Morphological			
9 10.				data in Remark		•	•
10.	100	= Total	Cover	Problematic Hydro	phytic Vege	etation' (Expla	ain)
Woody Vine Stratum (Plot size: 450 sq ft )  1. Parthenocissus quinquefolia	2	No	FACU	<sup>1</sup> Indicators of hydric so be present, unless dist			must
2. Smilax bona-nox	2	No	FACU	Hydrophytic			
	4	= Total	Cover	Vegetation	s X	No	
% Bare Ground in Herb Stratum 0%  Remarks:				Present? Ye	<u> </u>	No	
- Comano.							

Profile Des	cription: (Describe	to the depth	needed to docu	ment the i	indicator	or confirn	n the absence of	findicators.)
Depth	Matrix			ox Feature				
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-18	10 YR 3/1	100					Clay	
				_				
				_				
	oncentration, D=Dep					d Sand G	rains. <sup>2</sup> Locat	tion: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	able to all LF	RRs, unless other	rwise not	ed.)		Indicators fo	or Problematic Hydric Soils <sup>3</sup> :
Histoso	I (A1)			Gleyed Ma	. ,			ck (A9) ( <b>LRR I, J</b> )
	pipedon (A2)			Redox (S5	,			airie Redox (A16) (LRR F, G, H)
	istic (A3)			d Matrix (S				face (S7) (LRR G)
	en Sulfide (A4)	<b>-</b> \		Mucky Mir			_	ins Depressions (F16)
	d Layers (A5) (LRR uck (A9) (LRR F, G,	,		Gleyed Matrix (				H outside of MLRA 72 & 73)  I Vertic (F18)
	d Below Dark Surfac	,		Dark Surfa	,			ent Material (TF2)
	ark Surface (A12)	(, (, 1, 1,	_	ed Dark Su	` ,			allow Dark Surface (TF12)
_	Mucky Mineral (S1)			Depressio	. ,			xplain in Remarks)
2.5 cm	Mucky Peat or Peat	(S2) ( <b>LRR G</b> ,	<b>H</b> ) 🔲 High P	lains Depre	essions (F	16)	3Indicators of	hydrophytic vegetation and
5 cm M	ucky Peat or Peat (S	3) ( <b>LRR F</b> )	(MI	_RA 72 & 7	73 of LRR	<b>H</b> )		nydrology must be present,
							unless di	sturbed or problematic.
	Layer (if present):							
Type:			<u> </u>					V
	ches):						Hydric Soil P	resent? Yes No X
Remarks:								
No rodo	y footuros: i	coloted f	ormor obou	anal ac	or for	ma ala	and danra	ocion: noturally dark coil
INO TEUC	ix leatures, is	solateu i	onnei chai	11161 30	ai ioii	115 010	seu uepre:	ssion; naturally dark soil
HYDROLO	GY							
Wetland Hy	drology Indicators	<u> </u>						
-	cators (minimum of		check all that app	lv)			Secondary	Indicators (minimum of two required)
	Water (A1)		☐ Salt Crus	•				ce Soil Cracks (B6)
	ater Table (A2)			vertebrate	s (B13)			ely Vegetated Concave Surface (B8)
Saturati				Sulfide O				age Patterns (B10)
	Marks (B1)			on Water 1				ed Rhizospheres on Living Roots (C3)
	nt Deposits (B2)			Rhizosphe	, ,			ere tilled)
	posits (B3)		(where	not tilled)				sh Burrows (C8)
Algal M	at or Crust (B4)		Presence	of Reduce	ed Iron (C4	1)	Satura	ation Visible on Aerial Imagery (C9)
Iron De	posits (B5)		Thin Muc	k Surface (	(C7)		Geom	orphic Position (D2)
Inundat	ion Visible on Aerial	Imagery (B7)	Other (Ex	plain in Re	emarks)		FAC-N	Neutral Test (D5)
☐ Water-S	Stained Leaves (B9)						Frost-l	Heave Hummocks (D7) (LRR F)
Field Obser	vations:							
Surface Wat	ter Present?	/es No	X Depth (ir	nches):				
Water Table	Present?	/es No	_x Depth (ir	nches):				
Saturation F	resent?	/es No	X Depth (ir	nches):		Wetl	and Hydrology I	Present? Yes No X
	pillary fringe)							
Describe Re	ecorded Data (stream	n gauge, moni	toring well, aerial	photos, pr	evious ins	pections),	ıt avaılable:	
Remarks:								
No hydro	ologic indicato	rs observ	ed .					





Project/Site: Lake Ralph Hall Supplemental JD	/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017							
Applicant/Owner: Upper Trinity Regional Water District	State: TX	State: TX Sampling Point:						
Investigator(s): Jason Voight, Andrew Sample				ange:				
Landform (hillslope, terrace, etc.): Valley				=		Slope (%	o): 0-1%	
Subregion (LRR): Southwest Prairies								
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				needed, explain any answe				
SUMMARY OF FINDINGS – Attach site ma							es, etc.	
Hydrophytic Vegetation Present? Yes X	No		Is the Sample	nd Aroa				
Hydric Soil Present? Yes	NoX		within a Wetla		No	Χ		
Wetland Hydrology Present? Yes	NoX		within a went					
Heavy storms the previous day; outside	de of fore	ested	wetland d	lelineated at wp30	)7			
VEGETATION – Use scientific names of pla	Absolute	Domi	nont Indicator	Dominanaa Taat was	la baati			
Tree Stratum (Plot size: 700 sq ft )			nant Indicator <u>es?</u> Status	Dominance Test work  Number of Dominant S				
1. Fraxinus pennsylvanica	10	No	FAC	That Are OBL, FACW,		0		
2. Ulmus americana	5	No	FAC	(excluding FAC-):		2	_ (A)	
3		·		Total Number of Domin		2	4-1	
4				Species Across All Stra	ata:	2	_ (B)	
Sapling/Shrub Stratum (Plot size: 700 sq ft )		= Total	Cover	Percent of Dominant S		100	(A/B)	
1. Ulmus americana	5	No	FAC	That Are OBL, FACW,	OI FAC:		_ (A/D)	
2. Juniperus virginiana	5	No	FAC	Prevalence Index wo				
3				Total % Cover of:				
4				OBL species				
5				FACW species				
Herb Stratum (Plot size: 450 sq ft	10	= Total	Cover	FAC species FACU species		3 = 4 =	<del></del>	
1. Toxicodendron radicans	5	No	FACU	UPL species				
2. Bignonia capreolata	5	No	FAC	Column Totals:				
3. Ambrosia trifida	30	Yes	FAC					
4. Amaranthus tuberculatus	10	No	FAC	Prevalence Index				
5. Torilis arvensis	10	No	FAC	Hydrophytic Vegetati				
6. Elymus virginicus	20	Yes	FAC	1 - Rapid Test for		-		
7. Erigeron annuus	10	No	FACU	2 - Dominance Te				
8				3 - Prevalence Ind 4 - Morphological			ınnartina	
9		·		- data in Remark	Ruapialioi is or on a	separate shee	t)	
10				- Droblematic Hydro	phytic Ve	getation <sup>1</sup> (Exp	lain)	
Woody Vine Stratum (Plot size: 450 sq ft	<u></u>	= Total		<sup>1</sup> Indicators of hydric so be present, unless dist			/ must	
1				Hydrophytic	<u> </u>			
<u>-</u>		= Total		Hydrophytic Vegetation				
% Bare Ground in Herb Stratum 10		_ 10101	. 50101	Present? Ye	es X	No		
Remarks:								

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
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,		
	oncentration, D=De					ed Sand G		n: PL=Pore Lining, M=Matrix.	
	Indicators: (Appli	cable to all Lr	_				_	Problematic Hydric Soils <sup>3</sup> :	
Histosol	. ,			Gleyed Ma				(A9) (LRR I, J)	
	oipedon (A2)			Redox (S5	•			rie Redox (A16) (LRR F, G, H)	
Black Hi	stic (A3) n Sulfide (A4)			d Matrix (S Mucky Mir	,			ce (S7) ( <b>LRR G</b> ) s Depressions (F16)	
	d Layers (A5) ( <b>LRR</b>	E/		Gleyed Ma			-	outside of MLRA 72 & 73)	
	ick (A9) ( <b>LRR F, G</b>	,	·	d Matrix (	, ,		Reduced V	,	
	d Below Dark Surfa			Dark Surfa	,			t Material (TF2)	
	ark Surface (A12)	,	_		urface (F7)	)	_	ow Dark Surface (TF12)	
Sandy M	lucky Mineral (S1)		Redox	Depressio	ns (F8)			lain in Remarks)	
2.5 cm N	Mucky Peat or Peat	(S2) ( <b>LRR G</b> ,	<b>H</b> ) 🔲 High Pl	ains Depre	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	<b>H</b> )	wetland hy	drology must be present,	
							unless dist	urbed or problematic.	
Restrictive I	_ayer (if present):								
Type:								V	
Depth (inc	ches):		<u> </u>				Hydric Soil Pre	sent? Yes NoX	
Remarks:									
No re	dox fea	tures							
HYDROLO									
Wetland Hy	drology Indicators	s:							
	cators (minimum of	one required; o	check all that appl	y)			Secondary Ir	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)		Sparsely	Vegetated Concave Surface (B8)	
Saturation	on (A3)		Hydrogen	Sulfide O	dor (C1)		Drainage	e Patterns (B10)	
Water M	arks (B1)		Dry-Seaso	on Water 7	Γable (C2)		Oxidized	d Rhizospheres on Living Roots (C3)	
Sedimer	nt Deposits (B2)		Oxidized F	Rhizosphe	res on Liv	ing Roots	(C3) (where	e tilled)	
Drift Dep	oosits (B3)		(where	not tilled)			Crayfish	Burrows (C8)	
Algal Ma	at or Crust (B4)		Presence	of Reduce	ed Iron (C	4)	Saturation	on Visible on Aerial Imagery (C9)	
Iron Dep	osits (B5)		Thin Muck	Surface (	(C7)		Geomor	phic Position (D2)	
Inundation	on Visible on Aerial	Imagery (B7)	Other (Exp	olain in Re	emarks)		☐ FAC-Ne	utral Test (D5)	
☐ Water-S	tained Leaves (B9)						☐ Frost-He	eave Hummocks (D7) (LRR F)	
Field Obser	vations:								
Surface Water	er Present?	Yes No	X Depth (in	ches):					
Water Table			X Depth (in						
Saturation P			X Depth (in				land Hydrology Pr	esent? Yes No _X	
(includes cap	oillary fringe)								
Describe Re	corded Data (stream	m gauge, moni	toring well, aerial	photos, pr	evious ins	pections),	, if available:		
Remarks:									
1									









Project/Site: Lake Ralph Hall Supplemental JD	JD City/County: Ladonia/Fannin Sampling Date: 6/2/2017						
Applicant/Owner: Upper Trinity Regional Water District		State: TX	Sampling	Point: WP418	3		
Investigator(s): Jason Voight, Andrew Sample	Section, Township, Range:						
Landform (hillslope, terrace, etc.): Valley		Local rel	lief (concave,	convex, none): Concave		Slope (%)	. <u>0-1%</u>
Subregion (LRR): Southwest Prairies	Lat: 33.4	15314		Long: -95.97526		Datum: NA	.D83
Soil Map Unit Name: Tinn Clay, Occasionally flooded				NWI classific			
Are climatic / hydrologic conditions on the site typical for th							
Are Vegetation, Soil, or Hydrology				'Normal Circumstances"		Yes X N	lo
Are Vegetation, SoilX, or Hydrology				eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site map							es, etc.
Hydrophytic Vegetation Present? Yes X	No	lo	the Sampled	Aron			
Hydric Soil Present? Yes X	No		ithin a Wetlar				
Wetland Hydrology Present? Yes X	No		a 1101141				
Remarks:							
Heavy storms the previous day; depre-				with former char	nnel sca	ar; not	
hydraulically connected to any existing	stream	chann	nel				
VEGETATION – Use scientific names of plan	nts.						
	Absolute	Domina	ant Indicator	Dominance Test work	sheet:		
Tree Stratum (Plot size: 700 sq ft )	· · · · · · · · · · · · · · · · · · ·		Status	Number of Dominant S			
Fraxinus pennsylvanica     Ulmus americana		Yes Yes	FAC FAC	That Are OBL, FACW, (excluding FAC-):	or FAC	2	(A)
3. Celtis laevigata	10	No	FAC				. (
4				Total Number of Domir Species Across All Stra		2	(B)
	95	= Total C	Cover	Percent of Dominant S	necies		
Sapling/Shrub Stratum (Plot size: 700 sq ft )				That Are OBL, FACW,		100	(A/B)
1. Ulmus americana	_ 5	No No	FAC	Prevalence Index wor	rksheet:		
2. Celtis laevigata	5	No	FAC	Total % Cover of:		Multiply by:	
3. Fraxinus pennsylvanica				OBL species			
4				FACW species	x 2	=	
- O	10	= Total C	Cover	FAC species	x 3	=	
Herb Stratum (Plot size: 450 sq ft )				FACU species		=	_
1. Elymus virginicus	$-\frac{1}{2}$	No No	FAC	UPL species			
Bignonia capreolata     Ambrosia trifida	<u>2</u>	No No	FAC FAC	Column Totals:	(A)		(B)
Torilis arvensis	$-\frac{3}{2}$	No	FAC	Prevalence Index	c = B/A = _		_
¬''				Hydrophytic Vegetati	on Indicate	ors:	
5 6				1 - Rapid Test for	Hydrophytic	c Vegetation	
7.				2 - Dominance Tes			
8.				3 - Prevalence Ind		1	
9				4 - Morphological / data in Remark	Adaptations s or on a s	s' (Provide su <sub>l</sub> eparate sheet)	oporting
10				Problematic Hydro			
Washi Vina Chahim (District 450 sq ft	10	= Total C	Cover	<sup>1</sup> Indicators of hydric so		, ,	,
Woody Vine Stratum (Plot size: 450 sq ft )  1				be present, unless dist			must
2				Hydrophytic			
0/ Dana Crayerd in Harb Charles 90	0			Vegetation Yesent? Yes	s X	No	
% Bare Ground in Herb Stratum 90  Remarks:				1			

Profile Desc	ription: (Describe	to the dep	th needed to docu	ment the i	indicator	or confirr	m the absence of	f indicators.)
Depth Matrix Redox Features								
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-18	10 YR 3/1	95	10 YR 4/6	5	C	M	Clay	
	-			_				
			-	_				
	-		-	_				
			=Reduced Matrix, C			d Sand G		tion: PL=Pore Lining, M=Matrix.
_		cable to all	LRRs, unless othe				_	or Problematic Hydric Soils <sup>3</sup> :
Histosol	. ,			Gleyed Ma				ck (A9) ( <b>LRR I, J</b> )
	pipedon (A2)			Redox (S5				rairie Redox (A16) (LRR F, G, H)
Black Hi	, ,			d Matrix (S			=	face (S7) (LRR G)
	n Sulfide (A4)	<b>-</b> \		Mucky Mir			_	ins Depressions (F16)
	d Layers (A5) (LRR ick (A9) (LRR F, G,			Gleyed Maded Matrix (			_ `	H outside of MLRA 72 & 73)  Vertic (F18)
	d Below Dark Surfac			Dark Surfa	,		_	ent Material (TF2)
	ark Surface (A12)	DC (A11)		ed Dark Su	, ,			allow Dark Surface (TF12)
	fucky Mineral (S1)			Depressio	, ,			xplain in Remarks)
	lucky Peat or Peat	(S2) ( <b>LRR</b> (		ains Depre	. ,	16)		hydrophytic vegetation and
	icky Peat or Peat (S			RA 72 & 7	•	,		nydrology must be present,
							unless di	isturbed or problematic.
Restrictive I	_ayer (if present):							
Type:								
Depth (inc	ches):						Hydric Soil Pi	resent? Yes X No
Remarks:								
Redox fe	atures preser	nt; Tinn o	clay, occasion	ally floo	oded is	nation	ally listed hy	dric soil; naturally dark soil
HYDROLO	GY							
Wetland Hy	drology Indicators	:						
Primary India	cators (minimum of	one require	d; check all that app	ly)			Secondary	Indicators (minimum of two required)
☐ Surface	Water (A1)		Salt Crust	(B11)			Surfac	ce Soil Cracks (B6)
	iter Table (A2)			vertebrate	s (B13)			ely Vegetated Concave Surface (B8)
Saturation			Hydrogen	Sulfide O	dor (C1)			age Patterns (B10)
	arks (B1)			on Water T			Oxidiz	ed Rhizospheres on Living Roots (C3)
Sedimer	nt Deposits (B2)			Rhizosphe	, ,	ing Roots	(C3) (whe	ere tilled)
	posits (B3)			not tilled)		Ü	` ′ 🗖 `	sh Burrows (C8)
	at or Crust (B4)		_ `	of Reduce		<b>!</b> )		ation Visible on Aerial Imagery (C9)
"	oosits (B5)			k Surface (	•	,		orphic Position (D2)
	on Visible on Aerial	Imagery (B		plain in Re	. ,			Neutral Test (D5)
	tained Leaves (B9)			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,			Heave Hummocks (D7) (LRR F)
Field Observ	. ,						<u>—</u>	, , ,
Surface Water		⁄es	No X Depth (ir	ches):				
Water Table			No X Depth (in					
Saturation P			No X Depth (ir				land Hudrology !	Present? Yes X No
(includes cap		res	No <u>~</u> Depth (if	icries):		_   wet	iand nydrology i	Fresent? res NO
		n gauge, m	onitoring well, aerial	photos, pr	evious ins	pections),	, if available:	
Remarks:								













Project/Site: Lake Ralph Hall Supplemental JD		City/Cour	nty: Ladonia/F	annin	Sampling Date: 5/	31/2017			
Applicant/Owner: Upper Trinity Regional Water District		State: TX	/P 474						
Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:									
Landform (hillslope, terrace, etc.): Valley		Local reli	ief (concave,	convex, none): Concave	Slope	e (%): <u>0-1%</u>			
Subregion (LRR): Southwest Prairies	Lat: 33.4	15216		Long: <u>-95.94622</u>	Datum	: NAD83			
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classifica					
Are climatic / hydrologic conditions on the site typical for t	his time of yea								
Are Vegetation, Soil, or Hydrology				"Normal Circumstances" pr		No			
Are Vegetation, Soil _x, or Hydrology				eeded, explain any answers					
SUMMARY OF FINDINGS – Attach site ma					,	tures, etc.			
Hydrophytic Vegetation Present? Yes X	No								
Hydric Soil Present? Yes			the Sampled		No. Y				
Wetland Hydrology Present? Yes x		W	ithin a Wetlar	na? res	No <u>x</u>				
Remarks:									
VEGETATION II : ('C' )									
VEGETATION – Use scientific names of pla				1					
Tree Stratum (Plot size: 700 sq ft	Absolute % Cover		int Indicator ? Status	Dominance Test works					
1. Acer negundo	50	Yes	FAC	Number of Dominant Sp That Are OBL, FACW, o					
2. Ulmus americana	45	Yes	FAC	(excluding FAC-):	3	(A)			
3				Total Number of Domina	int				
4				Species Across All Strata	a: <u>4</u>	(B)			
Cooling/Object Object on (District 700 sq.ft	95	= Total C	Cover	Percent of Dominant Spe					
Sapling/Shrub Stratum (Plot size: 700 sq ft )  1. Acer negundo	10	Yes	FAC	That Are OBL, FACW, o	r FAC: <u>75%</u>	(A/B)			
2. Morus rubra	10	Yes	FACU	Prevalence Index work	sheet:				
3				Total % Cover of:	Multiply	by:			
4				OBL species					
5.				FACW species					
450 (	20	= Total C	Cover	FAC species					
Herb Stratum (Plot size: 450 sq ft )	2	No	LIDI	FACU species					
1. Lolium multiflorum 2. Carex crus-corvi	$-\frac{2}{2}$	No No	OBL	UPL species					
				Column Totals:	(A)	(B)			
3				Prevalence Index	= B/A =				
4				Hydrophytic Vegetation	n Indicators:				
5 6				1 - Rapid Test for H		ion			
7				2 - Dominance Test					
8.				3 - Prevalence Index					
9.			_	4 - Morphological Addata in Remarks	daptations' (Provid or on a separate s				
10				Problematic Hydrop	•	•			
	4	= Total C	Cover	<u> </u>		. ,			
Woody Vine Stratum (Plot size:)  1				<sup>1</sup> Indicators of hydric soil be present, unless distur					
2.				Hydrophytic					
00		= Total C	Cover	Vegetation	X No.				
% Bare Ground in Herb Stratum 96				Present? Yes	<u>X</u> No				
Remarks:	a a a Kilo - O	0. 1. 1	D.	mathematical P = 0	andre Levil	- II			
Up between remnant channels of form	ner North	Sulph	ur River;	not nydraulically o	or nydrologic	ally			
connected to existing main channel.									

Profile Desc	ription: (Describe	to the dep	oth needed to docur	nent the	indicator	or confir	m the absence of in	dicators.)
Depth	Matrix			x Feature	S1	. 2		
(inches) 0-18	Color (moist) 10 YR 2/1		Color (moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
	10 18 2/1	99	10.1/0				Clay	
12-18			10 YR 4/6	1	С	М	Clay	
<del></del>				-		-		
						. ———		
					· ———			
-								
			=Reduced Matrix, CS			ed Sand G		: PL=Pore Lining, M=Matrix.
_		able to all	LRRs, unless other					Problematic Hydric Soils <sup>3</sup> :
Histosol	. ,			Gleyed Ma				(A9) ( <b>LRR I, J</b> )
	ipedon (A2)			Redox (S5				e Redox (A16) ( <b>LRR F, G, H</b> )
Black His	, ,			d Matrix (S	,		_	e (S7) (LRR G)
	n Sulfide (A4) Layers (A5) ( <b>LRR</b> I	<b>E</b> \		миску іміі Gleyed M	neral (F1)		_	Depressions (F16) outside of MLRA 72 & 73)
	ck (A9) ( <b>LRR F, G</b> ,			d Matrix (	, ,		Reduced Ve	•
	Below Dark Surfac			Dark Surfa	,			Material (TF2)
	rk Surface (A12)	,	_		ırface (F7	")	=	w Dark Surface (TF12)
Sandy M	ucky Mineral (S1)		Redox [	Depressio	ns (F8)		Other (Expla	ain in Remarks)
	lucky Peat or Peat (	. , .	· · · —		essions (F	,		drophytic vegetation and
5 cm Mu	cky Peat or Peat (S	3) ( <b>LRR F</b> )	(ML	RA 72 &	73 of LRI	R H)		rology must be present,
Dootsietive I	(if						unless distu	rbed or problematic.
	.ayer (if present):							
	de e e V						Undria Cail Brea	anto Van Na X
	ches):						nyuric Soil Pres	ent? Yes No X
Remarks:								
Insufficient	redox features	observe	ed: Tinn clay, oc	casiona	ally floo	ded is n	nationally listed h	ydric soil; naturally dark soil
HYDROLO	GY							
Wetland Hyd	Irology Indicators:	ı !						
Primary Indic	ators (minimum of c	ne require	d; check all that appl	y)			Secondary Inc	dicators (minimum of two required)
Surface		•	Salt Crust				Surface S	Soil Cracks (B6)
	ter Table (A2)		Aquatic In		es (B13)		_	Vegetated Concave Surface (B8)
Saturation			Hydrogen					Patterns (B10)
Water Ma	arks (B1)		Dry-Seaso	n Water <sup>-</sup>	Table (C2	)	Oxidized	Rhizospheres on Living Roots (C3)
Sedimen	t Deposits (B2)		Oxidized F	Rhizosphe	res on Liv	ing Roots	s (C3) (where	tilled)
☐ Drift Dep	osits (B3)		(where i	not tilled)	)		Crayfish I	Burrows (C8)
니 Algal Ma	t or Crust (B4)		Presence	of Reduce	ed Iron (C	4)	Saturation	n Visible on Aerial Imagery (C9)
☐ Iron Dep	osits (B5)		Thin Muck	Surface	(C7)		Geomorp	hic Position (D2)
Inundation	on Visible on Aerial	Imagery (B	7) 📙 Other (Exp	olain in Re	emarks)		FAC-Neu	tral Test (D5)
✓ Water-St	ained Leaves (B9)						Frost-Hea	ave Hummocks (D7) (LRR F)
Field Observ								
Surface Water			No X Depth (in					
Water Table	Present? Y	'es	No x Depth (in	ches):				
Saturation Pr		'es	No X Depth (in	ches):		Wet	tland Hydrology Pre	sent? Yes X No
(includes cap Describe Red		n gauge, m	onitoring well, aerial p	photos, pr	evious in	I spections)	), if available:	
	•	_		•		,		
Remarks:								
between	meander ben	nds of ir	npounded sec	tion of	remna	ant forr	mer North Sul	hur River channel
			•					





Project/Site: Lake Ralph Hall Supplemental JD		City/Cou	unty: Ladonia/F	annin	Sampling Date:	5/31/2017
Applicant/Owner: Upper Trinity Regional Water District				State: TX	Sampling Point:	WP 482
Investigator(s): Jason Voight, Andrew Sample				inge:		
Landform (hillslope, terrace, etc.): Valley		Local re	elief (concave,	convex, none): Concave	Slo	pe (%): 0-1%
Subregion (LRR): Southwest Prairies	Lat: 33.4	46276		Long: <u>-95.91907</u>	Datu	ım: NAD83
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classific		
Are climatic / hydrologic conditions on the site typical f						
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"		No
Are Vegetation, Soil x, or Hydrology				eeded, explain any answe		
SUMMARY OF FINDINGS – Attach site r					,	eatures, etc.
Hydrophytic Vegetation Present? Yes _X	No		o the Complet	J Avec		
Hydric Soil Present? Yes X	No		s the Sampled within a Wetla		No ×	
	No <u>x</u>					<b>-</b>
Remarks:						
depressional area associated with f	ormer chan	inel s	car; not hy	draulically conne	ected to any	existing
stream channel						
<b>VEGETATION</b> – Use scientific names of	plants.					
Too Olysteen (Diet sing 700 sq ft	Absolute		nant Indicator	Dominance Test work	ksheet:	
Tree Stratum (Plot size: 700 sq ft )  1. Celtis laevigata	<u>% Cover</u> 10	Specie No	es? Status FAC	Number of Dominant S That Are OBL, FACW,		
2. Ulmus crassifolia	50	Yes	FAC	(excluding FAC-):	3	(A)
3. Fraxinus pennsylvanica	20	Yes	FAC	Total Number of Domir	nant	
4. Maclura pomifera	10	No	FACU	Species Across All Stra	^	(B)
700 (1	90	= Total	Cover	Percent of Dominant S	pecies	
Sapling/Shrub Stratum (Plot size: 700 sq ft	_) 5	No	FAC	That Are OBL, FACW,		(A/B)
Fraxinus pennsylvanica     Gleditsia triacanthos	<u>5</u>	No No	FAC	Prevalence Index wo	rksheet:	
3. Ulmus crassifolia		No	FAC	Total % Cover of:	Multip	ly by:
4. Celtis laevigata	5	No	FAC	OBL species	x 1 =	
5.				FACW species		
	20	= Total	Cover	FAC species		
Herb Stratum (Plot size: 450 sq ft )	45	Vaa	EAC)//	FACU species		
1. Carex cherokeensis 2. Ptilimnium nuttallii	<u>15</u> 	Yes No	FACW FACW	UPL species  Column Totals:		
	<u> </u>			Column Totals:	(A)	(B)
3 4				Prevalence Index	c = B/A =	
5				Hydrophytic Vegetati		
6				1 - Rapid Test for		tation
7				2 - Dominance Tes		
8				3 - Prevalence Ind		ida aummartina
9				4 - Morphological A	Adaptations (Prov s or on a separate	sheet)
10				Problematic Hydro	phytic Vegetation <sup>1</sup>	<sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 450 sq ft)	20	= Total	Cover	<sup>1</sup> Indicators of hydric so be present, unless dist		
1						
2				Hydrophytic Vegetation		
% Bare Ground in Herb Stratum 80%		= Total	Cover		es X No _	
Remarks:				L		
İ						

Depth   Mark   Scolor (moist)   %   Color (moist)   %   Typo   Loc   Tookute   Remarks			to the de	pth needed to docu			or confir	m the absence of i	ndicators.)
10 YR 3/1   100   10 YR 3/1   10 Y			%				Loc <sup>2</sup>	- Texture	Remarks
### Type: C-Concentration, D-Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  #### Type: C-Concentration, D-Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  ###################################				COIOI (IIIOISI)				TCXture	Kemarks
"Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. "Location: PL=Pore Lining, M=Matrix, Hydric Soil indicators: (Applicable to all LRRs, unless otherwise noted.)		· -		10 VD 4/6			N.4	Clay	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Hydrogo Suttide (A2)  Hydrogo Suttide (A3)  Hydrogo Suttide (A4)  Hydrogo Suttide (A5)  Loamy Mukey Mineral (F1)  Loamy Mukey Mineral (F1)  Thick Dark Surface (A12)  Sandy Mukey Mineral (F2)  Depleted Below Dark Surface (A12)  Sandy Mukey Mineral (F3)  Depleted Below Dark Surface (A12)  Sandy Mukey Mineral (S1)  Zend Mukey Peat or Peat (S2) (LRR 6, H)  Depleted Dark Surface (F7)  Depleted Matrix (F3)  Zend Mukey Mineral (S1)  Z	4-18	10 YR 3/T	98	10 YR 4/6			IVI	Clay	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Hydrogo Suttide (A2)  Hydrogo Suttide (A3)  Hydrogo Suttide (A4)  Hydrogo Suttide (A5)  Loamy Mukey Mineral (F1)  Loamy Mukey Mineral (F1)  Thick Dark Surface (A12)  Sandy Mukey Mineral (F2)  Depleted Below Dark Surface (A12)  Sandy Mukey Mineral (F3)  Depleted Below Dark Surface (A12)  Sandy Mukey Mineral (S1)  Zend Mukey Peat or Peat (S2) (LRR 6, H)  Depleted Dark Surface (F7)  Depleted Matrix (F3)  Zend Mukey Mineral (S1)  Z		<u></u>	_	<u> </u>	_	_		<u> </u>	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Hydrogo Suttide (A2)  Hydrogo Suttide (A3)  Hydrogo Suttide (A4)  Hydrogo Suttide (A5)  Loamy Mukey Mineral (F1)  Loamy Mukey Mineral (F1)  Thick Dark Surface (A12)  Sandy Mukey Mineral (F2)  Depleted Below Dark Surface (A12)  Sandy Mukey Mineral (F3)  Depleted Below Dark Surface (A12)  Sandy Mukey Mineral (S1)  Zend Mukey Peat or Peat (S2) (LRR 6, H)  Depleted Dark Surface (F7)  Depleted Matrix (F3)  Zend Mukey Mineral (S1)  Z									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Hydrogo Suttide (A2)  Hydrogo Suttide (A3)  Hydrogo Suttide (A4)  Hydrogo Suttide (A5)  Loamy Mukey Mineral (F1)  Loamy Mukey Mineral (F1)  Thick Dark Surface (A12)  Sandy Mukey Mineral (F2)  Depleted Below Dark Surface (A12)  Sandy Mukey Mineral (F3)  Depleted Below Dark Surface (A12)  Sandy Mukey Mineral (S1)  Zend Mukey Peat or Peat (S2) (LRR 6, H)  Depleted Dark Surface (F7)  Depleted Matrix (F3)  Zend Mukey Mineral (S1)  Z		-							
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Hydrogo Suttide (A2)  Hydrogo Suttide (A3)  Hydrogo Suttide (A4)  Hydrogo Suttide (A5)  Loamy Mukey Mineral (F1)  Loamy Mukey Mineral (F1)  Thick Dark Surface (A12)  Sandy Mukey Mineral (F2)  Depleted Below Dark Surface (A12)  Sandy Mukey Mineral (F3)  Depleted Below Dark Surface (A12)  Sandy Mukey Mineral (S1)  Zend Mukey Peat or Peat (S2) (LRR 6, H)  Depleted Dark Surface (F7)  Depleted Matrix (F3)  Zend Mukey Mineral (S1)  Z						_	-		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Hydrogo Suttide (A2)  Hydrogo Suttide (A3)  Hydrogo Suttide (A4)  Hydrogo Suttide (A5)  Loamy Mukey Mineral (F1)  Loamy Mukey Mineral (F1)  Thick Dark Surface (A12)  Sandy Mukey Mineral (F2)  Depleted Below Dark Surface (A12)  Sandy Mukey Mineral (F3)  Depleted Below Dark Surface (A12)  Sandy Mukey Mineral (S1)  Zend Mukey Peat or Peat (S2) (LRR 6, H)  Depleted Dark Surface (F7)  Depleted Matrix (F3)  Zend Mukey Mineral (S1)  Z								<u> </u>	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Hydrogo Suttide (A2)  Hydrogo Suttide (A3)  Hydrogo Suttide (A4)  Hydrogo Suttide (A5)  Loamy Mukey Mineral (F1)  Loamy Mukey Mineral (F1)  Thick Dark Surface (A12)  Sandy Mukey Mineral (F2)  Depleted Below Dark Surface (A12)  Sandy Mukey Mineral (F3)  Depleted Below Dark Surface (A12)  Sandy Mukey Mineral (S1)  Zend Mukey Peat or Peat (S2) (LRR 6, H)  Depleted Dark Surface (F7)  Depleted Matrix (F3)  Zend Mukey Mineral (S1)  Z		- <u> </u>	_	<u> </u>		_		<u> </u>	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Hydrogo Suttide (A2)  Hydrogo Suttide (A3)  Hydrogo Suttide (A4)  Hydrogo Suttide (A5)  Loamy Mukey Mineral (F1)  Loamy Mukey Mineral (F1)  Thick Dark Surface (A12)  Sandy Mukey Mineral (F2)  Depleted Below Dark Surface (A12)  Sandy Mukey Mineral (F3)  Depleted Below Dark Surface (A12)  Sandy Mukey Mineral (S1)  Zend Mukey Peat or Peat (S2) (LRR 6, H)  Depleted Dark Surface (F7)  Depleted Matrix (F3)  Zend Mukey Mineral (S1)  Z									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Histosol (A1)  Hydrogo Suttide (A2)  Hydrogo Suttide (A3)  Hydrogo Suttide (A4)  Hydrogo Suttide (A5)  Loamy Mukey Mineral (F1)  Loamy Mukey Mineral (F1)  Thick Dark Surface (A12)  Sandy Mukey Mineral (F2)  Depleted Below Dark Surface (A12)  Sandy Mukey Mineral (F3)  Depleted Below Dark Surface (A12)  Sandy Mukey Mineral (S1)  Zend Mukey Peat or Peat (S2) (LRR 6, H)  Depleted Dark Surface (F7)  Depleted Matrix (F3)  Zend Mukey Mineral (S1)  Z	<sup>1</sup> Type: C=C	Concentration, D=De	oletion, RI	M=Reduced Matrix, C	S=Covere	ed or Coate	ed Sand G	Grains. <sup>2</sup> Locatio	on: PL=Pore Lining, M=Matrix.
Histicsol (A1)									
Islatic Epipedon (A2)   Sandy Redox (S5)   Stripped Matrix (S6)   Dask Histic (A3)   Hydrogen Sulfide (A4)   LRR F, G, H)   Stripped Matrix (S6)   Depleted Below Dark Surface (A11)   Loarny Mucky Mineral (F1)   Loarny Mucky Mineral (F1)   Loarny Mucky Mineral (F1)   Loarny Mucky Mineral (F2)   Depleted Below Dark Surface (A11)   Redox Dark Surface (F6)   Depleted Bark Surface (F7)   Redox Dark Surface (F7)   Redox Dark Surface (F7)   Redox Dark Surface (F7)   Redox Dark Surface (F7)   Redox Depressions (F6)   University of the Mineral (S1)   Redox Depressions (F8)   High Plains Depressions (F6)   Redox Depressions (F6)   University of the Mineral (S1)   Redox Depressions (F6)   University of High Plains Depressions (F6)   Univers				_				_	•
Black Histic (A3)		` '							
Loamy Mucky Mineral (F1)   Loamy Mucky Mineral (F1)   Loamy Gleyed Matrix (F2)   Loamy Gleyed Matrix (F2)   Loamy Gleyed Matrix (F3)   Reduce Vertic (F18)   Reduce Vertic (F1									
□ stratified Layers (A5) (LRR F, G, H) □ 1 cm Muck (A9) (LRR F, G, H) □ Depleted Below Dark Surface (A11) □ Thick Dark Surface (A12) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F6) □ Depleted Dark Surface (F17) □ Mineral Mucky Peat or Peat (S2) (LRR G, H) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (F6) □ Depleted Dark Surface (F12) □ Depleted Dark Surface (F6) □ Depleted Dark Surface (F16) □ Depleted Dark		, ,				,			
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S2) Care Mucky Peat or Peat (S2) (LRR G, H) Some Mucky Peat or Peat (S3) (LRR F)  MILE Some Mucky Peat or Peat (S3) (LRR F)  MILE Some Mucky Peat or Peat (S3) (LRR G, H) Some Mucky Peat or Peat (S3) (LRR G, H)  MILE Some Mucky Peat or Peat (S3) (Mark Some Mucky Peak Some			F)	Loamy	Gleyed M	fatrix (F2)		(LRR F	l outside of MLRA 72 & 73)
Thick Dark Surface (A12)	1 cm M	uck (A9) (LRR F, G,	H)	Deplete	ed Matrix	(F3)		Reduced \	Vertic (F18)
Sandy Mucky Mineral (S1)	Deplete	ed Below Dark Surface	ce (A11)	✓ Redox	Dark Surf	face (F6)		=	` ,
2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	=	, ,				,	)		
S cm Mucky Peat or Peat (S3) (LRR F)	=	• ' '				` '			
Restrictive Layer (if present):		•	. , .	· · · — ·		•			
Restrictive Layer (if present):     Type:     Depth (inches):     Hydric Soil Present? Yes X No  Remarks:  Redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  Surface Water (A1)  Surface Water (A2)  Saturation (A3)  Hydrogen Sulfide Odor (C1)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Oxidized Rhizospheres on Living Roots (C3)  Water Marks (B1)  Dry-Season Water Table (C2)  Oxidized Rhizospheres on Living Roots (C3)  Where not tilled)  Iron Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Field Observations:  Water Table Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No X Depth (inches):  Saturation Present? Yes No X Depth (inches):  Saturation Present? Yes No X Depth (inches):  Wetland Hydrology Present? Yes No X Depth (inches):  Saturation Present? Yes No X Depth (inches):  Wetland Hydrology Present? Yes No X Depth (inches):  Saturation Present? Yes No X Depth (inches):  Saturation Present? Yes No X Depth (inches):  Wetland Hydrology Present? Yes No X Depth (inches):  Saturation Present? Yes No X Depth (inches):  Wetland Hydrology Present? Yes No X Depth (inches):  Saturation Present? Yes	5 cm M	ucky Peat or Peat (S	3) ( <b>LRR F</b>	F) (ML	.RA 72 &	73 of LRF	RH)	•	
Type:								unless dis	turbed or problematic.
Remarks:  Redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil  HydroLogy  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required: check all that apply)  Surface Water (A1)  Sult Crust (B11)  Aquatic Invertebrates (B13)  Saturation (A3)  Hydrogen Sulfide Odor (C1)  Drift Deposits (B2)  Oxidized Rhizospheres on Living Roots (C3)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Frost-Heave Hummocks (D7) (LRR F)  Fleid Observations:  Surface Water (Present? Yes No Depth (inches):  Saturation Present? Yes No Sa	Restrictive	Layer (if present):							
Redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil  AYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  Aquatic Invertebrates (B13)  Saturation (A3)  Hydrogen Sulfide Odor (C1)  Sediment Deposits (B2)  Oxidized Rhizospheres on Living Roots (C3)  Algal Mat or Crust (B4)  Presence of Reduced Iron (C4)  Iron Deposits (B5)  Iron Deposits (B5)  Water Stalined Leaves (B9)  Field Observations:  Surface Soil Cracks (B6)  Verifield Observations:  Surface Soil Cracks (B6)  Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  Driff poposits (B3)  (where not tilled)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Inundation Visible on Aerial Imagery (B7)  Other (Explain in Remarks)  Field Observations:  Surface Water Present? Yes No X Depth (inches):  Water Table Present? Yes No X Depth (inches):  Saturation Pre	,   —			<u> </u>					
Redox features present; Tinn clay, occasionally flooded is nationally listed hydric soil; naturally dark soil    AyDROLOGY	Depth (ir	nches):						Hydric Soil Pre	esent? Yes X No No
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  Sulface Water (A1)  Sufface Water (A1)  Surface Water Table (A2)  Hydrogen Sulfide Odor (C1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inudation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Field Observations:  Surface Water (Present? Yes No X Depth (inches):  Water Table Present? Yes No X Depth (inches):  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Secondary Indicators (minimum of two required)  Sparsely Vegetated Concave Surface (B8)  Drift Deposits (B10)  Dry-Season Water Table (C2)  Oxidized Rhizospheres on Living Roots (C3)  (where tilled)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  FAC-Neutral Test (D5)  Frost-Heave Hummocks (D7) (LRR F)  Wetland Hydrology Present? Yes No X  No X  Remarks:	Remarks:								
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  Sulface Water (A1)  Sufface Water (A1)  Surface Water Table (A2)  Hydrogen Sulfide Odor (C1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inudation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Field Observations:  Surface Water (Present? Yes No X Depth (inches):  Water Table Present? Yes No X Depth (inches):  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Secondary Indicators (minimum of two required)  Sparsely Vegetated Concave Surface (B8)  Drift Deposits (B10)  Dry-Season Water Table (C2)  Oxidized Rhizospheres on Living Roots (C3)  (where tilled)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  FAC-Neutral Test (D5)  Frost-Heave Hummocks (D7) (LRR F)  Wetland Hydrology Present? Yes No X  No X  Remarks:									
Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  Surface Water (A1)  Surface Water (A2)  High Water Table (A2)  Saturation (A3)  Saturation (A3)  Dry-Season Water Table (C2)  Sediment Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Yes  No  No  Depth (inches):  Water Marks:  Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Drainage Patterns (B10)  Drainage Patterns (B10)  Drainage Patterns (B10)  Oxidized Rhizospheres on Living Roots (C3)  (where tilled)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Saturation Visible on Aerial Imagery (C9)  Thin Muck Surface (C7)  Geomorphic Position (D2)  Frost-Heave Hummocks (D7) (LRR F)  Field Observations:  Surface Water Present?  Yes  No  No  Depth (inches):  Wetland Hydrology Present?  Yes  No  No  X  Depth (inches):  Saturation Present?  Yes  No  X  Depth (inches):  Saturation Present? Yes  No  X  Depth (inches):  Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  Drainage Patterns (B10)	Redox fe	eatures presen	t; Tinn	clay, occasiona	ally floo	oded is	nation	ally listed hyd	ric soil; naturally dark soil:
Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  Surface Water (A1)  Surface Water (A2)  High Water Table (A2)  Saturation (A3)  Saturation (A3)  Dry-Season Water Table (C2)  Sediment Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Yes  No  No  Depth (inches):  Water Marks:  Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Drainage Patterns (B10)  Drainage Patterns (B10)  Drainage Patterns (B10)  Oxidized Rhizospheres on Living Roots (C3)  (where tilled)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Saturation Visible on Aerial Imagery (C9)  Thin Muck Surface (C7)  Geomorphic Position (D2)  Frost-Heave Hummocks (D7) (LRR F)  Field Observations:  Surface Water Present?  Yes  No  No  Depth (inches):  Wetland Hydrology Present?  Yes  No  No  X  Depth (inches):  Saturation Present?  Yes  No  X  Depth (inches):  Saturation Present? Yes  No  X  Depth (inches):  Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  Drainage Patterns (B10)	AADBUI (	)GV							
Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (minimum of two required)  Surface Water (A1)  Salt Crust (B11)  Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Drainage Patterns (B10)									
Surface Water (A1) Salt Crust (B11) Surface Water (A2) High Water Table (A2) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Dry-Season Water Table (C2) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Iron Deposits (B5) Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Water Table Present? Yes No X Depth (inches): Salt Crust (B10) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)  Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X No X No X Depth (inches): Saturation Previous inspections), if available:  Remarks:									
High Water Table (A2) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Dry-Season Water Table (C2) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Water Table Present? Yes No X Depth (inches): Saturation Invertebrates (B13) Water Marks (B10) Dry-Season Water Table (C2) Dxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)  Wetland Hydrology Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): Saturation Prevent? Ves No X Depth (inches): Saturation Prevent? No X Depth (inches): Saturation Prevent? Ves No X Depth (inches): Saturation Prevent? No X Depth (inches): Saturation Prevent? Ves No X Depth (inches): Saturation Visible on Aerial Imagery (C9) Satu	Primary Ind	icators (minimum of	one requir	ed; check all that appl	ly)			Secondary I	ndicators (minimum of two required)
Saturation (A3)	Surface	e Water (A1)		Salt Crust	(B11)				
Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Water Table (C2)  Oxidized Rhizospheres on Living Roots (C3)  (where tilled)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  FAC-Neutral Test (D5)  Frost-Heave Hummocks (D7) (LRR F)  Field Observations:  Surface Water Present?  Water Table Present?  Yes No X Depth (inches):  Water Table Present?  Yes No X Depth (inches):  Water Table Present?  Yes No X Depth (inches):  Wetland Hydrology Present? Yes No X (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:	High W	ater Table (A2)		Aquatic In	vertebrat	es (B13)		<u></u> Sparsel	y Vegetated Concave Surface (B8)
Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Water Table Present?  Yes NoX Depth (inches):  Water Table Present?  Yes NoX Depth (inches):  Saturation Present?  Yes NoX Depth (inches):  Saturation Present?  Yes NoX Depth (inches):  Wetland Hydrology Present? Yes NoX  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:	Saturat	ion (A3)		Hydrogen	Sulfide C	Odor (C1)		L Drainag	e Patterns (B10)
Drift Deposits (B3)	☐ Water I	Marks (B1)		Dry-Seaso	on Water	Table (C2)	)	Oxidize	d Rhizospheres on Living Roots (C3)
Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Water Table Present?  Yes NoX Depth (inches):  Saturation Present?  Yes NoX Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Presence of Reduced Iron (C4)  Thin Muck Surface (C7)  Other (Explain in Remarks)  FAC-Neutral Test (D5)  Frost-Heave Hummocks (D7) (LRR F)  Wetland Hydrology Present? Yes NoX  Depth (inches):  Wetland Hydrology Present? Yes NoX  Remarks:	☐ Sedime	ent Deposits (B2)		Oxidized F	Rhizosph	eres on Liv	ing Roots	s (C3) (wher	re tilled)
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Yes NoX Depth (inches):  Saturation Present?  Yes NoX Depth (inches):  Saturation Present?  Yes NoX Depth (inches):  (includes capillary fringe)  Wetland Hydrology Present? Yes NoX  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	U Drift De	eposits (B3)		(where	not tilled	1)		Crayfish	n Burrows (C8)
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Yes No _ X Depth (inches):  Saturation Present?  Yes No _ X Depth (inches):  Saturation Present?  Yes No _ X Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Geomorphic Position (D2)  FAC-Neutral Test (D5)  Frost-Heave Hummocks (D7) (LRR F)  Wetland Hydrology Present? Yes No _ X Depth (inches): No _ X No _ X No _ X	□ Algal M	lat or Crust (B4)		Presence	of Reduc	ed Iron (C	4)	☐ Saturati	on Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5)  Water-Stained Leaves (B9) Frost-Heave Hummocks (D7) (LRR F)  Field Observations:  Surface Water Present? Yes No X Depth (inches):  Water Table Present? Yes No X Depth (inches):  Saturation Present? Yes No X Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:	-			_			,	Geomo	rphic Position (D2)
Water-Stained Leaves (B9)  Field Observations:  Surface Water Present? Yes No X Depth (inches):  Water Table Present? Yes No X Depth (inches):  Saturation Present? Yes No X Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:			Imagery (			. ,			
Field Observations:  Surface Water Present? Yes No _X Depth (inches):  Water Table Present? Yes No _X Depth (inches):  Saturation Present? Yes No _X Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:					,	,			* *
Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:		. ,							2.7 (2)
Water Table Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X Depth (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:			/ <u>a</u> s	No X Depth (in	iches).				
Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:									
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:									10 Y Y
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:			res	No ^ Depth (in	iches):		We	tiand Hydrology Pr	resent? Yes No ^
Remarks:			n gauge, r	nonitoring well, aerial	photos, p	revious ins	spections)	, if available:	
		•		•			. ,		
	Remarks:								
insufficient nyarological indicators observed		والمساعمة	والمحالة		_1				
	INSUITICIE	ent nyarologic	ai indic	ators observed	J				







Project/Site: Lake Ralph Hall Supplemental JD		City/Cou	nty: Ladonia/F	annin	Sampling Date: 5/3	31/2017
Applicant/Owner: Upper Trinity Regional Water District				State: TX	Sampling Point: W	P 512
Investigator(s): Jason Voight, Andrew Sample				nge:		
Landform (hillslope, terrace, etc.): Valley		Local re	elief (concave,	convex, none): Concave	Slope	(%): <u>0-1%</u>
Subregion (LRR): Southwest Prairies	Lat: 33.4	46313		Long: -95.91921 Datum: NA		
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" p		No
Are Vegetation, Soil x, or Hydrology				eeded, explain any answe		
SUMMARY OF FINDINGS – Attach site ma						ures, etc.
Hydrophytic Vegetation Present?  Yesx		Is	s the Sampled	I Area		
Hydric Soil Present? Yes x	No		rithin a Wetlar		No	
Wetland Hydrology Present?  Yes   X  Remarks:	No					
depressional area associated with for	mer chan	nel sc	car; not hy	draulically conne	ected to any st	tream
channel						
VEGETATION – Use scientific names of pla	ants.					
<u> </u>	Absolute	Domina	ant Indicator	Dominance Test work	sheet:	
Tree Stratum (Plot size: 700 sq ft )			s? Status	Number of Dominant S		
Quercus macrocarpa     Ulmus crassifolia	<u>10</u> 60	No Yes	FACU FAC	That Are OBL, FACW, (excluding FAC-):	or FAC 1	(A)
3. Fraxinus pennsylvanica	10	No	FAC		-	(/ //
		110		Total Number of Domin Species Across All Stra	4	(B)
4	80	= Total (	Cover			
Sapling/Shrub Stratum (Plot size: 700 sq ft )		- rotar (	00101	Percent of Dominant S That Are OBL, FACW,		(A/B)
1. Ulmus crassifolia	5	No	FAC	Prevalence Index wor	rkahaati	
2				Total % Cover of:		W.
3					$x 1 = \frac{8}{}$	<u> </u>
4				FACW species 5		
5	_	= Total (			x 3 = 240	
Herb Stratum (Plot size: 450 sq ft )	<del>-</del>	= 10(a) (	Cover		x 4 = <u>40</u>	
1. Carex crus-corvi	8	No	OBL	UPL species		
2. Ptilimnium nuttallii	5	No	FACW	Column Totals: 103	(A) <u>298</u>	(B)
3. Amaranthus tuberculatus	5	No	FAC FAC	Prevalence Index	x = B/A = 2.89	
4				Hydrophytic Vegetation		
5					Hydrophytic Vegetati	on
6				2 - Dominance Tes		
7				3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>	
8				4 - Morphological A	Adaptations <sup>1</sup> (Provide	e supporting
9					s or on a separate sh	
10.		= Total (	Cover	Problematic Hydro	phytic Vegetation (E	xplain)
Woody Vine Stratum (Plot size: 450 sq ft )  1.				<sup>1</sup> Indicators of hydric so be present, unless dist		
2.				Hydrophytic		
		= Total (		Vegetation	ne X Na	
% Bare Ground in Herb Stratum 82				Present? Ye	es X No	
Remarks:						

Profile Desc	cription: (Describe	to the dep	th needed to docum	nent the	indicator	or confirr	m the absence of	indicators.)
Depth	Matrix		Redox	c Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		Remarks
0-18	10 YR 3/1	98					Clay	
4-18			10YR 4/6	2	С	M	Clay	
	-						· <del></del> -	
							. <u></u> -	
1=		Jatian DM	Deduced March 00			-1.01.0	21 1	in Di Dana Linian M Matrix
			=Reduced Matrix, CS LRRs, unless other			ed Sand G		ion: PL=Pore Lining, M=Matrix.  or Problematic Hydric Soils <sup>3</sup> :
		able to all						ck (A9) (LRR I, J)
Histosol	pipedon (A2)		Sandy R		atrix (S4)			airie Redox (A16) (LRR F, G, H)
	istic (A3)		Stripped		•			face (S7) ( <b>LRR G</b> )
	en Sulfide (A4)			•	neral (F1)			ins Depressions (F16)
	d Layers (A5) ( <b>LRR</b> I	F)			latrix (F2)			H outside of MLRA 72 & 73)
	uck (A9) (LRR F, G,	•	Depleted				`	Vertic (F18)
Deplete	d Below Dark Surfac	e (A11)	Redox D	ark Surf	ace (F6)		Red Pare	ent Material (TF2)
	ark Surface (A12)				urface (F7	)		allow Dark Surface (TF12)
ı <b>—</b>	Mucky Mineral (S1)		Redox D	•	, ,			xplain in Remarks)
	Mucky Peat or Peat (	. , .	· · · —		essions (F	,		hydrophytic vegetation and
5 cm Mi	ucky Peat or Peat (S	3) ( <b>LRR F</b> )	(MLI	RA /2 &	73 of LRF	( H)		nydrology must be present,
Postrictivo	Layer (if present):						uniess di	sturbed or problematic.
	Layer (II present).							
Type:	ah a a \.						Headric Cail D	wasanta Yan X
	ches):						Hydric Soli Pi	resent? Yes X No
Remarks:								
Dodov fo	aturae abear	ad: Tinn	clay occasion	ally fla	odod i	s nation	ally lieted by	ydric soil; naturally dark soil
Nedox le	aluies obseive	zu, miin	ciay, occasion	ally III	Joueu I	s HallOI	ially listed fly	yulic soll, flaturally dark soll
HYDROLO	GY							
	drology Indicators:							
_			d; check all that apply	٨			Sacandary	Indicators (minimum of two required)
		ne require						
	Water (A1)		Salt Crust (		(D40)		_	ce Soil Cracks (B6)
I — "	ater Table (A2)		Aquatic Inv					ely Vegetated Concave Surface (B8)
Saturati			Hydrogen S					age Patterns (B10)
	Marks (B1)		Dry-Season					ed Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized R			ing Roots		ere tilled)
	posits (B3)		(where n			4)		sh Burrows (C8)
	at or Crust (B4) posits (B5)		Thin Muck		,	4)		ation Visible on Aerial Imagery (C9)
	,	Imagan, (D			. ,			orphic Position (D2)
	ion Visible on Aerial Stained Leaves (B9)	imagery (b	/) <u>—</u> Other (Exp	iain in Ri	emarks)			Neutral Test (D5) Heave Hummocks (D7) (LRR F)
Field Obser	( ,						<u> </u>	Heave Hullillocks (D1) (LKK F)
		/oo	No X Donth (inc	,h.c.o.\.				
Surface Wat			No X Depth (inc					
Water Table			No X Depth (inc					Y
Saturation P	resent? Y pillary fringe)	'es	No X Depth (inc	:hes):		Wet	land Hydrology F	Present? Yes X No
		n gauge, mo	onitoring well, aerial p	hotos, p	revious ins	spections),	, if available:	
	`					,,		
Remarks:								
	onal aroa acc	ociatod	with former ch	nanna	Lecar			
uchiessi	oriai alta ass	ocialeu	with former Cr	iaiiiie	i scal			









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	Sampling	g Point: WP	581
Investigator(s): Jason Voight, Andrew Sample		Section, T	Гownship, Ra	nge:			
Landform (hillslope, terrace, etc.): Valley		Local reli	ef (concave,	convex, none): Concave		Slope (	%): <u>0-1%</u>
Subregion (LRR): Southwest Prairies	Lat: 33.4	45307		Long: <u>-95.97526</u>		Datum: N	NAD83
Soil Map Unit Name: Tinn Clay, Occasionally flooded				NWI classific			
Are climatic / hydrologic conditions on the site typical for t	his time of year						
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	lo d	the Campled	I Area			
Hydric Soil Present? Yes	NoX		the Sampled thin a Wetlar		No	Χ	
Wetland Hydrology Present? Yes	No X		umi a wenai				
Remarks:							
Heavy storms the previous day; outside	de the for	ested v	wetland (	delineated at wp4	l18 		
VEGETATION – Use scientific names of pla		Damina	nt Indicator	Dominonos Tost word	b		
Tree Stratum (Plot size: 700 sq ft	Absolute % Cover		nt Indicator Status	Dominance Test work  Number of Dominant S			
1. Fraxinus pennsylvanica	10	No	FAC	That Are OBL, FACW,			
2. Ulmus americana	35	Yes	FAC	(excluding FAC-):		4	(A)
3. Celtis laevigata	35	Yes	FAC	Total Number of Domin		E	
4				Species Across All Stra	ata:	5	(B)
Sapling/Shrub Stratum (Plot size: 700 sq ft )	80	= Total C	over	Percent of Dominant S		90	(4 (5)
1. Ulmus americana	5	No	FAC	That Are OBL, FACW,	or FAC:	80	(A/B)
2. Celtis laevigata	10	No	FAC	Prevalence Index wo	ksheet:		
3. Fraxinus pennsylvanica	20	Yes	FAC	Total % Cover of:		Multiply by:	<u>:</u>
4. Quercus muehlenbergii	5	No	FAC	OBL species			
5. Acer negundo	5	No	FAC	FACW species			
450 sq.ft	45	= Total C	over	FACILIANAPIA			
Herb Stratum (Plot size: 450 sq ft 1. Elymus virginicus	35	Yes	FAC	FACU species		4 =	
2. Torilis arvensis	10	No	UPL	UPL species  Column Totals:			
3. Ambrosia trifida	10	No	FAC	Column Totals.	(^)	,	(D)
4. Parthenocissus quinquefolia	10	No	FACU	Prevalence Index			
5. Toxicodendron radicans	30	Yes	FACU	Hydrophytic Vegetati			
6.				1 - Rapid Test for		-	า
7.				2 - Dominance Te			
8				3 - Prevalence Ind			
9		· <u></u>		4 - Morphological data in Remark			
10				Problematic Hydro	phytic Ve	getation <sup>1</sup> (Ex	plain)
Woody Vine Stratum (Dietoize, 450 Sq.ft	95	= Total C	over	<sup>1</sup> Indicators of hydric so	il and wat	and hydrolog	av muet
Woody Vine Stratum (Plot size: 450 sq ft)  1. Parthenocissus quinquefolia	5	No	FACU	be present, unless dist			yy must
2.	5	No	FAC	Hydrophytic			
	10	= Total C	over	Vegetation	~		
% Bare Ground in Herb Stratum5				Present? Ye	s^_	No	_
Remarks:							

Profile Desc	cription: (Describ	e to the depti	h needed to docu	ment the i	ndicator	or confirn	n the absence of	indicators.)
Depth	Matrix			x Feature	4		<b>-</b> .	
(inches)	Color (moist)		Color (moist)	%	Type'	Loc <sup>2</sup>	Texture	Remarks
0-18	10 YR 3/1	100					Clay	
-								
							<u> </u>	
			Reduced Matrix, C			d Sand G		on: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appl	licable to all L	RRs, unless othe	rwise not	ed.)		Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol	. ,			Gleyed Ma	. ,			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)	. E'		Mucky Mir			_	ns Depressions (F16)
	d Layers (A5) ( <b>LRF</b> uck (A9) ( <b>LRR F, G</b>	,		Gleyed Ma ed Matrix (l				Houtside of MLRA 72 & 73) Vertic (F18)
	d Below Dark Surfa			Dark Surfa	,			nt Material (TF2)
	ark Surface (A12)	400 (7111)	_	ed Dark Su	. ,		_	low Dark Surface (TF12)
_	/lucky Mineral (S1)			Depression				plain in Remarks)
2.5 cm N	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 h	nydrophytic vegetation and
5 cm Μι	ucky Peat or Peat (	(S3) ( <b>LRR F</b> )	(ML	RA 72 & 7	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 redev	. fo otumo o . T	يرمام مرمرا		flaada	ما:م	الممدك	المناط المملمة التنا	in anily materially along anil
ino redox	k realures; r	inn clay,	occasionally	noode	ed is na	alionali	y listed flyar	ic soil; naturally dark soil
HYDROLO	GY							
Wetland Hy	drology Indicator	s:						
_			check all that app	lv)			Secondary I	Indicators (minimum of two required)
	Water (A1)	r ono roquirou,	Salt Crust					e Soil Cracks (B6)
	ater Table (A2)			vertebrate	s (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)			Rhizosphe			<del></del>	re tilled)
1 1 1	posits (B3)		· · · · · · · · · · · · · · · · · · ·	not tilled)		9		h Burrows (C8)
1 1 1	at or Crust (B4)			of Reduce		1)		ion Visible on Aerial Imagery (C9)
1 1 -	posits (B5)			Surface (		.,	_	rphic Position (D2)
	on Visible on Aeria	al Imagery (B7)		plain in Re				eutral Test (D5)
	tained Leaves (B9			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,			leave Hummocks (D7) (LRR F)
Field Obser	,	,						. , , , ,
Surface Wat		Yes N	lo X Depth (ir	ches):				
Water Table			lo X Depth (ir					
Saturation P			lo X Depth (ir				and Hydrology P	resent? Yes No _X
(includes car		1031	ю Верит (п			_   ""	and riyarology i	103cm: 103 110
Describe Re	corded Data (strea	ım gauge, mor	nitoring well, aerial	photos, pr	evious ins	pections),	if available:	
Remarks:								









Project/Site: Lake Ralph Hall Supplemental JD		City/County	: Ladonia/F	annin	Sampling Da	ate: 6/2/2017	
Applicant/Owner: Upper Trinity Regional Water District				State: TX	_ Sampling Po	oint: WP582	
Investigator(s): Jason Voight, Andrew Sample		Section, To	wnship, Ra	nge:			
Landform (hillslope, terrace, etc.): Valley		Local relief	(concave,	convex, none): Concave	)	Slope (%): 0	)-1%
Subregion (LRR): Southwest Prairies	Lat: 33.4	45273		Long: <u>-95.97502</u>		Datum: NAD8	33
Soil Map Unit Name: Tinn Clay, Occasionally flooded				NWI classif			
Are climatic / hydrologic conditions on the site typical for	this time of ve	ar? Yes					
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"		X No	
Are Vegetation, Soil _X, or Hydrology				eeded, explain any answ			
SUMMARY OF FINDINGS – Attach site ma			,			•	. etc
	p		9   0		-,p		
Hydrophytic Vegetation Present? Yes		Is th	e Sampled	i Area			
Hydric Soil Present? Yes		with	in a Wetlar	nd? Yes	No	X	
Wetland Hydrology Present? Yes  Remarks:	NO						
Heavy storms the previous day; depre	necional a	roa acc	ociatod	with former cha	nnol coar:	not	
hydraulically connected to any existin				with former tha	illei Scai,	HOU	
Trydradically confidenced to arry existing	y sireairi	Charine					
VEGETATION – Use scientific names of pla	ants.						
Tree Stratum (Plot size: 700 sq ft )	Absolute	Dominant		Dominance Test wor	ksheet:		
1. Fraxinus pennsylvanica	<u>% Cover</u> 10	Species? No	FAC	Number of Dominant S	•		
2. Celtis laevigata	60	Yes	FAC	That Are OBL, FACW (excluding FAC-):	, OI FAC	1	(A)
3.				Total Number of Domi	nant		
4				Species Across All Str		3 (	(B)
		= Total Co	ver	Percent of Dominant S	Snacias		
Sapling/Shrub Stratum (Plot size: 700 sq ft )				That Are OBL, FACW		33.3 (	(A/B)
1. Celtis laevigata	5	No	FAC	Prevalence Index wo	rkshoot.		
2				Total % Cover of:		ultiply by:	
3					x 1 =		
4				FACW species 0			
5	_	= Total Co		FAC species 105	x 3 =	315	
Herb Stratum (Plot size: 450 sq ft		= 10tai 00	701	FACU species 45			
1. Elymus virginicus	5	No	FAC	UPL species 0	x 5 =		
2. Amaranthus tuberculatus	8	No	FAC	Column Totals: 150	(A)	495	(B)
3. Ambrosia trifida	10	No	FAC	Prevalence Inde	x = B/A = 3.3	}	
Campsis radicans     Toxicodendron radicans	20 20	Yes Yes	FACU FACU	Hydrophytic Vegetat			
6. Erigeron annuus	20 2	No	FACU	1 - Rapid Test for	Hydrophytic V	egetation	
			17100	2 - Dominance Te	est is >50%		
7 8				3 - Prevalence Inc	dex is ≤3.0¹		
9.				4 - Morphological	Adaptations <sup>1</sup> (	Provide suppo	orting
10				data in Remark	•	•	١
	65	= Total Co	ver	<u> </u>		,	
Woody Vine Stratum (Plot size: 450 sq ft	_		E4.011	<sup>1</sup> Indicators of hydric so be present, unless dis			ıst
1. Parthenocissus quinquefolia	<u>5</u> 5	No	FACU			omano.	
2		No	FAC	Hydrophytic Vegetation			
% Bare Ground in Herb Stratum 35	10	= Total Co	/er		es N	o X	
Remarks:							

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> .	ъ.
(inches)	Color (moist)		Color (moist)	%	Type'	Loc <sup>2</sup>	Texture	Remarks
0-18	10 YR 2/1			_	·		Clay	
				_				
				_				
				_				
				_				
	oncentration, D=D	•				d Sand Gr		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	. ,			Gleyed Ma	. ,			k (A9) ( <b>LRR I, J</b> )
	oipedon (A2)			Redox (S5	•		_	iirie 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> )	(ML	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:			<u> </u>					V
Depth (in	ches):						Hydric Soil Pre	esent? Yes No _X
Remarks:								
NI I I	. ( t	"l		. (1 1 -	.1.2	. C 10:	or Parka al Jassala	da a a Mara a Guna Harada a a M
ino redox	x reatures; i	inn clay,	occasionally	Tioode	ed is na	ationali	y iistea nyar	ic soil; naturally dark soil
HYDROLO	GY							
	drology Indicator	٠.						
_	cators (minimum o		check all that ann	lv)			Secondary	Indicators (minimum of two required)
	Water (A1)	r one required,	Salt Crust	•				e Soil Cracks (B6)
	ater Table (A2)			vertebrate	e (B13)			ly Vegetated Concave Surface (B8)
Saturation	` '		= '	Sulfide O	, ,			ge Patterns (B10)
	larks (B1)			on Water 1	. ,			ed Rhizospheres on Living Roots (C3)
	nt Deposits (B2)					ing Roots		re tilled)
	posits (B3)			not tilled)		ing Roots		h Burrows (C8)
1 1 1	at or Crust (B4)			of Reduce		1)		ion Visible on Aerial Imagery (C9)
1 1 -	posits (B5)			Surface (		•)		rphic Position (D2)
	on Visible on Aeria	al Imagery (B7)		plain in Re				eutral Test (D5)
	stained Leaves (B9		<u> </u>	piaiii iii ike	markoj			leave Hummocks (D7) (LRR F)
Field Obser	,	,						isavo Hammosilo (27) (211117)
Surface Wat		Yes N	o X Depth (ir	rches).				
Water Table			o X Depth (ir					
			o X Depth (ir o X Depth (ir				and Hudrology D	resent? Yes NoX
Saturation P (includes car		resN	o Deptn (ir	icnes):		vveti	and mydrology P	resent? res NO
	corded Data (strea	ım gauge, mor	itoring well, aerial	photos, pr	evious ins	pections),	if available:	
Remarks:								











Project/Site: Lake Ralph Hall Supplemental JD		City/Count	y: Ladonia/F	annin	Sampling	Date: 6/2/201	17
Applicant/Owner: Upper Trinity Regional Water District				State: TX	Sampling	Point: WP58	5
Investigator(s): Jason Voight, Andrew Sample				nge:			
Landform (hillslope, terrace, etc.): Valley				=		Slope (%)	: 0-1%
				Long: <u>-95.9732</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		es X N	lo.
Are Vegetation, SoilX, or Hydrology				eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site map						•	es, etc.
Hydrophytic Vegetation Present? Yes X	No						
Hydric Soil Present? Yes X	No		he Sampled		No_		
Wetland Hydrology Present? Yes X	No	Wit	hin a Wetlar	id? fes <u>~</u>	NO_		
Remarks:		•					
Heavy storms the previous day; depre	essional a	area as	sociated	with former chan	nnel sca	ır; not	
hydraulically connected to any existing	g stream	channe	el				
VEGETATION – Use scientific names of pla	nts						
TEGETATION COS COLONIANO NAMES OF PIA	Absolute	Dominan	t Indicator	Dominance Test work	sheet:		
<u>Tree Stratum</u> (Plot size: 700 sq ft )	% Cover			Number of Dominant S			
1. Fraxinus pennsylvanica	50	Yes	FAC	That Are OBL, FACW,	or FAC	2	(4)
2. Celtis laevigata		Yes	FAC	(excluding FAC-):	-		(A)
3. Ulmus crassifolia	5	No	FAC	Total Number of Domin		2	(B)
4	70			Species Across All Stra	ııa		_ (D)
Sapling/Shrub Stratum (Plot size: 700 sq ft )	70	= Total Co	over	Percent of Dominant Sp That Are OBL, FACW,		100	(A/B)
1. Celtis laevigata	5	No	FAC				_ (\(\alpha\)
2. Fraxinus pennsylvanica				Prevalence Index wor			
3. Ulmus crassifolia				Total % Cover of:			
4				OBL species			
5				FACW species			
Herb Stratum (Plot size: 450 sq ft	5	= Total Co	over	FACU species		- <u></u>	
1. Toxicodendron radicans	5	No	FACU	UPL species			
2. Viola missouriensis	2	No	FACW	Column Totals:			
3. Ambrosia trifida	8	No	FAC				
4				Prevalence Index	· ·		
5				Hydrophytic Vegetation  1 - Rapid Test for H			
6				2 - Dominance Tes		vegetation	
7				3 - Prevalence Inde			
8				4 - Morphological A		1 (Provide sur	pporting
9				data in Remarks	s or on a se	eparate sheet	)
10	45	Tatal Ca		Problematic Hydro	phytic Vege	etation <sup>1</sup> (Expla	ain)
Woody Vine Stratum (Plot size: 450 sq ft )		= Total Co	over	<sup>1</sup> Indicators of hydric soi			must
Toxicodendron radicans/Campsis radicans	5/5	No	FACU/FACU	be present, unless distu	urbed or pro	oblematic.	
2. Smilax bona-nox	5	No	FACU	Hydrophytic			
0/ Bara Crayed in Hart Strategy 85	15	= Total Co	over	Vegetation Present? Yes	s X	No	
% Bare Ground in Herb Stratum 85  Remarks:				10.			
Tomano.							

Profile Desc	ription: (Describe	to the dep	th needed to docur	nent the i	ndicator	or confirr	n the absence of	indicators.)
Depth	Matrix			x Feature		2		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-18	10 YR 2/1	95	10 YR 4/6	5	C	M	Clay	
			-	-				·
	-			-				
			-					
			-	-				-
	-		-	-				<u> </u>
			=Reduced Matrix, CS			d Sand G		ion: PL=Pore Lining, M=Matrix.
		cable to all	LRRs, unless other				_	r Problematic Hydric Soils³:
Histosol	. ,			Gleyed Ma				ck (A9) ( <b>LRR I, J</b> )
	pipedon (A2)			Redox (S5				airie Redox (A16) (LRR F, G, H)
Black Hi	, ,			d Matrix (S	,		=	face (S7) (LRR G)
	n Sulfide (A4)	<b>-</b> \		Mucky Mir			_	ns Depressions (F16)
	d Layers (A5) (LRR ick (A9) (LRR F, G,			Gleyed Ma d Matrix (			_ `	H outside of MLRA 72 & 73) Vertic (F18)
	d Below Dark Surfac			o Mairix (i Dark Surfa	,			ent Material (TF2)
	ark Surface (A12)	DC (A11)	_		ırface (F7)			illow Dark Surface (TF12)
	fucky Mineral (S1)			Depressio	, ,			xplain in Remarks)
	lucky Peat or Peat	(S2) ( <b>LRR</b> (		•	essions (F	16)		hydrophytic vegetation and
	icky Peat or Peat (S				73 of LRR	,		ydrology must be present,
							unless di	sturbed or problematic.
Restrictive I	_ayer (if present):							
Type:								
Depth (inc	ches):						Hydric Soil Pr	resent? Yes X No
Remarks:								
Redox fe	atures preser	nt; Tinn o	clay, occasiona	ally floo	oded is	nation	ally listed hy	dric soil; naturally dark soil
HYDROLO	GY							
Wetland Hy	drology Indicators	:						
Primary India	cators (minimum of	one require	d; check all that appl	y)			Secondary	Indicators (minimum of two required)
☐ Surface	Water (A1)		Salt Crust	(B11)			☐ Surfac	e Soil Cracks (B6)
	iter Table (A2)		Aquatic In		s (B13)			ely Vegetated Concave Surface (B8)
Saturation			Hydrogen	Sulfide O	dor (C1)			ge Patterns (B10)
	arks (B1)		Dry-Seaso				Oxidiz	ed Rhizospheres on Living Roots (C3)
Sedimer	nt Deposits (B2)		Oxidized F		, ,	ing Roots	(C3) (whe	ere tilled)
	posits (B3)			not tilled)		Ü	` ′ 🗂 `	sh Burrows (C8)
	at or Crust (B4)		Presence	,		<b>!</b> )		tion Visible on Aerial Imagery (C9)
"	oosits (B5)		Thin Muck		•	,		orphic Position (D2)
	on Visible on Aerial	Imagery (B			,			leutral Test (D5)
	tained Leaves (B9)		,		,			Heave Hummocks (D7) (LRR F)
Field Observ	. ,							, , ,
Surface Water		⁄es	No X Depth (in	ches):				
Water Table			No X Depth (in					
							land Hudralagu F	Present? Yes X No
Saturation Pi (includes cap		res	No X Depth (in	cries):		_   wet	iand nydrology F	resent? res No
		n gauge, m	onitoring well, aerial	photos, pr	evious ins	pections),	, if available:	
Remarks:								







Project/Site: Lake Ralph Hall Supplemental JD	(	City/Cou	nty: Ladonia/F	annin	Sampling Date: 5/31	/2017
Applicant/Owner: Upper Trinity Regional Water District				State: TX	Sampling Point: WP	624
Investigator(s): Jason Voight, Andrew Sample				nge:		
Landform (hillslope, terrace, etc.): Valley		Local re	lief (concave,	convex, none): Concave	Slope (	%): <u>0-1%</u>
Subregion (LRR): Southwest Prairies	Lat: 33.4	16309		Long: <u>-95.91971</u>	Datum: _	NAD83
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classific		
Are climatic / hydrologic conditions on the site typical for						
Are Vegetation, Soil, or Hydrology	significantly	disturbed	d? Are '	'Normal Circumstances" p	oresent? Yes X	No
Are Vegetation, Soil _x, or Hydrology	naturally pro	blematic	? (If ne	eeded, explain any answe	rs in Remarks.)	
SUMMARY OF FINDINGS - Attach site ma	ap showing	sampl	ing point l	ocations, transects	s, important featu	ıres, etc.
Hydrophytic Vegetation Present?  Yes _X	No	le	the Sampled	I Area		
Hydric Soil Present? Yes X	No		ithin a Wetlar		No	
Wetland Hydrology Present?  Yes X  Remarks:	No					
depressional area associated with fo	rmer chan	nel so	ar not hy	draulically conne	ected to any exi	istina
stream channel	iiiioi oilaii	1101 00	ar, not my	dradilodily oornic	rotod to driy oxi	iomig
VEGETATION – Use scientific names of pl				Ta		
Tree Stratum (Plot size: 700 sq ft )	Absolute % Cover		ant Indicator s? Status	Dominance Test work  Number of Dominant S		
1. Fraxinus pennsylvanica	65	Yes	FAC	That Are OBL, FACW,	or FAC	
2. Celtis laevigata	5	No	FAC	(excluding FAC-):	1	(A)
3. Ulmus crassifolia	10	No	FAC	Total Number of Domin	4	( <del>-</del> )
4				Species Across All Stra	ıta: <u> </u>	(B)
Sapling/Shrub Stratum (Plot size: 700 sq ft )	80	= Total (	Cover	Percent of Dominant S		(A /D)
1. Ulmus crassifolia	5	No	FAC	That Are OBL, FACW,	or FAC: 10070	(A/B)
2. Celtis laevigata	5	No	FAC	Prevalence Index wor		
3				Total % Cover of:		
4					x 1 = 12	
5				FACW species 8	$x 2 = \frac{10}{270}$	
Harb Christian (District, 450 Sq.ft	10	= Total (	Cover	FAC species 90 FACU species		
Herb Stratum (Plot size: 450 sq ft)  1. Carex crus-corvi	12	No	OBL	UPL species		
2. Ptilimnium nuttallii	8	No	FACW	Column Totals: 110		(B)
3						
4.				Prevalence Index	•	
5				Hydrophytic Vegetation		
6				2 - Dominance Tes	Hydrophytic Vegetation	n
7				3 - Prevalence Inde		
8					ex is ≤3.0 Adaptations¹ (Provide s	supporting
9				data in Remark	s or on a separate she	eet)
10.	0.0			Problematic Hydro	phytic Vegetation <sup>1</sup> (Ex	plain)
Woody Vine Stratum (Plot size: 450 sq ft		= Total (		<sup>1</sup> Indicators of hydric so be present, unless dist		gy must
1 2				Hydrophytic		
Z		= Total (		Vegetation		
% Bare Ground in Herb Stratum 80				Present? Ye	s <u>X</u> No	
Remarks:						

Profile Desc	ription: (Describe	to the dep	oth needed to docum	nent the	indicator	or confirr	n the absence	e of indicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-1				-			Organic	surface layer of organic material
1-4	10 YR 3/1	100					Clay	
4-18	10 YR 3/1	98	10 YR 4/6	2	С	M	Clay	
					-		•	
			-					·
			·					·
								·
¹Type: C=C	oncentration, D=Dep	letion, RM	=Reduced Matrix, CS	=Covere	d or Coate	ed Sand G	rains. <sup>2</sup> Lo	ocation: PL=Pore Lining, M=Matrix.
			LRRs, unless other					s for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy G	Sleyed Ma	atrix (S4)		1 cm	Muck (A9) (LRR I, J)
	pipedon (A2)		Sandy R	-	, ,		Coas	t Prairie Redox (A16) ( <b>LRR F, G, H</b> )
Black Hi	stic (A3)		Stripped	Matrix (	S6)		Dark	Surface (S7) (LRR G)
	en Sulfide (A4)				neral (F1)			Plains Depressions (F16)
	d Layers (A5) (LRR I				latrix (F2)			RR H outside of MLRA 72 & 73)
	uck (A9) (LRR F, G,		Depleted					ced Vertic (F18)
	d Below Dark Surfac	e (A11)	Redox D					Parent Material (TF2)
	ark Surface (A12) Mucky Mineral (S1)		Redox D		urface (F7	)		Shallow Dark Surface (TF12) (Explain in Remarks)
	Mucky Milleral (31) Mucky Peat or Peat (	(S2) (I RR			essions (F	16)		s of hydrophytic vegetation and
	ucky Peat or Peat (S				73 of LRF	,		nd hydrology must be present,
		o) (=:::: )	(			,		s disturbed or problematic.
Restrictive	Layer (if present):							·
Type:								
Depth (in	ches):						Hydric Soi	il Present? Yes X No
Remarks:	,							
Redox fe	atures observe	ed; Tinn	clay, occasion	ally flo	oded is	s natior	nally listed	hydric soil; naturally dark soil
HYDROLO								
Wetland Hy	drology Indicators:							
Primary India	cators (minimum of c	ne require	d; check all that apply	/)			Second	lary Indicators (minimum of two required)
Surface	Water (A1)		Salt Crust					rface Soil Cracks (B6)
	ater Table (A2)		Aquatic Inv					arsely Vegetated Concave Surface (B8)
Saturati	on (A3)		Hydrogen S	Sulfide O	dor (C1)		₽ Dra	ainage Patterns (B10)
Water M	larks (B1)		Dry-Season	n Water	Table (C2)		·	idized Rhizospheres on Living Roots (C3)
Sedime	nt Deposits (B2)		Oxidized R	hizosphe	eres on Liv	ing Roots	(C3) (1	where tilled)
☐ Drift De	posits (B3)		(where n					ayfish Burrows (C8)
│	at or Crust (B4)		Presence o		•	4)	Sa <sup>·</sup>	turation Visible on Aerial Imagery (C9)
·	oosits (B5)		Thin Muck	Surface	(C7)		₩ Ge	omorphic Position (D2)
	on Visible on Aerial	Imagery (B	7) $\square$ Other (Exp	lain in Re	emarks)			C-Neutral Test (D5)
Water-S	tained Leaves (B9)						<u>└</u> Fro	ost-Heave Hummocks (D7) (LRR F)
Field Obser			v					
Surface Wat			No X Depth (inc					
Water Table			No X Depth (inc					
Saturation P	resent? Y	'es	No x Depth (inc	ches):		Wet	land Hydrolog	gy Present? Yes X No
(includes cap		n dallide m	onitoring well, aerial p	hotos n	revious ins	nections)	if available.	
Describe IVE	oordea Data (Stiedili	i gauge, ili	ormornig wen, aenar p	ποιου, μ	i ovious ilis	,podio113),	ii avaliabic.	
Remarks:								
	onal area acc	nciated	with former ch	าลทกค	l scar			
acpiessi	onai area ass	Joiated	WILL TOTTING CI	iai ii iC	Joan			







Project/Site: Lake Ralph Hall Supplemental JD	City/County: Ladonia/Fannin Sampling Date: 6/2/2017						
Applicant/Owner: Upper Trinity Regional Water District				State: TX	Sampling Point: W	Sampling Point: WP626	
Investigator(s): Jason Voight, Andrew Sample Section, Township, Range:							
Landform (hillslope, terrace, etc.): Valley				-		e (%): 0-1%	
Subregion (LRR): Southwest Prairies							
Soil Map Unit Name: Tinn Clay, Occasionally flooded				NWI classification: none			
Are climatic / hydrologic conditions on the site typical for thi							
Are Vegetation, Soil, or Hydrologys				"Normal Circumstances" p		No	
Are Vegetation, Soil _X, or Hydrology r				eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site map				•	,	tures, etc.	
Hydrophytic Vegetation Present? Yes X N							
Hydric Soil Present? Yes X	lo		the Sampled		No		
Wetland Hydrology Present? Yes X	lo	W	rithin a Wetla	nd? fes <u>^</u>	NO		
Remarks:							
Heavy storms the previous day; depres				I with former char	nnel scar; not		
hydraulically connected to any existing	stream	chanr	nel				
VEGETATION – Use scientific names of plan	nts.						
The second secon	Absolute	Domina	ant Indicator	Dominance Test work	sheet:		
Tree Stratum (Plot size: 700 sq ft )	% Cover		s? Status	Number of Dominant S			
1. Fraxinus pennsylvanica	45	Yes		That Are OBL, FACW,	or FAC 2	(4)	
2. Celtis laevigata	20	Yes		(excluding FAC-):		(A)	
3. Ulmus crassifolia	_ 5	No	FAC	Total Number of Domin	^	(B)	
4	70			Species Across All Stra		(D)	
Sapling/Shrub Stratum (Plot size: 700 sq ft )		= Total (	Cover	Percent of Dominant Sport That Are OBL, FACW,		(A/B)	
1. Celtis laevigata	5	No	FAC		0117to	(٨/٥)	
2. Fraxinus pennsylvanica	5	No	FAC	Prevalence Index wor			
3					Multiply b		
4				OBL species			
5				FACW species			
Herb Stratum (Plot size: 450 sq ft )	10	= Total (	Cover	FACU species			
1 Toxicodendron radicans	5	No	FACU	UPL species			
2. Viola missouriensis	10	No	FACW	Column Totals:			
3. Ambrosia trifida	3	No	FAC				
4. Elymus virginicus	2	No	FAC		= B/A =		
5				Hydrophytic Vegetation	<b>on Indicators:</b> Hydrophytic Vegetati		
6				2 - Dominance Tes	, , , ,	ON	
7				3 - Prevalence Inde			
8					Adaptations <sup>1</sup> (Provide	e supportina	
9				data in Remarks	s or on a separate sh	heet)	
10				Problematic Hydro	phytic Vegetation <sup>1</sup> (E	Explain)	
Woody Vine Stratum (Plot size: 450 sq ft )	20	= Total (	Cover	<sup>1</sup> Indicators of hydric soi	il and wetland hydrol	ogy must	
1. Toxicodendron radicans	5	No	FACU	be present, unless distu	urbed or problematic	i	
2. Smilax bona-nox	5	No	FACU	Hydrophytic			
200	10	= Total (	Cover	Vegetation Present? Ye	s X No		
% Bare Ground in Herb Stratum 80				i resent: Te	3 NU		
Remarks:							

Profile Desc	cription: (Describe	to the dept	h needed to docu	ment the i	ndicator o	or confirm	m the absence of	indicators.)
Depth	4 0				. ?	_		
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-18	10 YR 2/1	95	10 YR 4/6	_ 5	C	M	Clay	
							·	
							·	
							. <u></u>	
<sup>1</sup> Type: C=C	oncentration, D=De	pletion, RM=	Reduced Matrix, C	S=Covered	d or Coate	d Sand G	rains. <sup>2</sup> Location	on: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to all l	RRs, unless othe	rwise note	ed.)		Indicators for	r Problematic Hydric Soils <sup>3</sup> :
Histosol	. ,		Sandy	Gleyed Ma	trix (S4)			ck (A9) ( <b>LRR I, J</b> )
	pipedon (A2)			Redox (S5				airie Redox (A16) (LRR F, G, H)
	istic (A3)			d Matrix (S				ace (S7) (LRR G)
	en Sulfide (A4)	-		Mucky Mir			_	ns Depressions (F16)
	d Layers (A5) (LRR	,		Gleyed Ma			_ `	H outside of MLRA 72 & 73) Vertic (F18)
	uck (A9) ( <b>LRR F, G,</b> d Below Dark Surfa	,		ed Matrix (I Dark Surfa	,			nt Material (TF2)
	ark Surface (A12)	CC (A11)		ed Dark Su	, ,			llow Dark Surface (TF12)
	Mucky Mineral (S1)			Depression	, ,			plain in Remarks)
	Mucky Peat or Peat	(S2) (LRR G		ains Depre	, ,	16)		hydrophytic vegetation and
□ 5 cm Mu	ucky Peat or Peat (S	63) ( <b>LRR F</b> )	(MI	RA 72 & 7	73 of LRR	H)	wetland hy	ydrology must be present,
							unless dis	sturbed or problematic.
Restrictive	Layer (if present):							
Type:			<u></u>					V
Depth (in	ches):						Hydric Soil Pre	esent? Yes X No No
Remarks:								
Dadauta		. 4. Time -		- 11 41	ما امالم	4!		duia a aile maternalle e dante a ail
Redox re	atures preser	nt; Tinn C	ay, occasion	ally floc	oaea is	nation	ally listed nyo	dric soil; naturally dark soil
HYDROLO	GY							
	drology Indicators							
-	cators (minimum of		chack all that ann	lv)			Secondary	Indicators (minimum of two required)
	Water (A1)	one required	Salt Crus	•				e Soil Cracks (B6)
	ater Table (A2)			vertebrate	c (B13)		_	ely Vegetated Concave Surface (B8)
Saturation	` ,			Sulfide O	, ,			ge Patterns (B10)
	larks (B1)			on Water T				ed Rhizospheres on Living Roots (C3)
	nt Deposits (B2)			Rhizosphe		na Roots		re tilled)
	posits (B3)		<del></del>	not tilled)		ng rtoots	` ' 🗖 `	h Burrows (C8)
	at or Crust (B4)			of Reduce		)		tion Visible on Aerial Imagery (C9)
	posits (B5)			k Surface (		,	_	orphic Position (D2)
	on Visible on Aerial	Imagery (B7		plain in Re				eutral Test (D5)
	stained Leaves (B9)	• • •			,			Heave Hummocks (D7) (LRR F)
Field Obser	vations:						<del></del>	. , , , ,
Surface Wat	er Present?	Yes N	lo X Depth (ir	nches):				
Water Table			lo X Depth (ir					
Saturation P			lo X Depth (ir			l l	land Hydrology P	resent? Yes X No
(includes cap	oillary fringe)							
Describe Re	corded Data (strear	m gauge, mo	nitoring well, aerial	photos, pr	evious insp	pections),	, if available:	
Remarks:								
I								









Project/Site: Lake Ralph Hall Supplemental JD	City/County: Ladonia/Fannin Sampling Date:						
Applicant/Owner: Upper Trinity Regional Water District				State: TX			
Investigator(s): Jason Voight, Andrew Sample		Section	, Township, Ra	inge:			
Landform (hillslope, terrace, etc.): Valley							
Subregion (LRR): Southwest Prairies Lat: 33.46273							
Soil Map Unit Name: Tinn Clay, Occasionally Flooded			NWI classifi				
Are climatic / hydrologic conditions on the site typical for							
Are Vegetation, Soil, or Hydrology						No	
Are Vegetation, Soil x, or Hydrology				eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site ma				ocations, transects	s, important fe	atures, etc.	
	No No		s the Sampled		No	-	
depressional area associated with fo	rmer chan	nel s	car; not hy	draulically conne	ected to any	existing	
└ VEGETATION – Use scientific names of pl	ants.						
700 on #	Absolute		nant Indicator	Dominance Test work	ksheet:		
Tree Stratum (Plot size: 700 sq ft 1. Fraxinus pennsylvanica	<u>% Cover</u> 30	Specie Yes	es? Status FAC	Number of Dominant S			
2. Ulmus crassifolia	25	Yes		That Are OBL, FACW, (excluding FAC-):	2 <u>2</u>	(A)	
3. Celtis laevigata	15	No	FAC	Total Number of Domii			
4. Maclura pomifera	10	No	FACU	Species Across All Stra	0	(B)	
	80	= Total	Cover	Percent of Dominant S	Species		
Sapling/Shrub Stratum (Plot size: 700 sq ft )	0	Na	FAC	That Are OBL, FACW,	or FAC: 100 %	(A/B)	
Fraxinus pennsylvanica     Maclura pomifera	2	No No	FAC FACU	Prevalence Index wo	rksheet:		
	<del></del>	110		Total % Cover of:	Multipl	y by:	
3		-		OBL species 10	x 1 = 10		
5				FACW species 5	x 2 = 10		
0	7	= Total	Cover	FAC species 77			
Herb Stratum (Plot size: 450 sq ft		. • • •		FACU species 15	x 4 = 60		
1. Carex crus-corvi		No	OBL	UPL species			
2. Viola missouriensis	2	No	FACW	Column Totals: 107	(A) <u>311</u>	(B)	
Ptilimnium nuttallii     Amaranthus tuberculatus	<u>3</u>	No	FACW FAC	Prevalence Index	x = B/A = 2.91		
	<del></del>	No		Hydrophytic Vegetati	on Indicators:		
5				1 - Rapid Test for	Hydrophytic Veget	ation	
6 7				2 - Dominance Te	st is >50%		
8.				3 - Prevalence Ind	lex is ≤3.0 <sup>1</sup>		
9.					Adaptations <sup>1</sup> (Prov		
10				Problematic Hydro	•	,	
Woody Vine Stratum (Plot size: 450 sq ft)	20	= Total		<sup>1</sup> Indicators of hydric so be present, unless dist	oil and wetland hydi	rology must	
1					•		
2 % Bare Ground in Herb Stratum 80%	•	= Total	Cover	Hydrophytic Vegetation Present? Ye	es <u> </u>		
Remarks:				1			

Profile Desc	ription: (Describe	to the depth	needed to docu	ment the	indicator	or confirm	m the absence of in	ndicators.)
Depth				<b>-</b> .	5			
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-18	10 YR 3/1		10 YR 4/6	20	С	M	Clay	
				_				
	-			_	-			
	-			_	-			
	-							
	-			_		-		
	oncentration, D=De					ed Sand G		n: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applie	cable to all L	RRs, unless othe	rwise not	ed.)		Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol	, ,			Gleyed Ma	. ,			(A9) ( <b>LRR I, J</b> )
	oipedon (A2)			Redox (S	,			rie Redox (A16) (LRR F, G, H)
Black Hi	, ,			d Matrix (	,			ce (S7) (LRR G)
	en Sulfide (A4)	_`		Mucky Mi			_	Depressions (F16)
	d Layers (A5) (LRR			Gleyed M			_ `	outside of MLRA 72 & 73)
	ick (A9) (LRR F, G,			ed Matrix (	,		Reduced V	, ,
	d Below Dark Surfac ark Surface (A12)	æ (ATT)		Dark Surfa ed Dark Su	. ,	1		t Material (TF2) ow Dark Surface (TF12)
_	Mucky Mineral (S1)			Depressio		)		lain in Remarks)
_	Mucky Peat or Peat	(S2) (LRR G.		ains Depr	` ,	<del>-</del> 16)		ydrophytic vegetation and
	icky Peat or Peat (S			.RA 72 &				drology must be present,
	,	-/( /	,			,		urbed or problematic.
Restrictive	Layer (if present):							
Type:								
Depth (in	ches):						Hydric Soil Pres	sent? Yes X No
Remarks:								
Redox fe	atures promin	ent; Tinn	clay, occasio	nally flo	ooded	is natio	nally listed hyd	dric soil, naturally dark soil
	OV							
HYDROLO								
_	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		, ,			Vegetated Concave Surface (B8)
Saturati	, ,		Hydrogen		. ,		i i	e Patterns (B10)
	larks (B1)		Dry-Seaso		,	•		Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized F			ing Roots		e tilled)
	posits (B3)			not tilled)				Burrows (C8)
1 1 -	at or Crust (B4)		Presence			4)		on Visible on Aerial Imagery (C9)
	oosits (B5)		H Thin Muck		. ,			phic Position (D2)
	on Visible on Aerial	Imagery (B7)	Other (Ex	plain in Re	emarks)			utral Test (D5)
	tained Leaves (B9)						Frost-He	eave Hummocks (D7) (LRR F)
Field Obser		v		2	inahaa			
Surface Wat			o Depth (in					
Water Table			o X Depth (in					
Saturation P		Yes X N	o Depth (in	ches):		Wet	land Hydrology Pro	esent? Yes X No
(includes cap	oillary fringe) corded Data (strear	n dalide mor	itoring well periol	nhotos ni	revious in	enactions)	if available:	
Pescine Re	oordod Dala (Sliedi	ii gauge, mor	moning well, aelial	ριτοιοδ, μι	CVIOUS III	opeoii0115).	, 11 avaliabie.	
Remarks:								
	onol	ا- علمام م		h a := :=	l a = = =			
aepressi	onal area ass	ociated \	with former c	nanne	ıscar			









Project/Site: Lake Ralph Hall Supplemental JD	ct/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5/31/2017						
Applicant/Owner: Upper Trinity Regional Water District				State: TX	Sampling Point: WI	Sampling Point: WP 801	
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							
Soil Map Unit Name: Tinn Clay, Occasionally Flooded							
Are climatic / hydrologic conditions on the site typical for							
Are Vegetation, Soil, or Hydrology				'Normal Circumstances"		No	
Are Vegetation, Soil ×, or Hydrology				eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site ma						ures, etc.	
Hydrophytic Vegetation Present? Yes _x					<u>· · · · · · · · · · · · · · · · · · · </u>	<u> </u>	
Hydric Soil Present?  Yes   X			the Sampled		No		
Wetland Hydrology Present?  Yes   X  Remarks:	No	WI	thin a Wetlar	id? fes	No		
depressional area associated with for	mer chan	nel sc	ar: not hv	draulically conne	ected to anv ex	xistina	
stream channel			, · <b>,</b>	,	, ,	3	
VECETATION . Her exicutific manner of mil							
VEGETATION – Use scientific names of plants		D	at tarbantan	I Danis Tankana			
Tree Stratum (Plot size: 700 sq ft )	Absolute % Cover		nt Indicator Status	Dominance Test work  Number of Dominant S			
1. Ulmus crassifolia	60	Yes	FAC	That Are OBL, FACW,	or FAC		
2. Fraxinus pennsylvanica	5	No	FAC	(excluding FAC-):	2	(A)	
3. Maclura pomifera		No	FACU	Total Number of Domir	0	(5)	
4. Celtis laevigata	2	No	FAC	Species Across All Stra	ata: <u>2</u>	(B)	
Sapling/Shrub Stratum (Plot size: 700 sq ft )	72	= Total C	over	Percent of Dominant S		(A/D)	
1. Fraxinus pennsylvanica	2	No	FAC	That Are OBL, FACW,	01 FAC: 10070	(A/B)	
2. Ulmus crassifolia	2	No	FAC	Prevalence Index wor			
3. Gleditsia triacanthos	2	No	FAC	Total % Cover of:		Ŋ:	
4. Maclura pomifera	2	No	FACU	· ·	x 1 = 70		
5				FACW species 10 78	x = 20 x = 3		
Herb Stratum (Plot size: 450 sq ft )	8	= Total C	over		x = 4 = 36	<del></del>	
1. Carex crus-corvi	70	Yes	OBL	UPL species			
2. Ptilimnium nuttalli	10	No	FACW	Column Totals: 167			
3. Amaranthus tuberculatus	5	No	FAC		2.16		
4				Prevalence Index			
5		-		Hydrophytic Vegetation	<b>on indicators:</b> Hydrophytic Vegetation	on	
6				2 - Dominance Tes		JII	
7				3 - Prevalence Ind			
8					Adaptations <sup>1</sup> (Provide	supporting	
9				data in Remark	s or on a separate sh	neet)	
10		Total C		Problematic Hydro	phytic Vegetation <sup>1</sup> (E	xplain)	
Woody Vine Stratum (Plot size: 450 sq ft )		= Total C	over	<sup>1</sup> Indicators of hydric so			
1. Campsis radicans	2	No	FACU	be present, unless dist	urbed or problematic		
2		-		Hydrophytic			
0/ Poro Cround in Horb Strature 15	2	= Total C	over	Vegetation Ye	es X No		
% Bare Ground in Herb Stratum 15  Remarks:				1		<u> </u>	

Profile Desc	ription: (Describe	to the dept	h needed to docum	ent the	indicator	or confirn	n the absence of i	indicators.)		
Depth	Matrix		Redox	c Feature	S					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		Remarks		
0-18	10 YR 3/1	98	10 YR 4/6	2	С	M	Clay			
				-						
						-				
								_		
	-						<u> </u>	_		
1										
	oncentration, D=Dep					ed Sand G		on: PL=Pore Lining, M=Matrix.		
	ndicators: (Applic	able to all L					_	Problematic Hydric Soils <sup>3</sup> :		
Histosol	` '				atrix (S4)			k (A9) (LRR I, J)		
	pipedon (A2)			edox (S5				irie Redox (A16) (LRR F, G, H)		
Black Hi	n Sulfide (A4)			Matrix (S	neral (F1)		_	ace (S7) ( <b>LRR G</b> ) s Depressions (F16)		
	l Layers (A5) ( <b>LRR I</b>	F)			atrix (F2)		_	Houtside of MLRA 72 & 73)		
	ick (A9) ( <b>LRR F, G,</b> I	,		d Matrix (			_ `	Vertic (F18)		
	d Below Dark Surfac			ark Surfa	,			nt Material (TF2)		
Thick Da	ark Surface (A12)		Depleted	d Dark Su	ırface (F7	)	Very Shallow Dark Surface (TF12)			
	lucky Mineral (S1)			epressio	. ,			plain in Remarks)		
	lucky Peat or Peat (	. , .	—		essions (F	•		nydrophytic vegetation and		
5 cm Mu	icky Peat or Peat (S	3) ( <b>LRR F</b> )	(MLF	RA 72 &	73 of LRF	RH)		ydrology must be present,		
B (1)	(16						unless dis	sturbed or problematic.		
_	_ayer (if present):									
								Y		
	ches):						Hydric Soil Pre	esent? Yes X No		
Remarks:										
Dodov for	aturaa ahaamu	adı Tinn	ماميد ممممنامه	مال، داره	adad i	o notion	sally liated by	drie eeile meturelle derk eeil		
Redox lea	atures observe	ea, rinn	ciay, occasion	ally lic	oueu i	s nation	ially listed fly	dric soil; naturally dark soil		
HYDROLO	GY									
	drology Indicators:									
	cators (minimum of c		chack all that apply	'n			Sacandary	Indicators (minimum of two required)		
	Water (A1)	nie requireu	Salt Crust					e Soil Cracks (B6)		
	iter Table (A2)		Aquatic Inv		o (P12)			ly Vegetated Concave Surface (B8)		
			Hydrogen \$					ge Patterns (B10)		
Saturation	arks (B1)		Dry-Season					ed Rhizospheres on Living Roots (C3)		
	nt Deposits (B2)		Oxidized R					re tilled)		
	oosits (B3)		(where n			ilig Roots		h Burrows (C8)		
	at or Crust (B4)		Presence of			4)		ion Visible on Aerial Imagery (C9)		
_	osits (B5)		Thin Muck		`	+)	_	rphic Position (D2)		
	on Visible on Aerial	lmagany (B7			. ,			eutral Test (D5)		
_	tained Leaves (B9)	iiilageiy (b <i>i</i>	) <u>—</u> Other (Exp	iaiii iii ixe	iliaiks)			leave Hummocks (D7) (LRR F)		
Field Observ	. ,					<u> </u>		icave Hammooko (B7) (ERRT)		
Surface Water		oc N	lo X Depth (inc	has).						
Water Table			lo X Depth (inc							
							land I ledual and D	wasant2 Van X		
Saturation Proceed (includes cape		'es N	lo X Depth (inc	:nes):		weti	and Hydrology Pi	resent? Yes X No		
	corded Data (stream	gauge, moi	nitoring well, aerial p	hotos, pi	evious ins	spections),	if available:			
			·							
Remarks:										
	onal area ass	ociated	with former of	าลทกอ	l scar					
acpicasi	Jilai alba ass	Joialeu	with follings Cl	iaiiile	Joan					





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					Sampling Point: WP 857
Investigator(s): Jason Voight, Andrew Sample		Section, Tov	vnship, Ra	inge:	
Landform (hillslope, terrace, etc.): Valley					Slope (%): 0-1%
Subregion (LRR): Southwest Prairies					
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classific	
Are climatic / hydrologic conditions on the site typical for					
Are Vegetation, Soil, or Hydrology					
Are Vegetation, Soil x, or Hydrology				eeded, explain any answe	
SUMMARY OF FINDINGS – Attach site ma					,
	No No		e Sampled n a Wetla		No
depressional area associated with for stream channel	rmer chan	nel scar	; not hy	draulically conne	ected to any existing
VEGETATION – Use scientific names of pl	ants.				
Tree Stratum (Plot size: 700 sq ft )	Absolute	Dominant Species?		Dominance Test work	ksheet:
1. Fraxinus pennsylvanica	50	Species? Yes	FAC	Number of Dominant S That Are OBL, FACW,	
2. Ulmus crassifolia	10	No	FAC	(excluding FAC-):	1 (A)
3. Celtis laevigata	10	No	FAC	Total Number of Domir	nant
4. Maclura pomifera	5	No	FACU	Species Across All Stra	4
Sapling/Shrub Stratum (Plot size: 700 sq ft		= Total Cov		Percent of Dominant S That Are OBL, FACW,	
1. Fraxinus pennsylvanica	5	No	FAC	Prevalence Index wor	rksheet:
2					Multiply by:
3					x 1 = 5
4					x 2 = 0
5		= Total Cov	er	FAC species 75	x 3 = 225
Herb Stratum (Plot size: 450 sq ft )		= 10tal 00V	Ci	FACU species 7	
1. Carex crus-corvi	5	No	OBL		x 5 = 0
2				Column Totals: 87	(A) <u>258</u> (B)
3				Prevalence Index	c = B/A = 2.97
4				Hydrophytic Vegetati	
5				1 - Rapid Test for	Hydrophytic Vegetation
6 7				2 - Dominance Tes	st is >50%
8				3 - Prevalence Ind	
9					Adaptations <sup>1</sup> (Provide supporting as or on a separate sheet)
10					pphytic Vegetation <sup>1</sup> (Explain)
	_	= Total Cov		<del>-</del>	
Woody Vine Stratum (Plot size: 450 sq ft )  1. Campsis radicans	2	No	FACU	'Indicators of hydric so be present, unless dist	il and wetland hydrology must urbed or problematic.
2	•	= Total Cov	 er	Hydrophytic Vegetation	v
% Bare Ground in Herb Stratum 95				Present? Ye	es No
Remarks:					

Profile Desci	ription: (Describe	to the dep	th needed to docu	ment the	indicator	or confir	rm the absence of in	dicators.)
Depth	Matrix			x Feature	es	2	_	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		Remarks
0-18	10 YR 3/1	90	10 YR 4/6	10	С	M	Clay	
				-				
<del></del>								
						_		
				_	_			
				-				
1- 0.0			D 1 111 11 01				2	
			Reduced Matrix, CS			ed Sand (		n: PL=Pore Lining, M=Matrix.
_		able to all	LRRs, unless othe					Problematic Hydric Soils <sup>3</sup> :
Histosol (	. ,				atrix (S4)			(A9) ( <b>LRR I, J</b> ) ie Redox (A16) ( <b>LRR F, G, H</b> )
Black His	ipedon (A2)			Redox (S: d Matrix (			_	ce (S7) ( <b>LRR G</b> )
	n Sulfide (A4)			,	ineral (F1)	١	_	Depressions (F16)
	Layers (A5) (LRR I	F)			latrix (F2)	,	_	outside of MLRA 72 & 73)
	ck (A9) ( <b>LRR F, G</b> ,			ed Matrix (	, ,		Reduced Ve	· ·
	Below Dark Surfac		✓ Redox I	Dark Surf	ace (F6)			Material (TF2)
Thick Da	rk Surface (A12)		Deplete	d Dark S	urface (F7	7)	Very Shallo	w Dark Surface (TF12)
	ucky Mineral (S1)			Depression	. ,			ain in Remarks)
	ucky Peat or Peat (		· · · —		essions (	,		drophytic vegetation and
5 cm Mud	cky Peat or Peat (S	3) ( <b>LRR F</b> )	(ML	.RA 72 &	73 of LR	R H)		Irology must be present,
Dootsietive I	('if mm						unless distu	urbed or problematic.
_	ayer (if present):							
								<b>V</b>
	hes):						Hydric Soil Pres	sent? Yes X No
Remarks:								
Dada (a.			.1				and Paradia d	12 9
Redox tea	atures observe	ea; iinn	ciay, occasion	nally fic	ooaea	is natio	naliy listed nyd	Iric soil; naturally dark soil
HYDROLOG	2V							
_	rology Indicators:							
		one require	d; check all that appl					dicators (minimum of two required)
✓ Surface \	Vater (A1)		Salt Crust	(B11)				Soil Cracks (B6)
High Wat	er Table (A2)		Aquatic In					Vegetated Concave Surface (B8)
Saturatio	n (A3)		Hydrogen				☐ Drainage	Patterns (B10)
Water Ma	arks (B1)		Dry-Seaso		,	,		Rhizospheres on Living Roots (C3)
	t Deposits (B2)		Oxidized F	Rhizosphe	eres on Li	ving Roots	s (C3) (where	tilled)
☐ Drift Dep				not tilled				Burrows (C8)
	t or Crust (B4)		Presence		`	(4)		n Visible on Aerial Imagery (C9)
Iron Depo			H Thin Muck		` '			phic Position (D2)
	n Visible on Aerial	Imagery (B	7) <u> </u>	olain in R	emarks)			utral Test (D5)
	ained Leaves (B9)						Frost-He	ave Hummocks (D7) (LRR F)
Field Observ		.,		0				
Surface Water			No Depth (in					
Water Table I	Present? Y	'es	No X Depth (in	ches):				
Saturation Pro		'es X	No Depth (in	ches):		We	tland Hydrology Pre	esent? Yes X No
(includes cap		aguag ma	onitoring well, aerial	nhotoo n	rovious in	anastiona	) if available:	
pescribe Kec	orueu Dala (Sileali	ı gauge, me	antoning well, aenal	ριτυίυς, β	revious in	apecii011S	), ii available.	
Daws								
Remarks:								
depression	nal area ass	ociated	with former c	hanne	l scar			





Project/Site: Lake Ralph Hall Supplemental JD		City/Cou	unty: Ladonia/F	annin	Sampling Date: 5/3	1/2017
Applicant/Owner: Upper Trinity Regional Water District				State: TX	Sampling Point: WF	P 1146
Investigator(s): Jason Voight, Andrew Sample				inge:		
Landform (hillslope, terrace, etc.): Valley		Local re	elief (concave,	convex, none): Concave	Slope	(%): <u>0-1%</u>
Subregion (LRR): Southwest Prairies	Lat: 33.4	1625		Long: -95.92113 Datum: NAD83		
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	_ naturally pro	blematio	c? (If ne	eeded, explain any answe	ers in Remarks.)	
SUMMARY OF FINDINGS – Attach site ma	p showing	samp	ling point l	ocations, transects	s, important feat	ures, etc.
Hydrophytic Vegetation Present? Yes X	No	16	s the Sampled	ΑΛιοο		
Hydric Soil Present? Yes x	No		vithin a Wetla		No	
Wetland Hydrology Present?  Yes   X  Remarks:	No					
depressional area associated with for	rmer chan	nel so	car: not h	draulically conne	ected to anv ex	kistina
stream channel				,,		
VECETATION Lies esigntific names of pl	onto					
VEGETATION – Use scientific names of pl	Absolute	Domin	ant Indicator	Dominance Test work	rahaati	
Tree Stratum (Plot size: 700 sq ft )			es? Status	Number of Dominant S		
1. Fraxinus pennsylvanica	60	Yes	FAC	That Are OBL, FACW,		
2. Maclura pomifera	10	No	FACU	(excluding FAC-):		(A)
3. Ulmus crassifolia	15	No	FAC	Total Number of Domir	^	(D)
4. Celtis laevigata		No	FAC	Species Across All Stra	ata: <u>2</u>	(B)
Sapling/Shrub Stratum (Plot size: 700 sq ft )	90	= Total	Cover	Percent of Dominant S That Are OBL, FACW,		(A/B)
1. Fraxinus pennsylvanica	5	No	FAC			(A/b)
2. Celtis laevigata	2	No	FAC	Prevalence Index wor		
3				Total % Cover of:  OBL species 25		
4				OBL species 25 FACW species 2	$x 1 = \frac{25}{4}$	
5				FAC species 92		
Herb Stratum (Plot size: 450 sq ft )	7	= Total	Cover		x 4 = 48	<del></del>
1. Carex crus-corvi	10	No	OBL		x 5 = 0	
2. Amaranthus tuberculatus	5	No	FAC	Column Totals: 131		(B)
3. Chasmanthium latifolium	2	No	FACU			
4. Viola missouriensis	2	No	FACW	Prevalence Index		
5. Lemna minor	15	Yes	OBL	Hydrophytic Vegetation	<b>on indicators:</b> Hydrophytic Vegetatio	20
6				2 - Dominance Tes		וונ
7				3 - Prevalence Ind		
8					Adaptations <sup>1</sup> (Provide	supporting
9				data in Remark	s or on a separate sh	eet)
10	0.4	Total		Problematic Hydro	phytic Vegetation <sup>1</sup> (E	xplain)
Woody Vine Stratum (Plot size: 450 sq ft )  1		= Total		<sup>1</sup> Indicators of hydric so be present, unless dist		
2.				Hydrophytic		
		= Total		Vegetation	Υ	
% Bare Ground in Herb Stratum 66%				Present? Ye	es X No	_
Remarks:						

Profile Desci	ription: (Describe	to the dep	th needed to docu	ment the	indicator	or confir	rm the absence of in	dicators.)
Depth	Matrix			x Feature	es	2	_	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		Remarks
0-18	10 YR 3/1	80	10 YR 4/6	20	С	M	Clay	
				-				
<del></del>				-				
						_		
		_		_	_			
				-				
1- 0.0			D 1 111 11 01				2	
			Reduced Matrix, CS			ed Sand (		n: PL=Pore Lining, M=Matrix.
_		able to all	LRRs, unless othe				_	Problematic Hydric Soils <sup>3</sup> :
Histosol (	. ,				atrix (S4)			(A9) ( <b>LRR I, J</b> ) ie Redox (A16) ( <b>LRR F, G, H</b> )
Black His	ipedon (A2)			Redox (Sad d Matrix (			_	ce (S7) ( <b>LRR G</b> )
	n Sulfide (A4)			,	ineral (F1)	١	=	Depressions (F16)
	Layers (A5) (LRR I	F)			latrix (F2)	,	_	outside of MLRA 72 & 73)
	ck (A9) ( <b>LRR F, G</b> ,			d Matrix	. ,		Reduced V	•
	Below Dark Surfac		✓ Redox I	Dark Surf	ace (F6)			Material (TF2)
Thick Da	rk Surface (A12)		Deplete	d Dark S	urface (F7	7)	Very Shallo	w Dark Surface (TF12)
	ucky Mineral (S1)			Depression	. ,			ain in Remarks)
	lucky Peat or Peat (		· · · —		essions (l	,		drophytic vegetation and
5 cm Mud	cky Peat or Peat (S	3) ( <b>LRR F</b> )	(ML	.RA 72 &	73 of LR	R H)		Irology must be present,
Dootsietive I	/:f						unless distu	urbed or problematic.
_	ayer (if present):							
								<b>V</b>
	hes):						Hydric Soil Pres	sent? Yes X No
Remarks:								
Dada (a.	. (		.1				and Paradia d	Daniel Deller
Redox tea	atures observe	ea; iinn	ciay, occasion	nally fic	oaea	is natio	naliy listed nyd	Iric soil; naturally dark soil
HYDROLOG	2V							
_	Irology Indicators:							
		one require	d; check all that appl					dicators (minimum of two required)
✓ Surface \	Nater (A1)		Salt Crust	(B11)				Soil Cracks (B6)
High Wat	ter Table (A2)		Aquatic In					Vegetated Concave Surface (B8)
Saturatio	n (A3)		Hydrogen				☐ Drainage	Patterns (B10)
Water Ma	arks (B1)		Dry-Seaso		,	,		Rhizospheres on Living Roots (C3)
	t Deposits (B2)		Oxidized F	Rhizosphe	eres on Li	ving Roots	s (C3) (where	tilled)
	osits (B3)		(where	not tilled	)			Burrows (C8)
	t or Crust (B4)		Presence			(4)	Saturatio	n Visible on Aerial Imagery (C9)
Iron Depo	osits (B5)		H Thin Muck		` '			phic Position (D2)
	n Visible on Aerial	Imagery (B	7) <u> </u>	olain in R	emarks)			utral Test (D5)
	ained Leaves (B9)							ave Hummocks (D7) (LRR F)
Field Observ		.,		0	:b.o.			
Surface Water			No Depth (in					
Water Table I	Present? Y	'es	No X Depth (in	ches):				
Saturation Pro		es X	No Depth (in	ches):		We	tland Hydrology Pre	esent? Yes X No
(includes cap		2 201120 20	onitoring well, aerial	nhoton n	rovious in	anastiona	) if available:	
pescribe Kec	orueu Data (Stream	ı gaug <del>e</del> , m	antoning well, aenal	ριτυίυς, β	revious in	apecii011S	j, ii avallable.	
Daws								
Remarks:								
depression	onal area ass	ociated	with former c	hanne	l scar			









Project/Site: Lake Ralph Hall Supplemental JD		City/Cou	nty: Ladonia/F	annin	Sampling Date: <u>5/31/2017</u>
Applicant/Owner: Upper Trinity Regional Water District					Sampling Point: WP 1334
Investigator(s): Jason Voight, Andrew Sample		Section,	Township, Ra	ange:	
Landform (hillslope, terrace, etc.): Valley					Slope (%): 0-1%
Subregion (LRR): Southwest Prairies					
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classific	
Are climatic / hydrologic conditions on the site typical for th					
Are Vegetation, Soil, or Hydrology					
Are Vegetation, Soil X, or Hydrology				eeded, explain any answe	
SUMMARY OF FINDINGS – Attach site map					,
Lhadarahatia Varatatian Pracant?	Ma				
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			s the Sampleo		
Wetland Hydrology Present?  Yes X  Remarks:		W	rithin a Wetla	nd? Yes <u>X</u>	No
	nor chan	nol co	car: not hi	draulically conn	acted to any existing
depressional area associated with forn stream channel	nei Gian	1161 20	Jai, Hot Hy	yuraulically corific	scied to any existing
Stream Chaine					
VEGETATION – Use scientific names of plan	nts.				
Tree Stratum (Plot size: 700 sq ft )	Absolute		ant Indicator	Dominance Test worl	
1. Fraxinus pennsylvanica	30	Yes	FAC	Number of Dominant S That Are OBL, FACW,	
2. Celtis laevigata	25	Yes	FAC	(excluding FAC-):	3 (A)
3. Ulmus crassifolia	20	Yes	FAC	Total Number of Domin	nant
4. Maclura pomifera	5	No	FACU	Species Across All Stra	0
700 //	80	= Total	Cover	Percent of Dominant S	pecies
Sapling/Shrub Stratum (Plot size: 700 sq ft )	10	No	EAC	That Are OBL, FACW,	
Celtis laevigata     Fraxinus pennsylvanica	10	No	FAC FAC	Prevalence Index wo	rksheet:
3. Ulmus crassifolia	10	No	FAC	Total % Cover of:	Multiply by:
				OBL species 15	x 1 = 15
4 5					x 2 = 4
	30	= Total (	Cover		x 3 = 330
Herb Stratum (Plot size: 450 sq ft )					$x 4 = \frac{20}{2}$
1. Carex crus-corvi		No	OBL FAC		x 5 = 0
Amaranthus tuberculatus     Viola missouriensis	<u>5</u>	No	FAC FAC W	Column Totals: 132	(A) <u>369</u> (B)
	_ =	No	FACW	Prevalence Index	c = B/A = 2.8
4				Hydrophytic Vegetati	on Indicators:
5				1 - Rapid Test for	Hydrophytic Vegetation
6 7				2 - Dominance Te	st is >50%
8				3 - Prevalence Ind	
9.					Adaptations <sup>1</sup> (Provide supporting as or on a separate sheet)
10					ophytic Vegetation <sup>1</sup> (Explain)
	0.0	= Total (		- ·	
Woody Vine Stratum (Plot size: 450 sq ft)  1				be present, unless dist	oil and wetland hydrology must curbed or problematic.
2				Hydrophytic	
% Bare Ground in Herb Stratum 78		= Total	Cover	Vegetation Present? Ye	es No
% Bare Ground in Herb Stratum 78  Remarks:				1	

Profile Desc	ription: (Describe	to the dep	th needed to docu	ment the	indicator	or confir	m the absence of in	dicators.)
Depth	Matrix			x Feature	es	2	_	
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		Remarks
0-18	10 YR 3/1	85	10 YR 4/6	15	<u>C</u>	M	Clay	
				-				
<del></del>								
-						-		
					_			
				_				
				-	-	-		
1- 0.0			D 1 111 11 01				21	DI D. III MANA
			Reduced Matrix, CS			ed Sand C		: PL=Pore Lining, M=Matrix.
_		able to all	LRRs, unless othe				_	Problematic Hydric Soils <sup>3</sup> :
Histosol	. ,				atrix (S4)			(A9) ( <b>LRR I, J</b> ) e Redox (A16) ( <b>LRR F, G, H</b> )
Black His	ipedon (A2)			Redox (S: d Matrix (			_	e (S7) (LRR G)
	n Sulfide (A4)			,	neral (F1)		_	Depressions (F16)
	Layers (A5) ( <b>LRR</b>	F)			latrix (F2)		_	outside of MLRA 72 & 73)
	ck (A9) ( <b>LRR F, G</b> ,			ed Matrix (	. ,		Reduced Ve	•
	Below Dark Surfac		✓ Redox I	Dark Surf	ace (F6)			Material (TF2)
Thick Da	rk Surface (A12)		Deplete	d Dark S	urface (F7	·)	Very Shallov	w Dark Surface (TF12)
	ucky Mineral (S1)			Depression	. ,			ain in Remarks)
	lucky Peat or Peat (		· · · —		essions (l	,		drophytic vegetation and
5 cm Mu	cky Peat or Peat (S	3) ( <b>LRR F</b> )	(ML	.RA 72 &	73 of LR	R H)		rology must be present,
Dontaletius I	(if						unless distu	rbed or problematic.
_	ayer (if present):							
								<b>V</b>
,	:hes):						Hydric Soil Pres	ent? Yes X No No No
Remarks:								
Dada (a	. (		.1				II - P - ( I I I	eta anti anti malli alambani anti
Redox tea	atures observe	ea; iinn	ciay, occasion	nally fic	oaea	s natio	nally listed nyd	ric soil; naturally dark soil
HYDROLO	ev.							
_	Irology Indicators:							
		one require	d; check all that appl					dicators (minimum of two required)
Surface \	Water (A1)		Salt Crust	(B11)				Soil Cracks (B6)
High Wa	ter Table (A2)		Aquatic In					Vegetated Concave Surface (B8)
Saturation	n (A3)		Hydrogen				☐ Drainage	Patterns (B10)
Water M	arks (B1)		Dry-Seaso		,	,		Rhizospheres on Living Roots (C3)
	t Deposits (B2)		Oxidized F	Rhizosphe	eres on Li	ving Roots	s (C3) (where	tilled)
	osits (B3)		(where	not tilled	)			Burrows (C8)
	t or Crust (B4)		Presence			4)	Saturation	n Visible on Aerial Imagery (C9)
☐ Iron Dep	osits (B5)		H Thin Muck		` '			hic Position (D2)
	on Visible on Aerial	Imagery (B	7) <u> </u>	olain in R	emarks)			tral Test (D5)
	ained Leaves (B9)						Frost-Hea	ave Hummocks (D7) (LRR F)
Field Observ		.,		0	in ale a a			
Surface Water			No Depth (in					
Water Table	Present? Y	'es	No X Depth (in	ches):				
Saturation Pr		'es X	No Depth (in	ches):		We	tland Hydrology Pre	sent? Yes X No
(includes cap		aguag ma	onitoring well, aerial	nhotoo n	rovious in	opostiona	\ if available:	
Pescine Ke(	orueu Dala (Siledii	ı gauge, IIIC	omornig wen, aenal	ριτυίυδ, β	i evious III	ορσσιίστις)	j, ii avaliabi <del>e</del> .	
Domestic								
Remarks:								
depression	onal area ass	ociated	with former c	hanne	I scar			





Project/Site: Lake Ralph Hall Supplemental JD				annin		
Applicant/Owner: Upper Trinity Regional Water District				State: TX	Sampling Point: W	/P 1409
Investigator(s): Jason Voight, Andrew Sample				inge:		
Landform (hillslope, terrace, etc.): Valley		Local relief	(concave,	convex, none): Concave	Slope	e (%): <u>0-1%</u>
Subregion (LRR): Southwest Prairies	Lat: 33.4	16231		Long: -95.91948 Datum: NAD83		
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" p		No
Are Vegetation, Soil x, or Hydrology				eeded, explain any answe		
SUMMARY OF FINDINGS – Attach site m						tures, etc.
Hydrophytic Vegetation Present? Yes _X	No	ls th	e Sampleo	ΑΛιοο		
Hydric Soil Present? Yes x	No		in a Wetla		No	
	No					
Remarks:				, alma valla alle va a a ma		! . 4!
depressional area associated with fo	ormer chan	nei scai	; not ny	draulically conne	ected to any e	xisting
stream channel						
VEGETATION – Use scientific names of p	olants.					
700 cg ft	Absolute	Dominant		Dominance Test work	sheet:	
Tree Stratum (Plot size: 700 sq ft )  1. Fraxinus pennsylvanica	<u>% Cover</u> 45	Species? Yes	<u>Status</u> FAC	Number of Dominant S	•	
2. Ulmus crassifolia	40	Yes	FAC	That Are OBL, FACW, (excluding FAC-):	3	(A)
3				Total Number of Domin	ant	
4				Species Across All Stra	^	(B)
	0.5	= Total Cov	ver	Percent of Dominant S	oecies	
Sapling/Shrub Stratum (Plot size: 700 sq ft	)	NI-	E40	That Are OBL, FACW,		(A/B)
Fraxinus pennsylvanica     Ulmus crassifolia	<u>5</u>	No No	FAC FAC	Prevalence Index wor	ksheet:	
			FAC		Multiply I	by:
3 4				OBL species	x 1 =	<u> </u>
5				FACW species	x 2 =	
	40	= Total Cov	ver	FAC species	x 3 =	
Herb Stratum (Plot size: 450 sq ft		<b>V</b>	ODI	FACU species		
Carex crus-corvi     Amaranthus tuberculatus	<u>65</u> 5	Yes No	OBL FAC	UPL species		
Niola missouriensis	$\frac{3}{2}$	No	FACW	Column Totals:	(A)	(B)
4 Ptilimnium nuttallii		No	FACW	Prevalence Index	= B/A =	
5	<del></del>			Hydrophytic Vegetation	on Indicators:	
6.				1 🗔	Hydrophytic Vegetat	ion
7.				2 - Dominance Tes		
8				3 - Prevalence Inde		
9				4 - Morphological A	Adaptations <sup>1</sup> (Provides or on a separate s	e supporting heet)
10				Problematic Hydro		
Woody Vine Stratum (Plot size: 450 sq ft )	77	= Total Cov	ver .	<sup>1</sup> Indicators of hydric soi	il and wotland hydro	logy must
1				be present, unless distr		
2				Hydrophytic		
0.5 0 1.11 1.0 23		= Total Cov	ver .	Vegetation Present? Ye	s_X No	
% Bare Ground in Herb Stratum 23 Remarks:						
romano.						

Profile Desc	ription: (Describe	to the dep	th needed to docum	nent the	indicator	or confir	m the absence of inc	dicators.)
Depth	Matrix			x Feature		2	-	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		Remarks
0-4	10 YR 3/1	100					Clay	
4-18	10 YR 3/1	95	10 YR 4/6	5	С	М	Clay	
					-	• •	<del></del>	
						-	<del></del>	
						·	·	
								_
1Typo: C-C	ncontration D_Dor	lotion PM		S-Covere	d or Coat	nd Sand G	Proinc <sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
			LRRs, unless other			eu Sanu G		roblematic Hydric Soils <sup>3</sup> :
Histosol		able to all		Sleyed Ma			_	A9) ( <b>LRR I, J</b> )
	pipedon (A2)			Redox (S				e Redox (A16) ( <b>LRR F, G, H</b> )
Black His				Matrix (	•			e (S7) (LRR G)
	n Sulfide (A4)			•	neral (F1)			Depressions (F16)
	Layers (A5) (LRR	F)			atrix (F2)		_	outside of MLRA 72 & 73)
	ick (A9) ( <b>LRR F, G</b> ,			d Matrix (			Reduced Ve	rtic (F18)
Depleted	d Below Dark Surfac	e (A11)	Redox [	Dark Surfa	ace (F6)		Red Parent I	Material (TF2)
	ark Surface (A12)				urface (F7	)		v Dark Surface (TF12)
	lucky Mineral (S1)			Depressio				iin in Remarks)
	Mucky Peat or Peat				essions (I	,		drophytic vegetation and
5 cm Mu	icky Peat or Peat (S	3) ( <b>LRR F</b> )	(ML	RA 72 &	73 of LRI	R H)		ology must be present,
Postrictivo I	_ayer (if present):						uniess distur	bed or problematic.
Type:	-1 >						Heatele Oall Door	ent? Yes X No
	ches):						Hydric Soil Prese	ent? Yes X No No No
Remarks:								
Dodov for	oturoo oboony	ad: Tinn	alay aggarian	مالير فاد	odod i	a natio	nally liated byd	io opili poturally dark opil
Redux lea	atures observe	zu, min	ciay, occasioi	ially lic	oueu i	5 HallOI	nany nsied nydi	ric soil; naturally dark soil
HYDROLO	GY							
_	drology Indicators:			,				
-		one require	d; check all that apply					licators (minimum of two required)
	Water (A1)		Salt Crust					oil Cracks (B6)
	iter Table (A2)		Aquatic Inv		, ,			Vegetated Concave Surface (B8)
Saturation			Hydrogen					Patterns (B10)
	arks (B1)		☐ Dry-Seaso		,	,		Rhizospheres on Living Roots (C3)
	nt Deposits (B2)					ing Roots		•
	oosits (B3)			not tilled)				Burrows (C8)
1 1 -	it or Crust (B4)		Presence			4)		No Visible on Aerial Imagery (C9)
	osits (B5)		H Thin Muck		. ,			nic Position (D2)
	on Visible on Aerial	Imagery (B	7) <u> </u>	olain in Re	emarks)			ral Test (D5)
	tained Leaves (B9)						Frost-Hea	ve Hummocks (D7) (LRR F)
Field Observ			v					
Surface Wate			No X Depth (inc					
Water Table			No x Depth (inc					~
Saturation Pr		'es	No X Depth (inc	ches):		Wet	tland Hydrology Pres	sent? Yes X No
(includes cap Describe Red		n daude mo	onitoring well, aerial p	ohotos ni	revious in	spections)	. if available:	
200011001100	Julia Dala (Silvali	. gaago, mi		, pi	. J. 1. J.		, availabio.	
Remarks:								
		العاجاجي		ن جن ما				
Depressi	onai area ass	sociated	with former of	nanne	ı scar			





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					Sampling Point: WP 1410
Investigator(s): Jason Voight, Andrew Sample				nge:	
Landform (hillslope, terrace, etc.): Valley		Local relie	f (concave,	convex, none): Concave	Slope (%): 0-1%
Subregion (LRR): Southwest Prairies					
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classific	
Are climatic / hydrologic conditions on the site typical for tl	his time of yea				
Are Vegetation, Soil, or Hydrology					oresent? Yes X No
Are Vegetation, Soil _x, or Hydrology				eeded, explain any answe	
SUMMARY OF FINDINGS – Attach site map					,
Lhudanhudia Vanatatian Busanda Van	Na X				
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes			ne Sampled		V
Wetland Hydrology Present? Yes X	No	with	nin a Wetlar	nd? Yes	No X
Remarks:		I			
depressional area associated with form	mer chan	nel sca	r; not hy	draulically conne	cted to any existing
stream channel			•	•	, ,
VEGETATION – Use scientific names of pla	nts.				
Tree Stratum (Plot size: 700 sq ft )	Absolute		t Indicator	Dominance Test work	sheet:
1. Quercus macrocarpa	% Cover 25	Yes	FACU	Number of Dominant Sport Are OBL, FACW, or	
2. Maclura pomifera	25	Yes	FACU	(excluding FAC-):	3 (A)
3. Celtis laevigata	10	No	FAC	Total Number of Domin	ant
4. Ulmus crassifolia	25	Yes	FAC	Species Across All Stra	6
700 (	85	= Total Co	ver	Percent of Dominant Sp	pecies
Sapling/Shrub Stratum (Plot size: 700 sq ft )	F	No	FAC	That Are OBL, FACW,	
Fraxinus pennsylvanica     Celtis laevigata	<u>5</u> 5	No No	FAC FAC	Prevalence Index wor	ksheet:
3. Gleditsia triacanthos	$-\frac{3}{1}$	No	FAC	Total % Cover of:	Multiply by:
	_ <u>·</u>	-110	1710	OBL species 15	x 1 = 15
4 5.				FACW species 5	x 2 = 10
	11	= Total Co	ver		x 3 = <u>198</u>
Herb Stratum (Plot size: 450 sq ft				FACU species 50	
1. Carex crus-corvi	15	Yes	OBL	UPL species 20	
2. Lolium multiflorum		Yes	UPL	Column Totals: 156	(A) <u>523</u> (B)
3. Elymus virginicus 4 Ptilimnium nuttalli	<u>20</u>	Yes No	FACW	Prevalence Index	= B/A = 3.35
"-			FACV	Hydrophytic Vegetation	
5				1 - Rapid Test for H	Hydrophytic Vegetation
6				2 - Dominance Tes	st is >50%
8				3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>
9					Adaptations <sup>1</sup> (Provide supporting s or on a separate sheet)
10.					phytic Vegetation <sup>1</sup> (Explain)
		= Total Co	ver	I	
Woody Vine Stratum (Plot size: 450 ) 1.				'Indicators of hydric soi be present, unless distu	l and wetland hydrology must urbed or problematic.
2				Hydrophytic	
	•	= Total Co		Vegetation	o No X
% Bare Ground in Herb Stratum 40 %				Present? Yes	s No <u>x</u>
Remarks:					

Profile Des	cription: (Describe	to the depth	needed to docu	ment the i	ndicator	or confirn	n the absence o	f indicators.)
Depth	Matrix			ox Feature		. ,	_	
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-18	10 YR 3/1	100		_			Clay	
				_				
								<u> </u>
	-			_				
				_				
	oncentration, D=Dep					ed Sand G		tion: PL=Pore Lining, M=Matrix.
	Indicators: (Applic	able to all LR					_	or Problematic Hydric Soils <sup>3</sup> :
Histoso	, ,			Gleyed Ma	, ,			uck (A9) ( <b>LRR I, J</b> )
	pipedon (A2)			Redox (S5	•			rairie Redox (A16) (LRR F, G, H)
	istic (A3) en Sulfide (A4)			d Matrix (S Mucky Mir	,			rface (S7) ( <b>LRR G</b> ) nins Depressions (F16)
	d Layers (A5) ( <b>LRR</b>	F)		Gleyed Ma			-	H outside of MLRA 72 & 73)
	uck (A9) ( <b>LRR F, G</b> ,	,		ed Matrix (				d Vertic (F18)
	d Below Dark Surfac	,		Dark Surfa	,			rent Material (TF2)
	ark Surface (A12)	, ,	Deplete	ed Dark Su	ırface (F7)	)	☐ Very Sh	allow Dark Surface (TF12)
	Mucky Mineral (S1)			Depressio	` '		Other (E	xplain in Remarks)
	Mucky Peat or Peat (	. , .	. —	ains Depre	•			f hydrophytic vegetation and
5 cm M	ucky Peat or Peat (S	3) ( <b>LRR F</b> )	(MI	RA 72 & 1	73 of LRR	<b>H</b> )		hydrology must be present,
Postriotivo	Layer (if present):						unless d	listurbed or problematic.
Type:	oboo):		_				Hydria Sail B	resent? Yes No X
Remarks:	ches):		<del>_</del>				Hydric Soil F	resent: resNo
Remarks.								
No redox	features obse	rved: Tinn	clav. occasi	onally f	looded	is natio	nally listed h	nydric soil; naturally dark soil
HYDROLO	GY							
Wetland Hy	drology Indicators:	:						
Primary Indi	cators (minimum of o	one required; o	heck all that app	ly)			Secondary	y Indicators (minimum of two required)
☐ Surface	Water (A1)		Salt Crus	t (B11)			Surfa	ce Soil Cracks (B6)
High Wa	ater Table (A2)			vertebrate	s (B13)			sely Vegetated Concave Surface (B8)
Saturati	on (A3)		Hydrogen	Sulfide O	dor (C1)		Draina	age Patterns (B10)
Water N	larks (B1)		Dry-Seas	on Water T	Table (C2)		Oxidiz	zed Rhizospheres on Living Roots (C3)
Sedime	nt Deposits (B2)		Oxidized	Rhizosphe	res on Liv	ing Roots	(C3) (wh	ere tilled)
│	posits (B3)		(where	not tilled)			Crayfi	ish Burrows (C8)
Algal M	at or Crust (B4)		Presence	of Reduce	ed Iron (C4	4)	Satura	ation Visible on Aerial Imagery (C9)
Iron De	posits (B5)		Thin Muc	k Surface (	(C7)		Geom	norphic Position (D2)
Inundat	ion Visible on Aerial	Imagery (B7)	Other (Ex	plain in Re	emarks)		☐ FAC-I	Neutral Test (D5)
✓ Water-S	Stained Leaves (B9)						Frost-	Heave Hummocks (D7) (LRR F)
Field Obser	vations:							
Surface Wat	er Present?	'es No	X Depth (ir	nches):		_		
Water Table	Present?	'es No	X Depth (ir	nches):				
Saturation P	resent? Y	'es No	X Depth (ir	nches):		Wetl	and Hydrology	Present? Yes X No No
	pillary fringe) corded Data (stream	aguag monit	oring wall parial	nhotoo nr	ovious ins	unactiona)	if available:	
Describe Ne	corded Data (Stream	r gauge, moriit	oning wen, aenai	priotos, pr	evious iiis	pections),	ii available.	
Remarks:								
	anal area ass	opioto d	ith former	honnel	000=			
uepressi	onal area ass	ocialed W	iui ioimer (	nannel	scar			





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					Sampling Point: WP 1471
Investigator(s): Jason Voight, Andrew Sample		Section, To	wnship, Ra	inge:	
Landform (hillslope, terrace, etc.): Valley					Slope (%): 0-1%
Subregion (LRR): Southwest Prairies	Lat: 33.4	16202 deg		Long: -95.91898 deg	Datum: NAD83
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					present? Yes X No
Are Vegetation, Soil _x, or Hydrology	naturally pro	blematic?		eeded, explain any answe	
SUMMARY OF FINDINGS – Attach site map	showing	samplin	g point l	ocations, transects	s, important features, etc.
Hydrophytic Vegetation Present?         Yes	No		e Sampled in a Wetlar		No <u>×</u>
Wetland Hydrology Present?  Yes X  Remarks:	NO				
Depressional area associated with form  VEGETATION – Use scientific names of pla		nel sca	r; comp	arable area to W	P 1410
700 00 4	Absolute	Dominant		Dominance Test work	sheet:
Tree Stratum (Plot size: 700- sq ft)  1. Quercus macrocarpa	% Cover 25	Species? Yes	Status FACU	Number of Dominant S	
2. Fraxinus pennsylvanica	25	Yes	FAC	That Are OBL, FACW, (excluding FAC-):	or FAC (A)
3				Total Number of Domir	nant
4				Species Across All Stra	4
	50	= Total Co	/er	Percent of Dominant S	pecies
Sapling/Shrub Stratum (Plot size: 700 sq ft 1. Ulmus crassifolia	2	No	FAC	That Are OBL, FACW,	
		-		Prevalence Index wor	ksheet:
2				Total % Cover of:	Multiply by:
3				OBL species 10	x 1 = 10
5				-	x 2 = <u>20</u>
	2	= Total Co	/er		x 3 = 81
Herb Stratum (Plot size: 450 sq ft )				FACU species 25	
1. Carex crus-corvi	_ 10	Yes	OBL		$x = \frac{50}{304}$
2. Viola missouriensis	_ 5	No	FACW	Column Totals: 82	(A) <u>261</u> (B)
Lolium multiflorum     Ptilimnium nuttalli	- 10 5	Yes No	UPL FACW	Prevalence Index	x = B/A = 3.18
"-				Hydrophytic Vegetation	
5				1 - Rapid Test for i	Hydrophytic Vegetation
6				2 - Dominance Tes	st is >50%
7				3 - Prevalence Ind	ex is ≤3.0 <sup>1</sup>
8 9				4 - Morphological	Adaptations <sup>1</sup> (Provide supporting
10					s or on a separate sheet)
	20	= Total Co	/er	Problematic Hydro	phytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 450 ) 1				<sup>1</sup> Indicators of hydric so be present, unless dist	il and wetland hydrology must urbed or problematic.
2				Hydrophytic	
70	0	= Total Co	/er	Vegetation Present? Ye	es No X
% Bare Ground in Herb Stratum 70				resent: re	·
Remarks:					

Profile Desc	cription: (Describe	to the dep	th needed to docu	ment the	indicator	or confir	m the absence of	f indicators.)
Depth	Matrix			x Feature	es	2	-	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-18	10 YR 3/1	95					Clay	
4-18			10 YR 4/6	5	С	М	Clay	
								_
-		_						
							· · · · · · · · · · · · · · · · · · ·	
	-						<u> </u>	
-							· -	
17		- Indian DM	Darley of Matrix O			- 1010	21	Care Di Dana Listan M Matti
	oncentration, D=Dep Indicators: (Applic					ed Sand G		tion: PL=Pore Lining, M=Matrix.  or Problematic Hydric Soils <sup>3</sup> :
		Sable to all					_	•
Histosol	pipedon (A2)			Gleyed IVI Redox (S	atrix (S4)			rairie Redox (A16) (LRR F, G, H)
	istic (A3)			d Matrix (				face (S7) ( <b>LRR G</b> )
	en Sulfide (A4)			,	ineral (F1)			ins Depressions (F16)
	d Layers (A5) (LRR	F)			latrix (F2)			H outside of MLRA 72 & 73)
	uck (A9) (LRR F, G,			ed Matrix			_ `	d Vertic (F18)
	d Below Dark Surfac		✓ Redox	Dark Surf	ace (F6)		Red Pare	ent Material (TF2)
Thick D	ark Surface (A12)				urface (F7	<b>'</b> )		allow Dark Surface (TF12)
	Mucky Mineral (S1)			Depression	. ,		<del></del>	xplain in Remarks)
	Mucky Peat or Peat				essions (l			hydrophytic vegetation and
5 cm Mi	ucky Peat or Peat (S	( <b>LRR F</b> )	(ML	.RA 72 &	73 of LR	R H)		hydrology must be present,
Destrictive	Laver (if present).						unless di	isturbed or problematic.
	Layer (if present):							
Type:			<del></del>					Y
	ches):						Hydric Soil P	resent? Yes X No
Remarks:								
Dadayta	-4	a al. Tima	alaur aaaaalau	راز دران	ا مامما		بطلم وعمال بالمم	المعاد معالية والعاد والمعاد والمعاد والعاد
Redox le	atures observe	ea, rinn	ciay, occasioi	nally lic	Jouea	s natio	nally listed n	ydric soil; naturally dark soil
HYDROLO	iC.V							
_	drology Indicators							
_	cators (minimum of o	one require						/ Indicators (minimum of two required)
	Water (A1)		Salt Crust					ce Soil Cracks (B6)
	ater Table (A2)		Aquatic In					ely Vegetated Concave Surface (B8)
Saturati			Hydrogen		, ,			age Patterns (B10)
	/larks (B1)		Dry-Seaso		,	,		ed Rhizospheres on Living Roots (C3)
111	nt Deposits (B2)		Oxidized I			ving Roots		ere tilled)
	posits (B3)			not tilled				sh Burrows (C8)
1 1 1 -	at or Crust (B4)		Presence		•	4)		ation Visible on Aerial Imagery (C9)
	posits (B5)		Thin Muck		` '			orphic Position (D2)
	ion Visible on Aerial	Imagery (B	7) <u> </u>	plain in R	emarks)			Neutral Test (D5)
	Stained Leaves (B9)						<u></u> Frost-	Heave Hummocks (D7) (LRR F)
Field Obser			V					
Surface Wat			No X Depth (in					
Water Table	Present?	res	No x Depth (in	ches):				
Saturation P		/es	No X Depth (in	ches):		Wet	tland Hydrology I	Present? Yes X No
	pillary fringe) corded Data (strean	n dalide m	onitoring well periol	nhotoe n	rovious in	enactions)	if available:	
DOSCING IVE	oorada Data (Stiedii	. gaage, m	Jimoinig won, acida	μποιου, μ	. Svidus III	0000010113)	, ii avallabic.	
Domorto								
Remarks:	1		1 20 6					
Depress	ional area ass	sociated	i with former of	cnanne	ei scar			

Project/Site: Lake Ralph Hall Supplemental JD City/County: Ladonia/Fannin Sampling Date: 5							
Applicant/Owner: Upper Trinity Regional Water District				State: TX	Sampling Point: V	Sampling Point: WP 1504	
Investigator(s): Jason Voight, Andrew Sample		Section, T	ownship, Ra	nge:			
Landform (hillslope, terrace, etc.): Valley		Local relie	Slop	e (%): 0-1%			
Subregion (LRR): Southwest Prairies				Long: -95.93517			
Soil Map Unit Name: Tinn Clay, Occasionally Flooded				NWI classification: PFO1A			
Are climatic / hydrologic conditions on the site typical for							
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"		No	
Are Vegetation, Soil x, or Hydrology				eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site ma						atures, etc.	
Hydrophytic Vegetation Present? Yes X	No	le t	the Sampled	I Area			
Hydric Soil Present? Yes	No <u>x</u>		hin a Wetlar		No X		
Wetland Hydrology Present? Yes	No x						
Wooded area bordering the north side	e of the N	orth Su	ılphur riv	er channel.			
VEGETATION – Use scientific names of pl							
Tree Stratum (Plot size: 700 sq ft	Absolute % Cover		nt Indicator ? Status	Dominance Test work			
1. Ulmus crassifolia	40	Yes	FAC	Number of Dominant S That Are OBL, FACW,			
2. Celtis laevigata	40	Yes	FAC	(excluding FAC-):	4	(A)	
3. Fraxinus pennsylvanica	5	No	FAC	Total Number of Domir	nant		
4. Maclura pomifera	5	No	FACU	Species Across All Stra	ata: 5	(B)	
Sapling/Shrub Stratum (Plot size: 700 sq ft )		= Total Co		Percent of Dominant S That Are OBL, FACW,		(A/B)	
1. Ulmus crassifolia	10	No	FAC FAC	Prevalence Index wor	ksheet:		
Celtis laevigata     Fraxinus pennsylvanica	<u>50</u> 	Yes No	FAC	Total % Cover of:		by:	
			170	OBL species			
5.				FACW species	x 2 =		
J	62	= Total Co	over	FAC species	x 3 =		
Herb Stratum (Plot size: 450 sq ft		- 1010100		FACU species	x 4 =		
1. Elymus virginicus	50	Yes	FAC	UPL species	x 5 =		
2. Viola missouriensis	10	No	FACW	Column Totals:	(A)	(B)	
3. Carex planostachys	40	Yes	UPL	Prevalence Index	x = B/A =		
4				Hydrophytic Vegetation			
5				1 - Rapid Test for I	Hydrophytic Vegeta	tion	
6				2 - Dominance Tes	st is >50%		
7				3 - Prevalence Ind	ex is ≤3.0 <sup>1</sup>		
9.					Adaptations <sup>1</sup> (Provide		
10.					s or on a separate suphytic Vegetation (	,	
	400	= Total Co	over	Problematic Hydro	priytic vegetation (	(Explain)	
Woody Vine Stratum (Plot size: 450 sq ft )  1.				<sup>1</sup> Indicators of hydric so be present, unless dist			
2				Hydrophytic			
N.D. 0 11.11.10.11	0	= Total Co	over	Vegetation Present? Ye	es X No		
% Bare Ground in Herb Stratum U Remarks:				riesent: Te	NO		
nomano.							

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of 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		
					. '			_	
	-				·	-			
						-			
					. '				
·					· ——		<u> </u>	_	
					·				
			Reduced Matrix, CS			ed Sand G		on: PL=Pore Lining, M=Matrix.	
_		cable to all L	RRs, unless othe				_	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)	
Black Hi	, ,			d Matrix (S	,			ace (S7) (LRR G)	
	n Sulfide (A4) d Layers (A5) ( <b>LRR</b>	E)		Mucky Mii Gleyed Mi			_	s Depressions (F16)  Houtside of MLRA 72 & 73)	
	ick (A9) (LRR F, G			d Matrix (			_ `	Vertic (F18)	
	d Below Dark Surfa	,		Dark Surfa	,			nt Material (TF2)	
	ark Surface (A12)	(* * * * * )	_		urface (F7)	)		low Dark Surface (TF12)	
	lucky Mineral (S1)			Depressio	, ,			plain in Remarks)	
2.5 cm N	Mucky Peat or Peat	(S2) (LRR G,	, <b>H</b> ) 🔲 High Pla	ains Depre	essions (F	16)		nydrophytic vegetation and	
5 cm Mu	icky Peat or Peat (	S3) ( <b>LRR F</b> )	(ML	RA 72 &	73 of LRR	<b>H</b> )	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 No X	
Remarks:									
No redox	features obse	erved; Tinr	n clay, occasi	onally f	looded	is natio	nally listed hy	dric soil; naturally dark soil	
HYDROLO	GY								
Wetland Hyd	drology Indicators	<b>S</b> :							
Primary Indic	cators (minimum of	one required;	check all that appl	y)			Secondary I	ndicators (minimum of two required)	
Surface	Water (A1)		Salt Crust	(B11)			Surface	e Soil Cracks (B6)	
High Wa	iter Table (A2)		Aquatic In		es (B13)		Sparsel	y Vegetated Concave Surface (B8)	
Saturation	on (A3)		Hydrogen	Sulfide O	dor (C1)		Drainag	ge Patterns (B10)	
☐ Water M	arks (B1)		Dry-Seaso	n Water 1	Γable (C2)		Oxidize	d Rhizospheres on Living Roots (C3)	
Sediment Deposits (B2)  Oxidized Rhizospheres on Living Roots (C3)  (where tilled)									
Drift Dep	oosits (B3)		(where	not tilled)			Crayfish	n Burrows (C8)	
│	at or Crust (B4)		Presence	of Reduce	ed Iron (C	4)	Saturati	ion Visible on Aerial Imagery (C9)	
Iron Dep	osits (B5)		Thin Muck	Surface (	(C7)		Geomo	rphic Position (D2)	
Inundation	on Visible on Aeria	Imagery (B7)	Other (Ex	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 Hydrology P	resent? Yes No_X	
(includes cap	oillary fringe)							100 <u> </u>	
Describe Red	corded Data (stream	m gauge, mon	nitoring well, aerial	photos, pr	evious ins	pections),	if available:		
Remarks:									





# APPENDIX D PHOTOGRAPHS

## PHOTOGRAPHS ON-CHANNEL OPEN WATERS



OCP2. WP235 Pond with 3 foot wetland fringe. 5/30/2017.



OCP2. WP235 Pond with 3 foot wetland fringe. 5/30/2017.



OCP3. WP236 Pond with 3-15 foot wetland fringe. 5/30/2017.



OCP3. WP236 Pond with 3-15 foot wetland fringe. 5/30/2017.



OCP3. WP238 Larger part of the 3-15 foot wetland fringe of on-channel pond 3. 5/30/2017.



OCP4. WP240 Pond with no wetland fringe. 5/30/2017.



OCP4. WP240 Pond with no wetland fringe. 5/30/2017.



OCP5. WP401 Pond with 1 foot wetland fringe. 5/31/2017.



OCP5. WP401 Pond with 1 foot wetland fringe. 5/31/2017.



OCP7. WP320 Small pond with no wetland fringe before transition to channel. 5/30/2017.





OCP8. WP1472 Pond with partial 1 foot wetland fringe. 5/31/2017.



OCP10. WP326 Pond with 6 foot wetland fringe and submerged vegetation. 5/30/2017.



OCP10. WP326 Pond with 6 foot wetland fringe and submerged vegetation. 5/30/2017.



OCP11. WP400 Pond with partial 1 foot wetland fringe, submerged and floating vegetation. 5/30/2017.



OCP11. WP400 Pond with partial 1 foot wetland fringe, submerged and floating vegetation. 5/30/2017.



OCP13. WP1 Pond with partial 1-6 foot wetland fringe. 6/1/2017.



OCP13. WP2 Pond with 1-6 foot partial wetland fringe. 6/1/2017.



OCP17. WP1500 Large pond with wetland fringe ranging from 1-20 feet and algae. 5/31/2017.



OCP17. WP1501 Large pond with wetland fringe ranging from 1-20 feet and algae. 5/31/2017.



OCP17. WP1502 Large pond with wetland fringe ranging from 1-20 feet and algae. 5/31/2017.



OCP17. WP1502 Large pond with wetland fringe ranging from 1-20 feet and algae. 5/31/2017.



OCP17. WP1503 Large pond with wetland fringe ranging from 1-20 feet and algae. 5/31/2017.



OCP19. WP715 Pond with partial 1-3 foot wetland fringe. 5/31/2017.



OCP19. WP715 Pond with partial 1-3 foot wetland fringe. 5/31/2017.



OCP23. WP336 Large pond with partial 1 foot wetland fringe. 6/1/2017.



OCP32. WP4 Pond with no wetland fringe. 5/31/2017.



OCP32. WP4 Pond with no wetland fringe. 5/31/2017.



OCP32. WP4 Pond with no wetland fringe. 5/31/2017.



OCP33. WP10 Pond with partial 3 foot wetland fringe and submerged vegetation. 5/31/2017.



OCP33. WP10 Pond with partial 3 foot wetland fringe and submerged vegetation. 5/31/2017.

## PHOTOGRAPHS UPLAND OPEN WATERS



UP6. WP226 Upland Pond. 5/30/2017.







UP8. WP227 Upland Pond. 5/30/2017.



UP8. WP227 Upland Pond. 5/30/2017.



UP16. WP234 Upland Pond. 5/30/2017.



UP17. WP231 Upland Pond. 5/30/2017.



UP18. WP233 Upland Pond. 5/30/2017.



UP19. WP225 Upland Pond. 5/30/2017.



UP30. WP322 Upland Pond. 5/30/2017.



UP65. WP402 Upland Pond. 5/31/2017.



UP65. WP402 Upland Pond. 5/31/2017.



UP67. WP1473 Upland Pond. 5/31/2017.



UP79. WP713 Upland Pond below UP207. 5/31/2017.



UP79/80. WP714 Berm between ponds below UP207. 5/31/2017.



UP80. WP714 Upland Pond. 5/31/2017.



UP117. WP334 Upland Pond. 6/1/2017.



UP117. WP335 Upland Pond. 6/1/2017.



UP143. WP4 Upland Pond. 6/2/2017.





UP152. WP711 Upland Pond. 5/31/2017.



UP155. WP711 Upland Pond. 5/31/2017.